

Palace House Stables, Newmarket NKT 032

Archaeological Excavation Report

SCCAS Report No. 2012/012

Client: Forest Heath District Council

Author: Rob Brooks

September/2012

Palace House Stables, Newmarket

Archaeological Excavation Report

SCCAS Report No. 2012/012

Author: Rob Brooks

Contributions By: Mo Muldowney

Illustrator: Ellie Hillen and Gemma Adams

Editor: Richenda Goffin

Report Date: September/2012

© SCCAS

HER Information

Report Number: 2012/012
Site Name: Palace House Stables
Planning Application No: F/2010/0778/FU3
Date of Fieldwork: 17-23/01/2012
Grid Reference: TL 6448 6335
Client/Funding Body: Forest Heath District Council
Client Reference: N/A
Curatorial Officer: Keith Wade
Project Officer: Rob Brooks
Oasis Reference: suffolkc1-118642
Site Code: NKT 032

Digital report submitted to Archaeological Data Service:
<http://ads.ahds.ac.uk/catalogue/library/greylit>

Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By: Rob Brooks
Date: 27/09/2012
Approved By: David Gill
Position: Senior Project Officer
Date: 27/09/2012
Signed:

Contents

Summary

Drawing Conventions

1. Introduction	1
2. The Excavation	1
2.1 Site location	1
2.2 Geology and topography	1
2.3 Archaeological and historical background	2
3. Methodology	8
4. Results	9
4.1 Phase 1 (18th century, prior to 1787)	9
Posthole groups 0166 and 0167, and pit 0155	9
Structure 0154 and chalk floor 0157	11
Topsoil 0130/0137	12
4.2 Phase 2 (late 18th up to early/mid 19th century)	14
Building range 0164	14
4.3 Phase 3 (early/mid 19th, to late 19th/early 20th century)	17
Walls 0003, 0105 and 0113, and associated contexts	17
Structure 0112	17
4.4 Phase 4 (late 19th/early 20th century)	20
Linear feature 0148	20
Footings 0115	20
Footings 0114	22

Deposit 0106	22
Wall 0163	22
Layer 0168, topsoil 0129 and drain trench deposit 0136	23
4.5 Context descriptions to accompany the text	25
5. The finds evidence	28
5.1 Introduction	28
5.2 Pottery	28
Introduction	28
Methodology	28
The assemblage	29
Conclusion	29
5.3 Ceramic building material (CBM)	29
Introduction	29
Methodology	30
The assemblage	30
Conclusion	32
5.4 Mortar/plaster	32
5.5 Clay tobacco pipe	32
5.6 Worked flint	32
5.7 Slate	32
5.8 Bottle glass	33
5.9 Slag	33
5.10 Iron object	33
5.11 Non iron nail	33
5.12 The small finds	33
5.13 Conclusion	34
6. The environmental evidence	34

6.1	Faunal remains	34
6.2	Shell	34
7.	Discussion	35
8.	Conclusions	37
9.	Archive deposition	38
10.	Acknowledgements	38
11.	Bibliography	38

List of Figures

Figure 1.	Location map	4
Figure 2.	1787 Chapman map with the museum development outline (red), approximate site outline (blue) and possible outline of structure 0154 (yellow)	5
Figure 3.	1850 Public Health map with modern Ordnance Survey data, with site outline (red) and possible outline of structure 0154 (yellow)	6
Figure 4.	1902 Ordnance Survey map with site outline (red) and possible outline of structure 0114 (blue)	7
Figure 5.	Phase 1	13
Figure 6.	Phase 2	16
Figure 7.	Phase 3	19
Figure 8.	Phase 4	24
Figure 9.	Sections	27

List of Tables

Table 1.	Context descriptions	26
Table 2.	Finds quantities	28
Table 3.	CBM form quantities	29

List of Plates

Plate 1.	Posthole 0132 from group 0166, overlaid by layers 0129 and 0130, facing north-east, 1m scale	10
Plate 2.	South-east wall of structure 0154, with chalk floor 0157, 0.5m scale, facing south-east	11
Plate 3.	Topsoil 0130/0137, overlaid by surface deposits 0159, 0158 and 0120, which are cut away by drain deposit 0136, facing north-west, 2m scale	12
Plate 4.	Surface deposits 0120, 0158, 0159 and 0104, with wall 0121	

immediately right of 1m scale and tarmac block 0107 in bottom right, facing south-west, 1m and 2m scales	15
Plate 5. Surface 0104 and posthole 0102, facing south-west, 1m and 2m scales	15
Plate 6. Walls 0105, 0113 and 0112, associated chalk and brick surfaces, and drain trench 0119, facing south-east, 2x2m scales	18
Plate 7. Linear feature 0148 with iron girder in base, facing north-east, 0.3m scale	21
Plate 8. Footings 0115 in foreground, with wall 0114 to rear, facing north-west, 2x2m scale	21

List of Appendices

Appendix 1.	Brief and specification
Appendix 2.	Context list
Appendix 3.	OASIS form
Appendix 4.	Matrix
Appendix 5.	Pottery dates
Appendix 6.	CBM catalogue

Summary

Excavation immediately to the north-east of the main stable block and trainer's house at Palace House Stables, Newmarket, revealed a series of post-medieval features and structures. The earliest of these is shown by a phase of 18th century postholes and a pit, as well as an 18th century structure pre-dating the 1787 Chapman map, overlaid by buried topsoil. Several more extensive phases of construction then occur, with the latest appearing to date to around the late 19th or early 20th century. The function of these buildings was probably as subsidiary units to the adjoining stable yard (in its various incarnations), for purposes such as tack storage and possibly for husbandry of animals such as cattle. There are several historic maps showing the phases of the site's development, although none of the structures are shown on the earliest available plan, the 1720 Fort plan. This indicates that they were not associated with that phase of stable construction, although some of them may have been contemporary.

The features uncovered on site comprised brick walls and floors, surfaces, postholes, soil and demolition layers, and a pit. The majority of the finds consisted of animal bone, CBM and pot, much of which was abraded. All of the finds were post-medieval, excluding one redeposited later prehistoric flint.

The lack of earlier features and finds on the site, particularly considering its position on the Icknield Way and within medieval Newmarket, suggests that the area was possibly levelled extensively during various phases of redevelopment; particularly as medieval pottery has been recovered from the adjoining stable yard.

Drawing Conventions

Plans

- Limit of Excavation - - - - -
- Features - - - - -
- Break of Slope
.....
- Features - Conjectured - - - - -
- Natural Features
.....
- Sondages/Machine Strip - - - - -
- Intrusion/Truncation - - - - -
- Illustrated Section S.14 - - - - -
- Cut Number 0008
- Archaeological Features

Sections

- Limit of Excavation - - - - -
- Cut - - - - -
- Modern Cut - - - - -
- Cut - Conjectured - - - - -
- Deposit Horizon - - - - -
- Deposit Horizon - Conjectured - - - - -
- Intrusion/Truncation - - - - -
- Top of Natural - - - - -
- Top Surface - - - - -
- Break in Section - - - - -
- Cut Number 0008
- Deposit Number 0007
- Ordnance Datum $\frac{18.45m}{\times}$ OD

1. Introduction

An archaeological excavation was carried out in advance of development at Palace House Stables, Newmarket, in Suffolk (Fig. 1). The development involves the construction of new buildings associated with the new National Horseracing Museum facilities. The work was carried out to a Brief and Specification issued by Keith Wade (Suffolk County Council Archaeological Service, Conservation Team – Appendix 1) and follows on from an evaluation of the site by trial trenching (SCCAS Report 2010/106). The project was funded by the Forest Heath District Council and the archaeological work was commissioned by GWP Architecture.

2. The Excavation

2.1 Site location

Palace House stables are located to the south-east of Palace Street at grid reference TL 644 633 (Fig. 1). The excavation area was located immediately to the rear (north-east) of the 19th century trainer's house, in a small yard between the house and the north-east boundary wall of the complex. The stables to the south/south-east are arranged around a central courtyard, flanked by loose boxes on the south-east and west sides, with the trainer's house forming the northern side.

2.2 Geology and topography

The site lies on an area of broadly level ground at a height of c.29-30m AOD, with only a slight slope from the east down to the west (Fig. 1).

The geological records of the area cite no superficial deposits, with Holywell Nodular Chalk and New Pit Chalk formations uppermost (BGS, 2012). However, on site a mixture of dark orange sand and gravel, as has been recorded in other areas of Newmarket, overlaid solid chalk. The uppermost material is possibly patchy glacial drift surviving within hollows within the chalk bedrock, although it is more likely to be indicative of river terrace deposits, considering the site's position close to the flood plain.

2.3 Archaeological and historical background

The site lies within what is defined as Newmarket's medieval and post-medieval urban core (NKT 022, Fig. 1), north-east of the medieval Church of All Saints (NKT 001) and a site at Sun Lane, where phases of medieval and post-medieval archaeology were recorded (NKT 023). It is also within Historic Environment Record listing NKT 035, which is the 19th century Rothschild's training stables and trainer's house complex, which is immediately opposite the site of Palace House Mansion, built by Charles II in 1668-71.

Newmarket was founded in 1220 by Richard Argentuin, Lord of the Manor of Exning, with the settlement developing around a watering place along the road between London and Norwich, via Cambridge and Bury St Edmunds. This was already a well established course across the chalk lands known as the Icknield Way, which is a route of probable Iron Age origin (NKT 007). Excluding this, there are no references for archaeological activity from the prehistoric to Anglo-Saxon periods identified within the Historic Environment Record (HER), but there are records for the later medieval and post-medieval periods. These are presented in detail in the Desk-based Assessment produced by SCCAS and the documentary study by A. M. Breen in the same report (Rolfe, 2010).

Newmarket came to prominence in the early 17th century, when James I acquired a site in the town and built Newmarket Court House in 1606 (NKT 004). Both Charles I and Charles II also spent time in Newmarket, culminating with Charles II building Palace House Mansion (NKT 005) and the erection of several stables, including what is purported to be the world's first horseracing stables. The form of the stables altered over the years, with various periods of construction and demolition. It also appears that during the existence of the royal stables (possibly in several incarnations) and in close proximity, were stables that were privately owned, (Sutton, pers. comm.). The stables and trainer's house as we see them today started with their construction by Baron Mayer de Rothschild in 1857-60 (which incorporated parts of a stable shown on the 1720 Fort plan), with further additions made between 1896 and 1903 by Leopold de Rothschild.

Prior to the excavation works an archaeological evaluation was carried out on the site. This recorded an alignment of brick-built walls, which formed the front of an extensive

range of buildings. These structures were dated to the late 18th or early 19th century and their earliest full depiction is on the Public Health Map of 1850, although part of the south-eastern end may have been visible on Chapman's 1787 map (Figs. 2 and 3). The wall footings were covered by modern topsoil, but overlaid earlier deposits including a post-medieval posthole and possible floor surfaces, which were above a buried topsoil layer (which produced 16th to 18th century pottery and building rubble). The structures identified in the evaluation appear to have incorporated part of an earlier clunch-built structure within the north-east boundary wall which echoes the construction of the stable complex illustrated on the Fort plan. Several further examples of clunch construction still survive within the 19th century stables and trainer's house to the south-west, notably within the spine wall of the trainer's house, which is likely to be the rear wall of stables associated with the Charles II Palace.

The 1886 Ordnance Survey map shows very few changes from the 1850 Public Health map. However by the time of the 1902 OS map, the majority of the earlier buildings on the site had been demolished, with those at the south-east end being retained (Fig. 4). By the time of the 1926 OS map the site was largely cleared of any structures and was planted with trees.

After the evaluation works, an excavation was carried out in the main stable yard to the south-east run by Wessex Archaeology in conjunction with the Time Team television series. This revealed the front range of the stable depicted on the 1720 Fort plan. Beneath these remains soil layers containing medieval pottery were revealed (Donaghey, pers. comm.).

A painting of Cheveley Park by Siberechts (1627-1703), shows stables of a similar age to those shown on the Fort plan. An impressive façade fronts the stable, which faces towards the house. However, it is notable that to the side and rear of the main building, cows appear to have been kept, which were presumably then led out to pasture behind the cover of trees to the rear of the image. It is possible that the Palace House Stables may have also had a separate area for the husbandry of animals other than horses. The copyright for the painting belongs to Belvoir Castle & Bridgeman Art Library and as such it is not reproduced here.

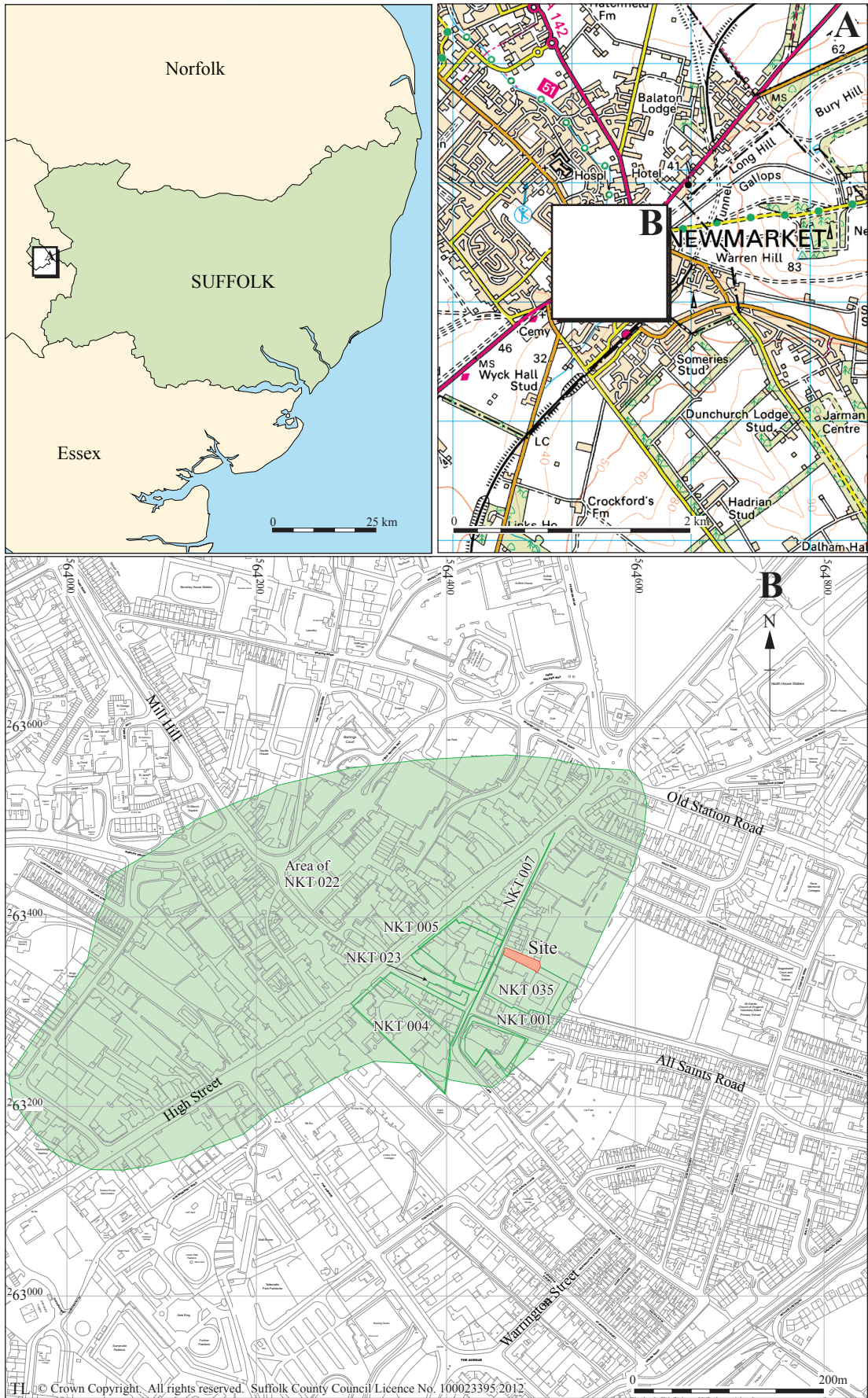


Figure 1. Location plan, showing development area (red) and HER sites mentioned in the text (green)

