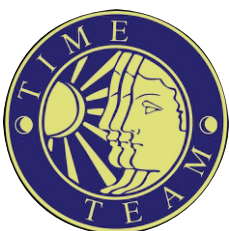


National Horse Racing Museum Newmarket, Suffolk

Archaeological Evaluation and Assessment of Results



Ref: 77506
April 2013



**NATIONAL HORSE RACING MUSEUM,
NEWMARKET,
SUFFOLK**

Archaeological Evaluation and Assessment of Results

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KING CHARLES II ROYAL PALACE AND STABLES, NEWMARKET, SUFFOLK

Archaeological Evaluation and Assessment of Results

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KING CHARLES II ROYAL PALACE AND STABLES, NEWMARKET, SUFFOLK

Archaeological Evaluation and Assessment of Results

Summary

Wessex Archaeology was commissioned by Videotext Communications Ltd to carry out archaeological recording and post-excavation analysis on an archaeological evaluation by Channel 4's 'Time Team' on King Charles II's Royal Palace and racing stables in Newmarket, centred on NGR 564450 263350. The current Palace House Mansion and entrance steps are Grade II* listed and the Palace House Stables are Grade II. The Palace was thought to have been constructed in 1671 by Charles II, although James I appears to have built a Palace within the near vicinity in 1608 (the exact location of which is now lost), and a second residence in 1614. Previous archaeological work on the Site has included an evaluation that revealed culverts associated with Charles II's Palace, and at least three late medieval or post-medieval buildings. Further investigations uncovered more brick culverts, while a later watching brief recorded a wall with a built-in well, associated with the Palace complex.

The Time Team evaluation, comprising four trenches, found evidence of at least two phases of stables associated with the Palace House Mansion. The earliest phase largely conformed to a 1740s map of the complex, apart from a large internal clunch-built, load-bearing wall, possibly mirrored by a geophysical anomaly on the opposite side of the building. The stables were later renovated internally by the addition of a further internal clunch wall and a resurfacing of the stable floor, possibly within the 19th century. Possibly associated with this phase of remodelling was a brick-built drain. A later addition to the stables was a series of brick pads to the north-east of the central spinal wall, but their function is uncertain.

A trench placed within the current car park of Palace House Mansion revealed two, and possibly three walls that were associated with a domestic range of the Palace, probably one of the kitchens. A second trench within the car park had to be abandoned due to the high density of services running through the area.

The fourth trench was placed within the Palace Garden. This uncovered a single post-medieval or modern gully cut into the subsoil. The trench was not, however, excavated down to the natural subsoil, and there could have been further features beneath the current excavated level.

KING CHARLES II ROYAL PALACE AND STABLES, NEWMARKET, SUFFOLK

Archaeological Evaluation and Assessment Report

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The excavation was undertaken by Time Team's retained archaeologists, Phil Harding (Wessex Archaeology), Tracey Smith, Ian Powlesland, Matt Williams, Raksha Dave, Cassie Newland and local archaeologists Lizzy Middleton, Charlotte Mecklenburgh, Chris Montague, Dan Britton, Marcus Britain and Adrian Donaghey. Local metal detectorist Alan Smith also provided much help and support. The geophysical survey was undertaken by GSB Prospection. The recording, finds co-ordination and processing was undertaken by Simon Flaherty and Lorrain Higbee. Finds identification was undertaken by Helen Geake (small finds), Paul Blinkhorn (pottery) and Lorrain Higbee (animal bone).

The archive was collated and all post-excavation assessment was undertaken by Wessex Archaeology. This report was compiled by Simon Flaherty, with specialist reports by Lorrain Higbee (animal bone) and Lorraine Mephram (all other finds). Advice on the standing buildings was supplied by Bob Davis. The illustrations were prepared by Kenneth Lymer. The post-excavation project was managed on behalf of Wessex Archaeology by Lorraine Mephram.

Thanks must be extended to the people who helped to initiate the project: Chris Garibaldi of the National Horseracing Museum, and Nigel McCurdy of Forest Heath District Council. Chris Garibaldi and Richard K Morriss both provided much invaluable information on the Palace buildings and their architectural history.

