

**Palace House Stables Basement
Evaluation, Newmarket
NKT 041**

Archaeological Evaluation Report

SCCAS Report No. 2012/079

Client: Forest Heath District Council

Author: Rob Brooks

August/2012

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

Summary

An evaluation was carried out within the south-east end of the trainer's house, within the Palace House Stables/Rothschild's stable yard complex, off Palace Street, Newmarket, in Suffolk. This work involved the excavation of six test pits, some of which revealed floor surfaces and a clunch wall from the Palace House Stables illustrated on the 1720 Fort Plan. Chalk screeds and floor surfaces from the older stables were also recorded. Overlying these remains, the various redevelopments of the site by the Rothschild family were uncovered, often incorporating or robbing out the older structures. The earliest deposit on the site was a buried topsoil layer, which pre-dates the stable. Finds from the site included pottery, roof tile, brick and tobacco pipe, all of which were post-medieval, as well as undated animal bone.

Despite the various phases of development across the site, it appears that deposits relating to the Palace House Stables, and potentially earlier, still survive.

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 
- 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 
- Deposit Number 0007
- Ordnance Datum $\overline{\overline{18.45\text{m OD}}}$

1. Introduction

Planning permission has been granted for the conversion of the Rothschild's stables into the new premises for the National Horseracing Museum. This evaluation focuses on developments taking place within the trainer's house. Within this area six test pits were dug within the limits of a new potential basement. The trainer's house is positioned on the south-east side of Palace Street, Newmarket, in Suffolk, and is immediately to the south-west of an excavation which was also associated with the museum's development (Brooks, 2012 and NKT 032 on Fig. 1).

A condition of the planning permission required that an archaeological evaluation was carried out under guidance issued by Keith Wade (Suffolk County Council Archaeological Service Conservation Team). Forest Heath District Council funded the evaluation, which was commissioned by GWP Architecture and carried out between 1st and 18th May, 2012.

The work was carried out in order to examine the site for potential heritage assets (in particular the foundations of King Charles II's stable), before they could be damaged or destroyed, and to provide sufficient information to construct a suitable archaeological conservation strategy for the development of the site.

2. Geology and topography

The site lies within the trainer's house, and the test pits were cut within the level floor surfaces. However, the wider area is also fairly level, at a height of c.28-29m AOD. The floor levels, where sampled, varied between 28.72-28.86m AOD.

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 geological deposit of orange gravelly-sand overlying the chalk bedrock was uncovered in Test Pit 2. This layer was also recorded in the excavation immediately to the north-east of the trainer's house.

3. Archaeology and historical background

The site lies within Newmarket's medieval and post-medieval urban core (NKT 022, Fig. 1), north-east of the medieval Church of All Saints (NKT 001) and of a site at Sun Lane, where phases of medieval and post-medieval archaeology were recorded (NKT 023). It is also within part of the larger Historic Environment Record listing NKT 035, which is the 19th century Rothschild's training stables and trainer's house complex, and is immediately opposite the site of Palace House Mansion, built by Charles II in 1668-71. The stables and trainer's house as we see them today were built for Baron Mayer de Rothschild in 1857-60 (and partially over a stable shown on the c.1720 Fort plan, see Fig. 2), with further additions and alterations made between 1893 and 1903 (for Leopold de Rothschild).

Prior to this evaluation, an evaluation and archaeological excavation were carried out on land immediately north-east of the trainer's house. These works recorded several posthole structures and a pit, indicating that this area was probably subsidiary to the stable complex throughout most of the 18th century. However, later phases of brick and chalk buildings, comprising an extensive range of buildings and other structures, were also uncovered which do seem to have played various roles within the stables. 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 some may have been visible on Chapman's 1787 map (Brooks, 2012). The evaluation and excavation also recorded that evidence for an earlier clunch-built structure survived 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, notably within the spine wall, which is the original rear wall of stables associated with the Charles II Palace (Muldowney, 2010 and Brooks, 2012).

An excavation was also carried out in the main stable yard immediately to the south-east of the trainer's house. This was run by Wessex Archaeology in conjunction with the Time Team television series. These revealed the front range of the stable depicted on the 1720 Fort plan. Beneath these remains, soil layers containing medieval pottery were excavated (Donaghey, 2012).

An architectural plan of the building from 1896 appears to be the earliest plan of the trainer's house to survive (Plate 1). The layout shown therein is identical to how it was at the time of the evaluation works and indicates that this end of the structure was largely utilitarian, being used for water closets, a scullery, boot room, saddle room, boy's (sic) dining hall and for coals, or possibly coats. Two sets of stairs also appear to run up into the building, from the north-east, indicating a change in levels and that the trainer's house may be on a somewhat built-up platform.

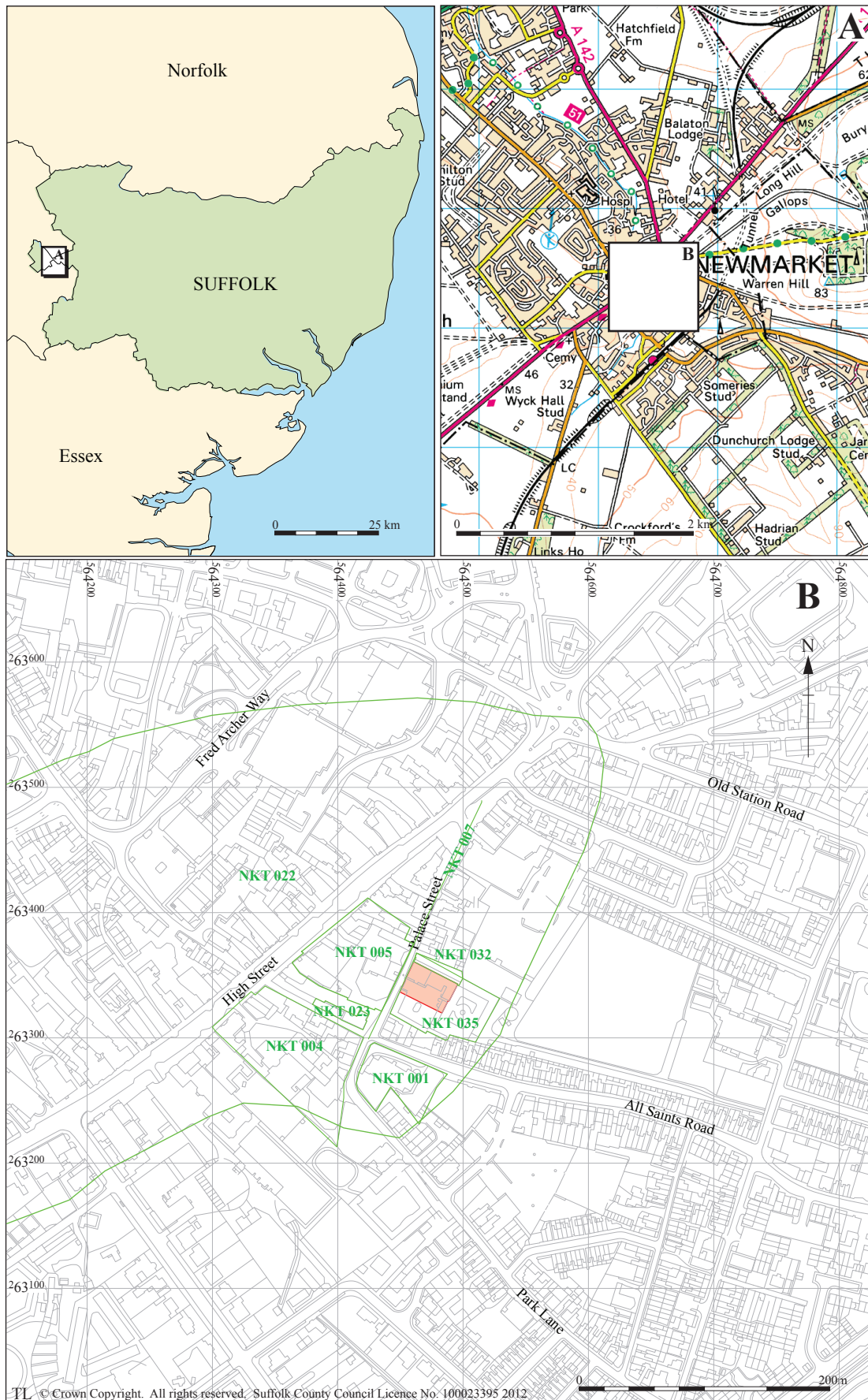


Figure 1. Location of site (red) and Historic Environment Record entries as mentioned in the text (green)