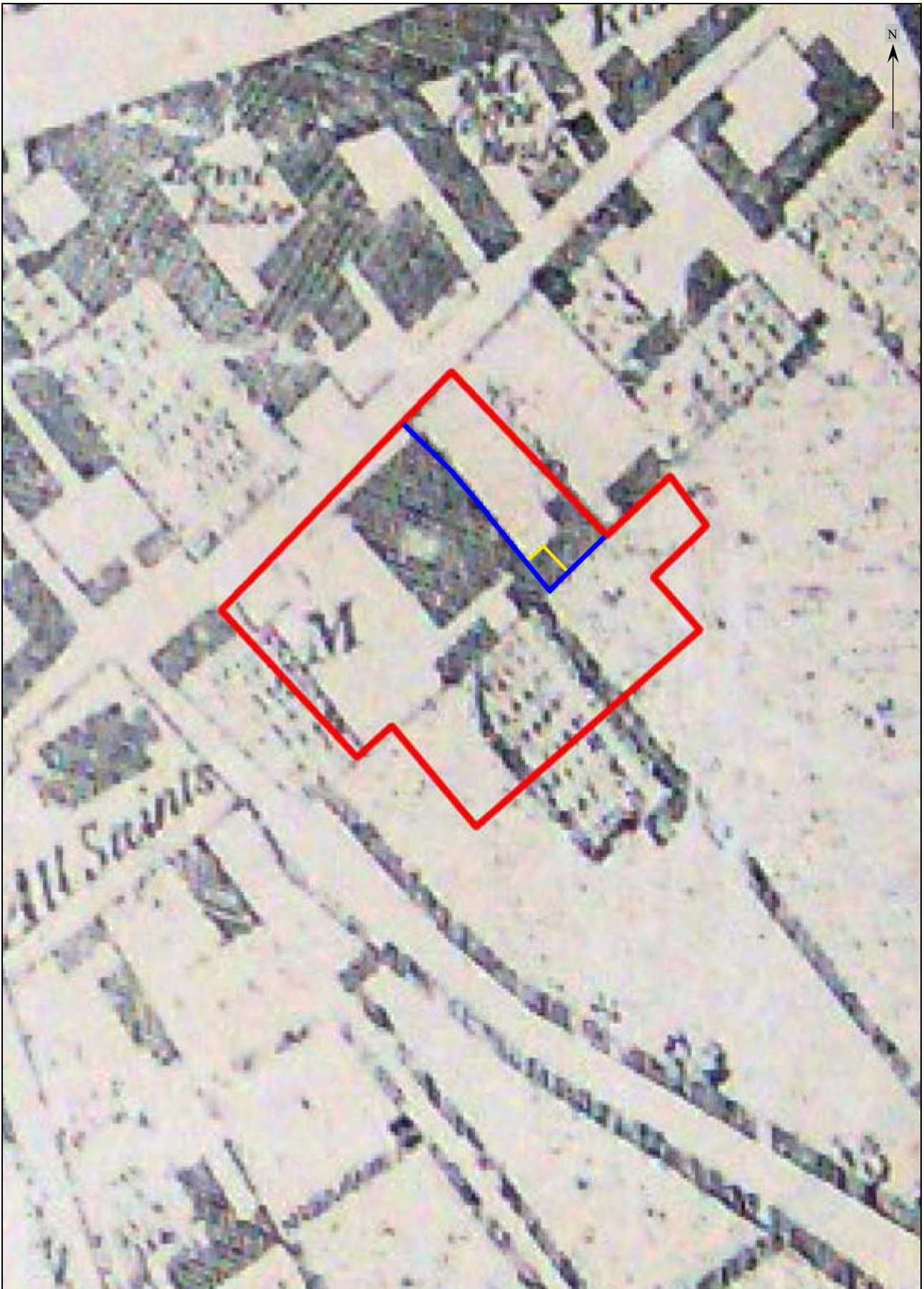


Figure 2. 1787 Chapman map with the museum development outline (red), approximate site outline (blue) and possible outline of structure 0154 (yellow)



Figure 3. 1850 Public Health map overlaid with modern Ordnance Survey data, with site outline (red) and possible outline of structure 0154 (yellow)

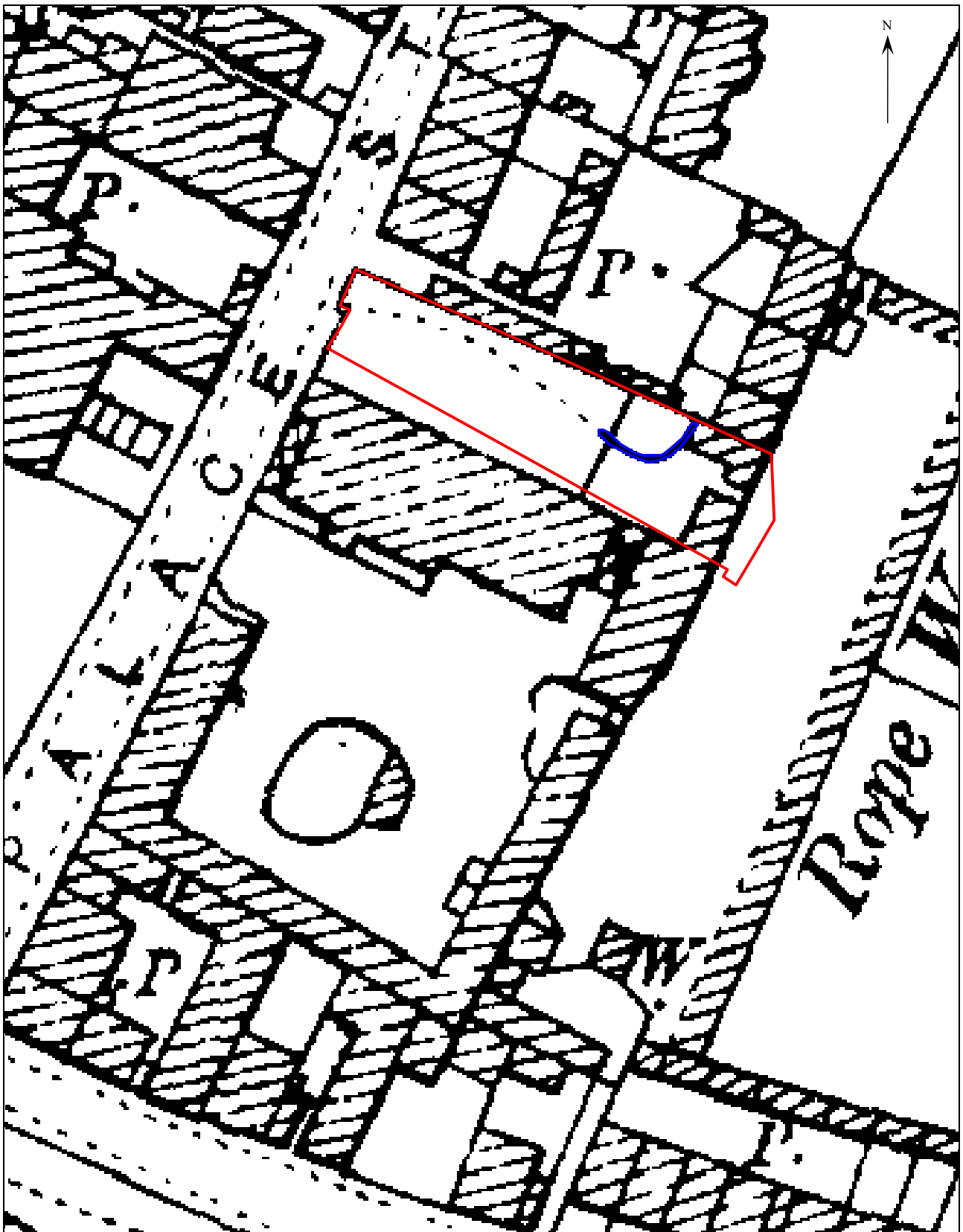


Figure 4. 1902 Ordnance Survey map with site outline (red) and possible outline of structure 0114 (blue)

3. Methodology

The site was stripped of vegetation and then topsoil to the top of the first archaeological level using a mechanical excavator equipped with a ditching bucket. This amounted to an area of c.220sqm (Figs. 5-8). The stripped surface was cleaned, planned and photographed. When the top layers were fully recorded as detailed below, the uppermost levels were then stripped to reveal the earlier stratigraphy. On the advice of the construction engineers a 45° gradient was left between the excavation and the north-east boundary wall. Due to this and the presence of several large concrete foundation blocks, a complete site strip was not possible.

Any visible cuts were hand excavated. The various features, layers and masonry were recorded using a single context continuous numbering system on SCCAS *pro forma* context sheets (Appendix 2). Sections were recorded at a scale of 1:10 or 1:20 and plans were drawn at a scale of 1:50, with stations for elevations established using a Real Time Kinematics global positioning system. Site levels were recorded using a dumpy level. Digital colour photographs were taken of all stages of the fieldwork, and are included in the archive. No environmental samples were taken.

Site data has been input onto an MS Access database and recorded using the County HER code NKT 032. Bulk finds were washed, marked and quantified. The site archives are kept in the main store of Suffolk County Council Archaeological Service at Bury St Edmunds under HER code NKT 032.

An OASIS form has been completed for the project (reference no. suffolkc1-118642, Appendix 3) and a digital copy of the report will be submitted for inclusion on the Archaeology Data Service database (<http://ads.ahds.ac.uk/catalogue/library/greylit>) upon completion of the project.

4. Results

An area of 220sqm was stripped with the mechanical excavator, which removed c.0.4m of topsoil and 0.2-0.3m of demolition material; mainly mortar and chalk rubble. Below this the top of the uppermost archaeological levels were exposed, comprising the bonded walls and surfaces (Figs. 7 and 8).

Most of the structures, features and layers recorded in the excavation are thought to be 18th century or later, mainly relating to the period after the production of the 1787 Chapman map. Exceptions to this are structure 0154, pit 0155 and most of the postholes, which also probably predate 1787. These features do not fit within the site's role after this date, from when it seems to have been devoted to stable buildings. The phasing is based partly around the various maps that survive for the site, as well as stratigraphy, although this is often rather limited. The finds are also often somewhat unreliable for dating because they are frequently reused (with regards to the ceramic building material (CBM)), have very broad date ranges, or are abraded. The quantity of finds was also low. A matrix is included as Appendix 4 and there are detailed feature descriptions in Table 1.

4.1 Phase 1 (18th century, prior to 1787)

The first phase appears to indicate activity prior to, and running into, the site's earliest incorporation into the stable complex. During this phase much of the site is empty, with only two posthole clusters and pit 0155, then later structure 0154 (Fig. 5). This building appears to herald the site's earliest integration into the stable. The walls that make up 0154 (and its associated chalk surface 0157) appear to have been built prior to 1787 when the Chapman map was drawn up and on which a building similar to 0154 appears.

Posthole groups 0166 and 0167, and pit 0155

The posthole clusters were located in the middle (group 0167) and north-west (group 0166) of the site, whilst pit 0155 was south-east of group 0167. Postholes 0132, 0133 and 0139 produced the earliest material on site, comprising four abraded pottery sherds dated as 16th-18th century, whilst late 17th-late 18th century pottery was present in

posthole 0124 and 18th-19th century CBM was found in several contexts. All of the postholes were overlaid by a topsoil layer recorded as 0130/0137, which produced 18th to 19th century abraded CBM. Both posthole clusters formed layouts that cannot be readily assigned to obvious structures, although it is notable that postholes 0139, 0151, 0152 and potentially 0018 (recorded during the evaluation) were aligned parallel with the boundary wall. The cuts were also quite distinct between the two groups, with those from group 0167 having flatter bases and steeper slopes than those in group 0166. This would tend to indicate two distinct structures and possibly different dates, although the date ranges of the finds from both clusters are identical.

Pit 0155 was a roughly oval cut which was also overlaid by topsoil 0130/0137. It contained the majority of the site's bone assemblage, producing thirty-five bones from a pig, but no other finds. The presence of the pit and its finds tend to indicate a different use for the site before its incorporation within the stable complex.



Plate 1. Posthole 0132 from group 0166, overlaid by layers 0129 and 0130, facing north-east, 1m scale

Structure 0154 and chalk floor 0157

At the south-east end of the site was a brick structure recorded as 0154. It measured 5.95m (NW-SE) x >3m (SW-NE). It was divided into two rooms and was generally constructed of unfrogged red post-medieval brick. However, the far south-east wall was made up of a mixture of reused red and yellow bricks (18th to 19th century), as well as occasional flint nodules. Initially the structure had been covered by a layer of sand, gravel, chalk/clunch, mortar and CBM, thought to relate to its demolition. This material was itself then covered by topsoil 0130/0137, although here it was quite disturbed and thin. The structure appears to feature as part of the layout of buildings on the 1787 Chapman map (Fig. 2) and is also shown on the 1850 Public Health map (Fig. 3). Unlike any of the extant surrounding structures or those depicted on the historical maps, this structure had a notably sunken floor 0157. A sondage was excavated into an area of structure 0154. This revealed more demolition rubble to the base of the surviving walls, at which point the chalk floor was uncovered. This was a thin compacted surface which incorporated occasional flints and CBM flecks.



Plate 2. South-east wall of structure 0154, with chalk floor 0157, 0.5m scale, facing south-east

Topsoil 0130/0137

This layer of buried topsoil was 0.2-0.35m deep and overlaid the features in Phase 1, with the possible exception of structure 0154. It was mixed mid-dark orangish-brown and greyish-brown clayey-sandy-silt and produced three abraded CBM fragments of post-medieval date (18th to 19th century), where excavated as 0137 in section 16. It is likely that this layer corresponds to layers 0012 and 0013 recorded in the evaluation at the north-west end of the site. The layer continues into section 19 at the south-east end of the site, although here it was more naturally derived and mixed. The thickness of the layer and its position above the other features in Phase 1, indicates that it formed over an extended period of time, presumably when the site was either not being used or was functioning as a garden or dump area for soil from elsewhere.



Plate 3. Topsoil 0130/0137, overlaid by surface deposits 0159, 0158 and 0120, which are cut away by drain deposit 0136, facing north-west, 2m scale

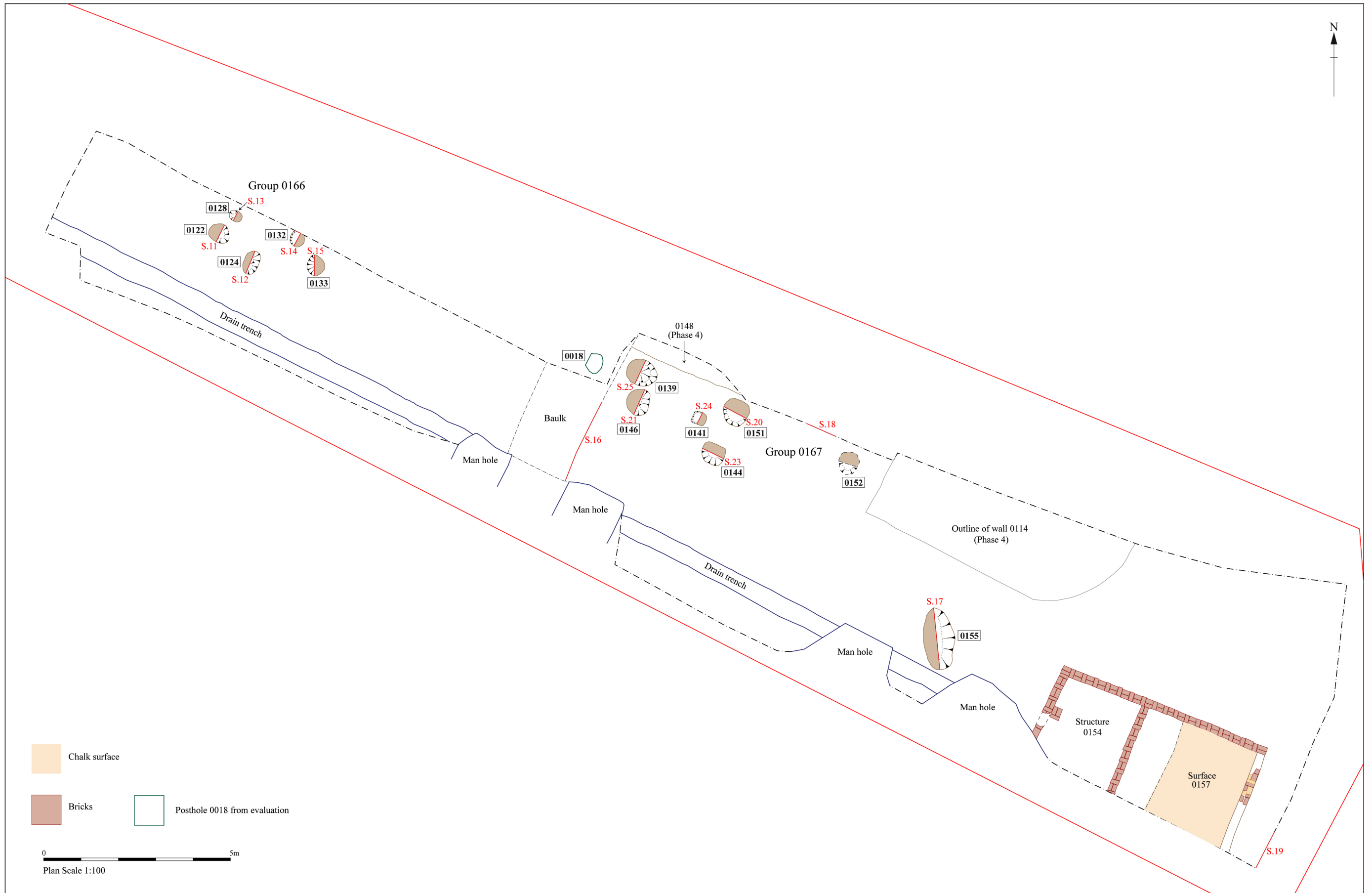


Figure 5. Phase 1

4.2 Phase 2 (late 18th up to early/mid 19th century)

The site's use seems to have changed significantly in this phase, encapsulating a more comprehensive range of chalk and brick buildings, which overlaid buried topsoil 0130/0137, but which were not featured on the 1850 Chapman map (Fig. 6). These buildings ran parallel to the boundary wall to the north-east, also mirroring the alignment of those in Phase 3. However, they are not thought to be the structures shown on the 1850 map because they appear to have been more irregular than the outlines depicted therein.