KING CHARLES II ROYAL PALACE AND STABLES, NEWMARKET, SUFFOLK

Archaeological Evaluation and Assessment of Results

1 INTRODUCTION

1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Videotext Communications Ltd to undertake a programme of archaeological recording and post-excavation work on an archaeological evaluation carried out by Channel 4's 'Time Team' at Newmarket, Suffolk, to investigate the area of King Charles II's Royal Palace and the associated stable block situated directly to the south-east, hereafter 'the Site' (**Figure 1**).

1.1.2 This report documents the results of archaeological survey and evaluation undertaken by Time Team, and presents an assessment of the results of these works which can be used to inform the future management and preservation of the Site.

1.2 The Site, location and geology

1.2.1 The site is at NGR 564450 263350 at a height of approximately 50m aOD. The underlying geology consists of well drained coarse and fine loamy soil that overlays chalk. Newmarket is approximately 33 miles (52km) north-west of Colchester and approximately 10 miles (16km) south east of Thetford.

1.2.2 Areas under investigation are owned by Forest Heath District Council. Target areas included King Charles II's Royal Palace (now known as Palace House Mansion), currently in use as a conference facility, the Palace Gardens to the west of Palace House Mansion, and a complex of stable buildings and yards currently disused and awaiting development. Palace House Mansion and stables are listed buildings, the Mansion Grade II* and the stables Grade II.

2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

2.1.1 The following historical and archaeological background has been summarised from the project design (Videotext Communications 2011).

2.2 Historical background

2.2.1 In 1608 James I built the first Royal Palace at Newmarket between the present-day site of the Jockey Club and Sun Lane. A sum of £257 was spent on his new lodgings and later in 1609-10 a further sum of £837 on additional buildings including stables, a boiling house and work houses. Unfortunately the location of the main lodgings was poorly sited and the building subsided in February 1613. This did not, however, dissuade James from continuing his association with Newmarket, which was quickly gaining a distinguished reputation for its pleasurable pastimes, particularly horse-racing – there are excellent natural gallops in the vicinity of the town.

2.2.2 A new block of lodgings was built in 1614 and finished in 1615 for the sum of £4660 11s 9½d, under the supervision of surveyor Simon Basil. Later

additions to the site in 1616-20, including the Great Stables and Prince's Lodgings, were conducted under the auspices of the new surveyor, Inigo Jones, assisted by John Webb. The site of this new construction cannot be located precisely but Chapman's map of 1787 labels the 'old Kings yard' on the corner of Sun Lane and High Street, in the area now known as Kingston Passage (see **Figure 1**), which may be a good indication of where part of the old palace once stood.

- 2.2.3 No depictions of this royal residence, or more appropriately hunting lodge, have survived, but it has been suggested that the 1669 etching of the Duke of Tuscany's visit to Newmarket (Medici Collection) may contain an impression of part of the building.
- 2.2.4 No alterations are accounted for during the reign of Charles I, although it is known that he held great fondness for Newmarket. However during the Parliamentary rule most of the palace was demolished.
- 2.2.5 At the Restoration the stables were rebuilt by John Bayspoole, Surveyor of the Mews, but no attempt was made to reconstruct the house itself. Instead, Charles II started developing a new site to the north-west, hiring gentlemen architect William Samwell to carry out the proposed work, and by 1671 more than £8000 had been spent. No views of the extant complex exist, although fragments of the main building can be seen in John Wooton's painting of George I at Newmarket (Yale Centre for British Art). However, there are two plans of the palace site that provide a clear view of the scope and scale of the buildings themselves. One of these was prepared in the 1740s by Thomas Fort (**Figure 2 and Front Cover**).
- 2.2.6 In addition to the main residential building, the palace complex included cottages, stables, outbuildings along the far side of Sun Lane, to the east of Palace Street and between Park Lane and All Saints Road. The main building appears to have been completed and settled by William Samwell in 1670.
- 2.2.7 Very few later alterations were subsequently made to the complex, although in 1705 Queen Anne demolished a coach house and forge to improve the view of the country from her privy window.
- 2.2.8 Much of the building was demolished in the 19th century, but the core building (now known as Palace House Mansion) was bought by Baron Meyer de Rothschild in 1857 and he employed the architect George Davey to carry out his desired alterations. Between about 1857-60, Rothschild remodelled part of the existing stables to form a Trainer's House, incorporating some 17th century walling from the former buildings. The stables and Trainer's House were altered and extended with a second eastern stable yard and ancillary stable ranges further east between 1896-1903 by W C & A S Manning for Leopold de Rothschild and his trainer, Alfred Hayhoe.
- 2.2.9 Palace House Mansion, including a set of newly built stables (built in 1904 to the east of the Site) remained in the de Rothschild family until 1985 when it was put up for auction. The local council subsequently acquired the site in 1992 and carried out renovations in 1996-7.