Figure 2. Plan of site showing trench locations (red), building plan (black), clunch wall (yellow), and 1720 Fort plan (green)

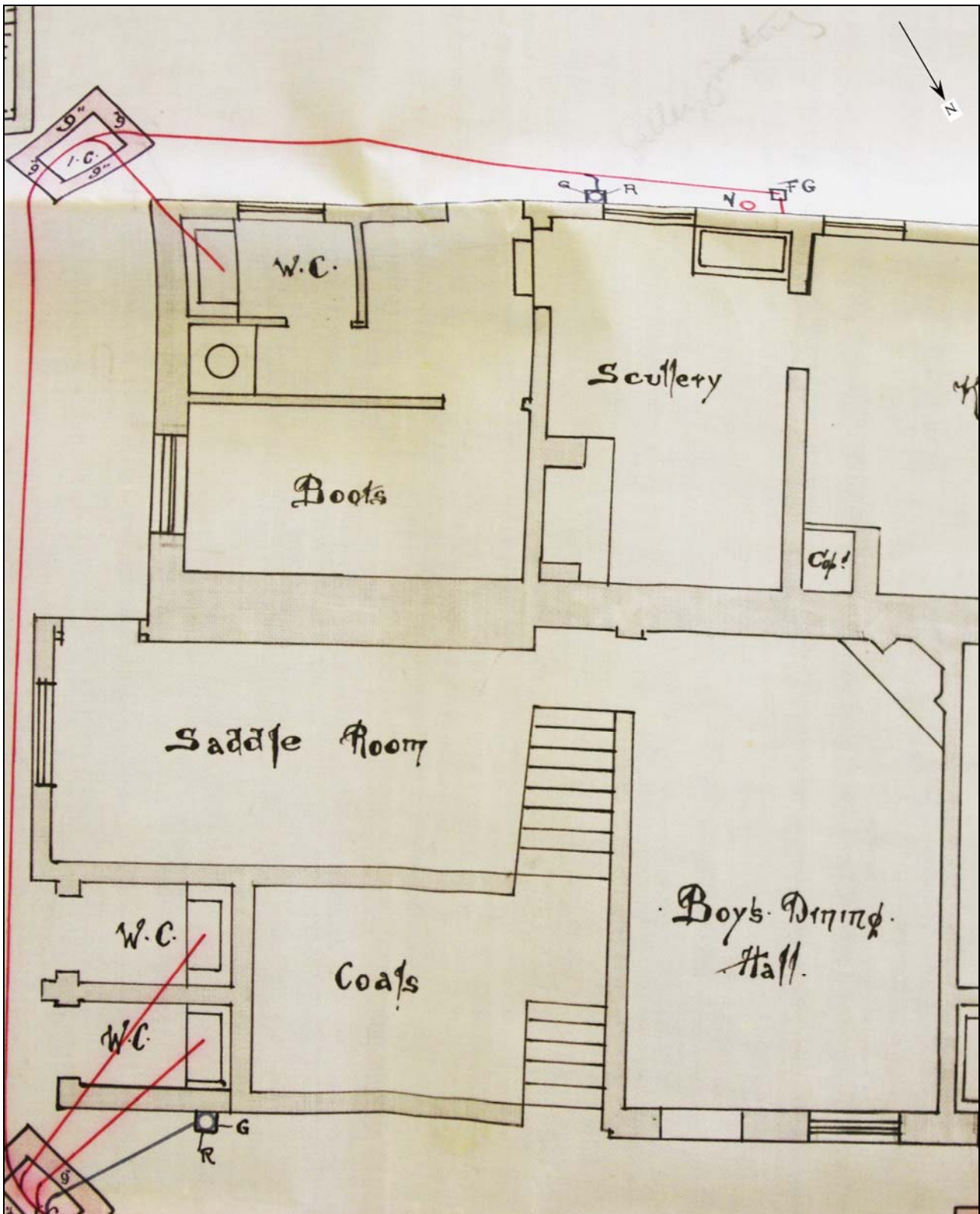


Plate 1. Extract from 1896 architectural plan of the trainer's house

Test Pits 1, 5 and 6 were located in the W.C. and Boots room, Test Pits 3 and 4 were in the Scullery, whilst Test Pit 2 was between the Boy's (sic) Dining Hall and the Saddle Room

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4. Methodology

Six test pits were hand-excavated. Initially this was carried out using a pneumatic drill to remove the top 0.1m of concrete or tile/brick floors, and then underlying rubble layers were manually excavated in order to expose any archaeological levels. The total area of the development measured 50sqm, and within this the test pits covered a total area of 6.3sqm, or 12.6% of the development area. The trenches were positioned to sample various parts of the stable shown on the 18th century Fort Plan. Test Pit 2 was just outside the rear clunch wall of the structure, in a small lean-to that was built shortly after the stable (Gill, 2012). The test pits were targeted specifically to areas where the stable clunch walls may have survived, as well as the positions of horse stalls, and also to establish whether different floor surfaces had been laid in different parts of the building.

The trenches were lowered in plan by hand excavation, with sections and plans being drawn at 1:10 or 1:20 when archaeological deposits were encountered. The works were primarily targeted at finding remains shown on the Fort Plan and as such excavations did not carry on through these where they were encountered in Test Pits 1 and 6. In the other test pits, excavations stopped at a level where a buried topsoil deposit was encountered. This material was sealed by the stable shown on the Fort Plan, and was only found where this earlier building had been removed as a result of 19th century construction. In Test Pit 2, the full soil profile was excavated to uncover the superficial and bedrock geology. Environmental bulk samples were not taken. Archaeological deposits were recorded using a single continuous numbering system on *pro forma* context sheets (Appendix 1). Colour digital photographs (300 x 300 dpi resolution) were taken of the contexts as well as of soil profiles and trenches (Appendix 2). A plan of the site was made using measurements taken from OS points, and levels were obtained using a dumpy level tied into a benchmark obtained from a GPS (working within 0.05m error tolerances). A search of the Suffolk Records Office, Bury St Edmunds, uncovered four documents and plans relating to alterations and additions to the Palace House and stables between November 1893 and March 1897. One of the plans has been reproduced within this report (Plate 1), whilst the rest were found to not relate to the area of this evaluation.

Site data has been input onto the MS Access database and recorded using the County Historic Environment Record code NKT 041. An OASIS form has been completed for

the project (reference no. suffolkc1-126916, Appendix 3) and a digital copy of the report submitted for inclusion on the Archaeology Data Service database (<http://ads.ahds.ac.uk/catalogue/library/greylit>). The site archive is kept in the main store of Suffolk County Council Archaeological Service at Bury St Edmunds under HER code NKT 041.

5. Results

5.1 Introduction

Of the six test pits, three contained archaeological deposits which are thought to relate to the stable illustrated on the Fort Plan. These are Test Pits 1, 2 and 6, which revealed brick and chalk floor surfaces and the remnants of a clunch wall. All the trenches were excavated through either tile, brick or concrete floors associated with the existing trainer's house, which themselves were laid onto concrete and rubble layers.

The details of the depths of the trenches and their profiles are included in Table 1.

