

**Programme of
Archaeological Works
at
Staple Chambers
Staple Gardens
Winchester
Hampshire**

*NGR: SU 47947 29720
SITE CODE: SG 10*

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1. Non-Technical Summary

From 24th August to 8th September 2010, Border Archaeology undertook a programme of archaeological evaluation at Staple Chambers, situated within the northwest corner of the Roman and medieval walled city of Winchester, an area of high archaeological sensitivity located immediately south of Northgate House, where excavations have revealed evidence of prehistoric, Roman, Saxo-Norman (9th-12th century) and later medieval (13th-15th century) occupation.

- The programme of archaeological fieldwork undertaken at Staple Chambers revealed evidence of substantial post-medieval brick cellarage in the southern and central parts of the evaluation trench (immediately east of the existing modern office building).*
- Much of the cellarage could not be investigated due to the presence of extensive modern services and the instability of the remaining cellar walls, However, it was established in the southern part of the trench that the cellarage extended to a depth of 2.20m below existing ground level, resulting in the severe truncation or removal of pre-19th century archaeological deposits in this area.*
- Nevertheless, significant archaeological deposits and features predating the 19th century were identified in several locations.*
- Just to the north of centre of the evaluation trench, excavation revealed the footings of a substantial chalk-and-flint wall and another masonry wall or pier immediately to the north. The date, function and relationship of these walls remain uncertain but it is possible that either they form part of a building of late Saxon or 13th-14th century date.*
- Towards the northern end of the evaluation trench, another substantial rubble masonry wall was identified, which appeared to form part of a deep cellar. An associated deposit, possibly representing a backfilling of the cellar after it fell out of use, contained 13th-14th century pottery, ridge tile and broken roof slate, probably imported from the North Cornish coast.*
- This wall would appear to have formed part of a high-status building of probable 13th-14th century date, possibly associated with the residence of the Archdeacon of Winchester. The full depth of the cellarage represented by wall (113) was not reached during the evaluation and, consequently, its impact on Saxon, Roman and earlier deposits & features remains unclear.*
- It is evident that the survival of significant archaeological deposits and features in the immediate vicinity of Staple Chambers is dependent on the extent of truncation by deep post-medieval cellarage and modern construction/landscaping activity. However, in those areas less heavily impacted by 19th-20th century building works, there is substantial potential for the survival of structural remains relating to several buildings of medieval or late Saxon date adjoining the street frontage of Staple Gardens, together with associated occupation deposits.*

2. Introduction

Border Archaeology was instructed by Stephen Davies Esq. on behalf of Staple Gardens Development Limited to undertake a programme of archaeological works for Staple Chambers Staple Gardens Winchester (NGR SU 47947 29720) (**Fig. 1**) in advance of the submission of planning proposals for the development of the site for offices and residential use (Planning Ref: 10/02813/FUL).

In summary, this programme of works consisted of the following components:

- 1/ The production of a Detailed Archaeological Assessment of the archaeological and historical resource within the site
- 2/ A programme of Archaeological Field Evaluation comprising an evaluation trench and two test pits on the N and W sides of the existing offices (**Fig. 2**)
- 3/ The production of an archaeological Deposit Model for the site, based upon a programme of geoarchaeological investigation
- 4/ The production of an Impact Assessment determining the impact of the proposed new building on the archaeological resource within the site (to be supplied as a separate report)

Fieldwork was undertaken between 24th August and 8th September 2010.

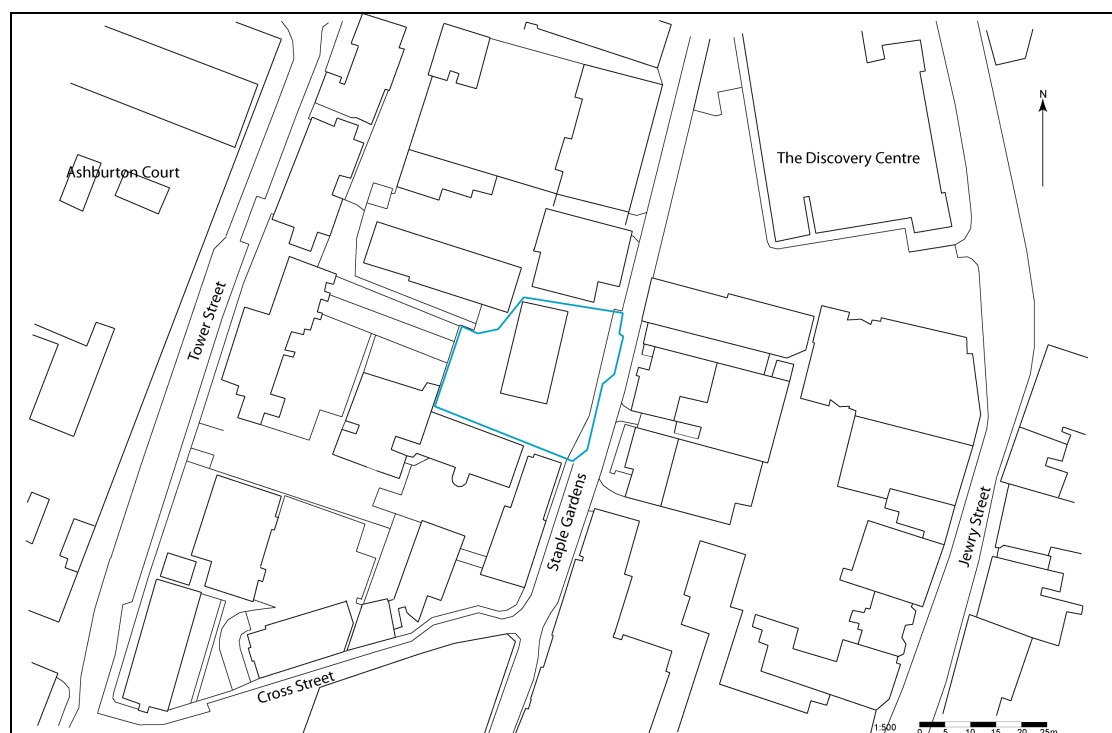


Fig. 1: Plan (Scale 1:500) showing location of site at Staple Chambers, Staple Gardens, Winchester

Prior to the commencement of fieldwork, a Written Scheme of Investigation was prepared by Border Archaeology for submission to Ms Tracy Matthews WCC Historic Environment Officer, and approved by her as a methodology for the proposed programme of work. A Detailed Archaeological Assessment was also undertaken, consisting of a detailed assessment of all available documentary and cartographic evidence and the results of previous archaeological fieldwork, in order to determine fully the archaeological potential of the site.

A copy of the Report will be sent to Ms Tracey Matthews, WCC Historic Environment Officer, Staple Garden Developments Ltd and to Jeremy Tyrell, T2 Architects. A copy of the archive report and digital data relating to the archaeological remains investigated (.dxf or shapefile format) will be deposited with the Winchester Sites and Monuments Record for incorporation into the Winchester Urban Archaeology Database.

3. Aim

The project aim was to assess as fully as possible, by means of a detailed archaeological assessment and archaeological field evaluation, the location, extent, date, state of preservation and significance of the archaeological resource on the site.

Based on the results of this programme of archaeological works, a considered assessment can be made of the likely impact of the archaeological resource of the proposed developmental groundworks and thus an appropriate programme of mitigation can be devised.

4. Site description

The site (centred on SU 49747 29720) consists of an existing modern two storey office building at Staple Gardens, currently occupied by Carter Jonas, and associated car parking area, situated on the W side of Staple Gardens, within the NW corner of the medieval walled city of Winchester (**Fig. 2**). The underlying geology in the vicinity of the study area comprises Upper Chalk of the Cretaceous Era overlain by clay with flints and gravelly sand.

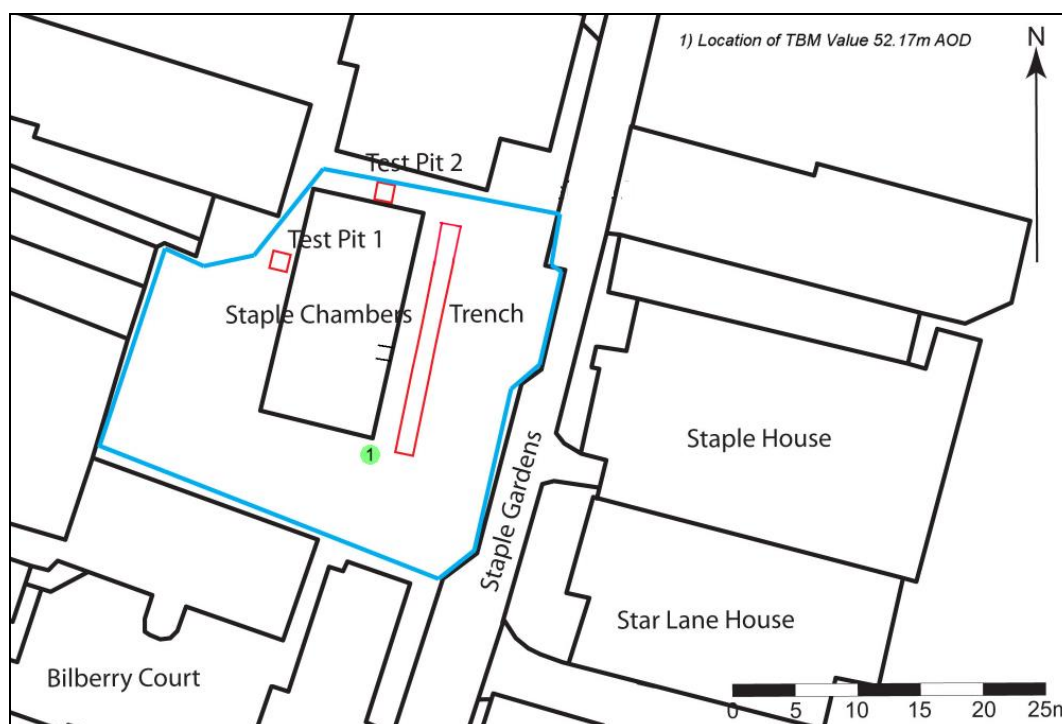


Fig. 2: Site plan showing location of evaluation trench and test pits

5. Brief Historical & Archaeological Background

It is possible that pre-Roman archaeology may survive within the study area, based on previous discoveries of later prehistoric occupation activity within the immediate locality. This evidence comprises a series of five circular posthole structures of late Bronze Age/early Iron Age date, a mid to late Iron Age holloway feature and four circular structures revealed during excavations at Northgate House, located on the W side of Staple Gardens immediately to the N of the site at Staple Chambers. These remains, however, appear to have been heavily truncated by Saxo-Norman and later medieval occupation features.

The site is known to occupy the NW corner of the Roman *civitas* of *Venta Belgarum*. Although this part of the walled area appears not to have been subject to intensive development during the Roman period, evidence of Roman occupation was identified in the early 1960s during excavations at the SCATS site (later Northgate House) and finds ranging in date from the 2nd-4th centuries AD were recovered. Associated service trenching in the roadway immediately E of Northgate House revealed a 1.20m thick layer of gravel at least 2.60m wide, which was interpreted as part of a possible Roman street running on a roughly N-S alignment (Cunliffe, 1964, 165-7)

Further evidence of Roman occupation was identified during the excavations carried out at Northgate House in 2005-6, which revealed the remains of one, possibly two street alignments together with several timber and masonry founded structures (Teague & Ford, 2006, 19-23). Roman settlement activity has also been found to the NE of the study area at the Jewry Street Library site, where the cut of a possible brick lined conduit with well-laid flint foundations and quantities of Roman brick in the backfill were found, along with the remains of several timber structures of late 1st-2nd century date flanking the W side of a metalled street aligned NE-SW. The presence of dark earths generally overlying features and deposits of Roman date on both the Northgate House and Jewry Street Library sites suggests a prolonged abandonment of this area in the late Roman/post-Roman period.

The origins of the street presently known as Staple Gardens, first referred to in 1110 as *Brudenestret* (Bridney Street) are closely associated with the foundation of the Alfredian *burh* in the late 9th century, the restoration of the defensive circuit and the establishment of the street grid system. Two major archaeological investigations carried out in the vicinity of Staple Chambers have revealed significant evidence of Saxo-Norman occupation, these being Northgate House immediately to the N — where an exceptionally well-preserved and deeply stratified sequence of deposits associated with the development of up to nine separate properties was revealed — and the Jewry Street Library site to the northeast of Staple Chambers, where a programme of archaeological work undertaken in 2005-6 identified several large concentrations of pit and posthole features, associated with activity to the rear of five properties fronting onto the E side of Staple Gardens (Teague & Ford, 2006, 23-29; Teague 2006, 13-14). Both sites produced a remarkably rich artefactual and ecofactual assemblage attesting to the intensity of Saxo-Norman occupation in this area.

Further indications of the intensive nature of Saxo-Norman occupation was revealed during the course of recent excavations at Nos. 26-7 and Nos. 28-9 Staple Gardens, including the remains of one, possibly two late Saxon buildings with a long sequence of floor and occupation deposits, as well as evidence for a

late 11th-12th century road surface constructed of large flint cobbles (Moore & Preston, 2008, 140-4).

The density of occupation and industrial activity along Staple Gardens appears to have declined by the late 12th-early 13th century, and there appears to have been a substantial reorganization of tenement plot boundaries along the W side of Staple Gardens at about this time. However, the area remained in use throughout much of the medieval period; excavations at the Northgate House site in 1960-1 revealed evidence of a masonry chapel and first floor hall of late 12th century date with additional buildings constructed in the late 13th-early 14th century, possibly associated with the residence of the Archdeacon of Winchester (Cunliffe, 1964, 167-70), and further evidence of medieval occupation in this area was identified during the Northgate House excavations undertaken in 2005-6 (Teague & Ford, 2006, 33-35)

Documentary sources indicate the existence of a substantial tenement plot belonging to the archdeacon of Winchester along the W side of Staple Gardens from the late 13th century onwards which was extended southwards in the late 13th-early 14th century, partially encroaching on the area of present-day Staple Chambers, evidence for which may be represented by the remains of a chalk masonry wall (1.1m in height) aligned E-W, which was identified at a depth of 0.4m below existing ground level during drainage trench excavations in the road immediately adjacent to Staple Chambers in 1983. The southern part of the Staple Chambers site appears to have lain within two tenement plots in the 13th century; documentary evidence indicates the possible presence of buildings occupying these plots from the late 13th century to early 15th century (Keene, 1985, 637-41).

Occupation on the site had ceased by the late medieval period, when it formed several garden plots which had been subdivided by the late 16th century. By 1750, Godson's map of Winchester shows that a row of cottages appear to have been erected on the front of the site, directly adjoining the street; with a large open area extending westwards towards the town walls and a small enclosed yard to the N.

Documentary and cartographic sources indicate the presence of a complex of buildings occupying the site by the mid to late 19th century, associated with the nearby gasworks, including cottages, offices and manager's residence (the latter being demolished in 1894). Cellarage was associated with the cottages and offices, specifically located in the southwest part of the site adjoining the street, and remained intact until their demolition in 1965. It is possible that the cellarage (which appears to have extended to a depth of approximately 1.85m) may have truncated archaeological deposits and features in this part of the site.

6. Scheme of Works

Summary Description of Works

The programme of archaeological fieldwork at Staple Chambers detailed in this report consisted of four components:

1/The excavation of a single evaluation trench, aligned N-S and measuring 19.00 x 2.00m, located immediately E of the existing office building.

2/The excavation of two test pits, located immediately N and W of the existing office building.

3/The excavation of two geotechnical boreholes, located to the N and SW of the existing offices, which were undertaken by percussive rig and partially observed by Gerry Martin MA MfA.

4/A programme of hand-augering undertaken by a qualified geoarchaeologist, Richard Payne (ARCA) to establish the depth of archaeological deposits in specific areas, followed by the excavation of a single geoarchaeological borehole.

This programme of archaeological works was carried out in accordance with *Standard and Guidance for archaeological field evaluation* (IfA 2008) and *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (English Heritage 2006) and with other relevant published sources of technical, professional and ethical guidance. Border Archaeology adheres to the *IfA Code of conduct* (2010) and *Code of approved practice for the regulation of contractual arrangements in field archaeology* (2008).

Methodology

Archaeological Field Evaluation (Evaluation Trench and Test Pits)

Evaluation trenching with an approximate area of 19.00m × 2.00m and two trial holes each measuring approximately 1.00m × 1.00m were excavated in designated locations to the N and W of the existing building with the principal area of trenching being in the form of a single substantial trench aligned N-S and located immediately E of the existing offices.

Due to the presence of extensive modern services (including an electricity cable and gas and sewage pipes) crossing the evaluation trench, as well as the instability of a deep brick cellar wall of 19th century date encountered in the southern part of the trench, it was only possible to undertake detailed investigation within three specific areas (**Fig. 3**).

Excavation of the evaluation trench (after manual removal of the concrete slabs, *paviers* and tarmac) was undertaken by machine using a toothless ditching bucket to the top of significant archaeology (defined as deposits of medieval or early post-medieval date) or natural, whichever is encountered first; followed by hand-excavation in order to investigate archaeological remains. This was deemed sufficient to characterise revealed archaeological deposits with the extent, colour, texture, boundary characteristics etc of each archaeological context being defined by trowelling.

Poorly stratified deposits such as 'dark earths' and garden soils pre-dating the post-medieval/modern period were removed in spits and sampled & sieved for the recovery of artefacts and palaeoenvironmental materials, such deposits being generally subdivided into horizontally-gridded vertical spits to allow for vertical separation of artefacts and ecofacts.

Samples of worked stone and CBM (brick, roof tile, floor tile, wall tile and hypocaust elements) were taken where feasible to assist in the analysis of building palaeotechnology.

A temporary benchmark was established adjacent to the SE corner of the existing office building, with a value of 52.17m AOD.

Recording

A detailed written, drawn and photographic record was produced in accordance with archaeological practices set out by the Institute for Archaeologists and Border Archaeology's *Field Recording Manual* (2008). A detailed stratigraphic record using a sequential context numbering system was compiled and a Harris matrix was produced for the entire site.

Written records were compiled using separate numbered pro forma record sheets to create a detailed stratigraphic record of the site. Plans, sections and elevations were produced at scales of 1:50, 1:20 or 1:10, as appropriate, on pro-forma gridded archivally stable polyester film; while artefact details were recorded at an appropriate scale. All plans, elevations and sections contain grid and level information relative to OS data. All drawings have been numbered and listed in a drawing register; these drawing numbers being cross-referenced to written site records.

A high resolution digital photographic record (12MPX) was compiled of all stratigraphic units, comprising record views of contexts, samples or artefacts, together with a representative photographic record of the progress of the evaluation. All photographic records were indexed by frame number and cross-referenced to written site records. Details concerning subject and direction of view were maintained in a photographic register, indexed by film and frame number.

The progress of the evaluation was recorded & assessed by the Company's General Manager George Children MA MifA using the Company's ISO 9001 procedures.