2.3 Archaeological background

- 2.3.1 Several archaeological interventions have taken place either within or adjacent to the Site. A summary of the results is provided below.
- 2.3.2 Archaeological investigations were undertaken at Palace House Mansion during 1996 and 1997 (Sommers 2001), which comprised a series of evaluation trenches within the Palace and its gardens. Following the results of this evaluation, two further areas were excavated. The first area was on the north side of the surviving portion of the Palace, where a series of brick culverts associated with the Palace were found, and the remains of two, or possibly three, late medieval/post medieval buildings, one of which appeared to have been destroyed by fire. A second area, in the former front garden of the Palace, revealed further brick culverts, belonging to at least two phases, and a post-medieval kiln or oven. Two small areas of the Palace foundations were also recorded.
- 2.3.3 During 2000, after the demolition of a wall immediately to the south of Palace House Mansion, and of a similar date, the associated trial holes dug to investigate the strength of the foundations were re-excavated and archaeologically monitored (Tester 2001). During this process, the cap of a brick-lined well, built into the structure of the wall, was struck and punctured. A section was recorded of the ground surface cut by the new footing trench, which showed the ground surface from which the wall was dug to be c. 0.3 m lower than the existing surface. A layer of mixed deposits interpreted as yard material overlay a natural silt layer. The skeleton of a large immature pig had been buried in a pit cut through the original yard surface. The wall continued below the original ground surface with bricks used for the footings. Various cross walls were recorded intersecting with the wall, but all post-dated the Palace precinct.

3 METHODOLOGY

3.1 Aims and scope

- 3.1.1 A project design for the work was compiled (Videotext Communications 2011), providing full details of the research aims and methods. A brief summary is presented here.
- 3.1.2 The overall aim of the project was to characterise the nature and date of the Site and place it within its historical, geographical and archaeological context.
- 3.1.3 Three specific research aims were identified:
- Research Aim 1: to ascertain the character of the Palace remains and the extent of their preservation, as documentary evidence suggested that a substantial proportion had survived.
 - Research Aim 2: to determine the character of the archaeological deposits within the area of the Palace Stables and to establish how well the stable remains survive within this area.
 - Research Aim 3: to identify any traces of Charles II's formal gardens within the current Palace House Mansion gardens.

4 METHODOLOGY

4.1 Geophysical survey

- 4.1.1 Prior to the excavation of evaluation trenches, a geophysical survey was carried out across the Site using ground penetrating radar (GPR). The survey grid was tied in to the Ordnance Survey grid using a Trimble real time differential GPS system.