Trench No. & size	Depth to archaeological level/ subsoil (in m)	Ground level (above OD)	Layers within profile
1 0.9m x 1.6m	0.28	28.72m	0.08m of brick and concrete above – 0.2m of rubble layer 0011, above – <0.01m of coal(?) dust layer 0012, above – Mortar layer 0015 and brick surface 0013
2 1m x 1m	0.37	28.86m	0.2m of tiles and compacted chalk, sand and clunch layer 0001, above – 0.1m of compacted chalk 0002, above – 0.14m of dark brownish-grey sandy-clayey-silt 0003, above – 0.06m of crushed pale grey chalk surface 0004, above – 0.16m of orangish-brown silty-sand 0005, buried topsoil(?), above – 0.2m of mid brownish-orange silty-sand 0006 – disturbed B-horizon/geology.
3 1m x 1.1m	0.38-0.62	28.87m	0.06m of tiles and concrete, above – 0.31-0.56m rubble layer 0016, above – 0.13-0.25m of demolition/occupation layer 0019, above – 0.13m of chalk floor base layer 0020, above – >0.2m of dark brown silt y-sand topsoil 0007
4 1m x 1m	0.5	28.87m	0.06m of tile and concrete, above – 0.44m of rubble layer 0008, above – 0.06m of chalk floor base layer 0009, above – >0.28m of dark brown silt y-sand topsoil 0010
5 0.7m x 0.8m	0.19	28.72m	0.08m of bricks and concrete, above – 0.14m of rubble layer 0023, above – 0.2m of dark brown silt y-sand topsoil 0024
6 1.6m x 1m	0.12	28.74m	North-west half of section 6: 0.07m of concrete, above – 0.28m of rubble layer 0026, above – >0.26m of dark brown silty-sand topsoil 0027 South-east half of section 6: 0.12-0.32m of upstanding 19th century partition wall, above – Wall 0025 and coal(?) dust layer 0012, above – 0.12m of brick surface 0013, above layer 0021

Table 1. Trench profile descriptions and levels

5.2 Context descriptions

The following descriptions describe all the contexts recorded in the evaluation and follow the stratigraphic sequence of the site, as represented by the matrix (Appendix 4).

5.2.1 Pre-stable construction

Subsoil 0006 and buried topsoil 0031

A slightly mixed layer of mid brownish-orange silty-sand made up a thin layer of mixed subsoil and superficial geology, recorded as 0006. It was uncovered at the base of Test Pit 2. Overlying this was a buried topsoil, 0031, which was found in Test Pits 2-6. It was a mid-dark orangish-brown silty-sand and is thought to pre-date the construction of the Palace House Stables. Both of these contexts are thought to continue through to the NKT 032 excavation to the north-east.

5.2.2 Stable construction

Wall remains 0014, brick floor 0030 and floor screed 0021

Several contexts are thought to relate directly to the construction of the Palace House Stables. The most obvious of these was encountered in Test Pit 1, where blocks of clunch were recorded at 0.3m below the ground surface and are probably a SW-NE aligned wall, representing the south-east gable of the stables. Throughout Test Pit 1 and 6 the stable floor surface was recorded as 0030 (individual contexts 0013 and 0022). This consisted of a mixture of red and yellow bricks, laid on edge and dated as 16th-18th century. In Test Pit 1, they only survived as a fragment of floor, but this was neatly laid against clunch wall 0014. In Test Pit 6, walls 0025 and 0028 had been built cutting the floor surface. The surface did not appear extend beyond wall 0025.

Underlying the brick floor in Test Pit 6 was a levelling screed/make-up layer recorded as 0021, consisting of mortar, stone, and tile fragments. It also produced 16th-18th century brick fragments.

Floor screeds/layers 0004, 0009 and 0020, and soil layers 0003 and 0019

In Test Pits 3 and 4 a chalk layer was recorded as 0009 and 0020, which were at a similar level and were 0.06m thick. These were interpreted as being screeds, overlying the buried topsoil, for surfaces within the stable. It is notable that in Test Pit 6, a rubble screed/make-up layer, 0021, had been used rather than a chalk layer. The reason for this is unclear, but it may be that different materials were used in different phases of construction of the stable or in relation to the different usage of areas.

Overlying screeds 0004 and 0020 were layers 0003 and 0019 in Test Pits 2 and 3, respectively. These consisted of brownish-grey sandy-clayey-silts that were between 0.16m and 0.24m thick and contained ceramic building material (CBM) fragments. Where recorded as layer 0003 it also contained charcoal, clay pipe and pottery, which were dated as 17th/18th century. It is unclear exactly what function these layers fulfilled, although they may have been a mixture of occupation soils and demolition material.

A chalk layer was recorded as layer 0004 in Test Pit 2. Its level was approximately 0.15m lower than layers 0009 and 0020 in the other test pits and it was external to the main structure of the stable. It was also over twice the thickness of the other chalk layers and probably indicates that a chalk floor was laid in this room, rather than being another screed.

5.2.3 Rothschild's Trainer's House

Foundation slot 0018

In Test Pit 3 a foundation slot associated with the Trainer's House was recorded as 0018 and had vertical sides. It contained fill 0017; a mid orangish-brown sandy-silt. The base of the feature was never uncovered and at its lowest point it extended 0.38m from the base of the wall it contained. The feature cut everything within Test Pit 3, excluding the rubble make-up layer 0016/0029 and the concrete and tile floor.

Layer 0012, surface 0015, and walls 0025 and 0028

Wall 0025 ran along and under the edge of the north-west end of Test Pit 1 and also carried on into Test Pit 6. It was built in rough courses from reused bricks. In Test Pit 6 it cut brick floor 0030. The floor was retained on the SE side of the wall, where the bricks butt neatly against the wall face. On the NW side the wall foundation was stepped, where the brick floor was not present.

In Test Pit 1 wall 0025 had mortar surface 0015 abutting/laid against it. This was a rough floor surface of yellowish-grey mortar. It appeared to infill areas where brick floor 0013 and wall stub 0014 had been cut. Surface 0015 is thought to have functioned as a repair to the stable remains in order for this area to be used within the trainer's house, in conjunction with wall 0025. This is evident as it abuts the existing wall of the trainer's house to the south-east. Wall 0028, aligned south-west to north-east was recorded abutting wall 0025 in Test Pit 6. It was built to a slightly higher standard than wall 0025, and was obviously a later addition to the building's internal layout.

Underlying 0.08m of brick and concrete and a further 0.2m of rubble floor base was the uppermost archaeological layer; the remains of coke/coal dust layer 0012 found in Test Pits 1 and 6. This consisted of a fine (<0.01m thick) lens of material that sporadically covered the surfaces in the test pits and ran up both the south-eastern wall of the trainer's house and up walls 0025 and 0028. The exact date of this layer is uncertain, but it clearly indicates that the area was being used for coal storage, or shows the position of a coal-fired heating system of some sort. This layer may indicate an earlier position of the 'Coals' room indicated on the 1896 plan (Plate 1).

Late floor screeds/make-up layers 0001, 0002 and 0029

Within Test Pit 2, layers of chalk and mixed chalk and rubble were recorded as 0001 and 0002, which were 0.17m and 0.11m thick respectively. Immediately overlying 0001 was the existing tile floor. In the remaining test pits a rubble make-up layer was recorded as 0029 (comprising 0008, 0011, 0016, 0023 and 0026). This layer was always immediately below a concrete base for the tiles that made up the current floor surface.