Recovery, processing and curation of artefactual data

All associated artefacts recovered were retained, cleaned, labelled and stored according to *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (IfA 2008) and *First Aid for Finds* (Watkinson & Neal 2001).

All artefacts were bagged and labelled with the site code and context number before being removed off-site and each assemblage will be examined by an approved specialist according to typological or chronological criteria and conservation needs identified. The ceramic evidence was identified and assessed in relation to using the Winchester fabric series and assessed in relation to existing national and regional research frameworks for Roman, Saxon and medieval pottery.

Conservation will be undertaken by approved conservators on advice provided by a suitable specialist to be agreed by Ms Helen Rees (Curator of Archaeology Winchester Museums) and in accordance with United Kingdom Institute for Conservation (now part of ICON, the Institute of Conservation) guidelines.

Environmental Strategy

No deposits considered suitable for environmental sampling were identified during the course of the fieldwork.

7. Results

Evaluation Trench

A single evaluation trench, orientated N-S and measuring 19.00m x 2.00m was excavated both by machine and manually, immediately to the E of the present office building, to a maximum depth of approximately 2.20m below ground level (approximately 52.00m AOD).

Due to the extensive presence of modern services and the instability of a deep brick cellar wall in the southern half of the trench (necessitating the rapid backfilling of part of this area for safety reasons), the principal evaluation trench fragmented into a small number of areas where limited archaeological interventions could be safely achieved (**Fig. 3**).

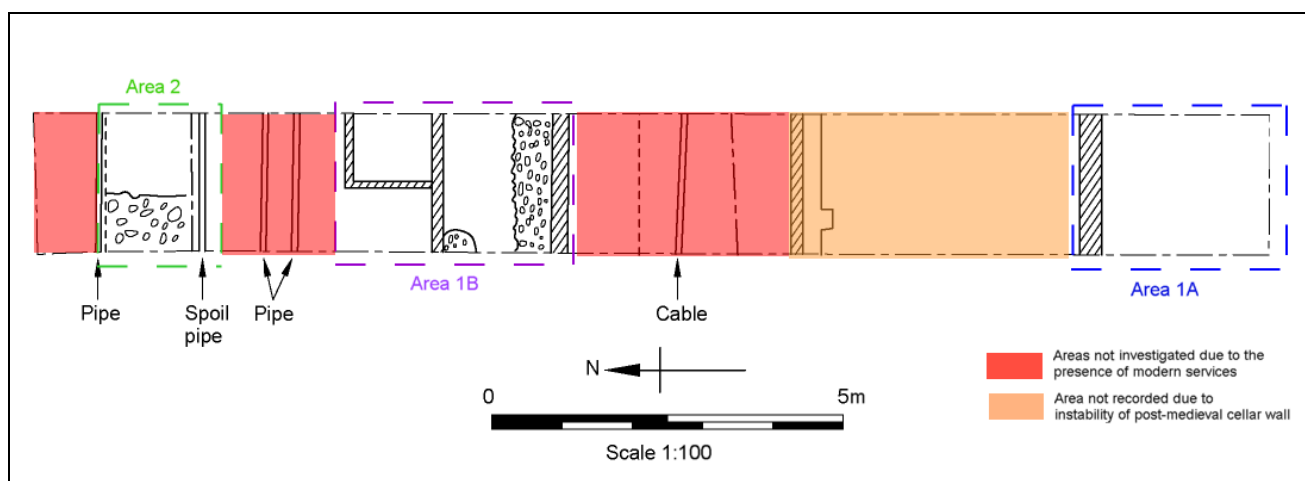


Fig. 3 Sketch plan (Scale 1:100) showing areas of archaeological intervention within the evaluation trench limited by the presence of modern services and the instability of a post-medieval cellar wall

These areas are described below:

Area 1A (Dimensions measuring 3.50m (N-S) x 2.00m (E-W)) located at the southern end of the evaluation trench.

Area 1B (Dimensions measuring 3.50m (N-S) x 2.00m (E-W)) located just slightly N of centre of the evaluation trench

Area 2 (Dimensions measuring 2.10m (N-S) x 2.00m (E-W)) located towards the N end of the evaluation trench

Area 1A: Southern Part of Evaluation Trench

Within the central and southern parts of the evaluation trench, a series of truncated brick and rubble masonry walls were identified, representing the remains of extensive cellarage of post-medieval date. The visible dimensions of the cellarage extended approximately 12.00m N-S and to a depth of over 2.00m below current ground level (to approximately 49.80m AOD). The cellars had been heavily truncated and in-filled with building debris and capped by a membrane of broken tarmac.

The earliest phase of the post-medieval cellarage appeared to be represented by (130) a roughly coursed flint and chalk wall aligned E-W, its visible extent measuring >1.50m (E-W) x 0.50m (N-S) x >2.20m depth (**Plate 1**), with its southern elevation faced by a single skin (0.10m thick) of regularly coursed unfrogged red bricks bonded with a coarse light greyish brown cement mortar with a projecting buttress, measuring 0.25m x 0.40m, offset to left of centre of the elevation.



Plate 1: View looking N showing S elevation of post-medieval cellar wall (130) of brick and flint and chalk masonry construction

The dimensions of the bricks corresponded roughly to 'Statute Bricks' (small standardised bricks measuring approximately 2.25ins. in thickness, which were in use from the late 16th to the early 19th century). The location of this wall appeared to correspond approximately to the N boundary of the house marked on late 19th century plans of the area as No. 18 Staple Gardens. Its considerable depth suggested the presence of substantial cellarage in this area, in excess of 2.00m below present ground level.

The area to the E of wall (130) was filled by homogenous dark greyish clayey silt (131) containing large quantities of 19th-20th century CBM, pottery and broken roof slate interpreted as building material used to backfill the cellarage when the 1960s offices were constructed. Unfortunately, this area could not be fully investigated due to the evident instability of wall (130), which appeared to extend westwards beneath the existing offices, and, upon the advice of the structural engineer, this section of the trench was rapidly backfilled to preserve the stability of the wall, the trench sides and the adjacent office building at Staple Chambers itself.

Approximately 3.5m S of wall (130), another brick wall (127) was identified, also aligned E-W, which appeared to represent the southern wall of the cellar associated with No. 18 Staple Gardens (**Fig. 4; Plate 2**). This wall had been removed to a depth of 1.50m by later truncation and was similar in construction to (130) comprising a single skin of regularly coursed, unfrogged red bricks, eight courses deep, bonded in a coarse mid brown cement mortar with a projecting buttress offset to left of centre. Evidence for a southward return at the E end of the wall was partially visible in the W-facing section of the trench.

Further investigation revealed evidence for a possible cellar floor, which was found immediately to the S of the wall at a depth of 49.80m AOD, represented by a thin layer of well compacted greyish brown cement (128), devoid of inclusions and measuring 0.02m thick. (128) appeared to directly overlie a light yellowish brown clay with flints (126), interpreted as natural deposition.

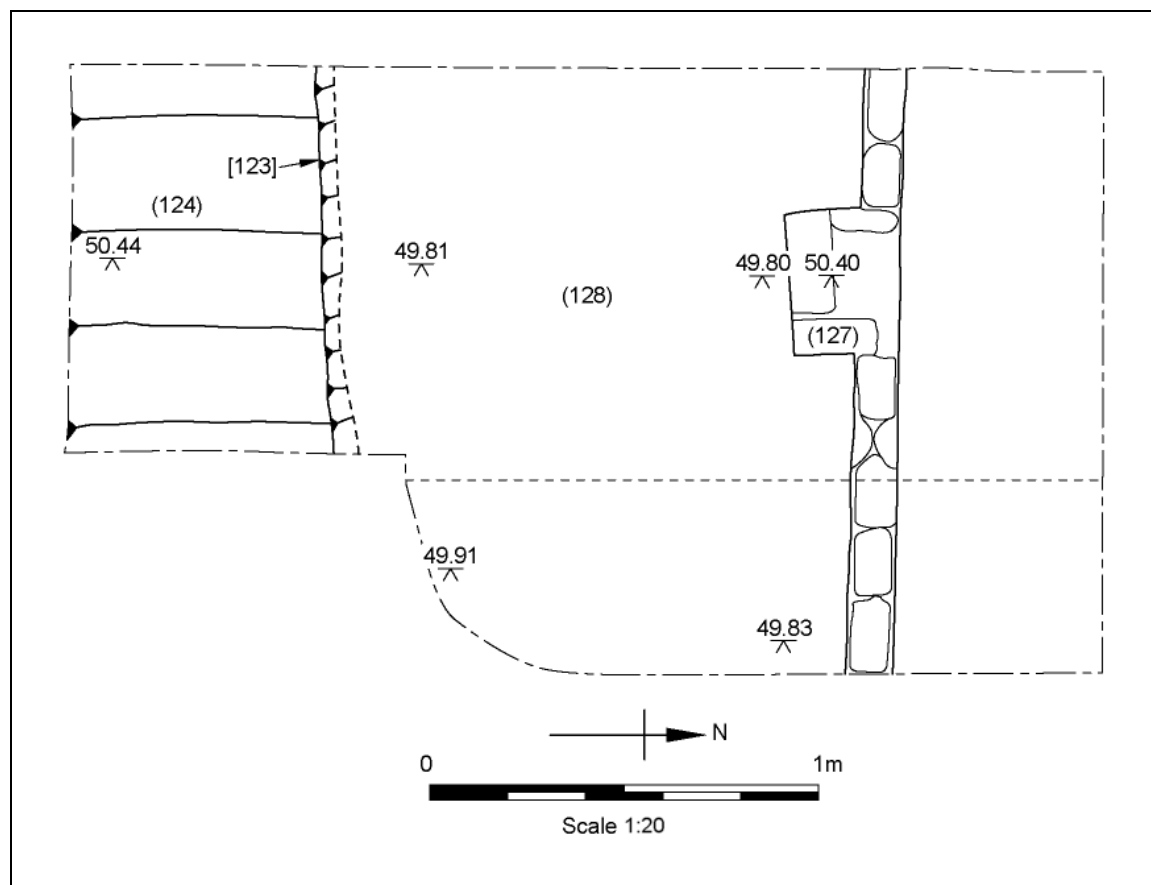


Fig. 4: Area 1A - Plan showing post-medieval brick cellar wall (127) with construction cut [123] to S, located at the southern end of the evaluation trench

Approximately 1.30m S of wall (127), possible evidence for another wall on the same E-W alignment was identified, represented by linear cut [123], its visible extent measuring >0.10m (N-S) x >1.00m (E-W) x > 0.60m (**Plate 2**). This appeared to be a construction cut for another wall, running parallel to (127), which however had been entirely removed by later truncation. The fill of [123] contained a light greyish brown clayey silt (125) with frequent brick and post-medieval ceramics (including 18th century porcelain sherds); the brick was similar in form to that used in the S facing of wall (127), suggesting that both may have been constructed at about the same time. [123] cut a puddled chalk surface (124) of indeterminate date at approximately 50.50m AOD, which in turn overlaid yellowish clay with flints (126) interpreted as natural.

Area 1B – Central Part of Evaluation Trench

It was not possible to investigate a 3.00m x 2.00m section of the trench immediately to the N of wall (130), due to the presence of a modern electricity cable extending E-W directly across the line of the trench and related stability and safety issues. Underlying a series of modern demolition/landscaping deposits, at an approximate depth of 51.70m AOD, were the shallow footings of a wall (121) consisting of two courses of frogged red brick aligned E-W with a continuation to the E, comprising a single course of regularly coursed limestone masonry (**Plate 3**). Projecting to the N of (121) were the footings of another wall (135), consisting of a single course of frogged red brick, 0.10m thick and running northwards for 0.90m with a return at the N end extending eastwards for 0.40m. These wall footings were interpreted as representing internal walls and appeared to occupy the footprint of the gasworks manager's house (No. 20 Staple Gardens) which had been demolished in 1894.



Plate 2: Plan view showing construction cut [123] with puddled chalk surface (124) immediately to S, with truncated remains of brick cellar wall (127) to N

These shallow wall footings overlaid (111), a loosely compacted deposit of angular, heavily fragmented chalk with frequent voids, >0.46m thick, interpreted as a substantial dump or raft of broken chalk used to level the ground, probably associated with the houses documented as occupying the site in the late 19th century. Cut from the top of (111) was [110], the construction cut for another

frogged red brick wall (106), laid in common bond and bonded with a grey cement mortar, located 1.50m S of (121) at a depth of 51.51m AOD. Wall (106) had evidently been heavily truncated, its visible dimensions measuring 1.50m E-W x 0.20m x 0.48m; underlying the wall was a well cemented grey concrete plinth or platform (105), measuring 0.20m in thickness (**Plate 4**). Wall (106) appeared to represent the N extent of the cellarge associated with No. 19 Staple Gardens.



Plate 3: View looking S showing footings of brick and rubble masonry wall (121) with extension to N (135) and remains of truncated brick cellar wall (106) to S

Underlying the chalk levelling deposit (111) was a bedding deposit of soft creamy mortar (120), its visible extent measuring 1.80m x 1.30m x 0.16m, which was presumably associated with the same phase of 19th century construction/landscaping activity as (111). (120) in turn overlaid a thin deposit of light greyish silt (122) with chalk flecking, 0.07m thick, interpreted as a trample deposit associated with the laying of mortar bedding (120).



Plate 4: View looking W showing E-facing section of central part of trench with chalk levelling deposit (111) in section with the remains of brick cellar wall (106) to the S and wall (121) to the N

Underlying (122), at an approximate depth of 1.20m, the top of a substantial flint and chalk wall (103) aligned E-W was identified at 51.00 AOD, its visible dimensions measuring 1.50m (E-W) x 0.50m (N-S) x 0.60m (**Plate 5: Figs. 5 & 6**). Only the northern face of wall was revealed, and appeared to be constructed of medium to large sized lumps of chalk with flint nodules protruding at regular intervals, set within a light greyish brown silty matrix; the wall itself sat within a concave construction cut [102] with sharply vertical sides towards the base. Within [102] and abutting wall (103) was (101), a loosely compacted greyish brown silty clay with occasional chalk flecking and flint, together with moderate quantities of pottery and animal bone, interpreted as a backfill to the construction cut for wall (103).

The pottery recovered from (101) consisted of Chalk Tempered Ware and Sandy Ware of late Saxon date (9th-11th centuries). A single bone ring, also of late Saxon date, was recovered from this deposit, closely comparable to examples retrieved from recent excavations at Northgate House (Cool, 2010).



Plate 5: View looking S showing chalk and flint wall (103) filling construction cut [102] with remains of masonry wall or pier (107) to N (in foreground to right)

Located 0.40m to the N of wall (103), the remains of another heavily truncated masonry wall or possible pier (107) were identified at a depth of 51.08m AOD, its visible extent measuring 0.66m (N-S) x 0.30m (E-W) x >0.50m. This wall appeared to be oriented N-S and was constructed of irregularly coursed limestone and chalk rubble with flint nodules, bonded with a greyish brown silt. Its full extent could not be established as its N end lay within an area occupied by modern services which could not be investigated, while it also appeared to extend further to the W, outside the limits of the evaluation trench.

It is possible that walls (103) and (107) formed components of the same structure, although there was no conclusive evidence of a structural link. Moreover, due to the limited area which could be safely investigated, together with the significant impact of post-medieval landscaping activity represented by

(111) and (120), which appeared to have horizontally truncated earlier deposits and features, it was not possible to determine with certainty from where the construction cuts for walls (103) and (107) had been cut.

Both walls (103) and (107) appeared to cut (100), a friable mid greyish brown clayey silt with frequent quantities of animal bone, pottery sherds and a small quantity of metalworking debris, measuring 0.25m thick, which appeared in section to underlie (120). The pottery consisted almost entirely of Chalk Tempered Ware and Sandy Ware of late Saxon date (9th-11th centuries) apart from a single residual sherd of Colour Coated Ware of late Roman date.

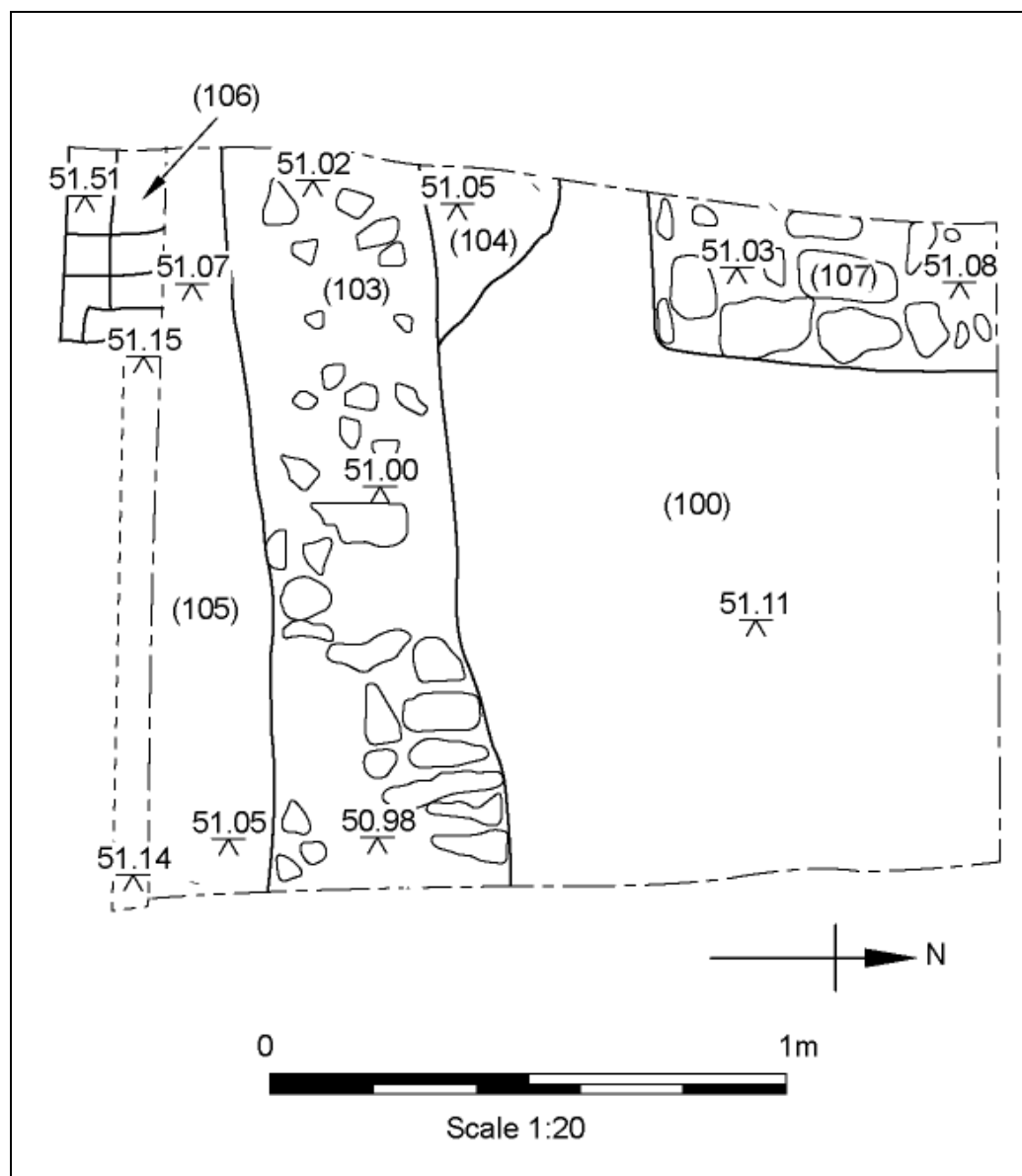


Fig. 5: Area 1B – Plan showing C19th brick wall (106) and associated concrete platform (105) and earlier masonry walls (103) and (107)

The animal bone assemblage appeared to be domestic in nature, chiefly consisting of cattle, *caprine* and pig bone, together with a small quantity of oyster shell. Evidence of dog-gnawing was identified on some of the bones (possibly indicative of exposure to scavengers), as well as several butchery marks;

however, the assemblage appeared generally to be characteristic of domestic consumption rather than large-scale animal processing or bone-working activity.