The evaluation works had exposed a series of post-medieval layers at the north-west end of the site, although these were only present in the area around test pit 1. They included chalk surface 0101 from Phase 2, which corresponds to evaluation contexts 0009, 0010 and 0011.

Building range 0164

Overlying buried topsoil 0130/0137 were chalk and mortar surfaces 0104 and 0120, which were flanked to the south by walls 0100 and 0121. Together, these various contexts formed building range 0164. Two associated layers were also recorded under surface 0120, which were made up of compacted orange sand, gravel and mortar, and recorded as 0158 and 0159. Another small area of chalk surface, 0101, and a chalk, brick and flint wall foundation, 0100, have also been recorded as part of this phase as they fall outside the structure associated with Phase 3. It is also notable that wall 0100 is roughly aligned with wall 0121. A drain and soak-away immediately south-west of wall 0100 are thought to have been associated with the existing stable block and drain deposit 0136 rather than with 0100, which it is close to.

At some point after the construction of building range 0164, posthole 0102 was inserted through chalk surface 0104. It was circular and steep-sided, but its base could not be defined within buried topsoil 0130/0137. It was cut away on its north-east edge by wall 0105 from Phase 3 and its fill, 0103, produced seven pieces of post-medieval CBM, generally dated to the 18th to 19th century.



Plate 4. Surface deposits 0120, 0158, 0159 and 0104, with wall 0121 immediately right of 1m scale and tarmac block 0107 in bottom right, facing south-west, 1m and 2m scales



Plate 5. Surface 0104 and posthole 0102, facing south-west, 1m and 2m scales

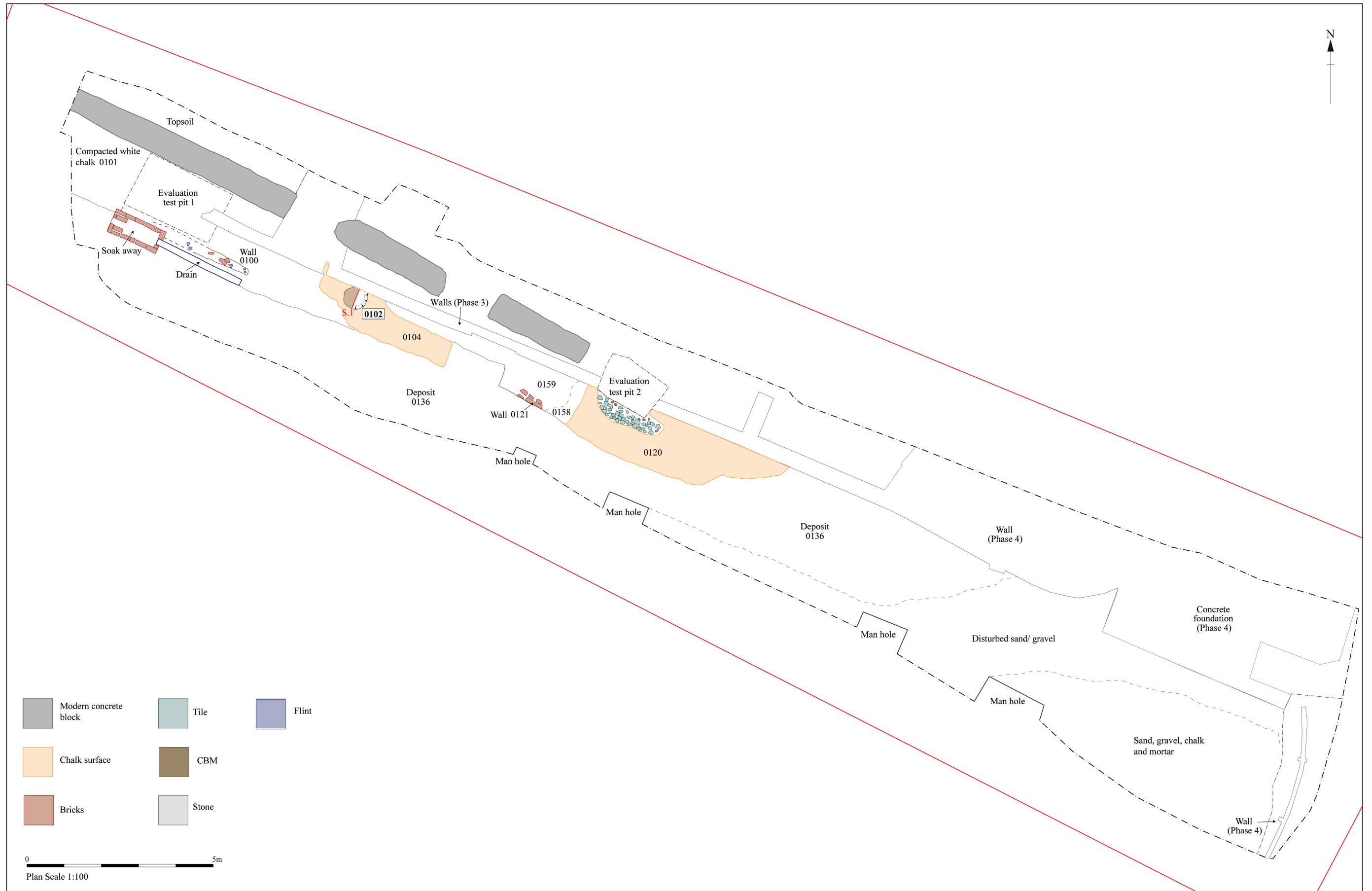


Figure 6. Phase 2

4.3 Phase 3 (early/mid 19th, to late 19th/early 20th century)

This phase encompasses the construction of a lean-to range, built against the north-east boundary wall and shown on the 1850 Public Health map, the 1886 OS map, but not the 1902 OS map. The walls, surfaces and layers within this phase form the most substantial remains of structures within the excavation and were built in sequence as a group of conjoined buildings, starting with walls 0105, 0113 and 0003 (Fig. 7). Following this, walls recorded as 0112 were built into the sequence. For the purpose of this report these associated contexts are sometimes referred to as group 0162.

Walls 0003, 0105 and 0113, and associated contexts

This was made up of a south-east to north-west aligned range, comprising up to three phases of construction and modification (Pl. 6). The longest surviving span of wall was built from red brick (reused late 17th to 18th century) and measured c.15.5m (SE-NW). It was made up of three lengths, 0003, 0105 and 0113, which were intersected by one doorway (indicated by threshold 0118) and drain 0119. The main walls were laid in alternating header and stretcher courses. Wall 0003 was recorded in the evaluation, but was not uncovered again in the excavation, having presumably been damaged during machining works. Two surviving return walls, running south-west to north-east towards the north-east edge of the site from walls 0003 and 0105, flanked drain 0119. These were constructed of smaller pieces of red brick, clunch and mortar, with the differing construction indicating that the drain was inserted into the structure group 0162. Door threshold 0118 was made up of twelve pale yellow bricks, matching those in surfaces 0110 and 0135 that were dated as 18th to 19th century (?1750-1850).

Structure 0112

A further modification of the range is shown by the insertion of structure 0112, which was 4.2m long (SE-NW). This had cut away the south-eastern end of wall 0113 and was aligned with it. A further return came off wall 0112, heading to the north-east site boundary. Brick samples from these walls were dated as 18th to early 19th century. It was a 0.45m thick wall with a course of headers laid double thickness, followed by a course of stretchers laid four bricks thick, and so on (Fig 7). Structure 0112 is cut at its south-east end by structure 0114 in Phase 4.

There were also several surviving chalk surfaces (0108, 0109, 0117 and 0161), a piece of tarmac surface (0107, Pl. 4), and brick surfaces 0110 and 0135 within the walls. Brick samples from 0110 and 0135 were dated as 18th to 19th century, with tentatively assigned ranges of ?1750-1850. These brick surfaces were slightly raised within the surrounding chalk surfaces, probably indicating that they were inserted repairs within the chalk. The rectangular block of tarmac 0107 (>1.05m E-W x >0.35m N-S x 0.08m thick) was found overlying chalk surface 0108, being partly cut away by a concrete foundation. It was not aligned with the structure as a whole and its purpose is unclear. However, it was immediately under demolition deposit 0106 and may have been associated with this activity (Phase 4), rather than the structures in Phase 3.



Plate 6. Walls 0105, 0113 and 0112, associated chalk and brick surfaces, and drain trench 0119, facing south-east, 2x2m scales

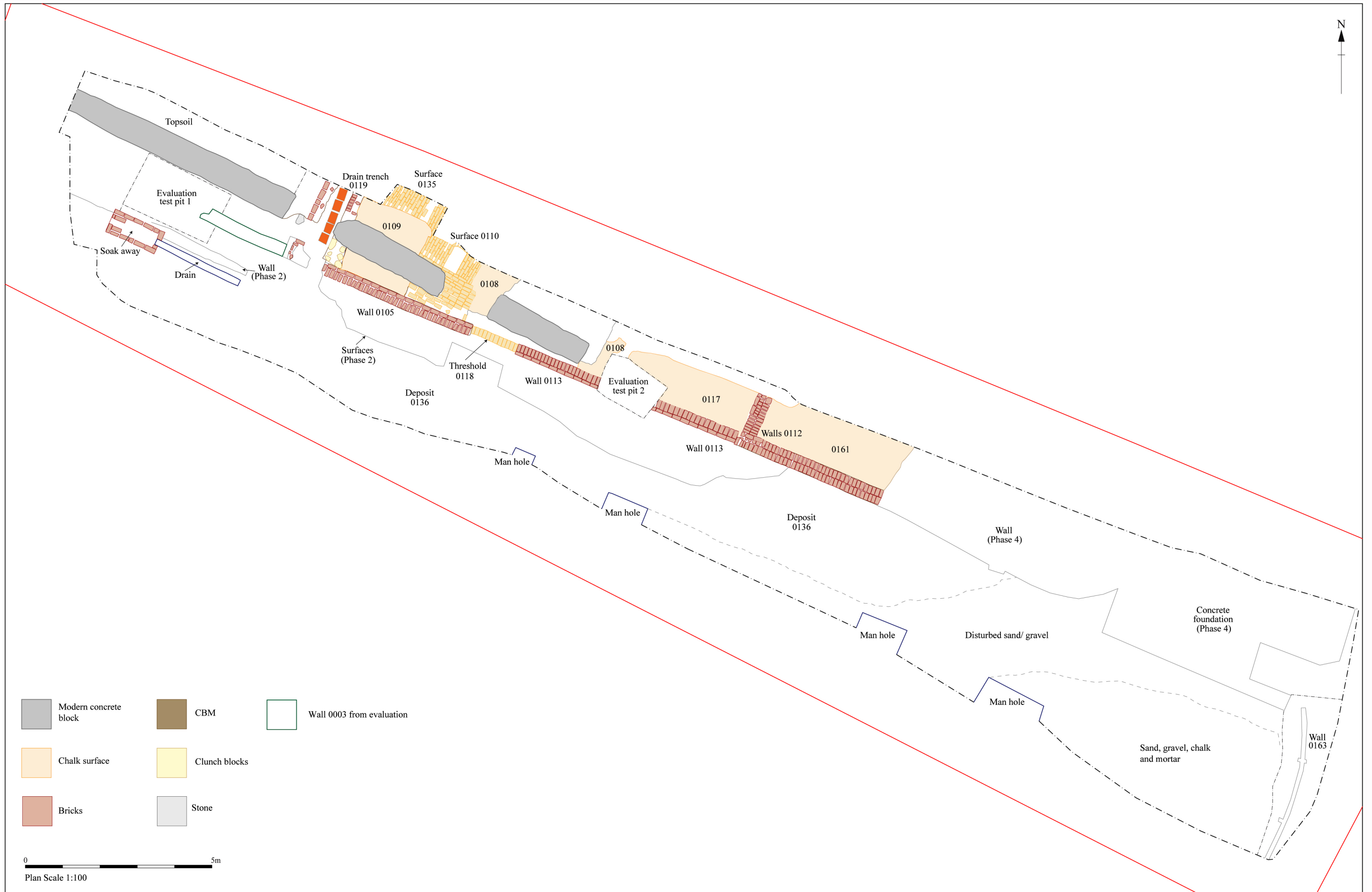


Figure 7. Phase 3

4.4 Phase 4 (late 19th/early 20th century)

This phase of activity broadly coincides with the period immediately prior to the building of the Baron Mayer de Rothschild's stables and trainer's house (1857-60), as well as during their use. The phase includes the building of two structures, 0114 and 0115, as well as demolition activity (layer 0106), and the construction of ornamental wall 0163 (Fig. 8). There is also a more unusual trench feature which contained an iron girder in its base. This cut the features in Phase 3. The sequences for this phase are based largely on stratigraphic evidence and information from the historic maps.

It is unclear whether the buildings from Phase 3 have been cleared from the site in the initial stages of Phase 4. This is because both structures 0114 and 0115 align with the earlier range, suggesting that they were later additions/modifications. However, the presence of none of the other buildings apart from structure 0114 on the 1902 OS map suggests that it at least, was not associated, with much of the site being razed prior to 1902.

Linear feature 0148

A linear trench was recorded, located on the north-east edge of the site (Pl. 7). It was aligned north-west to south-east. It was only possible to partially excavate the feature, but it cut truncated walls 0112 and 0113 and their associated chalk floors. Within the base of the excavated area an iron girder was uncovered, which was parallel to the feature's exposed edge and ran beyond the limits of the excavated area.

Footings 0115

Footings 0115 appear to be the earliest structure in this phase, although being made from Portland cement they can be no earlier than 1824 when this material was patented (Pl. 8). It is also clear from the 1850 Public Health map and the 1886 OS map that the site retained the buildings from Phase 3 until 1886, making the structure associated with footings 0115 later than this. The remains of the footings form a roughly rectangular plan with several subdivisions and measure 6.2m (SE-NW) x >3.2m (SW-NW). They were cut at the north-west end by structure 0114.



Plate 7. Linear feature 0148 with iron girder in base, facing north-east, 0.3m scale



Plate 8. Footings 0115 in foreground, with wall 0114 to rear, facing north-west, 2x2m scale

Footings 0114

Truncating both the south-east end of walls 0112 (Phase 3), and the north-west end of footings 0115, was a yellow brick structure that measured 7m (SE-NW) x >2.4m (SW-NE). It was rectangular with a curving south-east corner and it had a 0.4m thick concrete block attached, which truncated the end of wall 0112 (Pl. 8). The bricks were a mixture of frogged bricks and reused ventilation bricks, but all were pale yellow. The structure was not visible on the 1886 OS map, but it is present on the 1902 OS map, showing the curving end running to the north-east boundary wall, whilst the other end is open. Two wooden posts were still present within the south-west wall. The structure had been infilled with demolition rubble. It is uncertain whether this structure was ever associated with those in Phase 3. Its appearance as a solitary structure on the 1902 map would suggest that it was not, but its perfect alignment with structure 0112 is hard to explain otherwise.

Deposit 0106

Deposit 0106 is thought to probably relate to the demolition of all of the buildings forming the north-west to south-east range(s), including structures 0114 and 0115. This layer consisted of light-mid yellowish-brown chalky-sandy-silt, with common flints, CBM and small chalk fragments. It was recorded overlying the chalk surfaces of the range of structures in Phase 3. However, at the north-west end of the site it appears that the deposit was barely present, appearing patchily in the interface between topsoil 0129 and buried topsoil 0130/0137 (Sec. 14). No finds were recovered from the deposit due to the extremely abraded condition of the material.

Wall 0163

At the far south-east end of the site was wall 0163. It only survived as a single course of red bricks laid in stretcher bond, with a single brick laid at right angles at intervals of 6-7 bricks. It was positioned immediately beneath/within demolition deposit 0168. No structures matching this are visible on any of the historic OS maps, but it was constructed of bricks identical to those of the extant buildings to the south-west, as well as aligning with one of them, and overlaid concrete footings 0115, indicating that it was likely to be from the 20th century. Its form and insubstantial construction indicate that it was an ornamental feature.

Layer 0168, topsoil 0129 and drain trench deposit 0136

In the south-east corner of the site a 20th century layer of demolition rubble overlaid wall 0163. This was only present in a small area and may have been representative of a levelling layer. Overlying this layer and the rest of the site was topsoil 0129 (Pl. 1), which was only cut away in places by a drain trench deposit 0136 (Pl. 3). This trench truncated much of the south-west edge of the site and was associated with the installation and improvements of the drains for the stable complex.