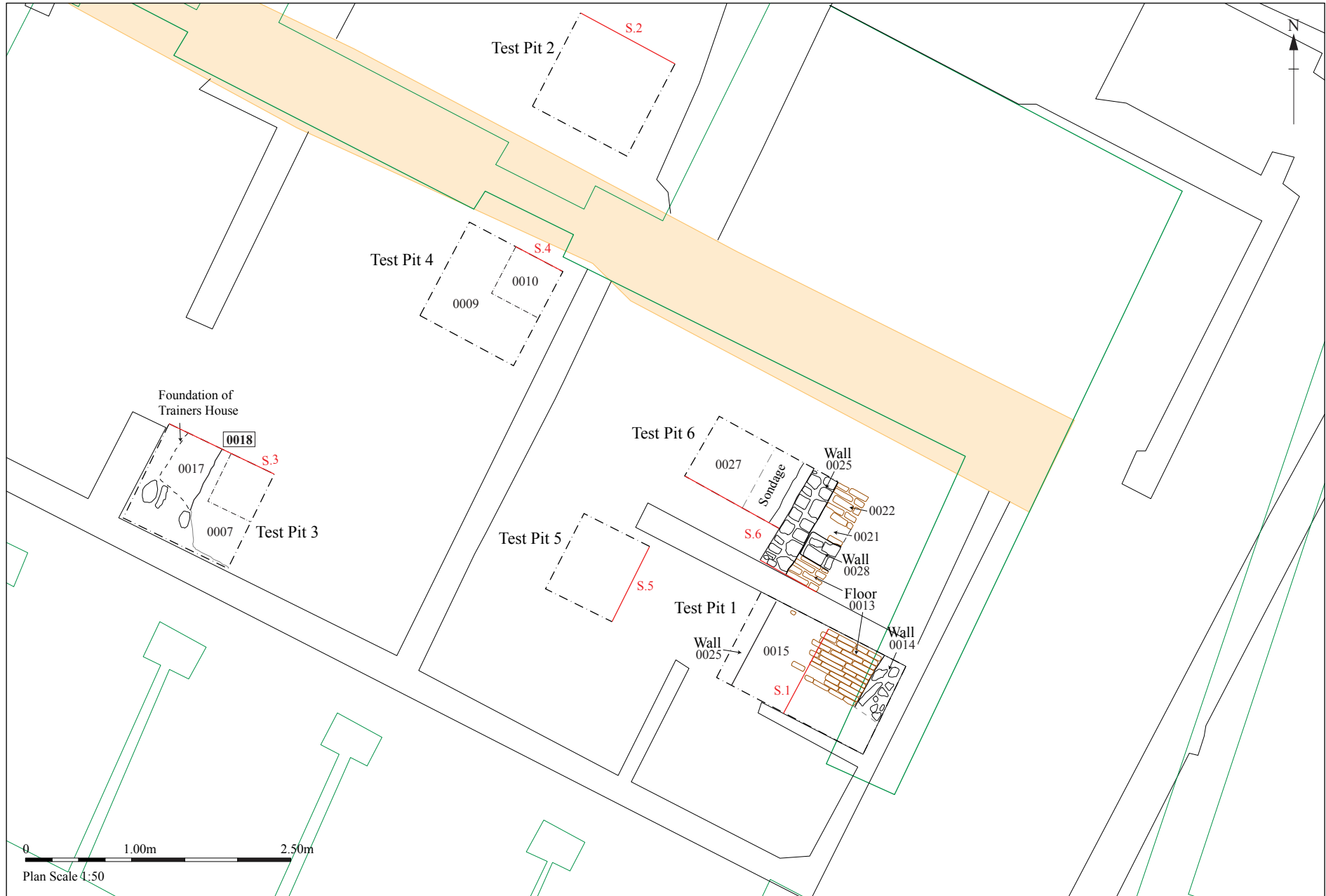


Figure 3. Trench plan, with fort plan (green) and clunch wall (yellow)

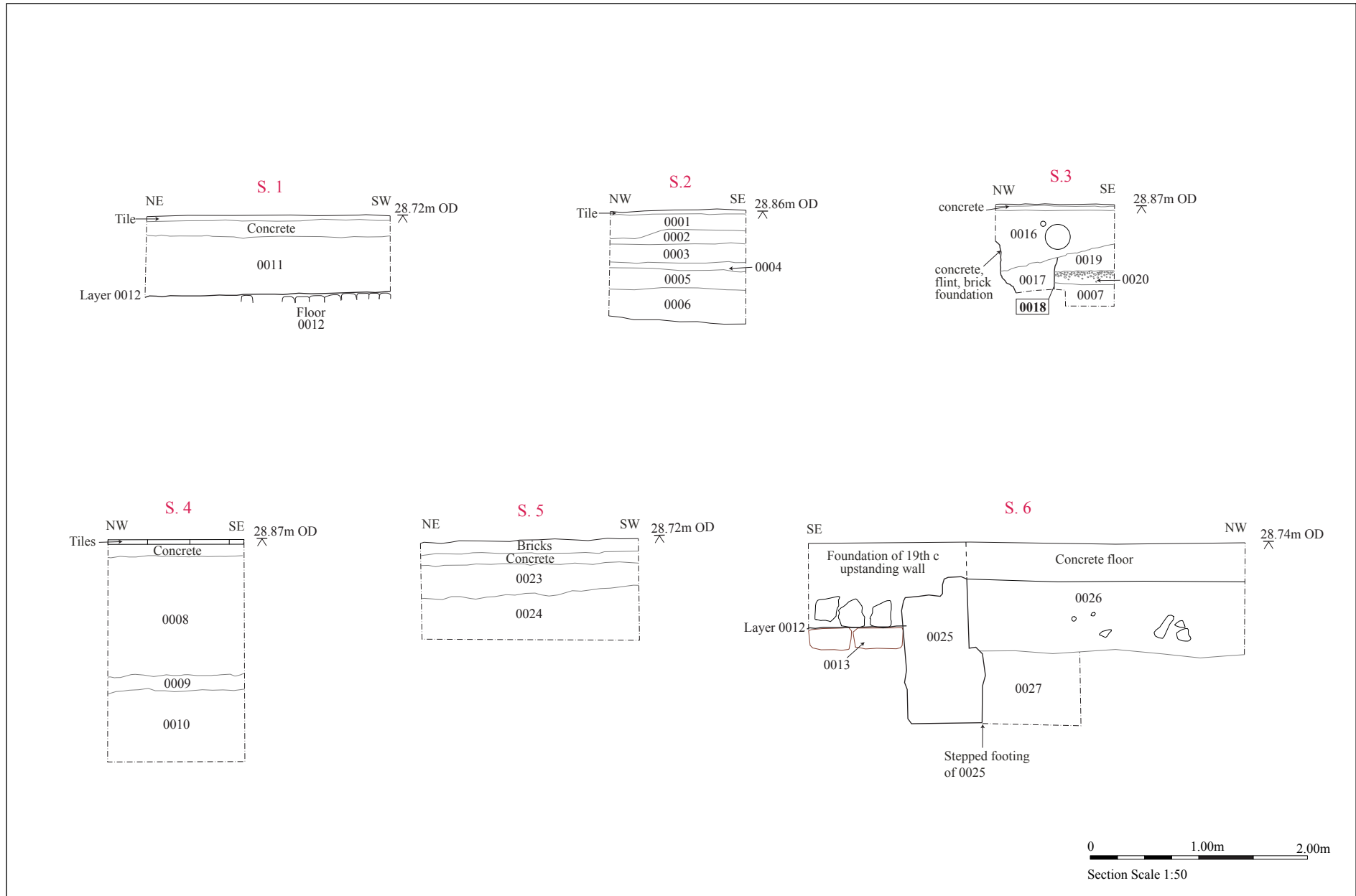


Figure 4. Sections

6. Finds and environmental evidence

Andy Fawcett

6.1 Introduction

Table 2 shows the quantities of finds collected in each context from the evaluation at Palace House Stables, Newmarket. All of the finds were retrieved from a series of layers.