The metalworking debris recovered from (100), although small in quantity, contained two smithing hearth bottoms, together with some material derived from the lining of a hearth; suggesting the presence of a smithing hearth in the immediate vicinity. (100) was difficult to characterise due to the limited extent revealed, it appeared to represent an occupation or midden deposit of probable late Saxon date, associated with domestic occupation and metalworking activity.

Although surprisingly there appeared to be little or no evidence for charcoal inclusions, the finds (particularly the bone assemblage) appeared to be indicative of domestic activity. It is possible that walls (103) and (107) were cut from (100) but this could not be satisfactorily determined due to the extent of post-medieval building activity which appears to have severely truncated the deposits higher up.

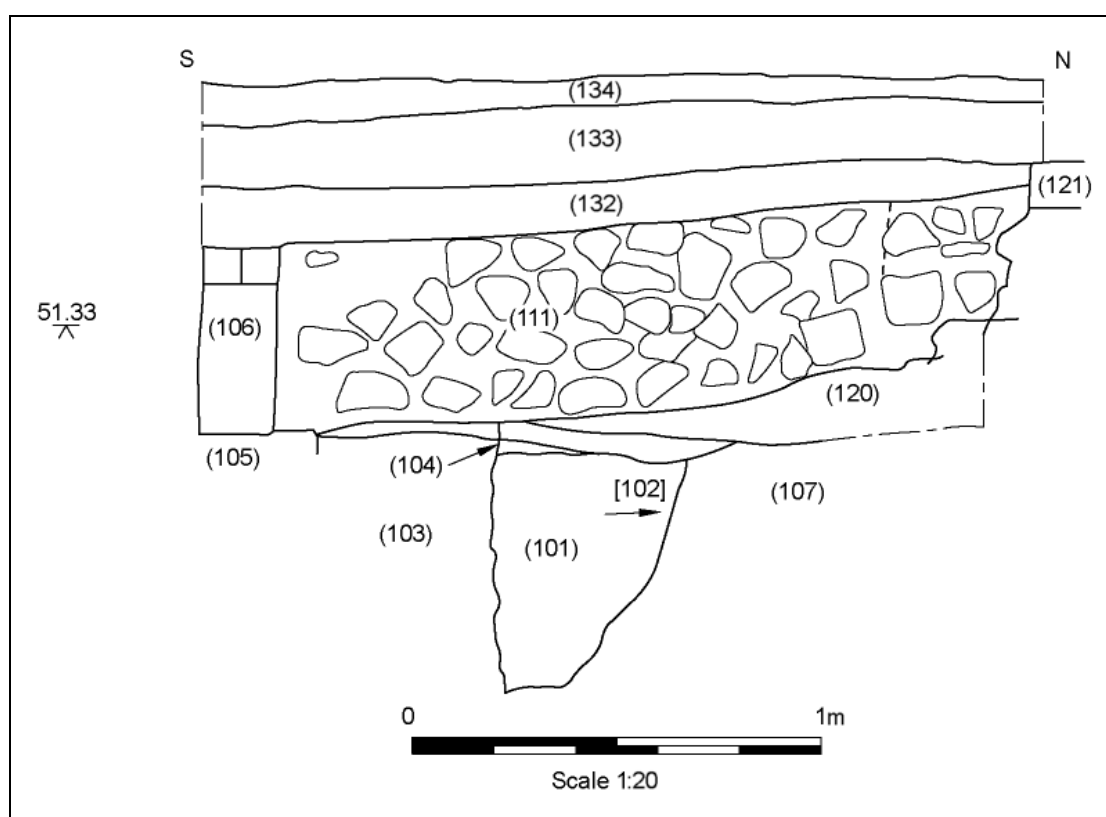


Fig. 6: Area 1B – E facing section of central part of evaluation trench

Underlying (100) was (109), a well compacted mid brown silty clay containing small quantities of ceramics, animal bone and a single piece of unmodified flint debitage of indeterminate date. The ceramic assemblage appeared to be late Saxon in date, comprising three body sherds of Chalk Tempered Ware, with the exception of a single brick fragment dated to the 13th-14th century (**Fig. 7**).

The occurrence of this 13th-14th century brick fragment is difficult to explain; it could imply that the late Saxon pottery in (109) is residual, which might suggest that the pottery in (100) could also be residual in nature. However, no intrusive material was found in the pottery from (100), which was entirely late Saxon in date.

It appears more likely that the brick fragment in (109) is intrusive; a possible explanation is that the fragment could have intruded into this context as a result of the construction of masonry wall (103), which would imply that (103) dates from the 13th-14th century. However, the backfill deposit (101) for the wall construction cut [102] appeared to contain exclusively late Saxon material. The animal bone assemblage from (109) was much smaller than (100) and appeared to be indicative of small scale domestic consumption.

(109) in turn overlaid (116), a thin spread of clean yellowish brown clay with angular gravel and flint inclusions (0.10m thickness), extending to a maximum visible depth of 50.62m AOD, provisionally interpreted as a coarse floor surface of indeterminate date.

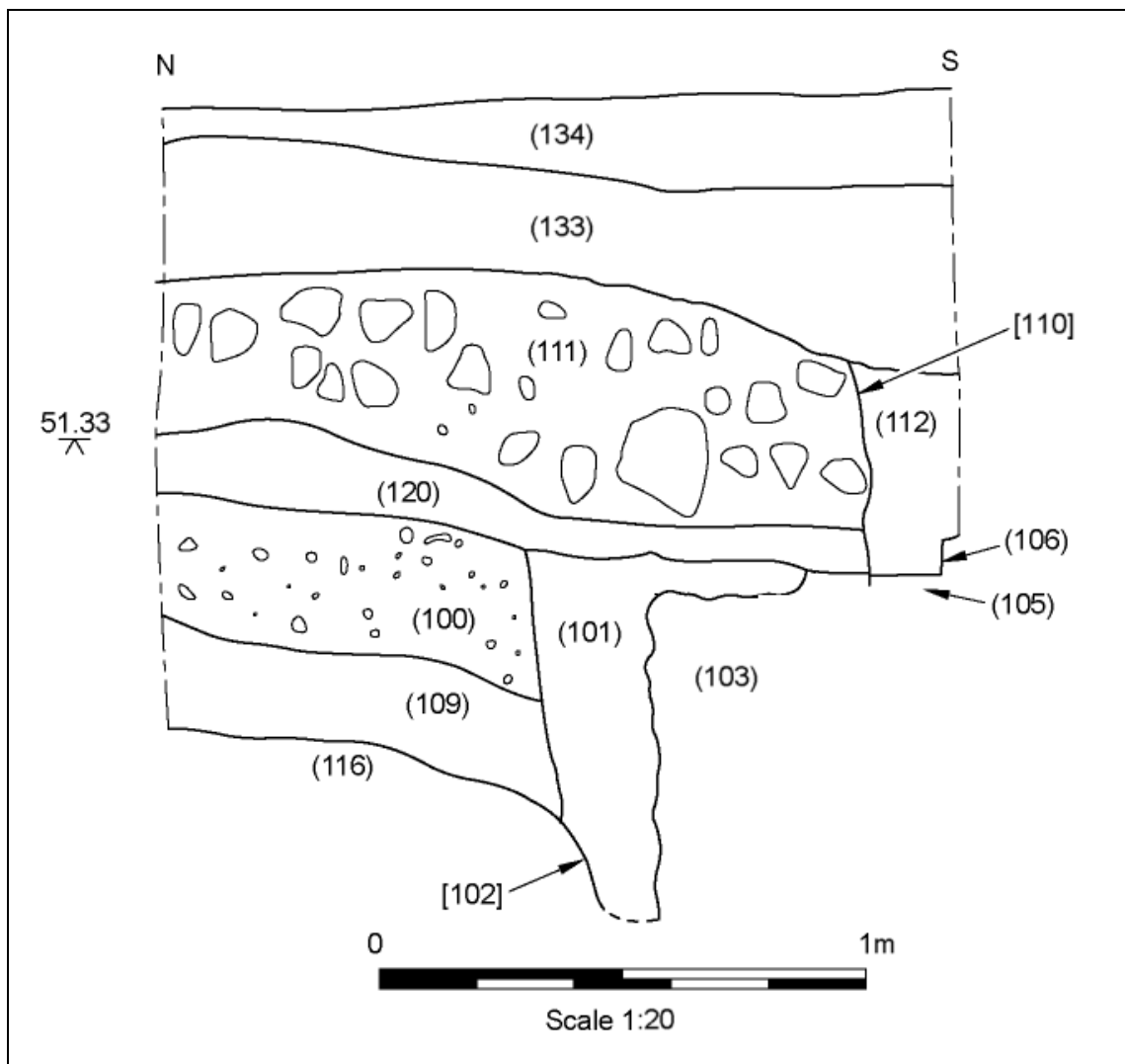


Fig. 7: Area 1B -W-facing section of central part of evaluation trench

Area 2: Northern Part of Evaluation Trench

Within the N half of the trench, immediately N of wall (121), a 2.00m × 2.00m section of the trench could not be investigated due to the presence of piping for modern utilities, while at the northernmost end of the evaluation trench, another section could not be recorded for similar reasons. Consequently, the area which could be investigated safely was restricted to a 2.10m × 2.00m section of the trench.

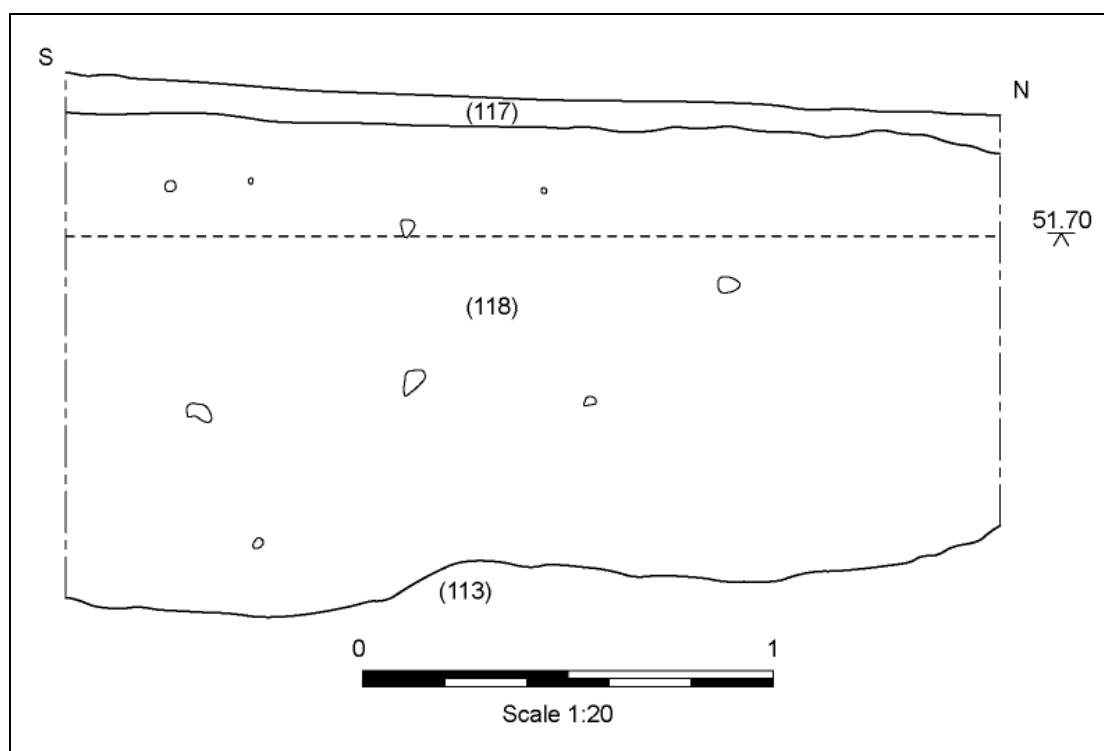


Fig. 8: Area 2 - E-facing section towards N end of evaluation trench

Within this area, the uppermost deposit encountered consisted of a friable dark brown sandy silt topsoil (117) which in turn overlaid a firmly compacted, dark brown gritty sandy silt (118) with frequent inclusions of chalk and CBM extending to a depth of 1.20m, interpreted as a deposit associated with demolition or landscaping activity of probable late 19th century date (**Fig. 8**).

Underlying (118), at an approximate depth of 50.96m AOD, the remains of a heavily truncated, N-S aligned wall were identified (113), its visible extent measuring 2.10m × 0.60m × > 0.60m, consisting of roughly hewn, irregularly coursed chalk and flint masonry within a buff sandy mortar, with crude mortar facing on the eastern side (**Fig. 9; Plate 6**). At the southern end of the wall, there appeared to be possible evidence of an eastward return although this could not be positively determined within the limits of the evaluation trench. There was no evidence to indicate from where (113) had been cut; it is likely that evidence for the cut had been removed as a result of post-medieval demolition/landscaping activity associated with (118) which could have horizontally truncated the deposits above (113). Wall (113) was interpreted as representing part of a sub-structure or cellar of probable medieval date associated with a building occupying the street frontage.



Fig. 9: Area 2 - Plan showing masonry wall (113) and associated deposit (119) towards N end of evaluation trench

Abutting the eastern side of wall (113) was a firmly compacted light yellowish brown silty clay (119) containing frequent chalk, mortar and flint inclusions, moderate quantities of broken slate fragments, pottery and ceramic tile fragments and occasional fragments of cattle and *caprine* bone, oyster shell (*Ostrea edulis*) and snail shell. (119) was interpreted as a probable backfill deposit associated with the disuse or demolition of the structure represented by wall (113).

A sondage was excavated to a depth of approximately 0.60m (50.26m AOD) to investigate (119) and determine the depth of the cellarage represented by wall (113); however, the base of the wall was not reached and no evidence for a floor level was encountered (**Plate 7**). This strongly suggested the presence of deep cellarage that may well have obliterated earlier underlying cultural deposits although this could not be confirmed within the limits of the evaluation trenching, due to access and space constraints.



Plate 6: View looking N showing substantial masonry wall (113) towards N end of trench

The date of wall (113) could not be securely established; however, the backfill deposit (119) contained whiteware fabrics of 12th-14th century date, together with green-glazed ridge and floor tile fragments of probable 13th-14th century date and a moderate quantity of grey-green, metamorphic mudstone slate, probably imported from quarries on the North Cornwall coast and very similar to that used in late 14th century roofing from St Mary Magdalene chapel and infirmary at Winchester (Hayward, 2010).



Plate 7: View looking W showing sondage through backfill deposit (119) and associated masonry wall (113) at N end of evaluation trench

Based on the evidence of the ceramics and worked slate, it would appear that the structure associated with wall (113) probably dated from the 13th-14th century. The date of the backfill event represented by (119) is difficult to determine precisely, although the fact that the latest datable material consisted of worked slate of possible late 14th century date might suggest that the structure fell into disuse not earlier than c.1400. The presence of fine green-glazed roof and floor tile fragments and Cornish slate roofing further suggests that the structure associated with wall (113) was probably of high status.

Test Pit 1



Plate 8: View looking N showing S-facing section of Test Pit 1 with shallow footings for 19th century brick wall (202) truncated by concrete foundations for existing 1960s offices

Test Pit 1, located adjacent to the W wall of the existing office building, measured 1.10m x 1.10m and was excavated to an approximate depth of 0.90m below existing ground level (52.17m AOD). Underlying the tarmac (200) was a deposit of firm mid brown gritty clay (201) with frequent chalk fragments and CBM inclusions interpreted as a make-up layer associated with the existing office building. (201) contained a small quantity of residual pottery and tile fragments of late medieval (13th-15th century) date. At 51.73m AOD, underlying this make-up deposit, a single course of bricks aligned E-W and bonded with a whitish sandy mortar was identified (202); this was interpreted as the footings of a possible outbuilding of mid to late 19th century date which had been truncated by the insertion of the concrete foundations for the existing 1960s offices (203) (**Plate 8; Fig. 10**).

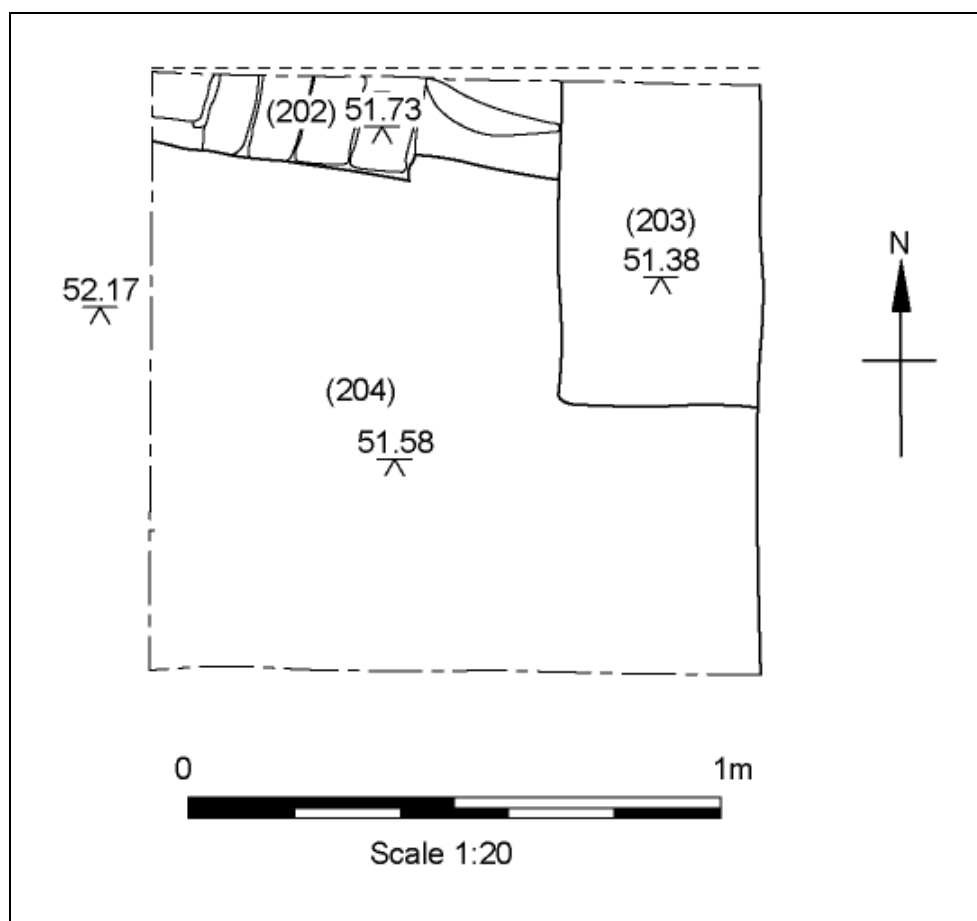


Fig. 10: Plan of Test Pit 1

Test Pit 2

Test Pit 2, excavated immediately adjacent to the N wall of the existing office building, measured 1.35 E-W x 1.22m N-S and was excavated to a maximum depth of approximately 1.80m below ground level (52.03m AOD).