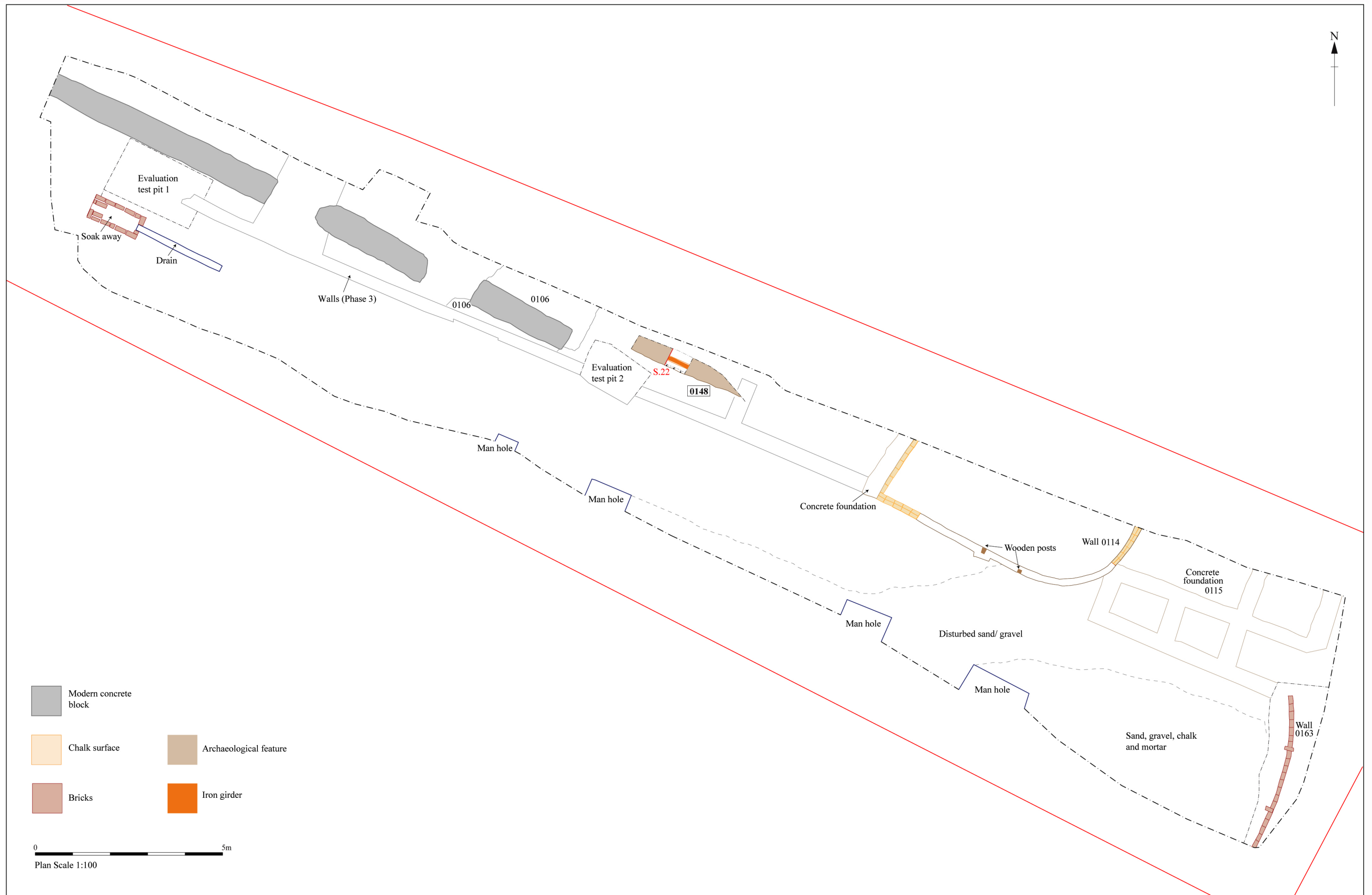


Figure 8. Phase 4

4.5 Context descriptions to accompany the text

Context	Description
Phase 1	
Posthole groups 0166 and 0167	<p>Towards the north-west end of the site a group of five postholes were excavated, comprising cuts 0122, 0124, 0128, 0132 and 0133 (group 0166). None of the postholes were visible cutting through the overlying buried topsoil and where cut in a section with the baulk, posthole 0132 was overlaid by topsoil 0130. This layer is thought to also be the same as buried topsoil 0137. They varied from circular to oval, ranging from 0.32m x 0.32m to 0.4-0.45m x 0.6-0.7m. The depths varied from 0.14m to 0.17m, although cut 0132 was 0.28m deep. The profiles were rather variable, with fairly gently sloping to steep-sloping sides and concave to irregular bases. This group produced late 16th to late 18th century abraded pottery, as well as 18th to 19th century abraded CBM.</p> <p>In the middle of the site six postholes and one possible posthole were recorded (group 0167). Cuts 0139, 0144, 0146 and 0151 were circular/oval to sub-square in plan and measured 0.52-0.74m wide x 0.64-0.85m long x 0.12-0.45m deep. Posthole 0018 (excavated during the evaluation) is also included in this group although it was not visible during the excavation. They had 45° to nearly vertical sides and slightly concave to flat bases. A similar-sized possible cut was also partially excavated and recorded as 0152. However it was extremely root disturbed and it was uncertain if it was a cut feature. The smallest posthole was recorded as cut 0144. It measured 0.34m x 0.35m x 0.13m, was sub-square in plan and had steep sides and a flat base. Material from these postholes included 18th to 19th century CBM, some of which was abraded.</p>
Pit 0155	<p>Only the base of this pit cut survived, which was oval in plan and measured 1.6m x 0.85m x 0.18m deep. The sides sloped at 30-40° and were slightly irregular leading to a concave base. It contained a single fill, 0156, which produced relatively high quantities of pig bones, which were in good condition, suggesting that the pit and its contents were relatively recent, although it was probably under topsoil 0130/0137.</p>
Structure 0154 and floor surface 0157	<p>Structure 0154 formed a rectangular structure, emerging from the north-east edge of the Rothschild's stables. It was divided into two rooms and measured 5.95m (NW-SE) x >3m (SW-NE). It was clearly underlying and on a different alignment to the existing stables. It was mainly constructed of standardised red bricks of 18-19th century date laid header to stretcher, although the south-eastern wall was made up of a mixture of yellow bricks and red bricks of various dimensions, with very uneven courses and occasional flint pieces. These mixed bricks were also 18th to 19th century.</p> <p>Surface 0157 was uncovered within a machine sondage within the walls of 0154. It was largely made up of compacted chalk, but also contained occasional CBM flecks and small flints.</p> <p>Overlying and infilling 0154 was a layer of demolition material, including clunch blocks and bricks. This was presumably a result of structure 0154's demolition relating to the construction of the existing stables. This in turns was overlaid by topsoil 0130/0137.</p>
Layer 0130/0137	<p>This was recorded as mid dark orangish-brown and greyish-brown clayey-sandy-silt and overlaid posthole group 0167, as well as posthole 0132 from group 0166. 0.2-0.35m deep. It was interpreted as a buried topsoil layer on site and produced three abraded CBM fragments of post-medieval/18th to 19th century date.</p>
Phase 2	
Layer group 0164. Surfaces 0104, 0120, 0158 and 0159	<p>The earliest of these layers was 0159, which was a 0.06m thick deposit of orange sand and gravel that appeared to have been compacted.</p> <p>Immediately overlying 0159 was layer 0158. It consisted of orange (?) mortar and clayey-sand, with frequent small flints. 0.07m thick.</p> <p>The top layer from this series was chalk surface 0120. Within it were frequent tile and occasional brick fragments. An associated chalk surface, 0104, was located north-west of 0120, and had been truncated by posthole 0102. It is probably part of the same phase as 0120 as it was also located externally of structure group 0162 and they were level with each other.</p>
Wall 0100 and surface 0101	<p>Near the north-west end of the site was a short stretch of wall foundation 0100. It was fragmented and aligned SE-NW. It consisted of compacted chalk (c.70-80%), broken brick and medium flint nodules. 0.3m wide x 3m long.</p> <p>At the far north-west end of the site was chalk surface 0100. The surviving area was roughly square in plan, but partially concealed under limits of excavation and cut by evaluation test pit and drain. Contains rare broken brick fragments and occasional medium flint nodules. >1.8 x >1.5 x 0.2m thick. This is thought to relate to the material recorded as 0008, 0009, 0010 and 0011 from the evaluation.</p>
Wall foundation 0121	<p>Running along the south-west edge of layer 0159 and set within it was a double row of bricks, consisting of six bricks laid in stretcher-stretcher bond. The alignment of this wall foundation stub had a parallel alignment with some of the bricks in surface 0110, suggesting that this surface had been reused within the construction of the wall 0105/group 0162.</p>
Posthole 0102	<p>Probably circular in plan, though truncated on north-east side by wall 0105. Steep-sided where cut visible, but not fully excavated as cut became unclear at 0.25m below the ground level. Cuts chalk layer 0104, cut</p>

	by wall 0105.
Phase 3	
Structure group 0162. Walls 0003, 0105, 0113, 0118 and drain 0119	<p>Running much of the length of the site on a NW-SE alignment was one side of a structure, recorded as group 0162. The earliest wall within the group was recorded as 0003, 0105 and 0113; the latter two lengths of which were divided by threshold 0118. Wall 0105/0113 was laid in alternating courses of stretchers and headers, from red brick of late 17th to 18th century date.</p> <p>One return came off wall 0105, heading on a SW-NE alignment at 0105's NW end. This was much more loosely constructed, using brick fragments, clunch blocks and pale yellow mortar. This also functioned as the edge of drain 0119, which flanked the north-west edge of the structure. The drain survived as five loosely joined cylinders on a mortar base and was also contained within a further brick wall on its north-west side.</p> <p>Threshold 0118 was constructed from yellow bricks, laid in a single course of headers. These were worn, but appeared to be similar to those used in surfaces 0110 and 0135, which are of 18th to 19th century date (?1750-1850).</p>
Chalk surfaces group 0160. Surfaces 0108, 0109, 0116 and 0117.	Several chalk surfaces were recorded within the brick walls making up group 0162. These were generally around 0.06m thick and were sometimes partially truncated/disturbed. They may have formed part of an earlier series of surfaces in conjunction with group 0164, but appeared to also have been employed as surfaces within wall group 0162.
Sand screed 0111	Underlying a small area of surface 0110 was a layer of pure orange sand. Loose compaction and immediately overlaid chalk surface 0109. Interpreted as functioning as a levelling screed for brick floor 0110.
Brick surfaces 0110 and 0135	Two small areas of a yellow brick floor surface were recorded within wall 0105. These were made up of slightly varied bricks with an 18th to 19th century (?1750-1850) date. They were numbered separately as surface 0135 was slightly higher than 0110, although this may not be significant. The alignment of the layout of the bricks did not run at a right angle to wall 0105.
Wall 0113	At the south-east end of wall 0113 was wall 0112. This consisted of one wall aligned with wall 0113, with a return running SW-NE. These walls cut wall 0113, and were approximately 0.45m thick, laid with a course of headers backing onto another course of headers. The course above then was laid as four stretchers running the thickness of the wall. At its south-east end this area of walling was cut away by late structure 0114.
Chalk surface 0161	Within wall 0112 was chalk surface 0161. It is the latest of the chalk surfaces as it is laid within 0112.
Tarmac deposit 0107	Overlying chalk surface 0108, but underneath demolition deposit 0106 was a small piece of tarmac or bitumen. It was a rectangular(?) area of dark grey/black material. It measured >1.05 x >0.35 x 0.08m thick.
Phase 4	
Footings 0115	This was a series of concrete foundations that appear to have been cut away by structure 0114 and are also under wall 0163. They only consist of what is now very loosely accumulated concrete rubble set within natural subsoil. Foundations are c.0.6m wide and the overall structure is 6.2m long (NW-SE).
Structure 0114	Brick structure consisting of yellow bricks. Mixture of bricks, (all are the same size) but some are reused ventilation bricks. One wall runs NE-SW from the NW baulk, then turns a right angle to run NW-SE, which then curves round to the NE at its SE end. Cuts wall 0112 and concrete foundation 0115. Two wooden posts set within the wall still had wood within them. It was back-filled with topsoil, sand, CBM. The bricks were laid in a stretcher bond.
Demolition deposit 0106	Light-mid yellowish-brown chalky-sandy-silt. Friable-firm compaction. Common small angular flints, and frequent small chalk and CBM fragments. It was approximately 0.06m thick and was interpreted as a layer of demolition material associated with the main range of buildings. It was underneath topsoil 0129.
Curved wall 0163	Brick structure, forming curving linear in plan aligned roughly N-S. Made up of bricks laid as stretchers in single line, with a single brick laid at right angles at intervals of 6-7 bricks. Aligns with N-S wall of building to south-west. Bricks are post-medieval. >4 0m long x 1-0.25m wide.
Topsoil 0129	Dark greyish-brown silty-clay. Friable compaction. Moderate small flints. Occasional medium rounded flints. Moderate CBM. Varying depth. Topsoil that overlies much of the site.
Feature 0148	Linear feature aligned NW-SE. Only partially visible on NE edge of site. 50° straight side with flat base. An iron girder(?) ran along the base, parallel with the feature. Only partially visible. Unclear function, but possibly structural.
Drain trench deposit 0136	Deposit of mid brownish-grey silty-sandy-clay. Firm compaction. Common small CBM lumps. Very gravelly with frequent chalk patches in places. Runs full length of SW edge of site parallel to stable yard buildings. Interpretation – drain trench deposit that was originally generated by installation of drains for stable yard, but has subsequently been reworked with new drains.

Table 1. Context descriptions

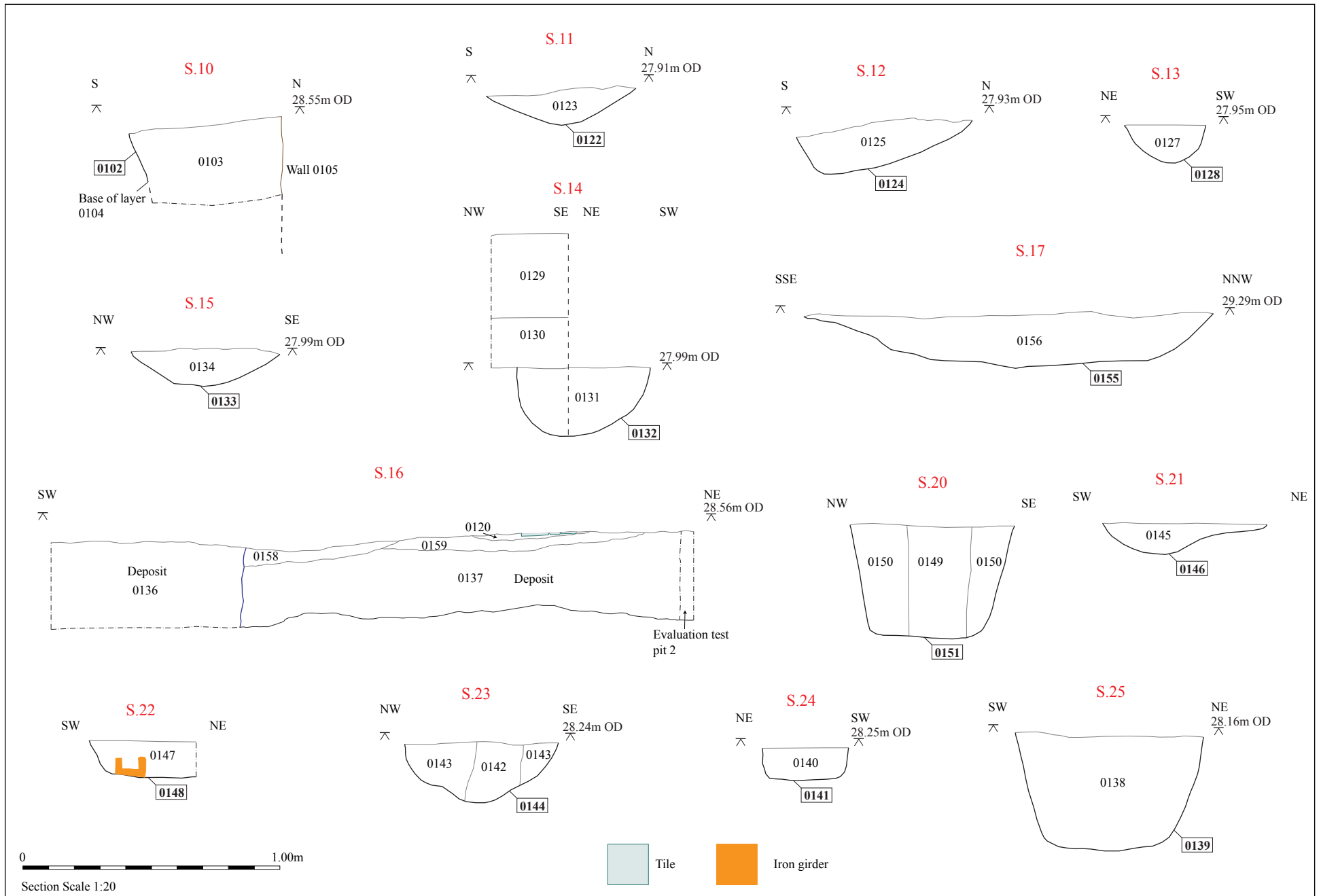


Figure 9. Sections

5. The finds evidence

Andy Fawcett

5.1 Introduction

Table 2 shows the quantities of finds collected from the archaeological excavation. The finds were retrieved from the fills of nine post-holes, one pit, drain, linear and gully.

Brick samples were also taken from three floor layers and three wall foundations. Also present are two small finds which have been recorded separately.

Find type	No	Wt/g
Pottery	8	103
CBM	54	24645
Mortar/plaster	2	178
Clay pipe	17	88
Worked flint	1	1
Slate	1	7
Glass	6	128
Slag	1	9
Iron object	2	72
Non-iron nail	1	3
Animal bone	40	405
Shell	2	15
Totals	144	25703

Table 2. Finds quantities

5.2 Pottery

Introduction

A total of eight sherds of pottery with a weight of 103g have been recorded in five contexts (Appendix 5). All of the sherds are dated to the post-medieval period. The condition of the pottery is variable, those from drain fill 0119 and post-hole 0124 display only slight abrasion, whereas the sherds from post-holes 0132, 0133 and 0139 are all abraded.