Context	Pottery		CBM		Clay tobacco pipe		Animal bone		Spot date
	No	Wgt/g	No	Wgt/g	No	Wgt/g	No	Wgt/g	
0001	1	39	2	218					16th-18th C
0003	1	8	4	1446	4	29			17th /18th C
0005							5	24	Undated
0007							4	20	Undated
0021			2	96					16th-18th C
0022			1	1380					16th-18th C
Totals	2	47	9	1760	4	29	9	44	

Table 2. Finds quantities

6.2 The pottery

Introduction and methodology

Two sherds of slightly abraded post-medieval pottery were recovered from two contexts. The sherds have been examined at x20 vision and assigned to a fabric group using the SCCAS fabric series.

The assemblage

Layers 0001 and 0003 both contain single sherds of Glazed Red Earthenware (GRE). The body sherd in 0001 displays a partial perforation hole, and is likely to have been part of a colander. A base fragment from a small jar or cup is present in layer 0003. The sherds are both dated from the 16th to 18th century.

6.3 Ceramic building materials (CBM)

Introduction

The ceramic building material assemblage was recorded in four of the layers. It is composed of seven roof tile (RT) and two late brick (LB) fragments. A full breakdown by context of the CBM can be seen in Appendix 5. In general the pieces are of a reasonable size and display only slight abrasion.

Roof tile

Layer 0001 contains a single fragment of roof tile that is probably dated to the medieval period (139g). It is in a soft, fine buff fabric which contains abundant calcareous inclusions as well as common ill sorted grog (fsc).

The remainder of the roof tile assemblage is coloured white/buff and in a fabric that contains grog (white/red which is often streaked) as well as ill-sorted red iron ore (wsg). The fabric is hard fired and superficially similar to the estuarine fabric encountered, for instance, at the Angel Hotel in Bury St Edmunds (Anderson 2005). However, they are more comparable to the later white/buff fired fabrics recorded at both Dragon Hall in Norwich and the Angel Hotel (Anderson, 2001 and 2005), containing abundant white/red grog alongside red ferrous inclusions. They are dated from the late medieval to post-medieval period, although their general appearance and fabric suggest they are more likely dated to the first half of the post-medieval period.

Brick

Two fragments of late brick (LB) were recovered from two separate layers. They are both in a fully oxidised medium sandy fabric which contains calcite (msc) as well as ferrous inclusions. The LB fragment in context 0003 is similar to the Drury type LB1, and the example in 0022 is closest to LB3 (1993, 165). Both of these are dated from the 16th to 18th century. Neither of the bricks are frogged and both have mortar on many of their sides, although not on the breaks. The fragment in 0022 is slightly burnt.

6.4 Clay tobacco pipe

All of the clay tobacco pipe fragments were noted in layer 0003. With the exception of one complete bowl, the remainder are all small and broken stem pieces. The bowl is similar to Oswald types 5/6 and is dated from around AD1640-80. Pottery dated from the 16th to 18th century is also present within the layer.

6.5 Faunal remains

Buried topsoil layers 0005 and 0007 both contain small quantities of animal bone. The two groups are very broken and worn. The collection is composed of large mammal bone fragments and only a single horse tooth in 0005 can be identified to species.

6.6 Discussion of material evidence

The finds have been retrieved from a variety of contexts, which include topsoil, screed and occupation/demolition and floor layers. Despite the mixed nature of these deposits, the finds assemblage, whose datable components are pottery, CBM and clay tobacco pipe, are all fairly harmonious, being dated from the 16th to 18th century. However, as the clay tobacco pipe bowl indicates, alongside the brick measurements and the general appearance of the roof tile, an earlier post-medieval date within this sequence seems more likely, possibly 17th century. No later post-medieval or modern material is present with the assemblage. The earliest find (recorded in the screed layer 0001) is a single roof tile fragment that is possibly dated to the medieval period. A recent finds assemblage retrieved from the Stables, less than ten metres away from the current evaluation (Fawcett, in Brooks, 2012), had a later sequence of finds (18th to mid 19th century).

7. Discussion

Out of the six test pits, archaeological deposits that are likely to relate to the Palace House Stables were revealed in Test Pits 1, 2, 3, 4 and 6. In Test Pits 1 and 6 these remains are 0.3m below the existing floor level (BFL), whilst they are 0.37m BFL for Test Pit 2, 0.62m for Test Pit 3 and 0.5m for Test Pit 4. The surviving deposits in Test Pits 1 and 6 appear to clearly represent brick surfaces surviving from the original stable, as well as a stretch of clunch wall within Test Pit 1, which presumably extends further to the north-east and south-west. A chalk surface within Test Pit 2 also appears to be a floor for the stables, and indicates a difference in building styles between the main area of the stable and the rooms adjoining the rear of the structure. The less substantial chalk layers recorded in Test Pits 3 and 4 are slightly lower than brick surface 0030 and are thought to represent the screeds for the continuation of the floor, which was presumably robbed out in this area.

The overlying contexts recorded within the test pits indicate the changing use of the area and its incorporation into the trainer's house, although layers 0003 and 0019, in Test Pits 2 and 3 respectively, may indicate some level of occupation and demolition. Apart from these layers though, there is a structural sequence of change and there seems to have been a phase (presumably associated with the mid-19th century Rothschild alterations) when the Palace House Stables remains were incorporated within the trainer's house. This is shown by the reuse and repair of the bricks surfaces in Test Pits 1 and 6, which were repaired in a utilitarian fashion with mortar layer 0015 and altered with the insertion of walls 0025 and 0028. Following this phase, the site seems to have been built up with various deposits, but mainly rubble layer 0029, which was used as a base for concrete, tile and brick surfaces that make up the existing floor and are part of the late-19th century Rothschild developments.

The existence of the buried topsoil layer, collectively recorded as 0031, indicates the earliest phase of the site, which pre-dates the Palace House Stables. In Test Pit 5 it had been somewhat disturbed in relation to the redevelopment of the site for the trainer's house, but otherwise the layer was sealed beneath older floor deposits. The age of this topsoil is uncertain, but a relatively similar layer recorded on the NKT 032 site contained 18th-19th century CBM. However a buried soil layer found underlying the stables during the Wessex Archaeology and Time Team excavation produced medieval pottery

(Donaghey, 2012) and generally the finds assemblage recovered from layers above the buried topsoil indicates a 17th century date.

8. Conclusions and recommendations for further work

It is clear from the test pit results that several deposits relating to the Palace House Stables still survive within the area of the proposed basement, despite the apparent robbing out of the floor layers in some places and the razing of the original clunch wall recorded within Test Pit 1. Finds from the test pits are also indicative of the presence of material contemporary with the older stable. However, in Test Pit 5 it appears that any stable remains had been completely truncated. Later layers relating to the Rothschild developments were also recorded in each test pit, as was a buried topsoil, which may have the potential to produce medieval material or seal earlier deposits.

Depending on the nature of the development plan, it is recommended that a full excavation be carried out in the area of Test Pits 1 and 6, to fully record the surviving walls and floor surfaces associated with the stables. It may also be necessary to excavate a limited area around Test Pit 2 in order to gauge the extent of the chalk floor around there, and record whether any wall remains from rooms at the rear of the stables survive. However, this may depend on the extent of the development in this area and a monitoring of construction groundworks here may be a more suitable option. It is also advisable that a programme of works be carried out in the remaining area encompassed by Test Pits 3, 4 and 5. This would give the opportunity to record the extent of the floor screeds as well as any other stables deposits that may survive. It would also then be possible to record the buried topsoil layer and to see if it sealed any further archaeological deposits. However, final decisions regarding the necessity and nature of further archaeological works will be made by Suffolk County Council Archaeological Service Conservation Team.

9. Archive deposition

Paper and photographic archive: SCCAS Bury St Edmunds

Digital archive: SCCAS R:\Environmental Protection\Conservation\Archaeology\
Archive\Newmarket\NKT 041 Palace House Stables Basement Eval

Digital photographic archive: SCCAS R:\Environmental Protection\Conservation\
Archaeology\Catalogues\Photos\HPA-HPZ\HPO 6-67

Finds and environmental archive: SCCAS Bury St Edmunds. Store Location: H/81/1
Parish box

10. Acknowledgements

The fieldwork was carried out by Rob Brooks, Phil Camps, John Sims and David Gill, and directed by Rob Brooks.