Within Test Pit 2, underlying the topsoil (300) was a firm light brown sandy silt (301) with occasional CBM and subangular stones (0.17m thick) interpreted as a modern landscaping deposit. Underlying (301) was (302) a thin lens of firm dark grey clayey loam with occasional CBM and chalk fragments, 0.05m thick, which in turn overlaid (303), a soft light brown coarse sand deposit, 0.07m in thickness.

(302) and (303) represented a sequence of thin lenses interpreted as tipping or landscaping deposits associated with the construction of the present office building. (303) in turn overlaid a moderately compacted dark brown clayey silt (304) with frequent chalk and slate fragments and charcoal flecking (0.82m thick), possibly representing an accumulation of post-medieval garden soils.

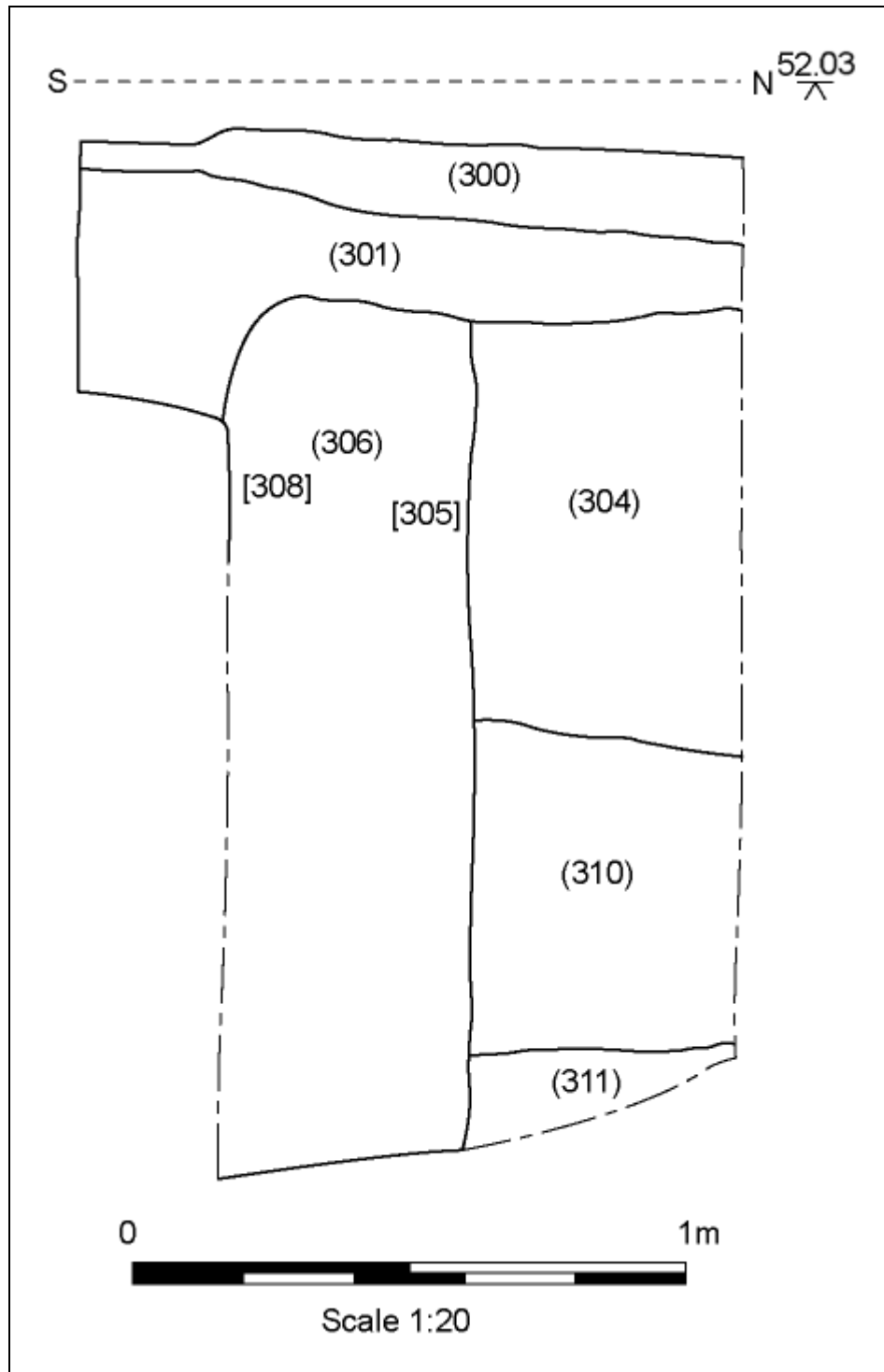


Fig. 11: Test Pit 2 - E Facing Section

From the top of (304), a substantial rectilinear trench had been cut [305], aligned E-W, with a sharp break of slope at the top and steep, almost vertical sides, its visible extent measuring 0.85m (E-W) × 0.40m (N-S) × 1.50m to accommodate a large cement capped drain of probable late 19th or early 20th century date which extended beneath the modern offices (**Fig.11**).

The upper fill of [305] consisted of a well compacted, mottled dark orangey brown silty clay (306) with flint and chalk inclusions, extending to a depth of 1.50m. A residual sherd of Central Gaulish samian, which had been modified to form a centrally perforated disk, was recovered from this deposit. This in turn overlaid the cement capping of the drain (309), the top of which was identified at a depth of 50.21m AOD.

Towards the base of the test pit, underlying garden soil deposit (304), a moderately compacted dark greyish brown silty clay with very occasional CBM flecking (310) was observed, which in turn overlaid a soft-light mid brown silty clay (311), its visible thickness measuring 0.16m, which was observed at a depth of 50.38m AOD.

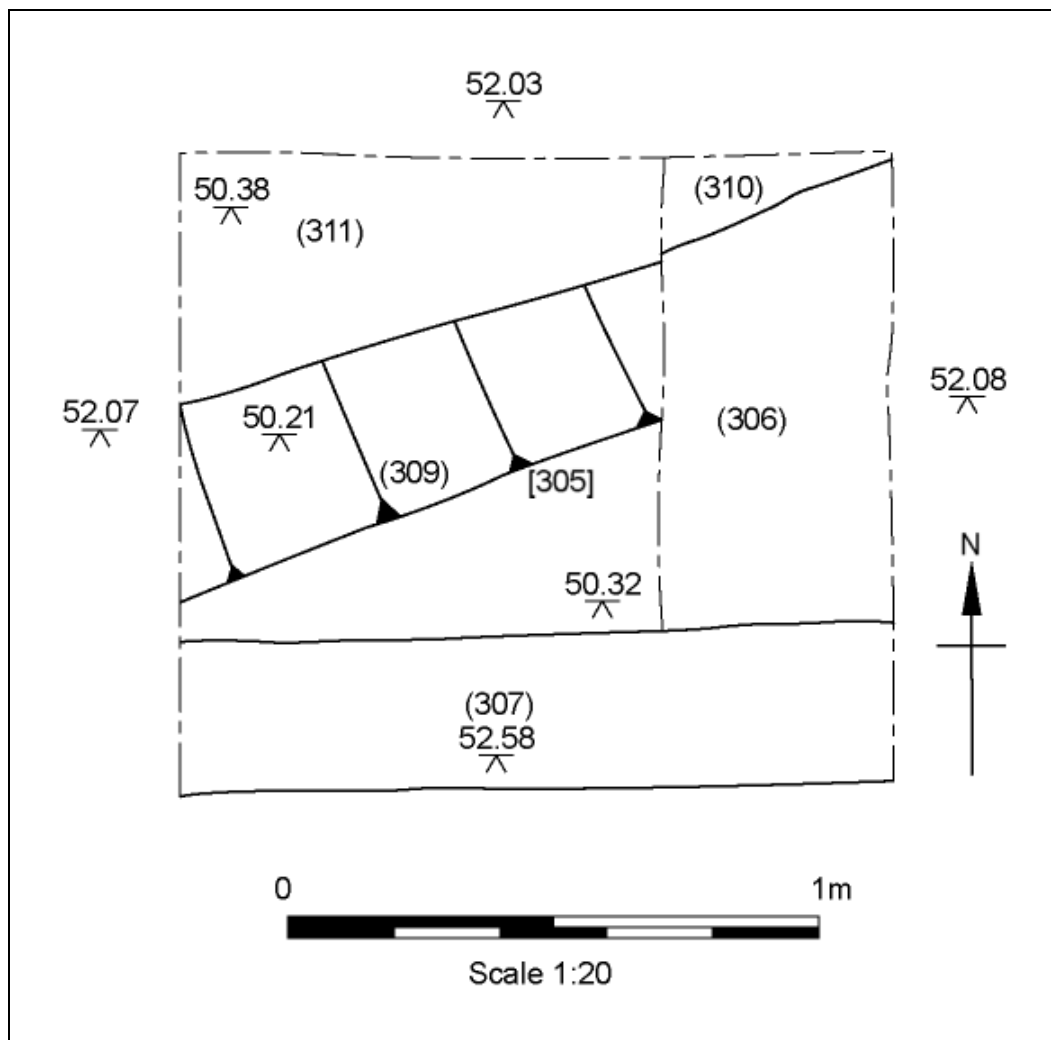


Fig. 12: Plan of Test Pit 2 at N end of existing office building

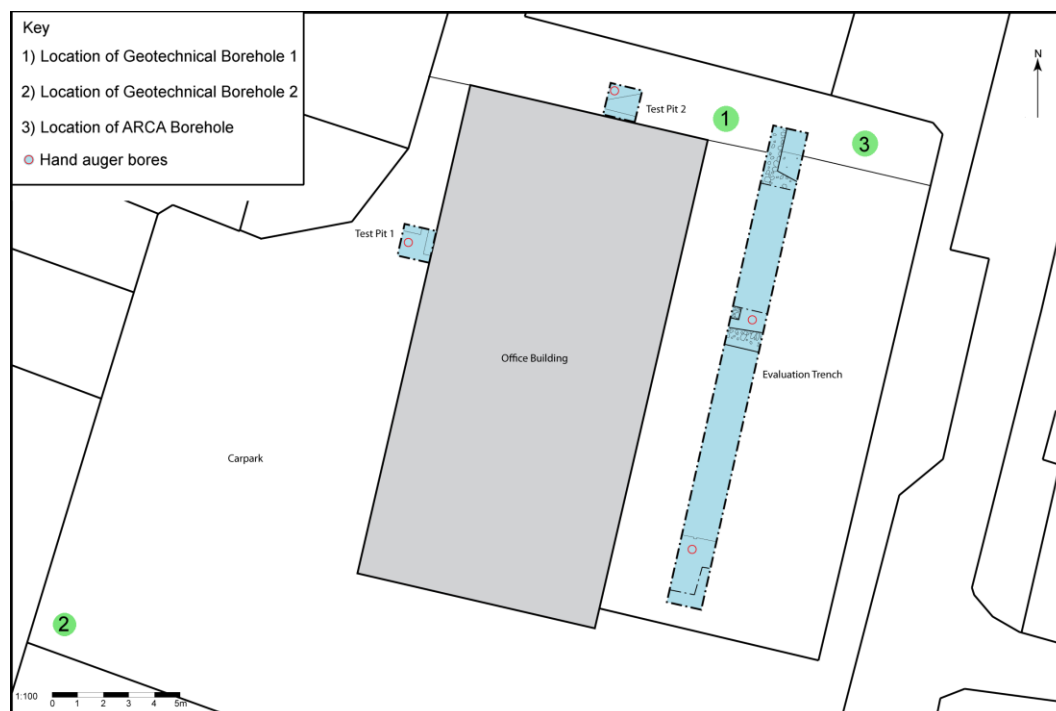


Fig. 13: Plan showing location of geotechnical boreholes observed and hand auger bores undertaken by ARCA

Excavation of geotechnical boreholes

Two geotechnical boreholes (**Fig. 13**) were excavated on the site by percussive rig and partially observed by Gerry Martin MA MifA. Borehole 1 was located immediately NE of the existing office building while Borehole 2 was located in the car park area to the SW of the existing offices.

The sequence of deposits revealed in Borehole 1 consisted of the following:

0-2.50m	Demolition rubble forming made-up ground
2.50-3.50m	Brown 'Hoggin' (Clay-with-Flints)
3.50m	Brown Clay-with-Flints but containing degraded oyster shell and charcoal flecks, made ground
3.70m	Brown clay with charcoal
4.00-6.50m	Dirty, off-white re-deposited chalk
6.50m-8.00m	Chalk lacking structure mixed with light brown clay and charcoal flecks. Five flints were recovered from this deposit but analysis (App. 6) suggests they were probably not cultural.
8.00m	Natural white chalk with an orange hue at the interface suggestive of weathering and exposure

Bore-hole 1 identified three horizontal layers that contained small fragments of oyster shell at a depth of approximately 48.50m AOD, initially interpreted as occupation deposits and apparently contradicting the terrain modelling evidence derived from the Northgate House excavations, suggesting that natural drift geology lies at an approximate height of between 50m and 50.4m AOD. Borehole 2, located to the SW of the office building, recovered a sequence that revealed 1.50m of made-ground, followed by a 4.00m depth of natural clay with flints overlying chalk natural. In addition, a programme of geoarchaeological investigation was implemented, comprising a series of hand auger bores undertaken by a qualified geoarchaeologist, Richard Payne (ARCA) to establish the depth of archaeological deposits in specific areas, followed by the excavation

of a single geotechnical borehole at the N end of the site. The results of this programme of investigation are detailed below.

8. Geoarchaeological assessment of stratigraphy at Staple Gardens Winchester

Richard Payne MSc (ARCA)

The Staple Chambers site is located on the W side of Staple Gardens, Winchester (centred on NGR SU 47958 29718) at a height of approximately +52.00m OD. A geotechnical borehole survey carried out in August 2010 demonstrate that 'Made ground' outcrops across the whole site, while archaeological trenches indicate that post medieval / modern development activity has truncated much of the earlier archaeology. The local geology is mapped by the British Geological Survey as Cretaceous Chalk of the Seaford Chalk Formation.

Border Archaeology was commissioned to undertake an archaeological evaluation of the Staple Chambers site as part of a planning application for the demolition of the existing building and construction of new offices. The evaluation consisted of one trench and two test pits (**Fig. 1**). ARCA was requested to assess the geoarchaeology of the site and model the stratigraphy. Accordingly the author visited the site on September 3rd, 6th and 9th. A further visit was made on Tuesday October 19th in order to drill a borehole to gain further information on the deposits lying beneath the evaluation trenches.

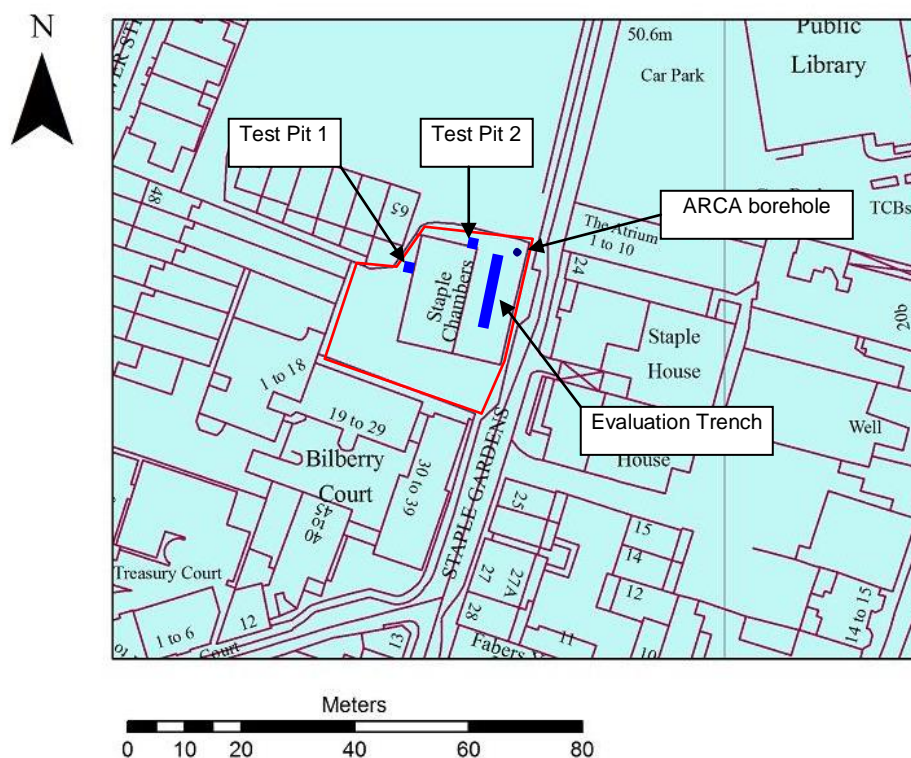


Fig. 1: Location of study area outlined in red and position of test pits, trench and borehole.

Methodology

The author made observations from vertical sections exposed in each of the archaeological evaluation trenches, while additional stratigraphic information was provided by describing strata recovered in boreholes drills through the base of the trenches with a hand operated Edelmann auger.

The single geoarchaeology borehole was drilling using an Eijelkamp gouge augers powered by an Atlas Cobra mechanical hammer. This equipment was used to drill from the present ground surface to the Chalk bedrock. Strata recovered in the gouge auger chamber was cleaned, photographed and described. It was then discarded and on completion of the borehole was used to refill the void that had been created.

Descriptions of strata made from vertical sections and boreholes were all made using the terminology of Hodgson (1976) and Munsell Color (2000). These records, together with photographs of the sections and borehole strata, and the RockWorks database form the geoarchaeological archive (currently in storage at the University of Winchester). All stratigraphic data collected from upstanding sections and boreholes was input into a Rockworks 2006 (Rockworks 2007) database and that software used to produce the deposit model reproduced in Figure 3 and the composite cross sections presented as Figures 3-6.