Methodology

All of the pottery has been examined at x20 vision and divided into fabric groups. Codes have been assigned to these groups using the SCCAS fabric series. All of the pottery has been recorded by sherd count, weight and estimated vessel equivalents (EVE's). A full contextual breakdown of the pottery can be seen in Appendix 5.

The assemblage

Drain fill 0119 contained three sherds of pottery (17g). One of these is a sherd of Mocha ware (MOCHA) with cream bands whilst the remainder are sherds of Transfer printed ware (TPE). The context is dated from the late 18th to 19th century. Post-hole 0125 contained one sherd of Nottingham type stoneware (ESWN). It is a rim fragment probably from an ink jar and is dated from the late 17th to late 18th century. The single sherds in post-holes 0132, 0133 and 0139 are all Glazed red earthenwares (GRE). They are all abraded body sherds and are dated from the 16th to 18th century.

Conclusion

The pottery assemblage is small and is principally of value for dating purposes. However the small number of sherds within each context, their abraded state and site conditions (the area having probably being levelled several times for different phases of construction) all contribute to the assemblage being of low interpretational value.

5.3 Ceramic building material (CBM)

Introduction

Five different categories of post-medieval CBM have been recorded and a breakdown of these can be seen in Table 3. The whole bricks have been taken as samples from wall foundations (0105, 0112 and 0154) or flooring layers (0110, 0120 and 0135). The remainder of the assemblage has been retrieved from the fills of eight post-holes, a gully, two layers and an unstratified context. The CBM is in a variable state of preservation being generally between abraded and slightly abraded. The sample bricks display little abrasion.

Form	Number	Weight/g
Roof tile (RT)	25	1047
Late brick (LB)	11	19948
Floor brick (FB)	2	3316
Floor tile (?FT)	1	3
Fragment (FRAG)	15	331
Totals	54	24645

Table 3. CBM form quantities

Methodology

All of the CBM has been divided into fabric groups and codes have been allocated to them based upon those currently in use by SCCAS. The CBM has been recorded by fragment count and weight and a full breakdown by context can be seen in Appendix 6.

The assemblage

Roof tile

The roof tile (RT) assemblage is fragmentary and in some instances, has clearly been reused, defined by mortar coating over old breaks (see post-holes 0103 and 0142 as examples of this). The only identifiable pieces are four pan tile fragments (PT) one of which, in floor layer 0120, displays a stamped 'L' on the nib. The roof tile depths measure mostly between 11mm and 17mm. All of the fragments are broadly dated to the post-medieval period.

The collection is split between two fabric groups. The first of these is made up of red medium sandy fabrics (ms), the most common of which contains ferrous inclusions (msfe). The second group is made up of white-firing clays (ws), and the most frequently encountered of these is one which contains grog and calcite (wsgc).

Late Brick

The majority of late bricks (LB) were taken as samples from wall foundations and floor layers and are therefore in a good state of preservation displaying little wear. Two of the examples, one each from post-hole 0142 and wall foundation 0154 have clearly been reused, indicated by mortar over old breaks.

The dimensions of the late bricks as whole (see Appendix 6), correspond chiefly to Drury types LB3 and LB9 (1993, 165) and are dated from the 18th to 19th century. However in the case of the white-firing bricks ('Suffolk whites') there appears to be some disharmony in their given date ranges. At the Angel Hotel these are dated 18th to 19th century (Anderson, 2005), whereas Ryan dates them from the late 18th to 19th

century (1996) and for Drury they become common in the 19th century. At Cressing Temple Manor 'Suffolk whites' are dated from c 1750 to 1850 (Ryan and Andrews, 1993); the measurements undertaken on these late bricks are comparable to those listed in the above publications. None of the bricks (red or white) are frogged which indicates a pre 1830/40 date for the assemblage. White brick production was known in Burwell in east Cambridgeshire as well as at Woolpit and Culford in Suffolk from at least 1750.

Two late brick fabric types are represented. The red firing types are predominantly medium sandy with ferrous inclusions (msfe). The white fired types are also medium sandy with either ferrous inclusions (wsfe) or grog and calcite (wsgc).

Floor brick

Two sample floor bricks or 'paviours' (FB) were extracted from floor layer 0135 (3316g). The two bricks are whole and in a white medium sandy fabric with ferrous inclusions (wsfe). Both of the bricks show signs of wear and some surfaces display mortar. Their dimensions, 230 x 107 x 47mm and 240 x 106 x 38mm are comparable to those recorded at the Angel Hotel in Bury St Edmunds (Anderson 2005). These types of bricks were commonly used for flooring in East Anglia in the 18th and 19th centuries.

?Floor tile

A very small possible floor tile fragment (3g) was recorded in post-hole 0103. It has a red surface and possible grey core with a small area of dripped decoration on a white slip. The surface area appears slightly concave which may have been part of the original tiles undulation. Its date is unknown.

Fragments

This group (FRAGS) consists of red medium sandy fragments which cannot be allocated accurately to a diagnostic form such as roof tile or brick. Their colours and fabrics suggest they are all dated to the post-medieval period.

Conclusion

The CBM assemblage contains roof tile and bricks which are predominantly dated from the 18th to mid 19th century. Some of the broken tile and brick pieces have clearly been reused by the presence of mortar across old breaks. The wall bricks and floor bricks were nearly all retrieved as samples from *in situ* features. However in general the remainder of the assemblage is fragmentary, worn and spread thinly across contexts and is in keeping with the heavily disturbed nature of the site.

5.4 Mortar/plaster

Two abraded pieces of lime based mortar were retrieved from post-hole 0125. The pieces are coloured off-white and in a medium sandy fabric (ms). Post-medieval pottery and CBM is also present within the context.

5.5 Clay tobacco pipe

Clay tobacco pipe fragments were recorded in four contexts, post-holes 0138, 0145, 0149 and linear fill 0147. The assemblage is chiefly composed of stem fragments. The only exceptions are a stem attached to a small flat pedestal and the remains of the lower part of the bowl. It is dated from the 17th century onwards and is present in fill 0147. A complete bowl with a small flat pedestal is present in fill 0149. Its form is similar to Oswald's No 8 in his simplified typology, and it is dated from the late 17th to early 18th century (1975, 37-9). In all instances the pipe fragments are accompanied by other finds dated to the post-medieval period.

5.6 Worked flint

A residual flake of worked flint, dated to the later prehistoric period, was recorded in post-hole 0125 (1g). A single abraded sherd of post-medieval pottery is also present within the fill.

5.7 Slate

A single abraded fragment of roof slate was noted in post-hole fill 0103. A small collection of post-medieval CBM is also present within the fill.

5.8 Bottle glass

Green post-medieval bottle glass was recorded in three contexts, drain fill 0119, post-hole 0138 and linear fill 017.

5.9 Slag

Linear fill 0147 contained a single fragment of non-metallurgical fuel ash slag. Also present within the context are fragments of post-medieval clay tobacco pipe and bottle glass.

5.10 Iron object

Two corroded pieces of a large industrial 'U' type staple with pointed terminals were retrieved from post-hole fill 0125. Both post-medieval pottery and CBM are present within the same context.

5.11 Non iron nail

A complete galvanised nail (probably zinc coated) with a round head was recorded in drain fill 0119. The presence of mortar on both the shaft and underside of the head indicates its probable use in walling. It is dated from the middle of the 19th century onwards and is accompanied by post-medieval pottery and glass.

5.12 The small finds

Identified by Andrew Brown

Two small finds were identified within the finds assemblage. Both were recorded in gully fill 0136 and are dated to the post-medieval period. The first (SF1001) is a severely degraded and flattened copper alloy thimble (6g). It is probably machine made and dated from the 17th to 18th century or possibly later. The second item (SF1002) is a copper alloy escutcheon cover (17g) dated from the 18th to 19th century. It is complete with a rounded head and splayed bottom half and would have been a furniture keyhole cover. The only other find within the fill is a small and abraded fragment of post-medieval roof tile.

5.13 Conclusion

In general the finds are in a fragmentary and abraded condition. This is due to the heavily disturbed nature of the site, the area having possibly been levelled several times during new periods of construction. The finds assemblage is dated to the post-medieval period, the principle datable components being, pottery, CBM, clay tobacco pipe, glass and two small finds. The more datable parts (pottery, CBM and clay tobacco pipe) suggest the main phase of activity within this period is between the 18th and mid 19th century. However, there is no cohesion in the distribution of finds generally (except for those sampled from walls and floor layers), a good example being the few Glazed red earthenwares, recorded in three different unrelated post-holes.

6. The environmental evidence

6.1 Faunal remains

Mike Feider

Forty fragments of animal bone were retrieved from the excavations at Palace House Stables. The majority of these are from a partial pig found in pit fill 0156. Drain 0119 contained a rib and partial tibia from an unidentifiable medium-sized mammal, posthole fill 0125 held a cow second phalanx and another medium-sized mammal rib, and posthole fill 0145 had an additional medium-sized mammal rib. All of these remains show slight signs of weathering.

The disarticulated ribs, vertebrae, femurs, and partial scapula and tibia of a pig were recovered from pit fill 0156. The bones are in excellent condition; probably representing a fairly modern animal. Based on the epiphyseal fusion of the long bones it was likely to be less than two years of age.

Very few conclusions can be made from such a small assemblage. The only butchery observed within the assemblage was a chop mark through the medium-sized mammal rib in posthole fill 0125. The pig from pit fill 0156 was too young for metrical analysis.

6.2 Shell

Two small and abraded oyster shell fragments are present within the finds assemblage, one each in drain fill 0119 and topsoil layer 0137.

7. Discussion

Four phases of well-preserved post-medieval building foundations, layers and several cut features were found across the site in spite of some truncation and relatively high levels of demolition and construction. The structures across the site probably date from c.1700, after the construction of the Royal Stable, and there is no indication of the medieval occupation despite the site's proximity to the town core. This suggests that the site has been roughly levelled and cleared during various stages of construction/redevelopment.

The earliest activity on the site is characterised by two posthole clusters, a pit, a linear feature (possibly structural) and brick walls with a chalk floor (Phase 1a). Most of these features do not clearly correspond to any of the activity previously recorded either during the evaluation works or on the 1787 Chapman map. Structure 0154 was part of the range of buildings shown on the Chapman map and as such this makes this the earliest remains on the site of a known date (highlighted on Figs. 2 and 3).

Stratigraphically contemporary with this were timber structures made up of post holes and a partial pig burial within a pit.

The function of the posthole groups is unclear. It is possible that their position near the front of the later building range is important, suggesting that they may have functioned as scaffold supports for construction of earlier buildings following the same alignment, or they may have been supports for open-fronted buildings. There is a possible alignment of postholes 0139, 0151 and 0152, which seem to also respect the south-west edge of feature 0148 and the general building alignments on site. The presence of a pig burial (pit 0155) is interesting, and the development of the worked topsoil, which sealed the early features suggest that the site was in use as a garden or unpaved yard prior to the site being built on in Phase 2. These features certainly indicate that this area of the complex was being used in a less prestigious manner to the front stables, potentially for animal husbandry, as appears to have been the case with the area to the rear of the stables at Cheveley Park.

After this initial phase of activity a series of surfaces and slightly irregular walls were built (Phase 2). These seem to roughly mirror the alignment of the later buildings and the earlier posthole groups and probably indicate one or more incarnations of these structures. They are not shown on the 1787 Chapman map, but by the time of the 1850

Public Health map a series of buildings are present. However, it is assumed that the structures depicted on the map are those from Phase 3 rather than Phase 2 because of the corresponding regularity in plan between the buildings on the map and those in this phase of the excavation. In comparison, the remains uncovered in Phase 2 appeared to be more irregular, with wall 0121 in particular being on a slightly different alignment to the buildings on the Public Health map.

The main phase of activity in this area of the stable complex is represented by the building works that begin in Phase 3, which are present on the Public Health map of 1850. These form a series of brick-built structures, running along much of the length of the site, which abut and incorporate a clunch-built section of the extant boundary wall to the north-east. There was a single door represented by threshold 0118 and drain 0119 and areas of compacted chalk surfaces and brick floors. The purpose of these buildings is unclear. The single doorway would indicate that they were not used for stabling the horses and as such it is assumed that these may have been tack rooms and other store rooms associated with the stable complex. Another possible use would also be for husbandry of animals such as cattle, as seen in the painting of Cheveley Park. These animals could then be run out during the day, and therefore not infringe upon the function of the stable as a prestigious building. However, the lack of a more comprehensive layout of this range of structures makes it impossible to be sure of their function. The range of buildings encompassed in Phase 3 was present until sometime after the drawing up of the 1886 OS map, but it was demolished by the time of 1902 OS map. There is little archaeological evidence from which to draw any other conclusions regarding this range of buildings. However, the level of the floor is evident from the position of the threshold and the chalk and brick surfaces. It is also possible that the construction of the buildings along this range varied as they are shaded differently on the Public Health map. This may denote that some of the structures were open-sided shelters/stores, whilst others had full height walls.

After the demolition of the buildings shown on the 1886 OS map, the structures in Phase 4 (structure 0114 and foundations 0115) seem to have been built as part of a series of alterations. Their function is uncertain, although an 1896 architectural plan indicates that wall 0114 was a 15 foot x 20 foot manure enclosure (Brooks, 2012).

8. Conclusions

The site has revealed a series of fairly well-preserved structural remains across the area, none of which are associated with the 1720 Fort plan construction stage. However, the earliest features were several postholes and a pit, indicating a potentially different use of the site prior to its incorporation within the stables, followed by it being left open for some time. However, these may indicate husbandry of animals other than horses in this particular area, which may have continued into later phases. The earliest clear structure is a two-roomed building, which probably pre-dates 1787, but is unlikely to be earlier than 1700. This was then superseded by a more intensive construction stage, which starts prior to the drawing up of the 1850 Chapman map. It appears that there were several phases of building associated with this activity, including enlargements and modifications. These structures survived until after the 1886 OS map was drawn up, but were demolished by 1902, by which time the final buildings on the site were completed. The function of any of the structures is not entirely clear. Despite their presence on several maps there is little evidence to indicate their role within the stable complex, suggesting that they are storage rooms or were complimentary in some other way to the main stable yard to the south-west, perhaps housing other animals. With this in mind it is unlikely that they would feature within any documentary sources to further explain their role within the site as a whole.

9. Archive deposition

Paper and photographic archive: SCCAS Bury St Edmunds R:\Environmental Protection\Conservation\Archaeology\Archive\Newmarket\NKT 032 Palace House Stables Excavation

Finds and environmental archive: SCCAS Bury St Edmunds. Store Location: Parish Box I/94/4

10. Acknowledgements

The excavation was carried out by Rob Brooks, John Sims, Adam Yates and Alan Smith, from Suffolk County Council Archaeological Service, Field Team.

The project was directed by Rob Brooks and managed by David Gill, who also provided advice during the production of the report.

The post-excavation was managed by Richenda Goffin. Finds processing was carried out by Jonathan Van Jennians, and the production of site plans and sections by Ellie Hillen and Gemma Adams. The finds report was written by Andy Fawcett, with contributions from Andrew Brown and Mike Feider.

The report was checked by David Gill and Richenda Goffin.

11. Bibliography

Anderson, S., 2005, 'Building materials' in Duffy, J. The Angel Hotel, Bury St Edmunds: A report on the archaeological investigation (BSE 231), SCCAS Rep No 2005/173

BGS, 2012, Information obtained from http://www.bgs.ac.uk/products/digital_maps/data_625k.html and reproduced with the permission of the British Geological Survey ©NERC. All rights Reserved

Brooks, R., 2012, *Palace House Stables Basement, Evaluation, Newmarket, NKT 041, Archaeological Evaluation Report*, SCCAS Report No. 2012/079. Bury St Edmunds: SCCAS

Donaghey, A., 2012, personal communication during lecture on *Palaces, Horses and Stables; Charles II and Newmarket*, held at Ipswich: University Campus Suffolk

- Drury, P., 1993 'Ceramic building materials' in Margeson, S. *Norwich Households*, EAA 58
- Muldowney, M., 2010, *Archaeological Evaluation Report, Palace House Stables, Newmarket, NKT 032*, SCCAS Report No. 2010/106. Bury St Edmunds: SCCAS
- Oswald, A., 1975, *Clay pipes for the archaeologist*, BAR No 14, Oxford
- Rolfe, J., 2010, *Palace House Stables, Newmarket, Suffolk, Archaeological Desk-based Assessment*, SCCAS Report No. 2010/055 Unpublished client report
- Ryan, P and Andrews, D., 1993, 'A brick and tile typology for Cressing Temple' in *Cressing Temple: A Templar and Hospitaller Manor in Essex*, Chelmsford: Essex County Council
- Ryan, P., 1996, *Brick in Essex from the Roman Conquest to the Reformation*, Chelmsford: P. Ryan
- Sutton, J., 2012, personal communication during lecture on *Palaces, Horses and Stables; Charles II and Newmarket*, held at Ipswich: University Campus Suffolk

Appendix 1. Brief and specification



The Archaeological Service

Economy, Skills and Environment
9-10 The Churchyard, Shire Hall
Bury St Edmunds
Suffolk
IP33 2AR

Brief and Specification for Excavation

PALACE HOUSE STABLES, PALACE STREET, NEWMARKET

Although this document is fundamental to the work of the specialist archaeological contractor the developer should be aware that certain of its requirements are likely to impinge upon the working practices of a general building contractor and may have financial implications

1. The nature of the development and archaeological requirements

- 1.1 Planning consent is to be sought from Forest Heath District Council for the relocation of the National Horseracing Museum into Palace House Stables, Palace Street, Newmarket, which involves a new-build temporary exhibition hall along the northern boundary of the site with basement accommodation. Any consent is likely to be the subject of a condition requiring an acceptable programme of archaeological work being carried out prior to development.
- 1.2 The site lies within the area of medieval Newmarket, as defined in the County Historic Environment Record, and on the site of the horse racing stables built by King Charles II in the later 17th century, and replaced with the current buildings between 1857 and 1860 and extended between 1896 and 1903. The later buildings incorporate some 17th century walling from the earlier buildings.
- 1.3 A trenched evaluation was undertaken on the site of the proposed new-build exhibition hall by SCC Archaeological Service Contracts Team in May 2010 (HER No. NKT032; SCCAS Report 2010/106). The evaluation revealed the brick walls of a late 18th century or early nineteenth century range of lean-to buildings against the northern boundary wall incorporating the clunch-built remains of an earlier structure thought to be part of the stable complex built by Charles II.
- 1.4 In order to comply with the planning condition, full archaeological excavation and recording of the footprint of the new-build area will be required prior to development. This brief and specification defines certain minimum criteria for that archaeological recording

2. Brief for Archaeological Investigation

- 2.1 An archaeological excavation, as specified in Section 3, is to be carried out prior to development. The area of excavation will correspond to the footprint of the proposed new temporary exhibition hall.