4.2 Evaluation trenches

- 4.2.1 Four trenches of varying sizes were excavated (**Figure 1**). The locations of Trenches 1-3 were carefully chosen to target features shown on the 1740s plan of the Palace, while Trench 4 was placed within an open area as shown on the 1740s plan, and targeted geophysical anomalies thought to be possible garden features.
- 4.2.2 Three trenches (Trenches 1-3) were excavated under constant archaeological supervision using a 360° tracked excavator fitted with a toothless grading bucket, and ceased at the identification of significant archaeological remains or at natural geology if this was encountered first. When machine excavation had ceased all trenches were cleaned by hand and archaeological deposits investigated. Trench 4 was hand excavated within the current Palace House garden.
- 4.2.3 At various stages during excavation the deposits were scanned by a metal detector and signals marked in order to facilitate investigation. The excavated up-cast was scanned by metal detector.
- 4.2.4 All archaeological deposits were recorded using Wessex Archaeology's *pro forma* record sheets with a unique numbering system for individual contexts. Trenches were located using a Trimble Real Time Differential GPS survey system. All archaeological features and deposits were planned at a scale of 1:20 with sections drawn at 1:10. All principal strata and features were related to the Ordnance Survey datum.
- 4.2.5 A full photographic record of the investigations and individual features was maintained, utilising digital images. The photographic record illustrated both the detail and general context of the archaeology revealed, and the Site as a whole.
- 4.2.6 At the completion of the work, all trenches were reinstated using the excavated soil.
- 4.2.7 The work was carried out between the 5 - 8 July 2011. The archive and all artefacts were subsequently transported to the offices of Wessex Archaeology in Salisbury where they were processed and assessed for this report.

4.3 Copyright

- 4.3.1 This report may contain material that is non-Wessex Archaeology copyright e.g. Ordnance Survey, British Geological Survey, Crown Copyright, or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are

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5 RESULTS

5.1 Introduction

- 5.1.1 Details of individual excavated contexts and features and the full geophysical report (GSB 2011) are retained in the archive. Summaries of the excavated deposits in each trench can be found in **Appendix 1**.

5.2 Geophysical Survey

- 5.2.1 Site conditions were outwardly very good – all areas were flat, open and relatively free of obstacles and under a mixture of grass, tarmac and gravel. The complication lay in the number of services and alterations made in the area of the Stables and Palace House Mansion.
- 5.2.2 All GPR interpretations are based on analysis of both raw and filtered depth-slice datasets as well as the original radargrams. Copies of all data plots can be found on the archive CD for more detailed viewing (included in the project archive).

Ground Penetrating Radar (GPR) survey (Figure 3)

Area 1

- 5.2.3 The original layout of the 17th century Palace is known to a certain extent (Videotext Communications 2011, fig. 6; **Figure 2** and **Front Cover**) and the gravel area outside Palace House Mansion certainly had additional structures built on it compared with what is left today. However, the GPR failed to clearly identify the exact position and layout of these structures owing to the extensive reworking of the site, including the laying of numerous services and a large area of concrete, the limits of which may be defined by the reflector [1]; this seems to be the base of the slab, as the top surface lay directly beneath the gravel. A few example services have been picked out but these should not be considered a complete picture of the layout of utilities at the site, or an indication of 'live' versus disused features.
- 5.2.4 Beneath the concrete and services, there are some very poorly defined reflectors [2] which are probably the demolished remnants of the original Palace, as partially uncovered during the Time Team evaluation. Anomalies further to the west [3] may be of a similar origin, but the poor definition means that they could simply be the effects of remodelling rather than *in situ* structures and, as such, remain classified as *Uncertain*.
- 5.2.5 Very strong responses in the north-west corner of the area coincide with a continuation of the buildings along the northern side of the survey, which are shown as part of the Palace complex on earlier plans (Videotext Communications 2011, fig. 6; **Figure 2** and **Front Cover**). It seems likely that this disturbance is an indication of demolition material, potentially infilling a cellar.

Area 2

- 5.2.6 This garden is shown as an open area on the original Palace plans and survey was undertaken in order to look for evidence of garden features. A number of drains or culverts were recorded crossing the area and they have

detracted somewhat from the more ephemeral responses that might be associated with the 17th century garden. In fact it has been difficult to define anything that would categorically suggest former horticulture. A relatively coherent reflector [4] is possibly evidence of a footpath or edge of a planting bed and, given its distribution, the anomaly in the very south-east of the survey area could be related, perhaps being towards the centre of an originally larger garden; however this is purely speculation, with the anomalies being far from conclusive in their character. There seems to be linear trend [5] across the top of the grid, which might be the edge of a former path or similar, with zones of disturbance to the south; these could be evidence of planting beds but the lack any clear pattern to these, with respect other responses, leaves them classed as *Uncertain*.