Project management was undertaken by David Gill who also provided advice during the production of the report.

Post-excavation management was provided by David Gill. Finds processing and analysis was undertaken by Jonathan Van Jennians. The specialist finds report was produced by Andy Fawcett.

The report illustrations were created by Gemma Adams and the report was edited by Abby Antrobus and David Gill.

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Appendix 1. 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
0001			Screed Layer	Crushed chalk and brownish-yellow silty-sand. Occasional angular and rounded medium flints. Moderate small angular and rounded flints. Rare CBM and pot. Compacted. Clear horizon clarity. Base for tile floor. Notably the other tiled floors in Test Pits 3 and 4 had concrete underlying the tiles.			0.17				0002		Yes	No			
0002			Hardcore Layer	Compacted chalk. Small-medium rounded lumps. Occasional small angular flints. Clear horizon clarity. Hardcore/levelling screed for 19th century floor.			0.11				0003	0001	No	No			
0003			Soil Layer	Dark brownish-grey sandy-clayey-silt. Firm compaction. Occasional CBM. Frequent charcoal and burnt material, clay pipe and pottery. Clear horizon clarity. Occupation or demolition layer on top of old floor?			0.14				0004	0002	Yes	No			
0004			Floor Layer	Pale grey crushed chalk. Compacted. Clear horizon clarity. No inclusions. Old floor level. Similar height to the floor level in Trench 1.			0.06				0005	0003	No	No			
0005			Topsoil Layer	Mid orangish-brown silty-sand. Compacted. Frequent flint gravel. Clear horizon clarity. Rare/occasional animal bone. Buried topsoil. Similar to the buried topsoil encountered in NKT 032 excavation and in other test pits.			0.16				0006	0004	Yes	No	0031		
0006			Deposit Layer	Mid brownish-orange silty-sand. Compacted. Abundant flint gravel - small-medium flints. Clear horizon clarity. Layer of old subsoil.			0.2					0005	No	No			
0007			Topsoil Layer	Mid-dark brown sandy-silt. Friable-firm compaction. Common angular flints and occasional chalk flecks. Possibly a buried topsoil layer similar to 0010 in Trench 4, 0005 in Trench 2, and buried topsoil in NKT 032 excavation. Less gravelly than 0005 and material from excavation though.			0.2					0020	Yes	No	0031		
0008			Rubble Layer	Layer of rubble, mainly consisting of tile and brick lumps, but also of flint and clunch pieces. Somewhat compacted. Material used as a base for the concrete screed underlying the tile floor. Also seen in Test Pit 1 as layer 0011 and Test Pit 3 as layer 0016.			0.44				0009		No	No		0029	
0009			Floor(?) Layer	A mixture that mainly consists of chalk lumps and compacted limey-chalk, but also mixed with brown silt. Remnants of a chalk floor, or possibly the screed/base for an older floor surface. Similar/same as 0020.			0.06				0010	0008	No	No			
0010			Soil Layer	Mid-dark brown, slightly orange silty-sand. Occasional small sub-angular stones (up to 0.02m diameter). Possibly a buried topsoil layer similar to 0007 in Test Pit 3, 0005 in Trench 2, and buried topsoil in NKT 032 excavation. Less gravelly than 0005 and material from excavation though.			0.27					0009	No	No	0031		

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	
0011			Rubble Layer	Layer of rubble, mainly consisting of tile and brick lumps, but also of flint and clunch pieces. Somewhat compacted. Material used as a base for the concrete screed underlying the tile floor. Also seen in Test Pit 3 as layer 0016 and Test Pit 4 as layer 0008.			0.23				0012		No	No	0029			
0012			Deposit Layer	Very patchy layer of black coal(?) dust material found overlying brick surface 0013, as well as layer 0015 and possibly also the remains of wall 0014. Possibly the remains of coal dust.			<0.01				0015, 0025	0011	No	No				
0013			Floor Layer	Brick floor surface, consisting of yellow and red bricks, laid on their edge. Similar bricks were dated as ?1750-1850 in the NKT 032 excavation. The bricks were 220-250mm long x 40-50mm thick. Stable floor, with bricks laid on their side to take more weight. Floor layer from original Palace House stable. Set within layer 0015?							0014	0025, 0015	No	No	0030			
0014			Wall Other	Clunch blocks set within pale grey mortar. The clunch blocks were somewhat irregular, measuring 0.11m x 0.09m and up to 0.16m x 0.25m. Foundations of a wall for the Palace House Stable. Set within layer 0015.	>0.54	>0.27							0013	No	No			
0015			Floor Layer	Degraded pale yellowish-grey crushed compacted mortar and sandy-silt, with chalk lumps and occasional CBM pieces. Seems to have been a floor layer where the stable bricks and clunch wall have been removed. Butts up to wall 0025 and is also covered by coal(?) dust layer 0012.	>0.85	>0.37					0013	0025, 0012	No	No				
0016			Rubble Layer	Layer of rubble, mainly consisting of concrete and brick lumps, but also of flint and clunch pieces. Somewhat compacted. Material used as a base for the concrete screed underlying the tile floor. Also seen in Test Pit 1 as layer 0011 and Test Pit 4 as layer 0008.			0.56				0017		No	No	0029			
0017	0018		Trench Fill	Mid orangish-brown sandy-silt. Friable. Common chalk lumps, broken clunch blocks and concrete, brick and tile rubble. Back fill of foundation trench 0018, which is part of the Trainer's House foundations.			>0.3				0018	0016	No	No				
0018	0018		Trench Cut	Linear in plan, aligned NE-SW, following path of Trainer's House wall to the NW. Sharp break of slope leading from the base of layer 0016. Vertically sided. Base not uncovered. Foundation trench cut for wall of Trainer's House.	>1	0.52	>0.3				0019	0017	No	No				
0019			Soil Layer	Pale brownish-grey sandy-silt. Firm compaction. Common mortar, clunch, brick and chalk flecks. Mixture of buried topsoil(?) or occupation soil(?) and demolition material.			0.26				0020	0018	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
0020			Floor(?) Layer	A mixture that mainly consists of chalk lumps and compacted chalk, but also becoming mixed with dark brown silt towards its base. Remnants of a chalk floor, or possibly the screed/base for an older floor surface. Similar/same as 0009.			0.13				0007	0019	No	No			
0021			Screed Layer	Deposit of pale greyish-yellow mortar fragments, and occasional stones and tile fragments. Friable-firm. Material underlying floor layer 0022. Served as a base for 0022.			>0.2				0022		Yes	No			
0022			Floor Layer	Surface consisting of a mix of yellow and red bricks, laid on edge. One sample kept. Floor surface that is the same as 0013.								0021, 0025	Yes	No	0030		
0023			Rubble Layer	Deposit of grey silty-sand, slate fragments, smashed yellow bricks, concrete and tile lumps. Firm compaction. Clear horizon clarity. Screed of demolition rubble for existing floor surface.			0.14				0024		No	No	0029		
0024			Soil Layer	Dark brown silty-sand. Firm compaction. Occasional small stones. Not fully excavated. Same layer seen in other trenches. Possibly a buried topsoil layer similar to 0007 in test pit 3, 0005 in test pit 2, 0010 in test pit 4, 0027 in test pit 6 and buried topsoil in NKT 032 excavation. Less gravelly than 0005 and material from excavation though.			>0.2					0023	No	No	0031		
0025			Wall Structure	Wall (aligned NE-SW) running through extended NW end of test pit 1 and test pit 6. Rubble wall, roughly coursed. Made from reclaimed stable floor bricks laid in an approximation of English bond. The joints are very wide with thick horizontal joints of very had cementitious mortar. Roughly finished- not pointed. In test pit 6, on the wall's NW side the foundation steps out, but on its SE side the foundation remains flush. Footing is concrete/cement, laid with crushed brick and flint. Wall 0028 abuts it. In test pit 1 the finishing of the wall on its SE side appears to be to a higher standard than it is in test pit 6. In test pit 1 layer 0012 also covers surface 0013 and wall 0025, indicating that they were used in conjunction with each other. Wall that was built after brick surfaces 0013 and 0022, hence why its foundation only steps out on the NW side and why it is covered in places with deposit 0012. Built similarly roughly to	>3.1	0.28	0.26				0013, 0022, 0027, 0015	0028, 0026, 0012	No	No			
0026			Rubble Layer	Deposit of grey silty-sand, slate fragments, smashed yellow bricks, concrete and tile lumps. Firm compaction. Clear horizon clarity. Screed of demolition rubble for existing floor surface.			0.2				0025		No	No	0029		
0027			Soil Layer	Dark brown silty-sand. Firm compaction. Occasional small stones. Not fully excavated. Same layer seen in other trenches. Possibly a buried topsoil layer similar to 0007 in test pit 3, 0005 in test pit 2, 0010 in test pit 4, 0024 in test pit 5 and buried topsoil in NKT 032 excavation. Less gravelly than 0005 and material from excavation though.			>0.26					0025	No	No	0031		