- 2.2 The academic objective will centre upon the potential for this site to produce, in particular, evidence for royal 17th century stables.
- 2.3 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2). Excavation is to be followed by the preparation of a full archive, and an assessment of potential for analysis and publication. Analysis and final report preparation will follow assessment and will be the subject of a further brief and updated project design.
- 2.4 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to SCCAS/CT (Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 352443) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the WSI as satisfactory.
- 2.5 The WSI will *provide the basis for measurable standards* and will be used to establish whether the requirements of the planning condition will be adequately met; an important aspect of the WSI will be an assessment of the project in relation to the Regional Research Framework (*East Anglian Archaeology Occasional Papers* 3, 1997, 'Research and Archaeology: A Framework for the Eastern Counties, 1. resource assessment', and 8, 2000, 'Research and Archaeology: A Framework for the Eastern Counties, 2. research agenda and strategy').
- 2.6 Neither this specification nor the WSI, however, is a sufficient basis for the discharge of the planning condition relating to archaeological investigation. Only the full implementation of the scheme, both completion of fieldwork and reporting based on the approved WSI, will enable SCCAS/CT to advise Forest Heath District Council that the condition has been adequately fulfilled and can be discharged.
- 2.7 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination. The developer should be aware that investigative sampling to test for contamination is likely to have an impact on any archaeological deposit which exists; proposals for sampling should be discussed with SCCAS/CT before execution.
- 2.8 The responsibility for identifying any restraints on archaeological field-work (e.g. Scheduled Monument status, Listed Building status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites &c.) rests with the commissioning body and its archaeological contractor. The existence and content of the archaeological brief does not over-ride such restraints or imply that the target area is freely available.
- 2.9 All arrangements for the excavation of the site, the timing of the work, access to the site, the definition of the precise area of landholding and area for proposed development are to be defined and negotiated with the commissioning body.

- 2.10 The developer or his archaeologist will give SCCAS/CT ten working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored. The method and form of development will also be monitored to ensure that it conforms to previously agreed locations and techniques upon which this specification is based.

3. Specification for the Archaeological Excavation

- 3.1 The excavation methodology is to be agreed in detail before the project commences. Certain minimum criteria will be required:
- 3.2 Topsoil and subsoil deposits must be removed to the top of the first archaeological level by an appropriate machine with a back-acting arm fitted with a toothless bucket. All machine excavation is to be under the direct control and supervision of an archaeologist.
- 3.3 If the machine stripping is to be undertaken by the main contractor, all machinery must keep off the stripped areas until they have been fully excavated and recorded, in accordance with this specification. Full construction work must not begin until excavation has been completed and formally confirmed by SCCAS/CT.
- 3.4 The top of the first archaeological deposit may be cleared by machine, but must then be cleaned off by hand. There is a presumption that excavation of all archaeological deposits will be done by hand unless it can be shown there will not be a loss of evidence by using a machine. The decision as to the proper method of further excavation will be made by the senior project archaeologist with regard to the nature of the deposit.
- 3.5 All features must be fully excavated. Post-holes and pits must be examined in section and then fully excavated. Fabricated surfaces within the excavation area (e.g. yards and floors) must be fully exposed and cleaned.
- 3.6 Any variation from this process can only be made by agreement [if necessary on site] with a member of SCCAS/CT, and must be confirmed in writing.
- 3.7 Collect and prepare environmental bulk samples (for flotation and analysis by an environmental specialist). The fills of all archaeological features should be bulk sampled for palaeoenvironmental remains and assessed by an appropriate specialist. The WSI must provide details of a comprehensive sampling strategy for retrieving and processing biological remains (for palaeoenvironmental and palaeoeconomic investigations and also for absolute dating), and samples of sediments and/or soils (for micromorphological and other pedological/sedimentological analyses of, for example, floor surfaces). All samples should be retained until their potential has been assessed. Advice on the appropriateness of the proposed strategies will be sought from the English Heritage Regional Adviser in Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy, P.L. and Wiltshire, P.E.J., 1994, *A guide to sampling archaeological deposits for environmental analysis*) is available for viewing from SCCAS.

- 3.8 A finds recovery policy is to be agreed before the project commences. It should be addressed by the WSI. Sieving of occupation levels and building fills will be expected.
- 3.9 Use of a metal detector will form an essential part of finds recovery. Metal detector searches must take place at all stages of the excavation by an experienced metal detector user.
- 3.10 All finds will be collected and processed. No discard policy will be considered until the whole body of finds has been evaluated.
- 3.11 All ceramic, bone and stone artefacts to be cleaned and processed concurrently with the excavation to allow immediate evaluation and input into decision making.
- 3.12 Metal artefacts must be stored and managed on site in accordance with *UK Institute of Conservators Guidelines* and evaluated for significant dating and cultural implications before despatch to a conservation laboratory within four weeks of excavation.
- 3.13 Human remains are to be treated at all stages with care and respect, and are to be dealt with in accordance with the law. They must be recorded *in situ* and subsequently lifted, packed and marked to standards compatible with those described in the Institute of Field Archaeologists' *Technical Paper 13: Excavation and post-excavation treatment of Cremated and Inhumed Human Remains*, by McKinley & Roberts. Proposals for the final disposition of remains following study and analysis will be required in the WSI.
- 3.14 Plans of the archaeological features on the site should normally be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. All levels should relate to Ordnance Datum. Any variations from this must be agreed with SCCAS/CT.
- 3.15 A photographic record of the work is to be made, consisting of both monochrome photographs and colour transparencies/high resolution digital images, and documented in a photographic archive.
- 3.16 Excavation record keeping is to be consistent with the requirements the County Historic Environment Record and compatible with its archive. Methods must be agreed with SCCAS/CT.

4. General Management

- 4.1 A timetable for all stages of the project must be agreed before the first stage of work commences.
- 4.2 Monitoring of the archaeological work will be undertaken by SCCAS/CT. A decision on the monitoring required will be made by SCCAS/CT on submission of the accepted WSI.

- 4.3 The composition of the project staff must be detailed and agreed (this is to include any subcontractors). For the site director and other staff likely to have a major responsibility for the post-excavation processing of this evaluation there must also be a statement of their responsibilities or a CV for post-excavation work on other archaeological sites and publication record. Ceramic specialists, in particular, must have relevant experience from this region, including knowledge of local ceramic sequences.
- 4.4 Provision should be included in the WSI for outreach activities throughout the project, for example, in the form of open days and/or local public lectures and/or presentation to local schools (during fieldwork and analysis stages).
- 4.5 It is the archaeological contractor's responsibility to ensure that adequate resources are available to fulfill the Specification.
- 4.6 A detailed risk assessment and management strategy must be presented for this particular site.
- 4.7 The WSI must include proposed security measures to protect the site and both excavated and unexcavated finds from vandalism and theft.
- 4.8 Provision for the reinstatement of the ground and filling of dangerous holes must be detailed in the WSI. However, trenches should not be backfilled without the approval of SCCAS/CT.
- 4.9 No initial survey to detect public utility or other services has taken place. The responsibility for this rests with the archaeological contractor.
- 4.10 Detailed standards, information and advice to supplement this specification are to be found in *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14, 2003. The Institute of Field Archaeologists' *Standard and Guidance for Archaeological Excavation* (revised 2001) should be used for additional guidance in the execution of the project and in drawing up the report.

5. Archive Requirements

- 5.1 Within four weeks of the end of field-work a written timetable for post-excavation work must be produced, which must be approved by SCCAS/CT. Following this a written statement of progress on post-excavation work whether archive, assessment, analysis or final report writing will be required at three monthly intervals.
- 5.2 The project manager must consult the County Historic Environment Record Officer (Dr Colin Pendleton) to obtain a Historic Environment Record number for the work. This number will be unique for the site and must be clearly marked on any documentation relating to the work.
- 5.3 An archive of all records and finds is to be prepared consistent with the principle of English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), particularly Appendix 3. However, the detail of the archive is to be fuller than that

implied in *MAP2* Appendix 3.2.1. The archive is to be sufficiently detailed to allow comprehension and further interpretation of the site should the project not proceed to detailed analysis and final report preparation. It must be adequate to perform the function of a final archive for lodgement in the County Historic Environment Record or museum.

- 5.4 A complete copy of the site record archive must be deposited with the County Historic Environment Record within 12 months of the completion of fieldwork. It will then become publicly accessible.
- 5.5 The data recording methods and conventions used must be consistent with, and approved by, the County Historic Environment Record. All record drawings of excavated evidence are to be presented in drawn up form, with overall site plans. All records must be on an archivally stable and suitable base.
- 5.6 The project manager should consult the SCCAS Archive Guidelines 2008 and also the County Historic Environment Record Officer regarding the requirements for the deposition of the archive (conservation, ordering, organisation, labelling, marking and storage) of excavated material and the archive. A clear statement of the form, intended content, and standards of the archive is to be submitted for approval as an essential requirement of the WSI.
- 5.7 The WSI should state proposals for the deposition of the digital archive relating to this project with the Archaeology Data Service (ADS), and allowance should be made for costs incurred to ensure proper deposition (<http://ads.ahds.ac.uk/project/policy.html>).
- 5.8 Finds must be appropriately conserved and stored in accordance with UK Institute Conservators Guidelines.
- 5.9 The site archive quoted at *MAP2* Appendix 3, must satisfy the standard set by the "Guideline for the preparation of site archives and assessments of all finds other than fired clay vessels" of the Roman Finds Group and the Finds Research Group AD700-1700 (1993).
- 5.10 Pottery should be recorded and archived to a standard comparable with 6.3 above, i.e. *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*, Prehistoric Ceramics Research Group Occ Paper 1 (1991, rev 1997), the *Guidelines for the archiving of Roman Pottery*, Study Group Roman Pottery (ed M G Darling 1994) and the *Guidelines of the Medieval Pottery Group* (in draft).
- 5.11 All coins must be identified and listed as a minimum archive requirement.
- 5.12 Every effort must be made to get the agreement of the landowner/developer to the deposition of the finds with the County Historic Environment Record or a museum in Suffolk which satisfies Museum and Galleries Commission requirements, as an indissoluble part of the full site archive. If this is not achievable for all or parts of the finds archive then provision must be made for additional recording (e.g. photography, illustration, analysis) as appropriate.

- 5.13 Where positive conclusions are drawn from a project, a summary report in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the Proceedings of the Suffolk Institute for Archaeology journal, must be prepared and included in the project report, or submitted to SCCAS/CT by the end of the calendar year in which the evaluation work takes place, whichever is the sooner.
- 5.14 Where appropriate, a digital vector trench plan should be included with the report, which must be compatible with MapInfo GIS software, for integration in the County Historic Environment Record. AutoCAD files should be also exported and saved into a format that can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files.
- 5.15 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.
- 5.16 All parts of the OASIS online form must be completed for submission to the County Historic Environment Record. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).

6. Report Requirements

- 6.1 An assessment report on the fieldwork and archive, and a project design for analysis and reporting, must be provided consistent with the principle of MAP2, particularly Appendix 4. The report must be integrated with the archive.
- 6.2 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 6.3 An important element of the report will be a description of the methodology.
- 6.4 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 6.5 Provision should be made to assess the potential of scientific dating techniques for establishing the date range of significant artefact or ecofact assemblages, features or structures.
- 6.6 The results should be related to the relevant known archaeological information held in the County Historic Environment Record.
- 6.7 The report will give an opinion as to the potential and necessity for further analysis of the excavation data beyond the archive stage, and the suggested requirement for publication; it will refer to the Regional Research Framework (see above, 2.5). Further analysis will not be embarked upon until the primary fieldwork results are assessed and the need for further work is established. Analysis and publication can be neither developed in detail nor costed in detail until this brief and specification is satisfied. However, the developer should be aware that there is a responsibility to provide a publication of the results of the programme of work.

- 6.8 The assessment report must be presented within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.
- 6.9 The involvement of SCCAS/CT should be acknowledged in any report or publication generated by this project.

Specification by: Keith Wade

Suffolk County Council
Archaeological Service Conservation Team
Economy, Skills and Environment
9-10 The Churchyard, Shire Hall
Bury St Edmunds
Suffolk IP33 2AR

Tel: 01284 352440

Email: keith.wade@suffolk.gov.uk

Date: 5th August 2010

Reference: / Palace House Stables

This brief and specification remains valid for 12 months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.

If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.

Appendix 2. Context List

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate	
0100	0100		Wall Foundation	Fragmented linear in plan, roughly aligned SE-NW in two sections. Consists of compacted chalk (c.70-80%), broken brick and medium flint nodules. Possibly related to modern drain, as on the same alignment, but could be cut by the drain. Probably the remains of a wall foundation, but could also be a chalk surface associated with 0101, but truncated by both the drain to the south-west and the evaluation test pit to the north-east.	2.9	0.3	0.08						No	No				
0101	0101		Floor Layer	Area of compacted chalk, roughly square in plan, but partially concealed under limits of excavation and cut by evaluation test pit and drain. Contains rare broken brick fragments and occasional medium flint nodules. Clear horizon. Possible crushed chalk floor or surface. Possibly the same as 0100, although this is much thicker.	>1.8	>1.5	0.2						No	No				
0102	0102		Posthole Cut	Circular in plan though truncated on north-east side by wall 0105. Steep-sided where cut visible, but not fully excavated. Cuts chalk layer 0104, cut by 0105. Cut of posthole. Not fully excavated because cut became unclear beyond 0.25m down.		0.6	>0.25				0104	0103	No	No				
0103	0102		Posthole Fill	Mixed mid brownish-grey and mid grey chalky-sandy-silt. Friable compaction. Common fragments of brick and lumps of chalk. Rare large sub-angular flints. Diffuse horizon clarity below chalk layer 0104. Fill of posthole.		0.6	>0.25				0102	0105	Yes	No				
0104	0104		Floor Layer	White-light grey compacted chalk. Roughly linear/rectangular in plan flanking south-west edge of wall 0105, but clearly partially truncated so original shape in plan is unclear. Chalk surface on probable exterior/west side of building consisting of wall 0105. Not associated with internal chalk surface 0109 because this is cut by posthole 0102, which is then cut by wall 0105. Probably associated with/the same as, 0120. It is not clear if all the chalk surfaces on site are potentially from a similar phase and are just reused or built-over during progressive phases of building.			0.18					0102	No	No	0164			
0105	0105		Wall Foundation	Linear wall aligned SE-NW. Made of an unfrogged red brick (225-240mm long x 105-120mm wide x 60mm tall). Bonded with a hard cement mortar with alternating rows of headers above stretchers. There is a return at the NW end aligned SW-NE which is constructed of clunch, brick and mortar flanking drain 0119. The same structure as wall 0113, separated by brick threshold 0118. Wall of post-medieval building. Related to chalk surfaces 0109 and 0116.	4.3	0.35					0103			Yes	No	0162		
0106	0106		Demolition Layer	Light-mid yellowish-brown chalky-sandy-silt. Friable-firm compaction. Common small angular flints, and frequent small chalk and CBM fragments. Possible demolition layer above chalk surface 0108 and tarmac(?) 0107.			0.06				0107		No	No				