5.2.7 At the time of survey it was suggested that the curving trend [6] may be a another central feature of a larger garden, with paths [7 & 8] running toward it; however, the latter seems more likely to be a culvert and the curving trend is formed of very ephemeral responses. They [6 & 7] could still be footpaths, but it is difficult to attribute a full interpretation with most of the curving feature lying beneath the current planting beds and garden boundary.

5.2.8 Reflections from the adjacent building and over-hanging bay window have been recorded along the top of the survey area.

Area 3

5.2.9 The main stable block was actually the first site to be investigated but unfortunately, as with Area 1, the remodelling, laying of services and resurfacing of the site have badly hampered the effectiveness of the GPR. Again, some services have been picked out but this is unlikely to be all of them and does not differentiate between modern, historic, 'live' or disused features. Between the myriad of utilities, the first features attributable to the original palace stables are two walls, joining at a right angle [9]; however, little else could be confidently picked out as part of the main stable. Upon excavation, this anomaly proved to be a substantial foundation. It actually extended further to the south east but an overlying utility masked its continuation. Having seen from the trench that many of the shallower brick walls and brick flooring of the stable were still *in situ*, just below the tarmac, it was then possible to pick out the associated anomalies from the dataset such as [10]. Clearly this would be difficult to do 'blind' given the similarity of response between these and areas of service trenching, tarmac variation and, for example in the case of [11], services running next to/on top of wall lines. However, based on this 'ground-truthing' and close analysis of the radargrams, further anomalies likely to be associated with the stable structure have been highlighted [e.g. 12].

5.2.10 The sub-circular anomaly [13] was part of the stable complex that survived through to early edition Ordnance Survey mapping and so can be categorised quite confidently. The same cannot be said for the grouping of reflections around [14] which could be a result of remodelling or part of the earlier stabling fabric.

Area 4

5.2.11 In the garden of the Racing Museum, the aim was to map the southern end of what was believed may have been the 17th century Palace complex. There is a suspicion that much of the dataset reflects responses associated with various garden layouts – a shallow band of increased response may be

a path and certainly the shallow variation [15] seems to coincide with an area of former planting visible at the time of survey. There is a slight complication that relatively strong reflectors [16] look well-defined, potentially to an extent that they could be queried as archaeological deposits, however their limits match quite closely those of the horticultural responses.

5.2.12 Further reflectors of *Uncertain* origin have been highlighted and although they all seem to share a common alignment, their distribution does little to suggest a distinct origin. Across the eastern end of the survey area, a spread of increased response can be seen to originate from a horizon of reflectors in the radargrams, the origin of which is unclear; they could be evidence of made ground, demolition material or simply a natural stratigraphic unit.

5.2.13 A broad zone of increased response [17] appears to be associated with the bed beneath an area of gravel, and some services have also been highlighted.

Conclusions

5.2.14 Survey looking for 17th century Palace structures and the original stabling that would have stood immediately adjacent to and opposite Palace House Mansion was severely hampered by remodelling and the presence of utilities. In the case of the Palace buildings, the limit of detectability was some poorly-defined reflectors at depth, whilst over the stable blocks only a section of substantial foundation wall was clearly mapped; the remainder required comparison with excavation results to inform upon what might be the shallow remnants of the stables, rather than service trenching or variation in the present tarmac surface.

5.2.15 Numerous culverts, pipes or drains were recorded beneath the Mansion lawn but little could be defined of the 17th century garden layout. The line of some pathways was very tentatively defined as was disturbance, of questionable antiquity, which may have been related to former planting beds. Similar ambiguity surrounded the search for the southern end of the Palace complex in the museum garden; although a 'busy' dataset was recorded, it was hard to associate the pattern of response with the expected archaeological features.

5.3 Upstanding remains

5.3.1 A number of upstanding remains of the stable block had been integrated into the later Trainer's House adapted from (and utilising part of the same ground plan as) the 17th century Palace stables. Most have been covered up by later renovations. Large parts of the northern clunch wall of the stable block are still present and were integrated into the central spine wall of the later house (**Figure 4: Plate 1**).