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
0028			Wall Structure	Brick wall running NW-SE in test pit 6 that abuts wall 0025. Not clear what bond this is laid in. Unclear if it sits on top of brick surfaces 0013 and 0022, or whether it is built through them. Later wall, but older than the upstanding 19th century partition wall that is built on top of it and associated with the Rothschild's stable.	>0.3	0.26					0025		No	No			
0029			Rubble Group	Group number for rubble make-up layer seen in all test pits, except pit 2. Make-up layer for existing tile, brick and concrete floors.									No	No	0029		
0030			Floor Group	Group number for brick stable floors in Test Pits 1 and 6.									No	No	0030		
0031			Topsoil Group	Group number for buried topsoil in Test Pits 2, 3, 4, 5 and 6.									No	No			

Appendix 2. Selected plates



Plate 2. Left – Test Pit 1, 1m scale, facing south-east, showing clunch wall 0014 to rear, brick surface 0013, mortar layer 0015 and layer 0012

Plate 3. Above – Test Pit 2, 0.3m and 1m scale, facing north-east, half-excavated, showing the top of chalk floor 0004



Plate 4. Above – Test Pit 2, 1m scale, facing north-east, fully excavated

Plate 5. Right – Test Pit 6, 1m scale, facing south-west, showing layer 0012, brick surfaces 0013 and 0022, screed 0021, and walls 0025 and 0028





Plate 6. Test Pit 6, 1m scale, facing north-west, showing layer 0012, brick surfaces 0013 and 0022, screed 0021, and walls 0025 and 0028



Plate 7. Test Pit 6, 1m scale, facing south-east, showing layer 0012, brick surfaces 0013 and 0022, screed 0021, stepped foundation of wall 0025, and wall 0028

Appendix 3. OASIS form

OASIS ID: suffolkc1-126916

Project details

Project name	NKT 041 Palace House Stables Basement Evaluation
Short description of the project	An evaluation was carried out within the south-east end of the trainer's house, within the Palace House Stables/Rothschild's stable yard complex, off Palace Street, Newmarket, in Suffolk. This work involved the excavation of six test pits, some of which revealed floor surfaces and a clunch wall from the Palace House Stables illustrated on the 1720 Fort Plan. Chalk screeds and floor surfaces from the older stables were also recorded. Overlying these remains, the various redevelopments of the site by the Rothschild family were uncovered, often incorporating or robbing out the older structures. The earliest deposit on the site was a buried topsoil layer, which pre-dates the stable. Finds from the site included pottery, roof tile, brick and tobacco pipe, all of which were post-medieval, as well as undated animal bone. Despite the various phases of development across the site, it appears that a number of deposits relating to the Palace House Stables, and potentially earlier, still survive.
Project dates	Start: 01-05-2012 End: 18-05-2012
Previous/future work	Yes / Yes
Any associated project reference codes	NKT 041 - Sitecode
Any associated project reference codes	NKT 041 - HER event no.
Any associated project reference codes	2012/079 - Contracting Unit No.
Any associated project reference codes	F/2010/0778/FU3 - Planning Application No.
Type of project	Field evaluation
Site status	Area of Archaeological Importance (AAI)
Current Land use	Other 3 - Built over
Monument type	FLOOR Post Medieval
Monument type	FLOOR Post Medieval
Monument type	LAYER Post Medieval
Monument type	LAYER Post Medieval
Monument type	LAYER Post Medieval
Monument type	WALL Post Medieval

Monument type	WALL Post Medieval
Monument type	BURIED SOIL HORIZON Uncertain
Significant Finds	TOBACCO PIPE Post Medieval
Significant Finds	BRICK Post Medieval
Significant Finds	TILE Post Medieval
Significant Finds	ANIMAL REMAINS Uncertain
Methods & techniques	""Targeted Trenches""
Development type	Public building (e.g. school, church, hospital, medical centre, law courts etc.)
Prompt	Direction from Local Planning Authority - PPS
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	SUFFOLK FOREST HEATH NEWMARKET NKT 041, Palace House Stables Basement Evaluation
Postcode	CB8 8EP
Study area	50.00 Square metres
Site coordinates	TL 6448 6334 52 0 52 14 35 N 000 24 33 E Point
Height OD / Depth	Min: 28.00m Max: 28.00m

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 recipient	Suffolk County Council Archaeological Service
Physical Archive ID	H/81/1
Physical	"Animal Bones", "Ceramics"

Contents

Digital Archive recipient	Suffolk County Council Archaeological Service
Digital Archive ID	NKT 041
Digital Contents	"Animal Bones","Ceramics","Survey","other"
Digital Media available	"Database","Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	Suffolk County Council Archaeological Service
Paper Archive ID	NKT 041
Paper Contents	"Animal Bones","Ceramics","other"
Paper Media available	"Context sheet","Correspondence","Plan","Report","Section"