Results

Test Pit 1

Test pit 1 was located on the W side of Staple Chambers at NGR SU 47943 29723, the deposits were examined in section and by use of a hand-operated Edelmann auger and described below. The modern ground level was +52.17m OD.

Observable in section:

0.00 – 0.80m (Test Pit) Tarmac overlying made ground consisting of 7.5 YR 3/2 dark brown poorly sorted sediment, silty clay in texture containing fragments of brick and mortar.

Observable in Edelmann auger samples:

0.80–1.30m. Dark brown poorly sorted sediment as above.

1.30–1.50m. Dark brown sediment poorly sorted sediment as described above becoming 7.5 YR 4/4 brown and silty clay in texture with fewer inclusions.

1.50–1.75m. 5 YR 5/5 yellowish red clay with flints. Interpreted as the Clay-with-Flints geological unit.

Test Pit 2

Test Pit 2 was located on the N side of Staple Chambers at NGR SU 47954 29727. The deposits were examined in section and by use of a hand-operated Edelmann auger and described below. The modern ground level was +52.03m OD.

0.00–1.85m. 7.5 YR 3/2 dark brown well mixed sandy clay containing fragments of brick, charcoal, flint and mortar.

1.85–2.5m. 5 YR 5/5 yellowish red clay with flints. Interpreted as the Clay-with-Flints geological unit.

Evaluation Trench, North Deposit Description

The sample point was located in the Evaluation Trench at NGR SU 47953 29722. The deposits were examined in section and by use of a hand-operated Edelmann auger and are described below. The modern ground level was +52.00m OD.

0.00–1.50m. (Trench) Made ground comprised of building rubble, re-deposited silt/clays and fragments of mortar, brick, charcoal and flint.

1.50–2.20m. 10 YR 3/2 very dark greyish brown silty clay loam, very mixed containing fragments of brick, mortar and flint.

2.20–3.00m. 7.5 YR 4/6 strong brown clay with flints. Interpreted as the Clay-with-Flints geological unit.

Evaluation Trench, South Deposit Description

The sample point was located in the Evaluation Trench at NGR SU 47952 29712. The deposits were examined in section and by use of a hand-operated Edelmann auger and are described below. The modern ground level was +52.00m OD.

0.00–2.20m. (Evaluation Trench) Made ground and fill of cellars comprised of building rubble, re-deposited sediment and fragments of mortar, brick, charcoal and flint.

2.2–3.1m. 5 YR 5/5 yellowish red clay with flints. Interpreted as the Clay-with-Flints geological unit.

Borehole

On the October 19th 2010 ARCA returned to the site in order to drill a borehole to further explore the strong brown to yellowish red clays encountered beneath the made ground deposits during the course of the evaluation. The borehole was located at NGR SU 47962 29726 while the modern ground level was 51.90m OD.

0.00–1.30m. 10 YR 4/2 dark greyish brown re-deposited sandy clay loam containing fragments of brick, chalk and charcoal, with an abrupt lower boundary.

1.30–2.24m. demolition rubble and occasional patches of re-deposited sandy clay loam, with an abrupt lower boundary.

2.24–2.60m. 5 YR 4/1 dark grey silty clay containing granular-sized fragments of charcoal and chalk clasts, with a sharp lower boundary.

2.60–4.25m. 5 YR 5/6 yellowish red clay with flints, increasing amounts of flint towards base of unit. A sharp and undulating lower boundary. This is the deposit that had provisionally been interpreted as Clay-with-Flints.

4.25–4.50m. 7.5 YR 7/4 pink, weathered chalk, diffuse lower boundary.

4.50–5.50m. chalk, becoming firmer and cleaner with depth (end of borehole).

Deposit Model

The stratigraphic data obtained from test pits and the evaluation trench sections together with the data gathered from the borehole were input into a RockWorks database containing the existing deposit data. The latter has been transcribed by the author from Winchester Museums' Service archive as part of his MPhil/PhD research. The combined dataset was then used to model the bedrock stratigraphy of an area of 100m radius from the Staple Chambers site (**Fig. 2**) and to produce a series of composite cross sections running through the site (**Figs 3-6**).

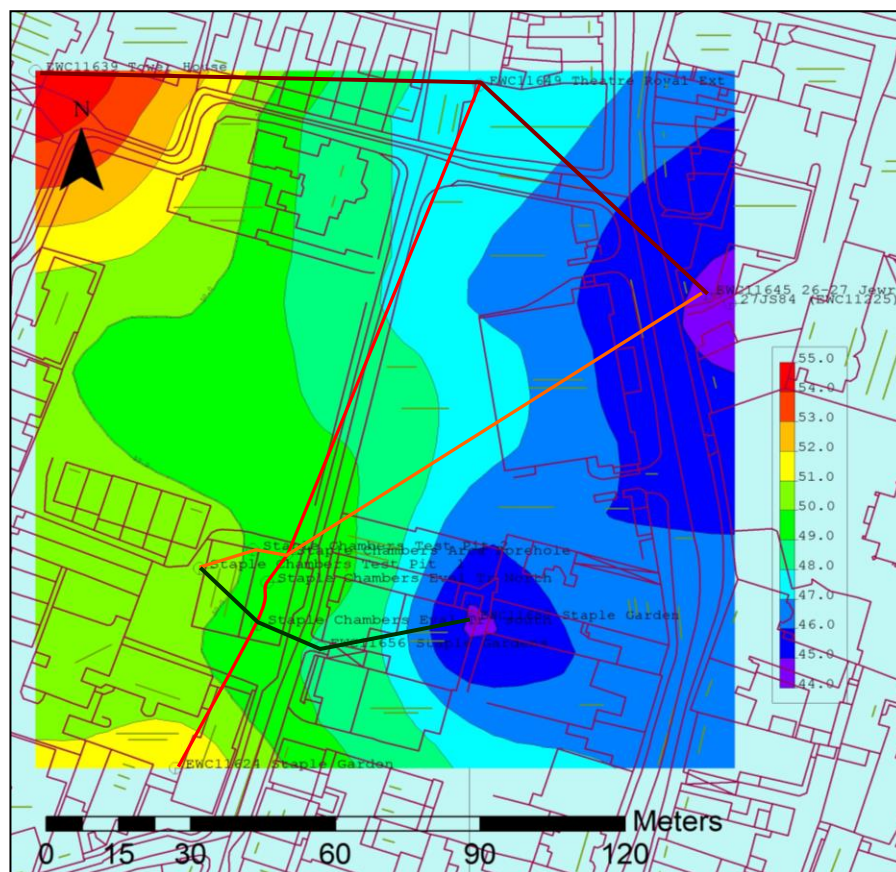


Fig. 2: Deposit model, showing elevation of the natural substrate underlying archaeological deposits with the colour scale representing in metres the height A.O.D.

- North - south section displayed in Figure 3.
- Southwest – northeast section displayed in Figure 4.
- West – east section displayed in Figure 5.
- West – east section displayed in Figure 6.

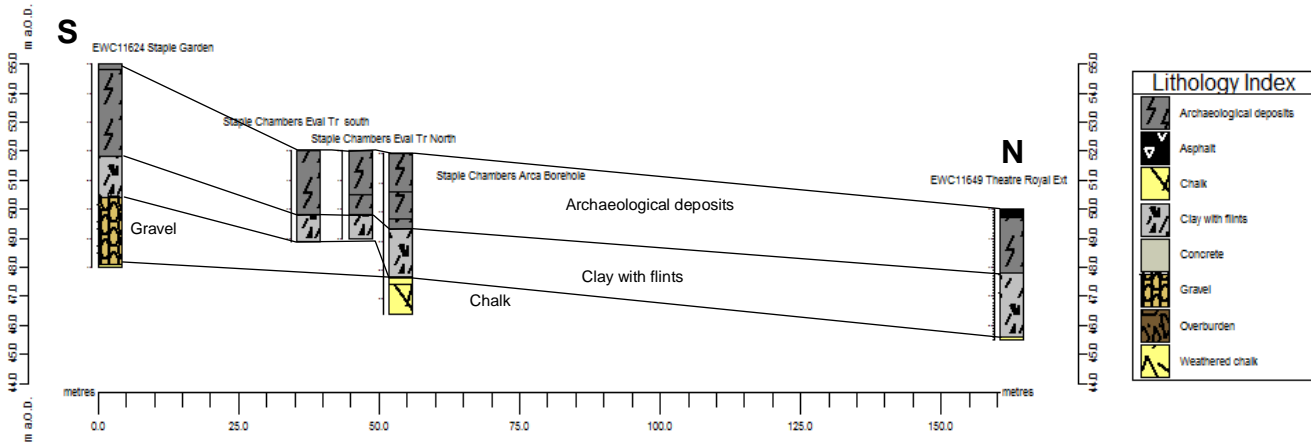


Fig. 3: North – south section

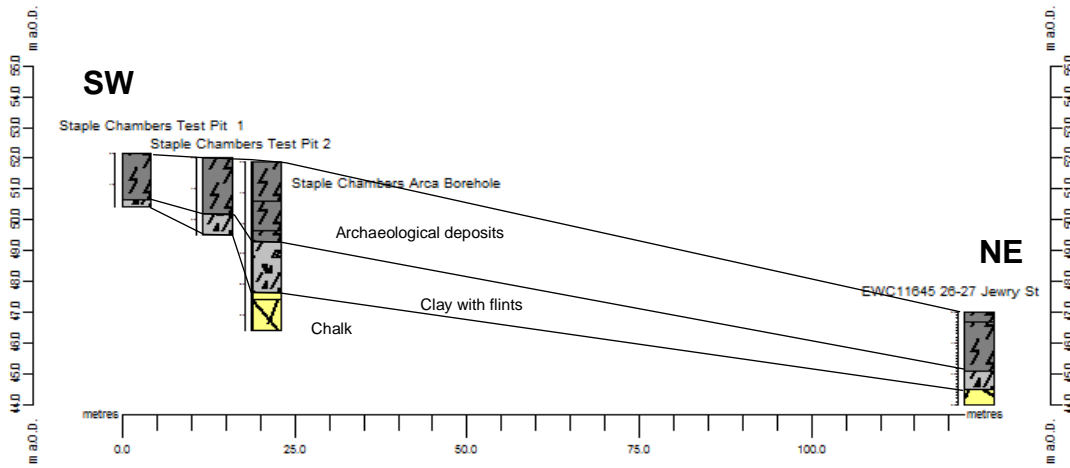


Fig. 4: Southwest - northeast section.

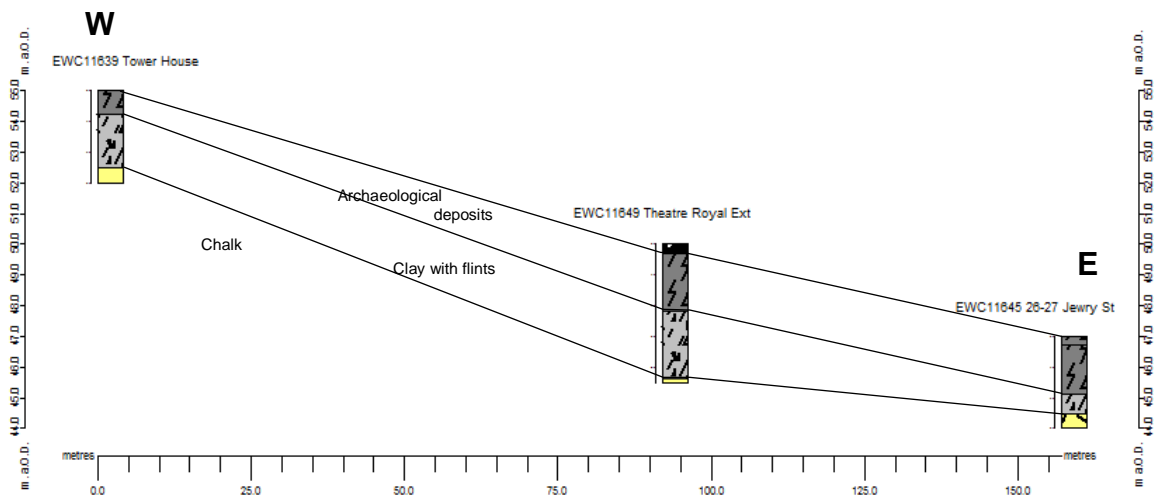


Fig. 5: West - east section.

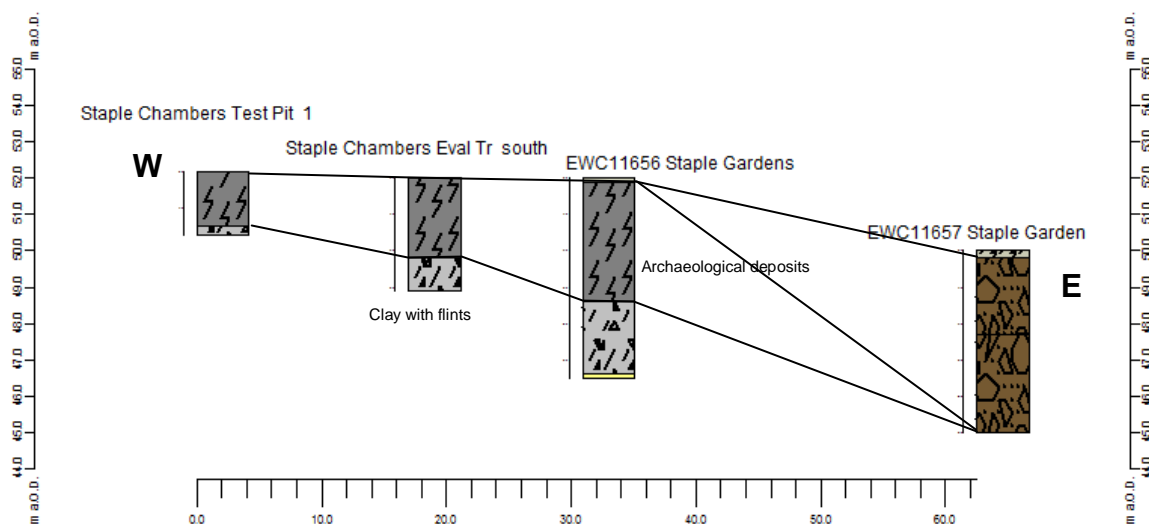


Fig. 6: W-E section

Discussion and Conclusions

The uppermost deposits encountered in the test pits, evaluation trench and the ARCA borehole are archaeological sediment comprised mostly of re-deposited silts/clays and building debris. These ranged in thickness from 1.50m in Test Pit 1 to over 2.00m in the evaluation trench. It would appear that as a result of the intensity of human activity in the Staple Gardens area archaeological deposits are largely of post-medieval date with older strata surviving in isolated patches. Across the entire study area the archaeological deposits overlay Clay-with-Flints strata, which in the ARCA borehole was recorded as being 1.65m in thickness and overlying weathered Chalk.

Clay-with-Flints are thought to be a residue resulting from carbonate dissolution while their formation is thought to date from the late Tertiary to the Middle Pleistocene. The Chalk underlying the Clay-with-Flints is initially highly weathered suggesting exposure to sub-aerial processes, but it becomes 'cleaner' and firmer with depth. It is notable that at EWC 11624, a further site in Staple Gardens a deposit of gravel measuring over 2.00m in thickness was recorded underlying the Clay-with-Flints (**Fig. 3**) (HER record no. EWC11624). This might be a Pleistocene gravel terrace, although such a stratigraphic relationship is highly problematic given the inferred age of the Clay-with-Flints. It is also possible that the 'gravel' could in fact be weathered Chalk. Further investigation of the stratigraphic archive is clearly needed to address this uncertainty.

Due to the sparseness of deposits in the Staple Gardens area in the RockWorks database that predate the post-medieval period it was only possible to model the distribution and thickness of the archaeological deposits as a whole. Examination of sequences recorded at Staple Chambers and from five surrounding sites for which stratigraphic data are available, indicate that Clay-with-Flints overlies Chalk across the whole area. The Chalk and Clay-with-Flints slopes gently downwards from S to N with a more pronounced downwards dip from W to E. The thickness

of archaeological deposits ranges from 1.50m in the W to up to 3.50m in the E. One anomaly in Figure 6 is the occurrence of nearly 5.00m of made ground comprising 'dark red contaminated brick gravel with ash fragments and dark grey noxious substances'. This observation was recorded during work carried out at the NE corner of Staple House on the E side of Staple Gardens and approximately 45.00m to the E of the study area. In all likelihood, the record is probably of post-medieval/modern back filling of a cellar or other deep excavation.

The model produced in Figure 2 shows that there is considerable depth of archaeological deposits across the study area and in its immediate vicinity. However, the model does not enable the discrimination of these deposits by age. Therefore, both conventional archaeological and geoarchaeological works will be required whenever deposits in this area are to be impacted by development.

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9. Discussion of Results

The results of the evaluation trenching, test pits and geoarchaeological investigation at Staple Chambers have revealed the presence of archaeological deposits ranging approximately in thickness from 1.50m (in Test Pit 1) to 2.00m (in the evaluation trench), overlying Clay with Flints. The results of Geotechnical Borehole 1 (immediately NE of the existing offices) suggested the possible presence of deeper archaeological deposits in this area, but further investigation suggests that this reading was probably anomalous, possibly resulting from the insertion of a deep cement capped drain of late 19th or 20th century date.

The results of this programme of archaeological fieldwork also demonstrate that archaeological deposits and features within the street frontage immediately E of the existing 1960s offices at Staple Chambers have been subject to considerable disturbance by 19th-20th century construction and landscaping activity and the installation of modern utilities.

Towards the southern end of the evaluation trench (*Area 1A*), it appeared that the post-medieval cellarage extended to a depth of over 2.00m and had entirely truncated archaeological deposits down to natural (represented by yellow Clay-with-Flints). Consequently, the archaeological potential of this area appears to be limited.

Evidence of substantial post-medieval brick cellarage was identified in the southern and central parts of the evaluation trench, extending to a depth of 2.20m below existing ground level. Investigation of the cellars was limited due to the extensive presence of modern services - the fact that the cellars had been heavily

truncated immediately prior to the construction of the existing offices in 1964 causing serious concerns as to stability - but at least two phases of construction and repair were identified.

The earlier phase of construction appeared to date to the late 18th or early 19th century and was represented by walls (127) and (130), while evidence of later construction was represented by (106) and (121), which appear to be mid-to-late 19th century in date. The cellarge appears to be associated with a row of cottages first shown in this location on Godson's 1750 map of Winchester and later shown on a plan of Staple Gardens dated 1823. These properties (later known as Nos. 17-19 Staple Gardens) were extensively altered in the mid-to-late 19th century following their purchase by Winchester Gas Company and Nos. 18 & 19 were converted into offices associated with the adjacent gasworks.