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate
0107	0107		Surface Layer	Small rectangular(?) area of dark grey/black coke-like (tarmac?). Cut by modern concrete foundation block and sits on top of chalk surface 0108. Possible remnants of a tar-macadam surface or a stand.	>1.05	>0.35	0.08				0108	0106	No	No			
0108	0108		Floor Layer	White-very light grey compacted chalk. Surface fragment 0107 sits within a slight indent within this surface. Within wall 0105/0113 and 0118. Chalk floor surface. Probably the same as 0109 and 0116. It is not clear if all the chalk surfaces on site are potentially from a similar phase and are just reused or built-over during progressive phases of building.	4	>1.3	0.06					0107	No	No			
0109	0109		Floor Layer	White-light grey compacted chalk. Full extent unclear but is under sand layer 0111. Within wall 0105/0113 and 0118. Chalk floor surface. Probably the same as 0108 and 0116. It is not clear if all the chalk surfaces on site are potentially from a similar phase and are just reused or built-over during progressive phases of building.	2	>1.5						0111	No	No			
0110	0110		Floor Layer	Single layer of bricks, possibly relating to wall 0105. Bricks nearest 0105 are laid normally (i.e. not on their side) and are yellow, unfrogged bricks (220-230mm long x 100-110mm wide x 60-65mm deep). Bricks towards the baulk are laid on their side, but are also yellow and unfrogged (230-240mm long x 105-110mm wide x 70mm deep). The layout of these bricks are not very well aligned with wall 0105. Brick floor layer. Presumably associated with wall 0105, although may have been incorporated from an earlier structure, hence unusual alignment. The alignment is closer to that of wall 0121, which is presumably from an earlier building. This probably also related to surface 0135, which is just to the north of it and is made of the same brick, but is slightly elevated.	>3.35	>2.65					0111, 0116		Yes	No	0165		
0111	0111		Screed Layer	Fairly pure orange sand. Loose compaction and clear horizon with chalk surface 0109 below. Sand screed laid on top of chalk surface 0109 for the laying of brick surface 0110. Different to the local natural sandy gravel, so clearly imported for the purpose.			0.08				0109	0110	No	No			
0112	0112		Wall Foundation	Wall aligned NW-SE, before turning SW-NE at NW end and running under site edge. Same alignment as 0105 and 0113. Abuts and possibly cuts 0113, post-dating the earlier structure. Courses laid as headers and the wall is two bricks wide, making it thicker than the other walls on site. The course above may have been laid as stretchers, whilst the one below is laid as headers. The bricks are red, measure 215mm long x 100mm wide x 60mm deep and are unfrogged. Encloses floor/surface 0117. Wall that post-dates 0105/0113, but is then cut away by 0114.	4.35	0.45					0113		Yes	No	0162		

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate	
0113	0113		Wall Foundation	Linear wall aligned SE-NW. Made of unfrogged red brick (225-240mm long x 105-120mm wide x 60mm deep). Bonded with a hard sand and cement mortar, with courses made up of headers showing on one side of the wall with stretchers showing on the other. This then reverses for the next course creating an English bond pattern, but thicker than two bricks. Building foundation. Same as 0105, separated by threshold 0118. Related to chalk surface 0108.	6.45	0.35						0112	No	No				
0114	0114		Wall Foundation	Brick structure consisting of yellow bricks. Mixture of bricks, (all are the same size) but some are reused ventilation bricks. One wall runs NE-SW from the NW baulk, then turns a right angle to run NW-SE, which then curves round to the NE at its SE end. Cuts wall 0112 and possibly cuts concrete foundation 0115. Two wooden posts set within the wall still had wood within them. It was back-filled with topsoil, sand, CBM. Laid in a stretcher bond. Fairly recent, probably 20th century structure.	6.4	>2.3								No	No			
0115	0115		Wall Foundation	Series of concrete wall foundations that appear to have been cut away by structure 0114. Only consists of what is now very loosely accumulated concrete rubble/powder set within natural subsoil. Foundations are c.0.5m wide. Structure foundations.	6.2	>3								No	No			
0116	0116		Floor Layer	Chalk surface within wall 0105. Truncated by/to the south of, large concrete block. Under brick floor 0110. Probably the same as 0108 and 0109. Chalk floor surface. It is not clear if all the chalk surfaces on site are potentially from a similar phase and are just reused or built-over during progressive phases of building.								0110	No	No				
0117	0117		Floor Layer	Patchy remnants of a compacted chalk layer. Within walls 0112. Partially cut away by evaluation test pit. Chalk floor surface. Probably the same as surface 0108. It is not clear if all the chalk surfaces on site are potentially from a similar phase and are just reused or built-over during progressive phases of building.	3.5	1.2								No	No			
0118	0118		Door Threshold	Single row of bricks on the same SE-NW alignment as walls 0105 and 0113. Laid with headers showing. Yellow unfrogged bricks measuring 220mm long x 110mm wide x 60mm deep, very similar to those used in surfaces 0110 and 0135. Threshold marking an entrance between walls 0105 and 0113.	1.3	0.22								No	No	0162		

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate
0119	0119		Drain Cut	<p>Linear trench cut with fairly vertical sides and a flat base. There is loosely molded mortar at the base to hold the clay drain pipes which loosely fit together. Rather variable brick, mortar and clunch blocks form the trench sides. The trench around the drain pieces is backfilled with CBM and loose silt.</p> <p>Drain trench associated with the 0105 structure. It was not entirely clear whether it was contemporary with 0105, or whether it was fitted later within the building, although the latter option is more likely as it would explain the irregular brickwork and clunch-work that makes up the drain trench.</p>	>2.5?	0.7	0.4						Yes	No	0162		
0120	0120		Floor Layer	<p>Mid whitish-yellow degraded and compacted chalk. Firm/compacted. Moderate small angular flints. Occasional medium flints. Frequent CBM patches consisting of tiles 80% and brick 20%. Partially enclosed by wall 0121, which survives in one part on its SW edge. Probably cut by wall 0114 and threshold 0118. Large patch of tiles and CBM uncovered in one area and is laid within the chalk. Partially truncated on SW edge by drain trench.</p> <p>This chalk surface seems associated with wall 0121, which was set within it. It is not clear if all the chalk surfaces on site are potentially from a similar phase and are just reused or built-over during progressive phases of building. However the associated layers underlying this particular part of chalk surface appear to indicate that it was part of a different phase of activity.</p>	>6	>1.5	0.07			0121	0158	0121, 0136	Yes	No	0164		
0121	0121		Wall Foundation	<p>Linear wall signed WNW-ESE. Small damaged section is all that survives, consisting of six bricks. Appears to be a mixture of red and yellow brick. Bonded in two rows of stretchers. Different alignment to walls 0105 and 0113, quite similar to alignment of bricks in floors 0110 and 0135.</p> <p>Largely truncated structure that was probably originally a wall. Only visible relation shows this cutting layer 0159, but as this is thought to be associated with 0158 and 0120, it probably cuts 0120.</p>	0.75	0.3			0120		0120		No	No			
0122	0122		Posthole Cut	<p>Circular in plan. Gently sloping sides, c.35°, with imperceptible break of slope to concave and irregular base.</p> <p>Cut of post-medieval posthole.</p>	0.6	0.6	0.14					0123	No	No	0166		
0123	0122		Posthole Fill	<p>Dark greyish-brown silty-gravelly-sand. Friable-firm compaction. Frequent mid-sized sub-angular-angular flint. Common small lumps of chalk and large sub-angular flints. Clear horizon clarity with natural. Single fill of feature.</p> <p>Fill of posthole.</p>	0.6	0.6	0.14				0122		No	No	0166		
0124	0124		Posthole Cut	<p>Oval in plan, aligned NE-SW. SW side- 70-80° slope, with curving break of slope to base. NE side- 40° irregular slope, with gently curving break of slope to base. Irregular/concave base.</p> <p>Cut of possible posthole/pit. Probably a posthole as there are several surrounding it.</p>	0.7	0.4	0.17					0125	No	No	0166		

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate
0125	0124		Posthole Fill	Mid greyish-brown silty-sand. Firm compaction. Frequent small and medium angular and sub-angular flints. 1 piece of mortar. Diffuse horizon clarity with natural. Single fill of feature. Fill of pit or posthole with lump of mortar at base.	0.7	0.4	0.17				0124		Yes	No	0166		
0126			Finds Unstratified	Unstratified finds from whole of site. Includes small finds.									Yes	No			
0127	0128		Posthole Fill	Mid brownish-grey sandy-silty-clay. Friable/loose compaction. Frequent small-medium angular and sub-angular flints. Clear horizon clarity with natural below. Single fill of feature. Fill of posthole.	0.32	0.32	0.15				0128		No	No	0166		
0128	0128		Posthole Cut	Circular in plan. U-shaped profile, sharp break of slope to base, slightly concave sides. Concave base. Located at the west end of the site, north of cut 0122. Cut of probable post-medieval posthole.	0.32	0.32	0.15					0127	No	No	0166		
0129	0129		Topsoil Layer	Dark greyish-brown silty-clay. Friable compaction. Moderate small flints. Occasional medium rounded flints. Moderate CBM. Horizon clear with layer 0130. Layer originally recorded at west end of site. However, it is thought to be the topsoil that overlies much of the site.			0.32				0130		No	No			
0130	0130		Deposit Layer	Mid brownish-grey silty-clay. Friable compaction. Moderate chalk flecks. Moderate/occasional small-medium angular and rounded flints. Root disturbance. Clear horizon clarity with 0131. Layer at west end of site above posthole 0132.			0.2				0131	0129, 0163	No	No			
0131	0132		Posthole Fill	Mid/light grey silty-clay. Friable compaction. Moderate chalk flecks and small nodules. Occasional small-medium sub-angular flints. Clear horizon clarity with natural. Single fill of feature. Fill of posthole.	0.4	>0.32	0.28				0132	0130	Yes	No	0166		
0132	0132		Posthole Cut	Circular in plan, with northern edge lost under baulk. U-shaped profile. Sharp break of slope. Steep, slightly concave sides. Concave base. Sealed by layer 0130. South-east of 0128. Cut of posthole.	0.4	>0.32	0.28					0131	No	No	0166		
0133	0133		Posthole Cut	Oval in plan, aligned N-S. Wide profile with shallow 30° convex sides. Concave base. Cut of possible pit or posthole. Probably a posthole as there are others in vicinity.	0.6	0.45	0.14					0134	No	No	0166		
0134	0133		Posthole Fill	Mid brownish-grey silty-chalky-sand. Firm compaction. Frequent small and medium angular flints. Clear horizon clarity with natural. Single fill of feature. Fill of posthole or pit.	0.6	0.45	0.14				0133		Yes	No	0166		

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate
0135	0135		Floor Layer	Brick surface, probable continuation of 0110, although slightly raised for unknown reason, possibly subsidence, etc. Yellow bricks, some of which have been placed on their side. Some appear to be floor bricks. Some are 220mm long x 110mm wide x 60mm deep, whilst others are 235mm long x 100-110mm wide x 25-45mm thick. Surface runs under site edge. Brick sample kept.	>1.5	0.65							Yes	No	0165		
0136	0136		Gully Fill	Brick surface. Some bricks place on side to support more weight such as horses etc? Deposit of mid brownish-grey silty-sandy-clay. Firm compaction. Common small CBM lumps. Very gravelly with frequent chalk patches in places. Runs full length of SW edge of site parallel to stable yard buildings. Material related to both the drain run following the SW edge of the site and to the construction of the stable yard buildings. Truncates archaeological levels.		>0.76	>0.39	SF1001, SF1002			0120		Yes	No			
0137			Topsoil Layer	Mid-dark orangish-brown sandy-clayey-silt. Common small chalk lumps and frequent small sub-angular and angular flints. Occasional CBM flecks. Clear horizon clarity with natural subsoil below. Buried topsoil layer.		>1.7	0.35					0159, 0163	Yes	No			
0138	0139		Posthole Fill	Dark orangish-brown sandy-silt. Abundant small-medium angular-rounded flints. Loose compaction. Clear horizon clarity with natural. Single/only fill. Posthole fill, post-medieval.	0.85	0.74	0.45				0139		Yes	No	0167		
0139	0139		Posthole Cut	Irregular circular posthole. 70° slightly concave sides, with rapidly curving break of slope to base. Flat/slightly concave base. Posthole cut. Notably similar in size to posthole 0151 and possible posthole 0152.	0.85	0.74	0.45					0138	No	No	0167		
0140	0141		Posthole Fill	Mid brownish-grey sandy-silt. Moderate medium angular and rounded flints. Frequent small chalk lumps. Clear horizon clarity with natural. Posthole fill.	0.35	0.34	0.13				0141		Yes	No	0167		
0141	0141		Posthole Cut	Square in plan with rounded corners. 85-90° sides with rapidly curving break of slope to base. Flat base. Posthole cut. Within centre of a series of other postholes, but this is a distinctly different shape and size, so may be a different phase or completely unassociated.	0.35	0.34	0.13					0140	No	No	0167		
0142	0144		Posthole Fill	Mid/pale grey sandy-silt. Moderate small CBM lumps and large chalk/clunch lumps. Horizon clarity clear. Friable compaction. Post-pipe for posthole. Large chalk/clunch lumps may be reused clunch post-packing.		0.18	0.24				0143		Yes	No	0167		
0143	0144		Posthole Fill	Light greyish-white silty-chalk. Compacted. Clear horizon clarity with natural. Occasional CBM and flint fragments. Post-packing fill.	0.65	0.55	0.23				0144	0142	No	No	0167		

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate
0144	0144		Posthole Cut	Square in plan with rounded corners. 50-75° concave sides, with gradually curving break of slope to base. Concave/slightly irregular base. Posthole cut.	0.65	0.55	0.23					0143	No	No	0167		
0145	0146		Posthole Fill	Dark orangish-brown sandy-silt. Friable compaction. Frequent small-medium angular and rounded flints. Clear horizon clarity. Single feature fill. Fill of possible pit/posthole. Probably a truncated posthole judging by its proximity to other postholes.	0.64	0.52	0.12				0146		Yes	No	0167		
0146	0146		Posthole Cut	Slightly irregular oval in plan, aligned NE-SW. SW side-45° concave sides. NE side- 20° convex. Sides have curving break of slope to base. Base- concave. Cut of possible pit/posthole. Probably a truncated posthole judging by its proximity to other postholes.	0.64	0.52	0.12					0145	No	No	0167		
0147	0148		Linear Fill	Mid/light brownish-grey sandy-silt. Loose compaction. Moderate chalk flecks and small lumps. Occasional flints. Clear horizon clarity. Contains an iron girder(?) following the SW edge of the feature. This was U-shaped, the sides being 80mm high and the base 120mm wide. Fill of 0148.	>3.2	>0.42	0.14				0148		Yes	No			
0148	0148		Linear Cut	Linear, aligned NW-SE. Only partially visible on NE edge of site. 50° straight side with curving break of slope to base. Flat base with iron girder(?) running along base, parallel with the feature. Structural feature serving as a foundation slot for girder? Although iron girder is not fixed within the slot.	>3.2	>0.42	0.14					0147	No	No			
0149	0151		Posthole Fill	Dark brown sandy-silt. Loose compaction. Frequent chalk flecks and small occasional rounded flints. Clear horizon clarity. Post-pipe fill of posthole 0151.		0.36	0.44				0150		Yes	No	0167		
0150	0151		Posthole Fill	Light orangish-white silty-chalk. Compacted. Occasional angular flints. Clear horizon clarity. Post-packing fill of 0151.	0.7	0.64	0.44				0151	0149	No	No	0167		
0151	0151		Posthole Cut	Irregular, slightly squared-off shape in plan. 75° straight sides, with rapidly curving break of slope to base. Flat base. Posthole fill. Similar to 0139 in shape and size. Similar appearance in plan 0152.	0.7	0.64	0.44					0150	No	No	0167		
0152	0152		Posthole Cut	Sub-circular. Steep sided to begin with, then becoming very disturbed/poorly defined. Unclear base. In plan this looked like a well-defined large posthole like 0139 and 0151. However during excavation it appeared to be either a root disturbance or a highly disturbed posthole. Not photo'd or drawn as it was not possible to properly excavate,	0.7	0.6						0153	No	No	0167		
0153	0152		Posthole Fill	Dark brown silty-sand in top 0.1m, quickly becoming mixed with natural orange sand and gravel. Friable but stony compaction. Frequent small-medium rounded-angular stones. Diffuse horizon clarity with natural/disturbed material below. Single feature fill. Possibly feature fill, but very disturbed. No finds present unlike in some of the other postholes nearby.	0.7	0.6					0152		No	No	0167		