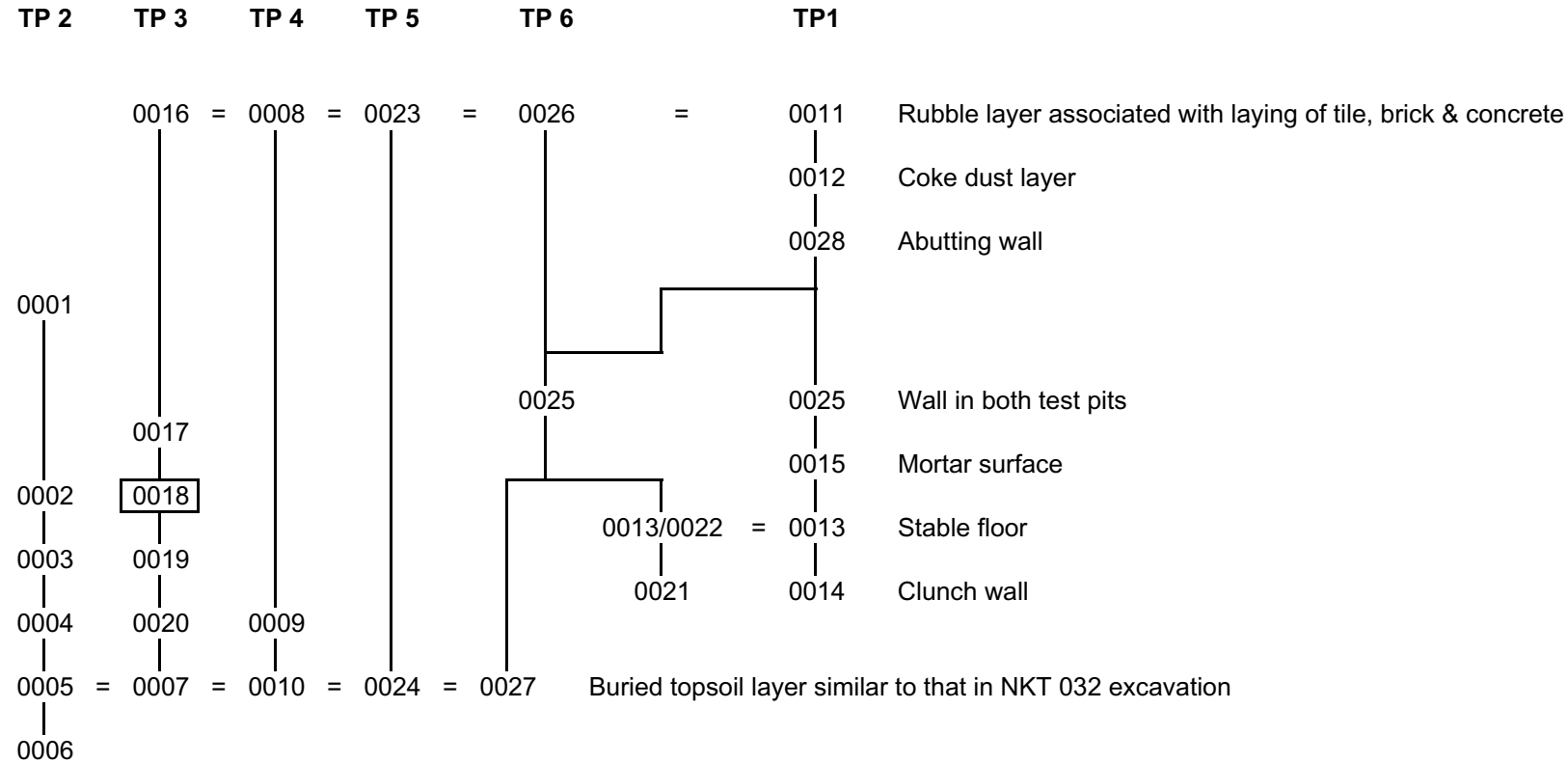
Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Palace House Stables Basement Evaluation, Newmarket, NKT 041, Archaeological Evaluation Report
Author(s)/Editor (s)	Brooks, R.
Other bibliographic details	SCCAS Report No. 2012/079
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Issuer or publisher	SCCAS
Place of issue or publication	Bury St Edmunds
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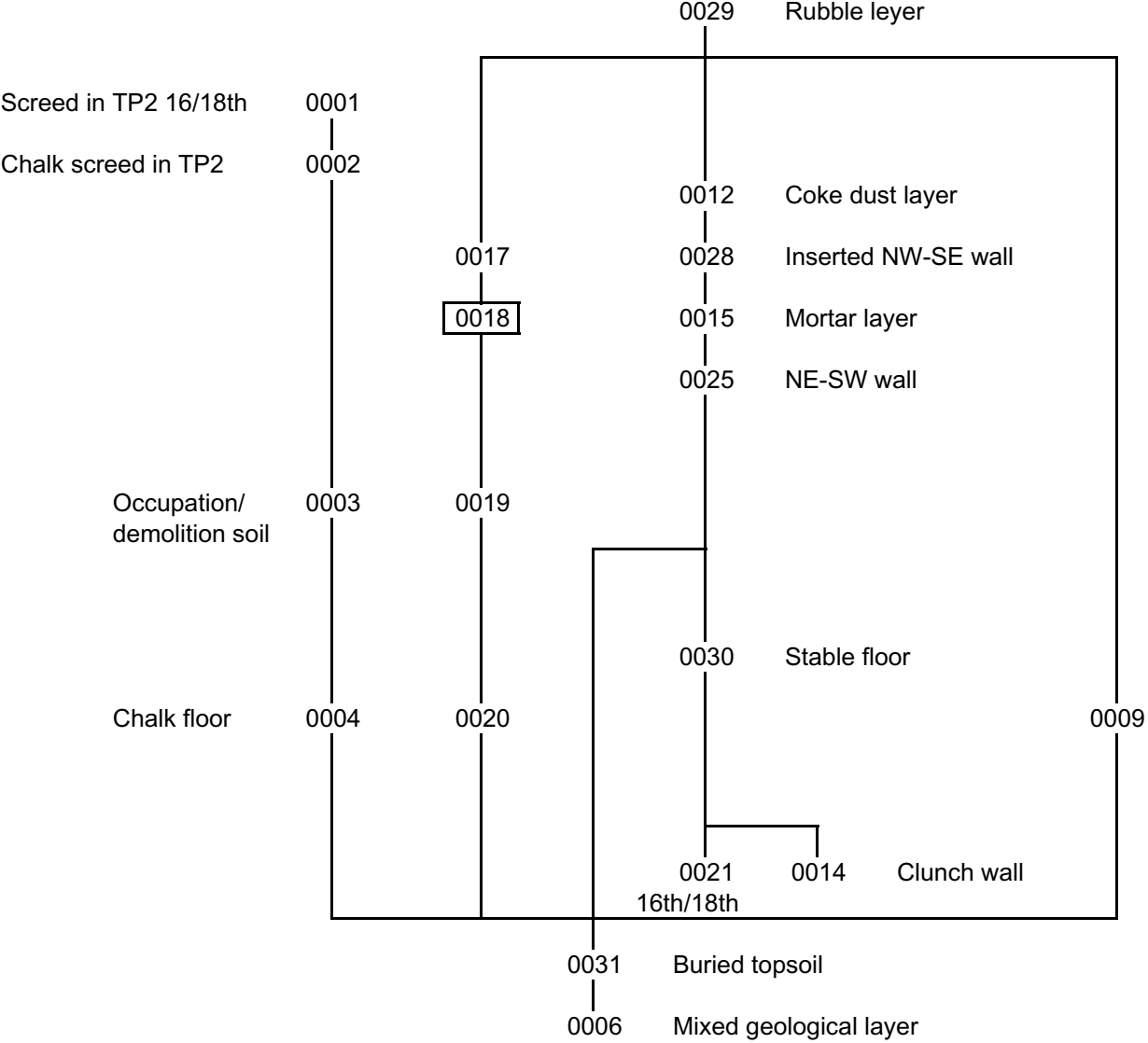
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Appendix 4. Matrix

Matrix with individual contexts in relation to test pits



Matrix incorporating group numbers



Appendix 5. CBM catalogue

Context	Fabric	Form	No	Weight (g)	Height (mm)	Width (mm)	Abrasion	Mortar	Notes	Date
0001	Fsc	RT	1	139	12		Sli		This is a fairly soft buff fabric with abundant calcareous inclusions as well as common ill sorted grog	?Medieval
0001	Wsg	RT	1	79	14		Sli		It contains common ill sorted red ferrous inclusions	Late medieval/post-medieval (?earlier post-medieval)
0003	Wsg	RT	1	713	15	165	Sli	On two long sides as well as upper and lower surfaces	This is the same as the wsfe example in 0001	Late medieval/post-medieval (?earlier post-medieval)
0003	Msc	LB	1	566	c 50	110	Sli	On all sides except the upper surface	The brick fully oxidised with abundant mostly fine calcite as well as other frequent ferrous inclusions It is not frogged and is similar to Drury type LB1 (1993, 165)	16th-18th C
0003	Wsg	RT	2	167	12		Sli		A similar fabric to the other wsg, but a slightly finer version	Late medieval/post-medieval (looks post-medieval)
0021	Wsg	RT	2	96	c 15		Sli	On one piece on upper surface	These fragments are similar in fabric to all of the others recovered from the layers	Late medieval/post-medieval (?earlier post-medieval)
0022	Msc	LB	1	1380	60	c 90	Sli	On two sides as well as upper and lower surfaces.	Closest match is the Drury type LB3 (1993, 165). The LB fragment is unfrogged and is slightly burnt	16th-18th C

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