Further evidence of truncation was identified in the central part of the trench, represented by a substantial deposit of broken chalk (111) interpreted as a levelling deposit or raft probably inserted in the mid-late 19th century, which appears to have resulted in the removal of archaeological deposits of later medieval or early post-medieval date in this area and the likely truncation of earlier deposits and features of late Saxon-early Norman date.

However, in spite of the considerable impact of post-medieval cellarge, later 20th century construction/landscaping activity and modern utility trenching, archaeological deposits and features predating the post-medieval period appear to have survived in isolated pockets. Within the central and northern parts of the evaluation trench, features and deposits of medieval or Saxon date were identified approximately 1.00m below existing ground level (approximately 52.00m AOD).

Within the central part of the trench, immediately N of the post-medieval cellarge (*Area 1B*), the heavily truncated footings of a substantial chalk and flint wall (103) aligned E-W were identified at a depth of 51.00m AOD, possibly associated with another masonry wall or pier (107) located just to the N (located at 51.08m AOD).

It is difficult to draw detailed conclusions regarding the date and function of walls (103) and (107), due to the limited extent of these features as revealed in the evaluation trench and the extent of 19th-20th century construction and landscaping activity which appears to have significantly truncated the deposits associated with these walls. Two possible interpretations can be advanced:

1/The two walls either form part of the sub-structure of a masonry building or the lower stages of a boundary wall of late Saxon (9th-11th century) date.

2/The walls either form part of the sub-structure of a masonry building or the lower stages of a boundary wall of later medieval date (c. 13th-14th century), possibly associated with one of the tenements documented as occupying this plot of land from the late 13th through to the early 15th century.

In support of the former hypothesis is the fact that (101), the backfill within the construction cut for wall (103), contained exclusively late Saxon pottery, broadly dating to the 9th-11th centuries, together with a single bone ring of late Saxon date. Both walls (103) and (107) appeared to cut (100), a deposit containing frequent animal bone and occasional metalworking debris, together with a moderate assemblage of late Saxon pottery, which has been provisionally interpreted as a possible occupation deposit or midden layer of late Saxon (9th-

11th century) date. However, it was not possible to determine with certainty whether both walls were *cut from* this deposit due to the extent of truncation by post-medieval building activity.

If walls (103) and (107) indeed represent a late Saxon building, this could suggest that the building was of particularly high status. It is possible that it could represent a residence for one of the 'King's thegns' recorded as resident in *Brudenestret* (present-day Staple Gardens) in the *Winton Domesday* of c.1110. However, although a number of stone-lined wells and the footings of at least one masonry structure of Saxo-Norman date have been identified during excavations at Northgate House, the majority of the structures identified in this area appear to have been of timber construction.

The main difficulty in accepting this interpretation is the presence of a 13th-14th century brick fragment in (109), which appeared in section to underlie presumed late Saxon occupation deposit (100). (109) also contained pottery of late Saxon date, which could be regarded as residual, although it appears more likely that the 13th-14th century brick fragment is intrusive. A possible explanation is that the fragment intruded into (109) as a result of the insertion of [102] the deep construction cut for wall (103), which would imply that this wall is also of 13th-14th century date. However, if this was the case, then one might expect to find later medieval pottery in either (100) or (101); however, the assemblage recovered from these two contexts comprised entirely late Saxon pottery. Further investigation of walls (103) and (107) and any associated deposits would be recommended in order to clarify their date, extent and possible function.

Occupation or possible midden deposit (100) was difficult to characterise but appears to represent a period of relatively intensive activity in this area during the late Saxon period; with possible evidence of smithing activity in the immediate vicinity indicated by the retrieval of two smithing hearth bottoms and a possible clay hearth lining fragment from this context. Despite the small nature of the assemblage, it nevertheless complements the evidence for intensive metalworking activity of Saxo-Norman date identified on the Northgate House site and at 26-27 Staple Gardens, indicating that this area was a focus for industrial activity (especially metalworking) in Winchester during the 9th-12th centuries (Teague & Ford, 2006; Moore & Preston, 2008).

A slightly earlier, less intensive phase of late Saxon occupation might be represented by (109), containing a small quantity of late Saxon pottery and a small assemblage of domestic animal bone, which appeared to overlie a coarse floor surface (116) of indeterminate date which was not fully investigated due to space and safety constraints.

Towards the N end of the evaluation trench, another isolated pocket of surviving archaeological deposits and features was identified (*Area 2*). This consisted of a substantial stone wall (113), probably representing the remains of a deep cellar of later medieval date (13th-14th century), and associated backfill deposit (119), which contained pottery and green-glazed roof and floor tile fragments of 13th-14th century date, together with a quantity of imported North Cornish roofing slate. The ridge and floor tile fragments may be compared with similar examples recovered from the excavations on the adjacent SCATS site (Archdeacon's Close) in the early 1960s (Cunliffe, 1964, 187).

A large quantity of broken roof slate was also recovered during the SCATS excavation, which was tentatively assigned to the earlier phase of work on the

Archdeacon's House in the late 12th-13th century (Cunliffe, 1964, 186). However, the roofing slate from (119) appears to exhibit close similarities with slate used in the roofing of the infirmary at St Mary Magdalene, Winchester, dated to the late 14th century (Hayward, 2010).

The presence of imported roofing slate and fine green-glazed roofing and floor tile implies that cellar wall (113) formed part of a high-status building. The construction of (113) appeared to differ markedly from walls (103) and (107). It could conceivably have formed part of the substantial complex of buildings associated with the Archdeacon of Winchester's residence, the southern boundary of which is documented as extending through the northern part of the Staple Chambers property.

The final depth of the cellar wall (113) was not established during the evaluation, due to the fact it was not possible to excavate further in this area because of access and space constraints. Consequently, the extent of surviving archaeological deposits of medieval, Saxon, Roman or earlier date in this area remains undetermined. No evidence of a clear association was noted between wall (113) and the substantial E-W aligned wall of probable medieval date identified during a watching brief on drainage trenching immediately to the E of this area (undertaken in 1983); the construction methodology appears to be different although both walls appear to extend to a considerable depth.

10. Conclusion

The programme of archaeological fieldwork undertaken at Staple Chambers revealed evidence of substantial post-medieval brick cellarage in the southern and central parts of the evaluation trench (immediately E of the existing modern office building).

Although a significant proportion of the cellarage could not be investigated, due to the presence of extensive modern services and the instability of the remaining cellar walls, it was established in the southern part of the trench (*Area 1A*) that the cellarage extended to a depth of 2.20m below existing ground level, probably resulting in the severe truncation or removal of pre-19th century archaeological deposits in this area. Evidence of considerable modern disturbance was also noted in Test Pit 1 and Test Pit 2, where a substantial modern culvert was identified.

In spite of these factors, significant archaeological deposits and features predating the 19th century were identified in several locations within the evaluation trench. These consisted of:

1/ Just to the N of centre of the trench (*Area 1B*), excavation revealed the footings of a substantial, E-W aligned chalk and flint wall (103) and another masonry wall immediately to the N (107), aligned N-S, both identified at about 1.00m below existing ground level (approx. 52.00m AOD). The date, function and relationship of these walls remain uncertain. It is possible that they form part of a building of late Saxon date, although another possibility is that they could date to the 13th-14th century. Associated with the walls was a series of possible occupation deposits (100), (109) and (116), the uppermost (100) containing exclusively late Saxon pottery.

2/ Towards the N end of the evaluation trench (*Area 2*), another substantial rubble masonry wall was identified (113), at 50.96m AOD (approximately 1.00m below existing ground level) which appeared to form part of a deep cellar. An associated deposit (119), possibly representing a backfilling of the cellar after it fell out of use, contained 13th-14th century pottery, ridge tile and broken roof slate probably imported from the North Cornish coast (and identical to that used for the roofing of the late 14th century infirmary of St Mary Magdalene, Winchester).

Wall (113) would appear to have formed part of a high-status building of probable 13th-14th century date, possibly associated with the residence of the Archdeacon of Winchester. The depth of the cellarage represented by wall (113) was not reached during the evaluation; consequently, its impact on Saxon, Roman and earlier deposits and features remains unclear.

In summary, the evaluation has demonstrated that the survival of significant archaeological deposits and features at Staple Chambers is extremely inconsistent and consequent on the extent of truncation by deep post-medieval cellarage and modern construction/landscaping activity.

However, in those areas less heavily impacted by 19th-20th century building works, there is clearly potential for the survival of structural remains relating to several buildings of medieval or late Saxon date adjoining the street frontage of Staple Gardens, together with associated occupation deposits.

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OS 3rd edition 25 inch map Hampshire 41.13 - 1909

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13. Appendix 1: Context Register

13.1 Evaluation Trench

Context	Description
(100)	Friable mid greyish brown clayey silt, visible extent 1.30m x 1.80m x 0.25m with moderate flint nodules and chalk flecking, containing frequent oyster shell, animal bone, iron slag and pottery sherds (late Saxon). No charcoal evident. Cut by [102], [108].
<i>INTERPRETATION:</i>	<i>Possible occupation deposit or midden with frequent animal bone, metalworking debris and late Saxon pottery.</i>
(101)	Loosely compacted greyish brown silty clay with occasional chalk flecking and lenses of orangey brown clay, visible extent 0.48m x 1.30m x 0.76m with occasional loose flint, moderate quantities of animal bone and pottery sherds. Abuts (103). Fills [102]
<i>INTERPRETATION:</i>	<i>Probable backfill to construction cut [102] for masonry wall (103)</i>
[102]	Rectilinear cut, oriented E-W, measuring 1.30m x 0.80m x 0.75m with concave sloping sides becoming steep and vertical towards the base of the cut. Cuts (100), (109). Filled by (101) and (103).
<i>INTERPRETATION:</i>	<i>Construction cut for masonry wall (103)</i>
(103)	Masonry wall oriented E-W, rectangular in plan, visible extent 1.50m x 0.50m x 0.60m, of roughly coursed flint and chalk construction and bonded with greyish silt (no evidence of mortar). Fills [102]. Abutted by (101)
<i>INTERPRETATION:</i>	<i>Probable foundation courses of a substantial medieval wall, possibly forming the sub-structure of a building or the lower stages of a precinct wall. Possibly associated with wall (107)</i>
(104)	Loosely compacted white puddled chalk spread with no inclusions, visible extent 0.28m x 0.34m x 0.10m. Underlies (122).
<i>INTERPRETATION:</i>	<i>Possibly representing a floor surface associated with wall (103) although it could represent a slumping deposit from mortar surface (120)</i>
(105)	Strongly cemented concrete plinth, rectangular in plan, oriented E-W, visible extent 1.50m x 0.40m x 0.20m. Fills [110] underlies (106).
<i>INTERPRETATION:</i>	<i>Concrete platform at base of construction cut [110] for late 19th century brick wall.</i>
(106)	Masonry wall, oriented E-W, rectangular in plan, visible extent 1.50m x 0.20m x 0.48m (six courses visible), constructed of regularly coursed, standard gauge red bricks laid in irregular Flemish bond. Overlies (105).
<i>INTERPRETATION:</i>	<i>Heavily truncated late 19th century brick wall, probably associated with No. 19 Staple Gardens (demolished c.1964)</i>
(107)	Masonry wall, oriented N-S, rectangular in plan, visible extent 0.66m x 0.30m x >0.50m, constructed of

	irregularly coursed limestone and chalk rubble with flint nodules, bonded with a greyish brown silt. Underlies (122) Fills [108]
<i>INTERPRETATION:</i>	<i>Possible remains of a medieval masonry wall or pier; may be associated with masonry wall (103)</i>
[108]	Probable rectilinear cut, oriented N-S, presumed extent 0.66m x 0.30m x >0.50m, unexcavated
<i>INTERPRETATION:</i>	<i>Hypothetical cut for masonry wall or pier (107) not visible in section</i>
(109)	Moderately compacted mid brown silty clay, visible extent 1.30m x 1.80m x 0.20m, containing moderate quantities of animal bone, pottery and tile. Underlies (100). Overlies (116). Cut by [102]
<i>INTERPRETATION:</i>	<i>Possible occupation surface or midden deposit; appears to be of late Saxon date based on the pottery evidence although a single piece of 13th-14th century brick was also identified.</i>
[110]	Rectilinear cut, visible extent 1.50m x 0.40m x 0.45m, with vertical sides and a probable flat base. Filled by (105) (106) and (112). Cuts (111)
<i>INTERPRETATION:</i>	<i>Construction cut for late 19th century brick wall (106)</i>
(111)	Loosely compacted deposit of angular, heavily fragmented chalk with frequent voids, with inclusions of cement mortar beneath wall (121). Visible extent 1.80m x 1.10m x 0.46m. Underlies (121). Overlies (120). Cut by [110]
<i>INTERPRETATION</i>	<i>Landscaping/make-up deposit, presumably representing a chalk raft or levelling deposit associated with the mid-late 19th century brick structure represented by wall (121)</i>
(112)	Very loosely compacted dark greyish brown silt with frequent brick fragments, inclusions of flint and greyish mortar. Visible extent 1.50m x 0.80m x 0.40m. Fills [110]. Abuts (106)
<i>INTERPRETATION</i>	<i>Backfill to construction cut for late 19th century brick wall (106)</i>
(113)	Masonry wall, oriented N-S with possible return at its S end, visible extent 2.10m x 0.60m x 0.50m, constructed of roughly hewn, irregularly coursed chalk lumps set within a buff sandy mortar matrix. Underlies (118). Fills [114]. Abutted by (119)
<i>INTERPRETATION</i>	<i>Masonry wall of probable medieval date, possibly representing part of a cellar associated with a building occupying the street frontage.</i>
[114]	Rectilinear cut, oriented E-W, extent not visible in plan or section. Filled by (113)
<i>INTERPRETATION</i>	<i>Hypothetical construction cut for masonry wall (113).</i>
(115)	VOID
<i>INTERPRETATION</i>	
(116)	Plastic, well compacted mid-yellowish brown clay with frequent angular gravel and degraded flint inclusions, visible extent 0.90m x 0.60m x 0.10m (full depth not determined). Underlies (109).
<i>INTERPRETATION</i>	<i>Possible occupation surface or midden deposit, possibly representing part of a sequence of occupation layers</i>

	<i>although it was not possible to establish this conclusively</i>
(117)	Friable, dark greyish brown sandy silt with occasional angular stones and chalk flecking, visible extent 2.50m x 1.20m x 0.20m. Overlies (118).
INTERPRETATION	<i>Topsoil deposit in N part of trench, probably representing modern landscaping activity associated with the construction of the existing 1960s offices</i>
(118)	Firmly compacted, dark brown gritty silty clay with frequent inclusions of CBM and chalk fragments. Visible extent 5.00m x 1.20m x 1.0m. Underlies (117). Overlies (113), (119)
INTERPRETATION	<i>Deep homogenous deposit containing demolition debris, possibly associated with late 19th century landscaping/demolition activity.</i>
(119)	Well compacted light yellowish brown silt with occasional chalk, mortar and flint inclusions, moderate pottery and occasional slate and CBM. Visible extent >2.30m x >0.70m x 0.10m (depth not fully ascertained). Underlies (118). Abuts (113)
INTERPRETATION	<i>Infilling material within area of possible cellarage framed by wall (113). Probably represents material deposited in the cellar when the overlying superstructure was dismantled, probably in the late 14th century</i>
(120)	Friable, soft creamy mortar deposit with no inclusions, visible extent 1.80m x 1.30m x 0.16m. Underlies (111). Overlies (122)
INTERPRETATION	<i>Bedding of mortar probably associated with chalk raft for mid-late 19th century brick structures occupying street frontage</i>
(121)	Masonry wall, oriented E-W, consisting of a single course of frogged red brick bonded with a grey creamy cement mortar (visible dimensions 0.70m x 0.20m x 0.08m) with extension to E consisting of a single course of regularly coursed limestone (visible dimensions 0.60m x 0.20m x 0.10m). Overlies (111). Underlies (132).
INTERPRETATION	<i>Heavily truncated brick wall probably representing the internal wall of gasworks manager's house demolished in 1894, located to N of Nos. 16-19 Staple Gardens</i>
(122)	Soft, friable light greyish silt with chalk flecking. Visible extent 1.00m x 0.07m (only visible in section).
INTERPRETATION	<i>Probable trample deposit associated with laying of mortar bedding (120) for mid-late 19th century structures</i>
[123]	Rectilinear cut, oriented E-W with a sharp break of slope at the top, sharp vertical sides and a flat base. Visible extent >0.10m x >1.00m x > 0.60m. Filled by (125)
INTERPRETATION	<i>Possible construction cut for cellar wall of post-medieval century date, possibly representing earlier phase of 19th century cellarage</i>
(124)	Friable, yellowish white chalk lens with moderate large to medium flint inclusions. Visible extent 1.00m x 0.70m x 0.60m. Overlies (126) Cut by [123]
INTERPRETATION	<i>Thin lens of white chalk forming coarse surface overlying truncated clay with flints (126). Cut by [123].</i>
(125)	Cohesive, light greyish brown clayey silt with frequent

	brick, post-medieval ceramic sherds and occasional slate fragments. Visible extent >0.10m x >1.00m x > 0.60m. Fills [123]
<i>INTERPRETATION</i>	<i>Backfill of former cellarage [123]</i>
(126)	Moderately compacted light yellowish brown clay with flints, no evidence of reworking, no finds. Thickness over 0.60m deep. Underlies (124).
<i>INTERPRETATION</i>	<i>Probable natural deposition</i>
(127)	Masonry wall, oriented E-W, visible extent 1.50m x 0.20m x >0.60m. Constructed of regularly coursed unfrogged red bricks bonded in cement mortar. Fills [129].
<i>INTERPRETATION</i>	<i>Probable southern wall of cellarage for late 19th century building occupying street frontage.</i>
(128)	Well compacted, greyish brown cement mortar deposit, devoid of inclusions or finds. Overlies (126) Visible extent 1.50m x 1.40m.
<i>INTERPRETATION</i>	<i>Probable cement floor for 19th century cellarage</i>
[129]	Rectilinear cut, oriented E-W, with vertical sides to a flat base, visible extent 1.50m x 0.20m x >0.60m. Filled by (127)
<i>INTERPRETATION</i>	<i>Construction cut for late 19th century wall (127), probably cellarage for building occupying street frontage</i>
(130)	Masonry wall, oriented E-W, visible extent >1.50m (E-W) x 0.50m (N-S) x >2.20m depth, constructed of irregularly coursed flint and chalk stones with southern elevation faced by a single skin (0.10m thick) of regularly coursed unfrogged red bricks bonded with a coarse light greyish brown cement mortar.
<i>INTERPRETATION</i>	<i>Post-medieval wall with later repairs, apparently representing the southern end of deep cellarage associated with No. 18 Staple Gardens</i>
(131)	Cohesive, dark greyish clayey silt containing large quantities of 19 th -20 th century CBM, pottery and broken roof slate. Visible extent 3.00m x 2.00m x 2.20m. Underlies (134). Overlies (130)
<i>INTERPRETATION</i>	<i>Demolition debris used to backfill the 19th century cellarage when the 1960s offices were constructed.</i>
(132)	Friable, dark greyish brown sandy silt with frequent CBM, occasional angular stones and chalk flecking, visible extent 3.50m x 2.00m x 0.10m. Underlies (133). Overlies (121)
<i>INTERPRETATION</i>	<i>Demolition/landscaping deposit of late 19th or 20th century date</i>
(133)	Well compacted dark blackish tarmac deposit, visible extent 3.50m x 2.00m x 0.30m. Overlies (132). Underlies (134)
<i>INTERPRETATION</i>	<i>Capping layer associated with construction of present 1960s offices</i>
(134)	Friable yellow sandy gravel deposit with inclusions of tarmac, CBM fragments & small angular and sub-angular stones. Visible extent 3.50m x 2.00m 3.5m x 0.15m Overlies (133)
<i>INTERPRETATION</i>	<i>Modern gravel sub-base for paved area in front of offices</i>
(135)	Single course of frogged red brick oriented N-S with

	eastward return at N end, bonded with a grey creamy cement. Visible extent 0.90m (N-S) × 0.40m (E-W) × 0.10m × > 0.08m. Underlies (132). Overlies (111).
<i>INTERPRETATION</i>	<i>Footings of appendage to internal wall (121) probably representing part of manager's house (demolished 1894)</i>