5.3.2 The fenestration of the windows conformed to a symmetrical shape throughout the stable, as indicated by Thomas Fort's 1740s plan of the Palace complex (**Figure 2** and **Front Cover**). The windows were in a voussoir style using clunch stones of which the plain and keystones are still visible (**Figure 4: Plate 2**). On the internal side of the walls, brick was used instead of clunch. The voussoir windows are reminiscent stylistically of the 1619 stable designs of Inigo Jones.

5.3.3 The Public Health Map of 1850 confirms the presence of the stable blocks. However, by the time of the 1886 Ordnance Survey map the stable block had been replaced by a house (the Trainer's House). These dates are confirmed by the presence of a fireplace within the eastern first floor of the building which is a Thomas Jekyll design produced by Barnard, Bishop and Barnard of Norwich c.1870, and which appears to have been part of the original build of the Trainer's House (**Figure 4: Plate 3**).

5.3.4 Parts of an earlier building seem to have been incorporated into the 19th century stable buildings. The south-west corner of the stables included an abutted outside staircase. The stables are present within the 1821 Enclosure Award Map, although the staircase does not appear on any map until 1903. The staircase has been made from reused moulded stone fragments, possibly originally from part of the parapet or cornice of an earlier building, concreted over to create steps (**Figure 4: Plate 4**).

5.4 Evaluation trenches

Trench 1 (Figures 5 & 6)

5.4.1 Trench 1 was positioned in order to assess the form, character and state of preservation of the 17th century stables, and to test the accuracy of the 1740s plan. The trench was heavily affected by services running throughout the area, but showed at least two separate structural phases (**Figure 5**).

Phase 1 (17th century)

5.4.2 The trench contained part of the foundations of the stables as shown on Fort's 1740s map (**Figure 2** and **Front Cover**). What was uncovered comprised part of the frontage wall, including the entrance; the 'spine' wall which divided the stable block into two; the entrance passage leading to the stairwell; and what appears to have been an 'extra' foundation wall which was part of the original build, but which was never built upon.

5.4.3 The outside wall of the stables, facing the stable-yard, had a foundation comprising roughly square-cut clunch blocks with no bonding (**105/110**), but its importance as the front wall and location of the main entrance was shown by its brick facing (**106/111**). This would have been an imposing two-storey frontage.

5.4.4 The central wall (**146**) of the stables was exposed along the northern edge of Trench 1, oriented north-west to south-east. This wall was also clunch-built, and formed the 'spine' on to which the two rows of individual stalls would have backed, although no traces of the individual stalls themselves were observed.

5.4.5 Two narrow red brick walls (**107** and **116**) formed the main entrance corridor to the stable block, running across the block to the central wall, with a room on either side, each containing stalls set against the central wall (**Figure 5: Plates 5-6**). The corridor walls were approximately 1.66m apart and appear on the 1740s plan as leading to a staircase. Both these walls would have abutted both the front wall (**105** and **110**) and the central wall of the building (**146**).

5.4.6 Two areas of flooring (**158** and **160**) were situated between walls **107** and **116**. Floor **160** butted against walls **116** and **146**. This floor comprises a single layer of unfrogged red bricks. The second floor (**158**) abutted wall

107. It was also of red brick, but lay above another layer of bricks set upright (**159**). These brick surfaces correspond to the area of the stairwell shown on the 1740s plan. The stairwell would have led to an upper chamber with a window overlooking the stable yard – in other words, an ideal viewing station for the King and his guests.

- 5.4.7 A further wall (**161**), of a single brick width, was located in the north-west corner of the trench, running parallel to wall **146**. At its north-western end it ran under the trench edge; its south-eastern end abutted wall **116**. This wall is not shown the 1740s map, but may have been related to the stalls on that side of the stable.
- 5.4.8 A thick (0.90m), load-bearing clunch foundation (**149**) oriented north-east to south-west, was recorded for a length of 7.65m along the south-eastern edge of the trench. It abutted wall **146** at its northern end and wall **105** at its southern end. This wall is not shown on the 1740s map of the stable, but was structurally identical to the other clunch walls, suggesting it was erected at a similar time. It appears, however, to have been only ever a foundation, and never had a wall erected on top. There is just a suggestion of another wall/foundation in a corresponding position to the west of the entrance passage on the geophysical plot (see **Figure 3**).
- 5.4.9 Beneath the stable block was an occupation deposit (114) that contained two sherds of medieval pottery (13th/14th century).