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate	
0154	0154		Wall Foundation	<p>Rectangular in plan, but runs into SW site edge. Comprises a NW-SE wall, from which 3 returns emerge (NE-SW aligned) from SW side. Mainly laid in regular courses of stretcher-header-stretcher. Southern-most return is much more irregular, with uneven courses, reusing older varied bricks and some more modern ones as seen in the rest of the structure (could be repairs). Bricks making up the majority of the walls are 222mm long x 110mm wide x 68mm deep. Some reused ventilation bricks of the same dimensions are also present. The bricks in the older irregular wall are a mixture of reads and yellows. Many of the yellows are floor bricks. Occasional flint also built into the wall. Two brick samples have been kept from the older bricks.</p> <p>Post-medieval structure, as it is presumably earlier than the (1903?) training yard buildings to the south-west. The irregularly laid wall may be from an older structure/version of the same building, which was then incorporated into the new phase, hence its pale yellow mortar compared to the grey mortar elsewhere.</p>	5.95	>3								Yes	No			
0155	0155		Pit Cut	<p>Oval in plan, aligned N-S. 30-40° irregular sides (concave and convex), with gently curving break of slope to base. Concave/flat base.</p> <p>Cut of pit. Presumably quite truncated, hence shallow depth.</p>	1.6	0.85	0.18					0156		No	No			
0156	0155		Pit Fill	<p>Mid-dark greyish-brown Silty-sandy-gravel. Friable compaction. Abundant small-large angular and sub-angular flints. Occasional chalk. Diffuse horizon clarity with natural.</p> <p>Fill of pit.</p>	1.6	0.85	0.18				0155			Yes	No			
0157	0157		Floor Layer	<p>Chalk layer that has clearly been compacted and was found at base of machined test pit on south-east partition of structure 0154. Concreted compaction with occasional flints and CBM. Also patches of looser grey chalky-silt. Surface found at 1.35m below ground level and c.0.6-0.7m below level of truncated orange stony-sand geology.</p> <p>Compacted chalk that has been somewhat levelled to serve as a floor surface in 0154. Layer above 0157, which infills 0154 was grey silty-sand, CBM, flint and clunch, presumably from demolition of 0154's upstanding walls.</p>										No	No			
0158	0158		Floor Layer	<p>Orange clayey-sand and chalk. Firm compaction. Frequent small angular flints.</p> <p>Part of floor layer/series of layers underlying/associated with 0120. Presumably associated with an earlier building phase than 0105, etc.</p>			0.07					0159	0120	No	No			0164
0159	0159		Floor Layer	<p>Orange sand and flint. Hard compaction. Clear horizon clarity with buried topsoil 0137 below.</p> <p>Part of floor layer/series of layers underlying/associated with 0120. Presumably associated with an earlier building phase than 0105, etc.</p>			0.06					0137	0158	No	No			0164
0160			Surface Group	<p>Group number for chalk surfaces 0108, 0109, 0116 and 0117.</p> <p>Series of chalk surfaces thought to have been laid contemporaneously within wall group 0162.</p>								0162		No	No			0160

Context No	Feature No	Grid Sq.	Feature Type	Description	Length	Width	Depth	Small Finds	Cuts	Cut by	Over	Under	Finds	Sample	Group No	Phase	Spotdate	
0161			Surface Layer	Chalk surface within wall 0113. Chalk floor. Not contemporary with 0117/group 0160 as it is laid within wall 0113, which is later than the 0160 and the walls to the north-west.	4.2	>0.8							No	No				
0162			Wall Group	Group number for walls 0105, 0112, threshold 0118 and drain trench 0119. Series of associated walls, as well as door threshold 0118 and drain 0119.								0160	No	No	0162			
0163	0163		Wall Foundation	Curving brick structure, forming curving linear in plan aligned roughly N-S. Made up of bricks laid as stretchers in single line, with a single brick laid at right angles at intervals of 6-7 bricks. Aligns with N-S wall of building to south-west. Bricks are post-medieval. External feature associated with trainer's yard.	>4	0.1-0.						0130, 0137	0168	No	No			
0164			Surface Group	Group number for a series of contexts, comprising 0104, 0120, 0158, 0159 and 0121. Largely truncated by deposit 0136 to the south-west and by wall group 0162 to the north-east. Small portion of surviving wall 0121 is positioned on the south-west edge of this. Series of layers. Gravel, CBM, mortar basal layers make up a firm, level base, whilst chalk surfaces 0104 and 0120 are the upper smooth floor surfaces. Associated with wall 0121 and probably collectively these represent a structure.										No	No	0164		
0165			Surface Group	Two areas of adjacent brick surfaces constructed from slightly differing, somewhat rounded/abraded yellow bricks. Given separate context numbers as 0135 was slightly higher than 0110. Somewhat uneven but probably contemporary surfaces.										No	No	0165		
0166			Posthole Group	Group number for postholes 0122, 0124, 0128, 0132 and 0133. These were closely clustered together towards the NW end of the site. They were slightly variable in size and shape. Posthole group of unclear function, although they may have formed scaffolding for structures. Post-medieval finds retrieved. This group may related to posthole group 0167, although their forms are different.										No	No	0166		
0167			Posthole Group	Group number for postholes 0139, 0141, 0144, 0146, 0151 and 0152, as well as 0018 from the evaluation. These were closely clustered together towards the middle of the site. They were slightly variable in size and shape. Posthole group of unclear function, although they may have formed scaffolding for structures. Post-medieval finds retrieved. This group may related to posthole group 0166, although their forms are different.										No	No	0167		
0168	0168		Demolition Layer	Layer of crushed rubble, mortar, CBM and occasional flints. Sharp horizon clarity with topsoil 0130/0137. Overlies wall 0163. Only present at south-east end of site. Demolition material that was possibly used as a leveling screed. 20th century.			0.26					0163		No	No			

Appendix 3. OASIS form

OASIS ID: [suffolkc1-118642](#)

Project details

Project name	NKT 032 Palace House Stables Excavation, Newmarket
Short description of the project	Excavation to the north-east of the main stable block and trainer's house at Palace House Stables, revealed a series of post-medieval features and structures. The earliest of these is shown by a phase of 18th century postholes and a pit, as well as an 18th century structure pre-dating the 1787 Chapman map, overlaid by buried topsoil. Several more extensive phases of construction then occur, with the latest appearing to date to around the late 19th or early 20th century. The function of these buildings was probably as subsidiary units to the adjoining stable yard (in its various incarnations), for purposes such as tack storage and possibly for husbandry of animals such as cattle. There are several historic maps showing the phases of the site's development, although none of the structures are shown on the earliest available plan, the 1720 Fort plan. This indicates that they were not associated with that phase of stable construction, although some of them may have been contemporary. The features uncovered on site comprised brick walls and floors, surfaces, postholes, soil and demolition layers, and a pit. The majority of the finds consisted of animal bone, CBM and pot, much of which was abraded. All of the finds were post-medieval, excluding one redeposited later prehistoric flint. The lack of earlier features and finds on the site, particularly considering its position on the Icknield Way and within medieval Newmarket, suggests that the area was possibly levelled extensively during various phases of redevelopment; particularly as medieval pottery has been recovered from the adjoining stable yard.
Project dates	Start: 17-01-2012 End: 23-01-2012
Previous/future work	Yes / Not known
Any associated project reference codes	NKT 032 - Sitecode
Any associated project reference codes	NKT 032 - HER event no.
Any associated project reference codes	F/2010/0778/FU3 - Planning Application No.
Any associated project reference codes	2012/012 - Contracting Unit No.
Type of project	Recording project
Current Land use	Other 13 - Waste ground
Monument type	POST HOLES Post Medieval
Monument type	PIT Post Medieval

Monument type	STRUCTURES Post Medieval
Monument type	LAYERS Post Medieval
Significant Finds	POT Post Medieval
Significant Finds	TILE Post Medieval
Significant Finds	BRICK Post Medieval
Significant Finds	TOBACCO PIPE Post Medieval
Significant Finds	LITHIC IMPLEMENT Late Prehistoric
Significant Finds	ANIMAL REMAINS Medieval
Significant Finds	GLASS Post Medieval
Significant Finds	SLAG Post Medieval
Significant Finds	THIMBLE Post Medieval
Significant Finds	ESCUTCHEON COVER Post Medieval
Significant Finds	MOLLUSCA REMAINS Uncertain
Investigation type	"Full excavation"
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	SUFFOLK FOREST HEATH NEWMARKET NKT 032, Palace House Stables Excavation
Postcode	CB8
Study area	220.00 Square metres
Site coordinates	TL 6448 6335 52 0 52 14 35 N 000 24 33 E Point

Project creators

Name of Organisation	Suffolk County Council Archaeological Service
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	K. Wade
Project director/manager	David Gill
Project supervisor	Rob Brooks
Type of sponsor/funding body	District Council
Name of sponsor/funding body	Forest Heath District Council

Project archives

Physical Archive	Suffolk County Council Archaeological Service
------------------	---

recipient	
Physical Archive ID	I/94/4
Physical Contents	"Animal Bones", "Ceramics", "Glass", "Industrial", "Metal", "Worked stone/lithics", "other"
Digital Archive recipient	Suffolk County Council Archaeological Service
Digital Archive ID	NKT 032
Digital Contents	"Animal Bones", "Ceramics", "Glass", "Industrial", "Metal", "Stratigraphic", "Survey", "Worked stone/lithics", "other"
Digital Media available	"Database", "Images raster / digital photography", "Spreadsheets", "Survey", "Text"
Paper Archive recipient	Suffolk County Council Archaeological Service
Paper Archive ID	NKT 032
Paper Contents	"Animal Bones", "Ceramics", "Glass", "Industrial", "Metal", "Stratigraphic", "Worked stone/lithics", "other"
Paper Media available	"Context sheet", "Correspondence", "Plan", "Report", "Section", "Survey", "Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Palace House Stables, Newmarket, NKT 032, Archaeological Excavation Report
Author(s)/Editor(s)	Brooks, R.
Other bibliographic details	SCCAS Report No. 2012/012
Date	2012
Issuer or publisher	SCCAS
Place of issue or publication	Bury St Edmunds
Description	A4, comb bound, white cover, in colour, with 6 appendices (also available as a pdf)
Entered by	Rob Brooks (rob.brooks@suffolk.gov.uk)
Entered on	27 September 2012

Appendix 4. Matrix

Phase 2b

0136 = drain trench deposit

0129 = topsoil

0163 = curved wall

0106 = demolition deposit

Phase 2a

0114 = curved structure

Visible on 1902 OS map

concrete footings = 0115

Phase 1d

Main structures visible on 1850 Chapman and 1886 OS map, but not on 1902 OS map

0107 = tarmac lump

0161 = chalk surface within 0113

0113 = cutting brick wall

0165 = yellow brick surfaces 0110 and 0135

0111 = orange sand levelling screed

0160 = chalk surfaces 0108, 0109, 0116, 0117

0162 = brick wall range and drain trench 0105, 0112, 0118, 0119

Phase 1c

0103

0102

Phase 1b

0100 =chalk wall
0101 =chalk surface

0164 = older surfaces and small portion of wall 0104, 0120, 0158, 0159, 0121

Phase 1a

Structure 0154 visible on 1787 Chapman map

0130 = 0137 = buried topsoil

0157

0154

0131

0132

0153

0152

0149

0150

0151

0142

0143

0144

0140

0141

0138

0139

0145

0146

0134

0133

0127

0128

0125

0124

0123

0122

0156

0155

0147

0148 = feature with girder

Appendix 5. Pottery dates

Ctxt	Fabric	Form	Dec	No	EVE	Wgt/g	State	Comments	Fabric date	Context date
0119	MOCHA	Body	Cream bands	1	0	8	Sli		L18th-19th C	L18th-19th C
0119	TPE	Body, plate		2	0.03	9	Sli		18th-20th C	
0125	ESWN	Jar		1	0.5	37	Sli	Nottingham type ware. Rim probably from an ink jar	L17th-L18th C	L17th-L18th C
0131	GRE	Body		2	0	7	Abr		16th-18th C	16th-18th C
0134	GRE	Body		1	0	10	Abr		16th-18th C	16th-18th C
0138	GRE	Body		1	0	30	Abr		16th-18th C	16th-18th C

Appendix 6. CBM catalogue

Ctxt	Fabric	Form	No	Wgt/g	Hght (mm)	Lgth	Width	Re-used	Abr	Mortar	Notes	Date
0103	Msfe	RT	1	63	14			<input checked="" type="checkbox"/>	Sli	Sides	Pan tile, high fired, grey with red core. Mortar on sides and breaks.	Post-medieval
0103	Wsgc	RT	1	29				<input type="checkbox"/>	Sli		Pin/red core	18th-19th C
0103	Wsg	RT	1	23				<input type="checkbox"/>	Abr			18th-19th C
0103	Wsfe	?LB	1	80				<input type="checkbox"/>	Sli		Shattered	18th-19th C (?1750-1850)
0103	Ms	?FT	1	3				<input type="checkbox"/>	Sli		Red surface, grey core, white slip with drip decoration, high fired	?Post-medieval
0103	Msfe	RT	1	83	17			<input checked="" type="checkbox"/>	Sli		Red, pan tile. Mortar is on the break	Post-medieval
0103	Msc	RT	1	51	22			<input type="checkbox"/>	Abr	On one edge	Orange, ridged on underside, possible pan tile	Post-medieval
0105	Msfe	LB	1	2769	60	226	104	<input type="checkbox"/>	Gc	On five sides	Red, not frogged, similar to Dury LB3	L17th-18th C
0110	Wsfe	LB	1	2387	61	217	100	<input type="checkbox"/>	Abr		Whole, not frogged, like LB9	18th-19th C (?1750-1850)
0110	Wsfe	LB	1	2481	60	217	100	<input type="checkbox"/>	Abr		Whole, not frogged, like LB9	18th-19th C (?1750-1850)
0112	Msfe	LB	1	2436	65	215	105	<input type="checkbox"/>	Sli	On four sides	Red, whole, not frogged, similar to LB3 but closer to Ryans 18th-E19th type	18th-E19th C

Ctxt	Fabric	Form	No	Wgt/g	Hght (mm)	Lgth	Width	Re-used	Abr	Mortar	Notes	Date
0120	Msfe	RT	2	429	15			<input type="checkbox"/>	Sli	On one tile, one	Orange, pant tile, no join but possibly same tile. One with nib and letter L stamped on it	Post-medieval
0125	Wsg	FRAG	2	22				<input type="checkbox"/>	Abr			18th-19th C
0125	Msf	FRAG	1	47				<input type="checkbox"/>	Abr	On one surface	Orange	Post-medieval
0125	Msfe	RT	1	37	10			<input type="checkbox"/>	Sli		Pan tile, orange, curved	Post-medieval
0126	Wsfe	RT	1	59	14			<input checked="" type="checkbox"/>	Sli	Four surfaces	Some clacite voids, high fired, mortar on break	18th-19th C
0131	Ws/ms	FRAG	4	14				<input type="checkbox"/>	Sli		White and red fabrics	18th-19th C
0131	Wsgc	RT	2	23	14			<input type="checkbox"/>	Abr			18th-19th C
0131	Msfe	RT	1	6	10			<input type="checkbox"/>	Abr			Post-medieval
0135	Wsfe	FB	1	1961	47	230	107	<input type="checkbox"/>	Sli	Three surfaces	Whole paviour (see Angel Hotel 2005)	18th-19th C
0135	Wsfe	FB	1	1355	38	240	106	<input type="checkbox"/>	Abr	Five surfaces	Whole paviour (see Angel Hotel 2005)	18th-19th C
0135	Wsfe	LB	1	2626	65	225	110	<input type="checkbox"/>	Gc	Three surfaces	Whole, not frogged	18th-19th C (?1750-1850)
0135	Wsfe	LB	1	2665	65	225	110	<input type="checkbox"/>	Gc	Five surfaces	Whole, not frogged	18th-19th C (?1750-1850)

Ctxt	Fabric	Form	No	Wgt/g	Hght (mm)	Lgth	Width	Re-used	Abr	Mortar	Notes	Date
0136	Msfe	RT	1	12	13			<input type="checkbox"/>	Abr		Orange	Post-medieval
0137	Ms	FRAG	4	36				<input type="checkbox"/>	Abr		Red	Post-medieval
0137	Wsgc	RT	1	37	12			<input type="checkbox"/>	Sli			18th-19th C
0137	Msfe	RT	4	49	12			<input checked="" type="checkbox"/>	Abr-sli	All over	Red, mortared over breaks	Post-medieval
0138	Wsgc	RT	3	46	12			<input type="checkbox"/>	Sli			18th-19th C
0138	Ms	FRAG	1	17				<input type="checkbox"/>	Abr		Red	Post-medieval
0140	Msf	FRAG	1	125				<input checked="" type="checkbox"/>	Abr	Two surfaces	Orange, LB fragment, mortared on break	Post-medieval
0140	Wsc	RT	1	27	11			<input type="checkbox"/>	Sli			18th-19th C
0142	Msfe	FRAG	2	70				<input checked="" type="checkbox"/>	Abr	All over	Red, probably LB fragments, mortar over the breaks	Post-medieval
0142	Msf	LB	1	960	60			<input checked="" type="checkbox"/>	Abr	Five surfaces	Red, mortared over one older break, not frogged	Post-medieval
0142	Wsc	RT	1	18	12			<input checked="" type="checkbox"/>	Sli	Three surfaces	Mortared over three breaks	18th-19th C
0145	Wsgc	RT	1	37	12			<input type="checkbox"/>	Sli			18th-19th C

Ctxt	Fabric	Form	No	Wgt/g	Hght (mm)	Lgth	Width	Re-used	Abr	Mortar	Notes	Date
0149	Wsgc	RT	1	18	13			<input type="checkbox"/>	Sli		With streaky red iron ore	18th-19th C
0154	Wsgc	LB	2	1391	60		109	<input checked="" type="checkbox"/>	Sli	Four surfaces	Very pale orange, join. Mortared over old breaks, not frogged	18th-19th C
0154	Ws?c	LB	1	2153	50	210	106	<input type="checkbox"/>	Sli	Five surfaces	Whole, not frogged, heavily mortared	18th-19th C

Archaeological services Field Projects Team

Delivering a full range of archaeological services

- Desk-based assessments and advice
- Site investigation
- Outreach and educational resources
- Historic Building Recording
- Environmental processing
- Finds analysis and photography
- Graphics design and illustration

Contact:

Rhodri Gardner

Tel: 01473 581743 Fax: 01473 288221

rhodri.gardner@suffolk.gov.uk

www.suffolk.gov.uk/Environment/Archaeology/