13.2 Test Pit 1

Context	Description
(200)	Tarmac. Visible extent 1.15m × 1.13m × 0.08m. Overlies (201)
<i>INTERPRETATION:</i>	<i>Tarmac surface for car park</i>
(201)	Well compacted orangey brown gritty clay with frequent chalk and flint inclusions, occasional residual sherds of medieval pottery and sandstone inclusions. Visible extent 1.15m × 1.13m × 0.55m. Underlies (200). Overlies (203).
<i>INTERPRETATION:</i>	<i>Modern made-up ground deposit associated with the construction of the present 1960s office building</i>
(202)	Masonry wall, rectilinear in plan, oriented E-W, visible extent 0.75m × 0.20m × 0.45m, consisting of a single course of brick bonded with a whitish sandy mortar Underlies (203). Overlies (204)
<i>INTERPRETATION:</i>	<i>Heavily truncated remains of brick wall footing possibly associated with a 19th century outbuilding</i>
(203)	Indurated concrete plinth, oriented N-S, visible extent 0.37m × 0.60m. Underlies (201). Overlies (202)
<i>INTERPRETATION:</i>	<i>Foundations for existing 1960s office building</i>
(204)	Moderately compacted dark greyish brown, gritty silty clay with frequent small rounded stone inclusions. Visible extent 1.15m × 1.13m × unknown depth. Underlies (202).
<i>INTERPRETATION</i>	<i>Post-medieval garden soil deposit</i>

13.3 Test Pit 2

Context	Description
(300)	Well compacted dark greyish brown sandy silt with occasional chalk flecking and small angular stones. Visible extent 1.35m × 1.00m × 0.15m. Overlies (301)
<i>INTERPRETATION:</i>	<i>Topsoil</i>
(301)	Firmly compacted light brown sandy silt with occasional angular and rounded stones, with flecks of chalk and CBM fragments. Visible extent 1.22m × 1.25m × 0.17m. Underlies (300), Overlies (302).
<i>INTERPRETATION:</i>	<i>Landscaping/make-up deposit associated with construction of existing 1960s office building</i>
(302)	Well compacted, dark grey loam with occasional inclusions of chalk, small angular stones and CBM. Visible extent 0.95m × 0.05m × 0.05m. Underlies (301). Overlies (303)
<i>INTERPRETATION:</i>	<i>Thin lens of redeposited material, possibly demolition debris</i>

(303)	Soft, light greyish brown coarse sand, no inclusions. Visible extent 1.18m x 0.20m x 0.07m. Underlies (302). Overlies (304)
<i>INTERPRETATION:</i>	<i>Tipping deposit possibly associated with post-demolition landscaping activity</i>
(304)	Moderately compact dark brown clayey silt with frequent inclusions of chalk, flint, slate fragments and frequent charcoal flecking. Visible extent 0.82m x 0.47m x 1.35m. Underlies (303). Overlies (310) Cut by [305]
<i>INTERPRETATION</i>	<i>Deep garden soil deposit of likely post-medieval date</i>
[305]	Rectilinear cut, oriented roughly E-W, visible extent 0.85m (E-W) x 0.40m (N-S) x 1.50m with a sharp break of slope at the top and vertical sides. Filled by (306), (309)
<i>INTERPRETATION</i>	<i>Construction cut for late 19th-20th century drain</i>
(306)	Well compacted, mottled dark orangey brown silty clay with flint and chalk inclusions and one modified sherd of Samian ware (residual), visible extent 0.75m x 0.84m x 1.35m. Fills [305]. Overlies (309)
<i>INTERPRETATION</i>	<i>Fill of cut [305] for late 19th century drain</i>
(307)	Indurated concrete plinth, oriented E-W, visible extent 0.20m x 0.30m x 1.35m (d). Fills [308]. Underlies (301)
<i>INTERPRETATION</i>	<i>Concrete foundation for existing 1960s office building</i>
[308]	Rectilinear cut, oriented E-W, visible extent >0.30m x >1.35m x 0.20m with sharp break of slope at the top and steeply sloping sides. Filled by (307).
<i>INTERPRETATION</i>	<i>Construction cut for foundation of existing 1960s office</i>
(309)	Indurated grey concrete, oriented E-W, visible extent >0.90m x > 0.70m x unknown depth. Fills [305]. Underlies (306)
<i>INTERPRETATION</i>	<i>Capping for late 19th-early 20th century drain</i>
(310)	Moderately compact dark greyish brown gritty silty clay with frequent small stone inclusions and CBM flecking. Visible extent 0.60m x 1.35m x 0.47m. Underlies (304). Overlies (311)
<i>INTERPRETATION</i>	<i>Redeposited made-up ground layer</i>
(311)	Soft, light mid-brown silty clay. Visible extent 0.47m x 1.35m x 0.16m. Underlies (310).
<i>INTERPRETATION</i>	<i>Possible garden soil deposit, devoid of artefactual material</i>

14. Appendix 2: Ceramic Assessment

Roman Pottery (*Dr Jane Timby MlFA*)

The archaeological work at Staple Gardens, Winchester, resulted in the recovery of a single sherd of Central Gaulish samian from context (306). The sherd, probably from a large bowl Drag 31, has been modified to form a slightly asymmetrical, centrally perforated disk measuring approximately 48mm x 52mm. The original samian vessel is likely to date to the mid-later 2nd century.

Post-Roman Pottery (*Ben Jervis MA PlfA*)

Ben Jervis Archaeological Report 39

INTRODUCTION

This report is an assessment of 52 sherds of pottery and nine fragments of ceramic building material from excavations at Staple Gardens, Winchester. The material came from five contexts and will be discussed by context. The pottery is summarised by context in Table 1.

The pottery has been examined in accordance with the minimum standards produced by the Medieval Pottery Research Group (MPRG 2001). In accordance with these standards the pottery has been recorded by ware type and form, with three methods of quantification being used (sherd count, sherd weight and estimated vessel count). Notes were made on the presence of decoration and other notable features. Where possible, wares have been related to the existing Winchester City Museums fabric type series (Holmes and Matthews forthcoming), to ware rather than fabric level.

There is a long history of ceramic study in Winchester and at Staple Gardens, with material previously having been published by Cunliffe (1964) and Vince and Steane (2008). Oxford Archaeology has also recently undertaken fieldwork in the area and comparison has been drawn based on previous conversations with John Cotter. Material from other sites in Winchester is due for publication imminently (Matthews and Holmes forthcoming) and I am grateful to Helen Rees for providing a draft copy of this report.

THE POTTERY

Context 100

This context contained 35 sherds, weighing 563g. The most common ware present is Chalk Tempered Ware, present in oxidised and reduced varieties. One sherd exhibits stamped decoration. Several of the sherds are likely to be from a single vessel, but could not be joined. This type is generally considered to be of late Saxon (9th-11th century) date, but some types may have continued to have been produced into the early 12th century (Holmes and Matthews forthcoming). The material is similar in fabric to contemporary types from Southampton (Brown

1994). There is also a single sherd of wheel-thrown Late Saxon Sandy Ware, typical of the latter part of this period and four sherds of unglazed medium grained sandy ware, three of which are likely to be from a single vessel. This ware was produced from the 10th-13th centuries. A single sherd of Roman colour coated ware is also present. On balance the material in this context can be comfortably dated to the latter part of the late Saxon period, perhaps the 10th-11th centuries.

Context 101

There are eight sherds of Chalk Tempered Ware. One is a large rim sherd with thumb impressed decoration, a type typical in late Saxon deposits in Winchester and Southampton, as well as further afield (e.g. Chichester: Jervis 2009). There are two further jar rims, both of simple, everted form. Five body sherds are also present. There are two sherds of Late Saxon Sandy Ware. Therefore the material in this context can be dated to the late Saxon period (9th-11th centuries).

Context 109

The context contained three body sherds of Chalk Tempered Ware, dating to the 9th-11th centuries. A brick fragment was also present (see below). The pottery alone suggests a late Saxon date, although the brick is likely to be slightly later in date.

Context 119

The pottery consists of 10 sherds from a single vessel. The fabric is a whiteware with a pinkish core, in the Laverstock tradition, although this is not a Laverstock product. Similar iron rich whiteware fabrics have been dated to the 12th-14th century elsewhere in Hampshire (e.g. Brown 2002; Jervis forthcoming). The tile from this context is discussed below.

Context 201

Four sherds of pottery were present in this context, along with two CBM fragments (See below). Two of the pottery sherds, including a jug handle, are in South Hampshire Redware and date to the 13th-14th Centuries (Brown 2002; Holmes and Matthews forthcoming). There are single sherds of Reduced Ware and Redware with a Grey Core (see Matthews and Holmes forthcoming), both of which date to the 14th-15th centuries. As this feature is related to 20th century landscaping, the material is likely to be residual.

THE BRICK AND TILE

Context (109)

A single brick fragment was present. The uneven surfaces and large inclusions suggest a medieval date. The thickness of approximately 40mm corresponds well with medieval (13th-14th century) bricks from Southampton (Poole 2010, 19).

Context (119)

A single glazed ridge tile fragment was present. This is similar to a medieval tile from previous excavations at Staple Gardens (Cunliffe 1964, 187). A 13th-14th

century date can be suggested, which corresponds with the pottery from this feature. A second large fragment may be from a similar type, but the fragment present is not diagnostic. Three flat fragments with sanding on the rear and a green glaze are likely to be floor tiles of similar date.

Context (201)

Two undiagnostic but joining tile fragments are present. They are probably of post-medieval date and are likely to be residual in this context.

Context	(100)		(101)		(109)		(119)		(201)		Total	
	SC	SW	SC	SW	SC	SW	SC	SW	SC	SW	SC	SW
Roman Colour Coat	1	3									1	3
Chalk Tempered Ware	29	453	8	181	3	33					40	667
Late Saxon Sandy	1	33	2	77							3	110
Medium Grained Sandy Ware	4	74									4	74
South Hants RW									2	115	2	115
Common Whiteware							10	49			10	49
Reduced Ware									1	33	1	33
Redware with grey core									1	19	1	19
Grand Total	35	563	10	258	3	33	10	49	4	167	62	1070

CONCLUSIONS

This is a small assemblage, the material in which is typical of that excavated previously at Staple Gardens, although a much narrower range of types are present (Cunliffe 1968; Vince and Steane 2008; John Cotter pers. comm.). Contexts (100) and (101) are of late Saxon date and context (119) is likely to date from the 13th-14th centuries, on the basis of the pottery and tile present. The presence of a medieval brick in context (109) may either be intrusive or indicative of a 13th-14th century date for this context, making the Saxon pottery present residual. The composition of the material from context (201) is very mixed, as is to be expected. It is not recommended that any further analysis is carried out on this material.

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15. Appendix 3: Petrology and Function of Worked Stone at Staple Gardens, Winchester

Dr Kevin Hayward (University of Reading)

Introduction

This review examines the geological character and (where possible) the source of a small assemblage¹ (58 examples – 2.6kg) of roofing slate recovered from context (119) from an evaluation at Staple Chambers, Staple Gardens, Winchester (SU 47947 29720)

Methodology

Consultation of the local geological map for Winchester (Sheet 299) and accompanying memoirs (Osborne-White 1912; Booth 2002) provided an understanding of the geology of the immediate vicinity and local surroundings. Hand specimen comparative analysis using a hand lens (Gowland x10) and binocular microscope (Brunel x 40) of the slate against roofing material obtained examined from the multi-period site of St. Mary Magdalene, Winchester (AY352) (Hayward 2010),

Local Geology

The surrounding geologically young Upper Cretaceous chalkland stratigraphy does not contain material hard enough to be used for building material (Booth 2002) dimension stone or roofing stone. This meant that suitable material needed to be brought in from distance to embellish, build and roof the masonry buildings of medieval Winchester. The stone types used in the construction the medieval

¹ Two bags

infirmary and chapel of St Mary Magdalene (Hayward 2010) bears this out with Quarr stone from the Isle of Wight, Chilmark stone from Salisbury and Caen stone from Normandy all being brought in. The same was true of the roofing slate from this site. The navigable River Itchen would have no doubt been a major factor in the supply of stone to this important medieval centre.

Petrological Character and Function

Hand specimen comparative analysis of the rock from (119) showed it to be the same grey-green slate as that used in late 14th century roofing from St Mary Magdalene chapel and infirmary at Winchester (Hayward 2010).

This grey-green to grey very fissile metamorphosed mudstone 'slate' is, in hand specimen, homogeneous. However, at a higher magnification there are crenulations (undulations) which display micro lamellae (bands) rearranged under pressure to form mica/chlorite bands. There is one brown/red example and possible relict 5mm trace fossils on another.

The fissile character of this slate made it an ideal material to split in to large narrow blocks suitable for roofing – numerous nail holes bear this out.

Petrological Source and Summary

Geologically old (Lower Palaeozoic) fine grained metamorphic slates were quarried from a number of parts of Western Britain for roofing slate including Westmorland (Honister Slate) (Stanier 2000, 132-138), North Wales, South Wales 'blue slate' (Jope & Dunning 1954) and Atlantic Slate from Cornwall (Stanier 2000, 123-131).

The light grey/green-red brown slates from Staple Gardens Winchester were probably **quarried from the Devonian Atlantic Slates North Cornwall particularly around Tintagel and Padstow**. Two reasons may be given. First is the grey-green to red brown colour more typical of this deposit rather than the harder North Wales (dark grey) and Honister (light green) slate. Second there is recording of slate being worked in Cornwall since at least the fourteenth century (Stanier, 2000, 123) and shipped around the coast. The possibility remains however, that this could be blue slate quarried since medieval times from South Wales (Jope & Dunning 1954).

Clearly, the slate used at Staple Gardens and St Mary Magdalene Infirmary was being shipped in from considerable distance around the coast or possibly overland. The draw on resources that medieval Winchester had was clearly great with stone from Normandy, Isle of Wight, Salisbury and now probably Cornwall. It also reflects the poor local underlying chalk geology which was far too soft to be used as building stone.

The date too (12th-15th century) of the building fronting *Bredenestret* is consistent with the use of this stone at St Mary Magdalene (14th century) where glazed ridge tiles are also found.² Both are clearly indicators of status, prior to the building being demolished.

² Hayward pers. obs.

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16. Appendix 4: Assessment of metalworking debris from Staple Chambers, Staple Gardens, Winchester, Hampshire

Dr David Starley

(*David Starley Archaeometallurgy Report 06/10*)

Summary

Metalworking debris from medieval deposits at Staple Chambers, Winchester included very small amounts of material which derived from iron smithing.

Background to the Excavation

An evaluation undertaken immediately S of Northgate House revealed a series of masonry walls possibly relating to an undercroft of medieval date, as well as a series of late medieval occupation deposits from which a small quantity of iron slag was retrieved. The evaluation methodology and sampling strategy is not known to the specialist.

Assessment of Metalworking Debris

Methodology for assessment

All bulk slag provided by Border Archaeology, amounting to one box was visually examined. This material was classified into the standard categories used by the specialist, based on those developed by the former English Heritage Ancient Monuments Laboratory. Visual observation of the exterior was backed up where necessary, by the examination of fresh fracture surfaces, the use of a geological

streak plate and a magnet. Table 1 presents these findings, listed under these categories.

Table 1. Summary of metallurgical debris from Staple Chambers

Activity	Classification	Weight (g)	Context
Iron smithing	Smithing hearth bottom (2 complete pieces)	579	100
Non-diagnostic metalworking	Fired clay/hearth lining (2 fragments)	96	100
Total		675	

Classification of debris

Some forms of slag are visually diagnostic, providing unambiguous evidence for a specific metallurgical process. Other debris is less distinctive and it is not possible to determine which metallurgical, or other high temperature process, it derives from. At Staple Chambers, the only diagnostic slag was that associated with iron smithing.

1. Diagnostic – iron smithing

Evidence for iron smithing comes in two forms; bulk slags and micro slags. Of the bulk slags, the most easily recognisable are smithing hearth bottoms which, typically, have a characteristic plano-convex section, typically having a rough convex base and a vitrified upper surface which is flat, or even slightly hollowed as a result of the downward pressure of air from the *tuyère*. Compositionally, smithing hearth bottoms are predominantly fayalitic (iron silicate) and form as a result of high temperature reactions between the iron, iron-scale and silica. The silica can derive from the hearth lining, where this is made of clay, or possibly sand used as a flux by the smith, or from silica in coke, where this was used as a fuel. Only two examples of smithing hearth bottoms were recovered from Staple Chambers. These were small in comparison to other assemblages of medieval smithing debris. Hammerscale is an important indicator of the exact location of an iron smithing hearth (Starley 1995). However, no hammerscale was found in the small amount of loose material within the finds bag, nor was any information provided from the excavator as to whether such micro slags had been identified on-site, or during any soil sample processing.

2. Non-diagnostic – metalworking

Some categories of material can be produced by a wide range of high-temperature activities and are of little help in distinguishing between these processes. Material listed as fired clay/hearth lining is typically found on traditional, clay built smithing hearths and furnaces. They often (but not at Staple Chambers) have a glazed surface which results from a high temperature reaction between the clay lining of the hearth/furnace and the alkali fuel ash or fayalitic slag.

Conclusions

The archaeological evaluation at Staple Chambers recovered only a very small amount of metalworking debris, (675g), from a single context (100) recorded as a silty layer containing frequent oyster shell, animal bones and late Saxon pottery and provisionally assigned to the 9th-11th centuries. Assessment of the metalworking debris identified two smithing hearth bottoms, a type of slag characteristic of the hot-working of iron, together with some material which derives from the lining of a hearth; possibly the same smithing hearth which produced the other debris.

Although the process can be positively identified, the significance of such a small amount, needs to be judged in terms of the extent of the evaluation (not known to the specialist) and to other evidence from the vicinity. Iron smithing is a common activity in medieval towns and relatively large amounts of debris will be produced over long periods (several hearth bottoms a day for each hearth). Although some such bulk debris may remain in the vicinity or the hearth, it is frequently more widely dispersed, often being made use of as hardcore or the surfacing of roads and tracks. There is also a possibility of some material being residual from early periods. Sites such as The Brooks, Winchester (Starley 1993) produced evidence of a wide range of metalworking including iron smelting, iron smithing, silver refining, copper alloy and gold melting, during the Roman period.

Another site, or series of sites, is of more immediate relevance to Staple Chambers, Northgate House/ Staples Gardens and Winchester Discovery Centre, excavated by Oxford and Wessex Archaeology, respectively, for which the debris was examined jointly (Starley 2008). Evidence from these sites showed iron smithing in this area in both the Roman period and then at a more significant scale from the late Saxon through to the Anglo-Norman, the later period apparently tying in very closely to a smith named Richard, recorded as working in the immediate vicinity in the *Winton Domesday*.

Suggestions for Future work

Little would be gained by re-examining the slag with the aid of physico-chemical analysis.

Retention of finds

It is recommended that all finds be saved.

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17. Appendix 5: Assessment of hand-collected shell and vertebrate remains

Alison Foster and John Carrott (Palaeoecology Research Services)

Summary

Small quantities of hand-collected shell and animal bone recovered from deposits encountered during excavations at Staple Chambers, Staple Gardens, Winchester, Hampshire were submitted for an evaluation of their bioarchaeological potential. The works comprised the excavation of a single evaluation trench, two test pits, two geotechnical boreholes and a programme of hand-augering and revealed evidence of substantial post-medieval brick cellarage and the remains of several medieval walls which may represent the undercroft of a large medieval building. One borehole revealed evidence of presumed cultural deposits containing oyster shell at 3.50 metres below the present ground level possibly indicating the presence of a deep feature (e.g. a ditch or well) in this area.

The hand-collected shell assemblage was very small and recovered from just three deposits. Consequently, it was of little interpretative value. Almost all of the remains were of variably preserved oyster valves which presumably derived from human food waste. Other shell remains were restricted to a single fragment of indeterminate land snail shell of no interpretative value.

The site produced a small but well preserved vertebrate assemblage which showed little indication of the presence of reworked or residual material. Identified elements were exclusively of the main domestic mammals, with no remains of birds or wild animals, and skeletal element representation suggested that most of the assemblage derived from initial carcass preparation. Although fragmentation was generally low, only 20 of the bones were measurable; too few to provide data for any meaningful biometric analysis.

No further study of the current material is warranted. However, the generally good preservation of the vertebrate remains recovered suggests that any future excavations in the vicinity should allow for the possibility of encountering larger and more interpretatively valuable concentrations of bone.

Keywords: *Staple Chambers; Staple Gardens; Winchester; Hampshire; Evaluation; Medieval; Invertebrate Remains; Marine Shell; Oyster (Ostrea Edulis L.); Land Snails; Vertebrate Remains; Perforated Metapodial.*

Introduction

An archaeological evaluation excavation was undertaken by Border Archaeology at Staple Chambers, Staple Gardens, Winchester (approximate NGR SU 479 297), between the 24th of August and the 8th of September 2010. The works comprised the excavation of a single evaluation trench, two test pits, two geotechnical boreholes and a programme of hand-augering.

The site area was located within the NW corner of the Roman and medieval walled city of Winchester, an area of high archaeological sensitivity immediately

to the S of Northgate House, where previous excavations revealed evidence of prehistoric, Roman, Saxo-Norman and later medieval occupation.

The archaeological works revealed evidence of substantial post-medieval brick cellarage in the southern part of the evaluation trench which extended to a depth of 2.20m below the present ground level. Towards the northern end of the trench, the remains of several medieval walls were identified, which may represent the undercroft of a large medieval building. One borehole revealed evidence of presumed cultural deposits containing oyster shell at 3.50m below the present ground level (48.50m AOD) possibly indicating the presence of a deep feature (e.g. a ditch or well) in this area.

The small quantities of hand-collected shell and bone recovered were submitted to Palaeoecology Research Services Limited (PRS), Kingston upon Hull for an evaluation of their bioarchaeological potential.

Methods

All of the submitted material was examined and identified as closely as possible within the constraints of the evaluation.

Hand-collected shell

Shell fragments recovered were identified principally with reference to Hayward and Ryland (1995) for marine shell; nomenclature follows this work. Terrestrial mollusc remains were identified to species where possible, with reference to Cameron (2003), Cameron and Redfern (1976), Ellis (1969), Kerney (1999) and Kerney and Cameron (1979); nomenclature follows Kerney (1999). The weights (in grammes), numbers of fragments and maximum dimensions of shell of different *taxa* from each context were recorded (where determinable) and the minimum numbers of individuals (or individual valves for bivalve *taxa*) represented calculated where possible.

For oyster (*Ostrea edulis* L.) shell additional notes were made (where possible) regarding: numbers of left and right valves; evidence of having been opened using a knife or similar implement; measurability of the valves; damage from other marine biota (e.g. polychaete worms and dog whelks); encrustation by barnacles. Preservation was recorded using two, subjective, four-point scales for erosion and fragmentation—scale points were: 0 – none apparent; 1 – slight; 2 – moderate; 3 – high.

Hand-collected vertebrate remains

For the vertebrate remains, subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted where applicable.

Fragments were identified to species or species group using the PRS modern comparative reference collection and published works (Schmid 1972). The bones that could not be identified to species were described as the 'unidentified' fraction. Within this fraction fragments were grouped into three categories: large mammal (assumed to be cattle, horse or large *cervid*), medium-sized mammal 1 (assumed to be *caprine*, pig or small *cervid*), medium-sized mammal 2 (from an animal of dog/cat/hare size) and completely unidentified.

Results

Hand-collected shell

Small quantities of remains of oyster valves and fragments thereof, were recovered from two medieval deposits, Context (100) (late Saxon midden deposit) and Context (119) (14th-15th century backfill of cellarage); the majority (five of a combined total of six valves and 101 of 109g by weight) from the first of these. Preservation of the remains was variable, ranging from poor to fair.

All of those remains representing whole valves, or significant portions thereof, could be identified to side, with twice as many right valves (4) as left valves (2) recorded. Two, and perhaps three, of the valves would be able to provide biometrical data beyond a simple maximum linear dimension (these additional measurements were not taken as part of this evaluation). Evidence of the oysters having been opened using a knife or similar implement (as shown by characteristic damage to the shell margins) was noted on at least half (but perhaps as much as two-thirds) of the valves. One of the valves showed fresh breakage presumably caused during recovery of the remains.

There was no evidence of damage to the oyster valves by other marine biota (e.g. by polychaete worms or dog whelks) or encrustation (e.g. by barnacles).

The only terrestrial or freshwater mollusc taxa recorded in the hand-collected shell assemblage was a single indeterminate land snail shell fragment from Context (119) (later medieval (14th-15th century) backfill of cellarage); this had been submitted in a bag labelled as 'fish bone'.

Details of the remains recovered from each context are given in Table 1

Table 1: Hand-collected shell from excavations at Staple Chambers, Staple Gardens, Winchester, Hampshire.

Key: 'CN' = context number; 'l' = number of left (or lower) valves; 'r' = number of right (or upper) valves; 'i' = number of valves of indeterminate side; 'e' = average erosion score for valves; 'f' = average fragmentation score for valves; 'meas' = estimated number of valves intact enough to be measured; 'kn' = number of valves showing damage characteristic of the oyster having been opened using a knife or similar implement; 'fr' = number of valves showing fresh breakage; 'biota' = number of valves with evidence of damage or encrustation from/by other marine biota; 'wt' = total weight of shell (in grammes).

CN	Context details	Oyster valves									Notes	wt
		l	r	i	e	f	meas	kn	fr	biota		
(100)	Medieval (9 th -11 th century) midden deposit	2	3	0	1	2	2/?3	2/?3	1	0	Oyster valve to 83 mm (101.0 g); a few mm-flakes of shell Note: also one sherd of pottery to 34 mm (3.9 g) from this context	101.0
(119)	Later medieval (14 th -15 th century) backfill of cellarage	0	1	0	2	3	0	1	0	0	Oyster valve to 60 mm	8.0
(119)	Later medieval (14 th -15 th century) backfill of cellarage	0	0	0	-	-	-	-	-	-	One indeterminate land snail shell fragment to 17 mm – NB: in bag labelled 'fish bone'	0.1

Hand-collected vertebrate remains

Vertebrate remains were recovered from a total of four medieval midden deposits and backfills, (Contexts 100, 101, 109, and 119) resulting in a small assemblage of 112 fragments.

The general condition of the assemblage was good, and fragmentation was not extensive, although approximately 35% of the material from Context (100) showed signs of modern breaks or abrasion. The angularity of bones butchered or broken in antiquity had mostly been maintained and surface erosion was negligible. The colour of the bones ranged from light brown to brown, with some having a somewhat ginger cast, but these differences were not pronounced. There was no evidence of burning or scorching of the bones. Ten fragments, all from Context (100), showed evidence of dog-gnawing. The assemblage comprised the remains of the main domestic mammals and was dominated by cattle and *caprine* bones, with a few pig bones; no bird bones or remains of wild species were recovered.

Evidence of butchery was seen on only 14 fragments, almost all of which were from Context (100). The most obvious were chop marks to articular surfaces of long bones, indicating the reduction of carcasses into smaller joints. Skeletal element representation showed a pronounced bias towards vertebrae, skull fragments and lower limb bones; the only major meat-bearing bones present were five scapula fragments and seven distal humeri. No pathologies were noted. A perforation in the proximal articulation of a *caprine* metacarpal from Context (100) seems to have been intentionally drilled; its purpose is unclear but where similar modifications have been recorded they are assumed to be associated with marrow extraction (see Harrison 2006, for example).

Twenty of the bones were measurable for the purposes of biometrical data analysis. Although two mandibles are included in this count, post-depositional loss of most of the teeth would mean that age-at-death could only be rather broadly estimated rendering them of limited use for such profiling. Details of the recorded remains are presented by context in Table 2.

Table 2: Hand-collected vertebrate remains from excavations at Staple Chambers, Staple Gardens, Winchester, Hampshire

Species		Context				Total
		100	101	109	119	
<i>Sus f. domestic</i>	Pig	7	2	1	-	10
<i>Bos f. domestic</i>	Cattle	18	1	4	2	25
<i>Ovis f. domestic</i>	Sheep	2	-	-	-	2
Caprine	Sheep/goat	14	-	1	3	18
large mammal	large mammal	31	-	4	1	36
medium sized mammal 1	medium-sized mammal 1	5	-	-	-	5
medium sized mammal 2	medium sized mammal 2	-	-	-	1	1
unidentified	unidentified	14	-	-	1	15
Total	Total	91	3	10	8	112

Discussion and statement of potential

The hand-collected shell assemblage was very small and recovered from just three deposits. Consequently, it was of little interpretative value. Almost all of the remains were of variably preserved oyster valves and presumably derived from human food waste. If the oysters were supplied from a cultivated source then current evidence suggests that they were most likely imported from beds along the coast of the English Channel (Winder 1992 and pers. comm.). Certain organisms (e.g. *Polydora* spp. polychaete worms) which infest oysters have known preferred habitats, and this can help to identify the source of the oysters, but unfortunately such evidence was lacking from this assemblage. Other shell remains were restricted to a single fragment of indeterminate land snail shell of no interpretative value.

The site produced a small but well preserved vertebrate assemblage which showed little indication of the presence of reworked or residual material. Identified elements were exclusively of the main domestic mammals, with no remains of birds or wild animals, and skeletal element representation suggested that most of the assemblage was derived from initial carcass preparation. Evidence of dog-gnawing visible on a number of the bones from Context (100) suggests a period of exposure prior to incorporation into the deposit when they would have been accessible to scavengers. No burnt fragments were recovered, suggesting little or no on-site burning for rubbish disposal; although burnt bone may easily fragment into very small pieces which can be missed by hand-collection. No pathologies were noted, but modification of a *caprine* metapodial *may* be evidence of marrow extraction. Although fragmentation was generally low only 20 of the bones were measurable; too few to provide data for any meaningful biometric analysis.

Preservation of the shell was, overall, rather poor but that of the vertebrate remains was sufficiently good to suggest that any future excavations in the vicinity should allow for the possibility of encountering larger, and more interpretatively valuable, concentrations.

Recommendations

No further study of the current material is warranted.

Retention and disposal

All of the remains should be retained as part of the physical archive for the site.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 4, National Industrial Estate, Bontoft Avenue, Kingston upon Hull), pending return to the excavator, along with paper and electronic records pertaining to the work described here.

Acknowledgements

The authors are grateful to Neil Shurety, of Border Archaeology, for providing the material and the archaeological information.

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18. Appendix 6: Assessment of flint artefacts

Dr Randolph E. Donahue & Dr Adrian Evans (University of Bradford)

Staple Chambers, Staple Gardens, Winchester (Site Code SG10)

SG10 (109) 1 x flint

This is the distal portion of a flake. The proximal end is missing as the result of a break initiated on the dorsal surface. On the dorsal surface there are flake scars indicated two previous flake removals from the same edge as this piece. The distal end of the dorsal surface is rough textured as a result of water-rolling. This piece is from the outer part of a core that was sourced from a secondary deposit. It is cultural although because it is unmodified *debitage* an age cannot be assigned.

SG10 borehole 2 - 1 x flint

This is the medial section of a flake. The right margin is cortical. There is a small amount of edge damage around the piece that is post-depositional. It is likely cultural. The flake looks like the type that would be typically produced during biface thinning and its size would suggest an early date (middle Palaeolithic), with no other cultural remains in support, this assertion is hard to make.

SG10 borehole 2 - 4 x flint pieces

None of these pieces can be considered to be culturally derived.

19. Appendix 7: Analysis of a bone ring from Staple Chambers, Staple Gardens, Winchester (SG 10)

H.E.M. Cool

(December 2010)

No. 1 is a fragment of a bone ring of a type that was common during the late Saxon and Saxo-Norman periods (9th -11th centuries). One in bone and two in antler were recovered from late 10th-mid 11th century contexts at Coppergate in York (MacGregor *et al* 1999, 1943) and they have frequently been found during other excavations in Winchester. In the 1961-71 excavations, nine bone examples were found in contexts dated from the late 9th to the 19th centuries (Biddle 1990, 1136 nos. 432-9). Four of these pre-dated the early 12th century and of those from later contexts, three came from the St Pancras site on Brook Street where one had been found in a 9th-10th century context and so could have been residual from this early activity. The Oxford Archaeology excavations (unpublished) at Staple Gardens and Northgate House produced an example from each site. Both of these came from mid 9th –mid 11th century contexts. The rings are large enough to have functioned as simple finger rings but their precise function is unknown

Catalogue

Bone ring. D-sectioned. Approximately one-third extant. Diameter c. 25mm, section 5 x 2mm, Context (101) sf.

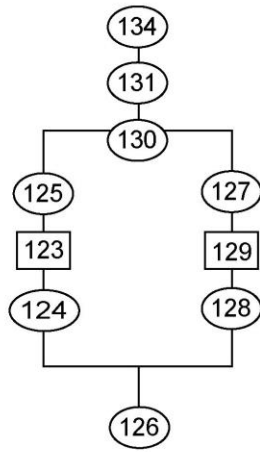
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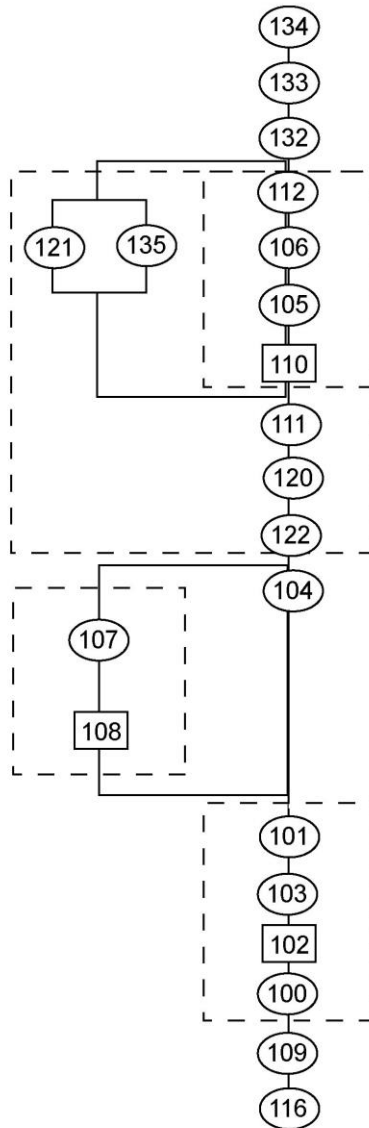
MacGregor, A., Mainman, A.J. and Rogers, N.S.H., 1999, 'Bone, Antler, Ivory and Horn from Anglo-Scandinavian and Medieval York', *The Archaeology of York* 17/12, York

Harris Matrices for Evaluation Trench Areas 1A & 1B & Area 2

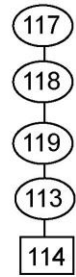
Matrix for Area 1A



Matrix for Area 1B

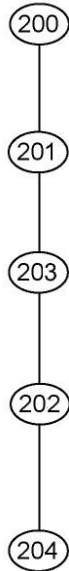


Matrix for Area 2

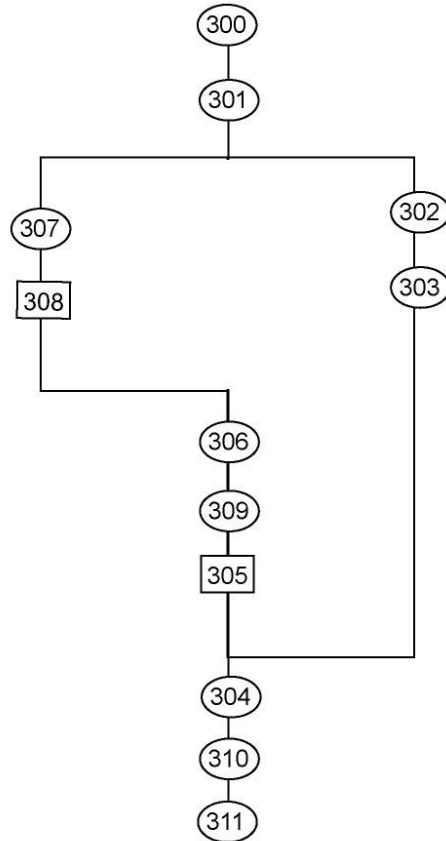


Harris Matrix for Test Pit 1 (W side of offices) and Test Pit 2 (N side of offices)

Matrix for Test Pit 1



Matrix for Test Pit 2





Document Control

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1	Final	Dec 2010	<i>Neil Shurety Dip M.GM Inst. M</i>