Phase 2 (19th century)

- 5.4.10 A subsequent phase of renovation work took place within the stables. A yellow brick floor (**152**) was laid, consisting of a single layer of bricks. Within the floor area, individual stalls were denoted by lines of red bricks, indicating that each stall was c. 1.7m wide. This appears a little narrower than the stalls marked on the 1740s plan, which seem to be closer to 2m wide (see **Figure 2**). The floor was laid on top of an area that had been robbed out and backfilled with demolition rubble (layer **131**). A single piece of pottery was found within the demolition layer which dated the layer no earlier than the 19th century. The dating is confirmed by the bricks used for the flooring, which were possibly London Stock.
- 5.4.11 A poorly built clunch wall (**153**) truncated the earliest phase of the stables through walls **116**, **107** and **149** and floor **158**. It is unclear whether it also truncated the later stable floor **152**, but more probably the two were contemporaneous (**Figure 6: Plate 7**). There was a slight gap between the wall and floor which appeared to represent some removed structural remains, probably the wooden panelling between the stalls.
- 5.4.12 Both wall **153** and the new stable floor **152** respected the original building alignments. If, as has been suggested above, the stalls marked out on the new floor were c. 1.7m wide, and this is extrapolated to the north-west, then this appears to line up with wall **107**, suggesting that parts at least of the original stable were still in use in its later phase and that the original main entrance was still in use.
- 5.4.13 It is unclear whether clunch walls **149** and **153** were being used at this stage concurrently, although doubt may be cast on the load-bearing capability of wall **153**. Instead, it may have been that a passageway was created running through the length of the building.

- 5.4.14 One drain was revealed (**151**; **Figure 6: Plate 9**), but it was unclear to which phase this was related (although all phases would have required a drain). The drain truncated wall **149** which was probably related to the phase 1 structure. It was oriented north-south, and was built mainly of red bricks, although where it truncated wall **149** a number of yellow bricks were present, further suggesting that it may have related to the later phase of the building.
- 5.4.15 Finally, a number of brick pads (**142**, **141**, **140**, **139**, **138**, **137** and **136**) were recorded within the north-eastern corner of the trench (**Figure 6: Plate 8**). They appeared to have been laid in an area that had been excavated and then levelled (**145,143**) with small pieces of building material, suggesting that the pads were a later addition to the building. The pads varied in length, but only because of truncation by modern services. They were one brick wide, and no mortar was observed on the upper surfaces, suggesting that they were never built up any higher; their function remains unclear. They were stylistically similar to each other but were unequally spaced.

Trench 2 (Figure 7)

- 5.4.16 Trench 2 was located within the south-western car park of the current Palace House Mansion, to test the state of preservation of the archaeological remains from the Palace complex. Its precise location was based on the 1740s map and the earlier excavation results.
- 5.4.17 The features within the trench had been severely truncated by later services (**212** and **208**) and a possible brick-topped culvert (**210**). Parts of three walls were recorded (**204**, **205** and **206**; **Figure 6: Plate 7**). Red brick wall **204** was oriented north-east to south-west direction, and survived to a height of 0.5m; it sat on a footing constructed of clunch and broken bricks (**209**). The wall had been badly damaged by demolition and later service trenches.
- 5.4.18 Wall **204** butted against wall **205**, aligned east-west; this was only visible for a length of 0.9m. It appeared to have been bonded to wall **206**, but its poor preservation meant that this was hard to establish with certainty, and it may in fact have been part of the same wall.
- 5.4.19 The earliest phase of walling present is represented by **206**. This wall was oriented north-east to south-west, and was recorded for a length of 0.4m; it continued to the north-east as wall **204**.
- 5.4.20 Interpretation of the archaeological deposits in Trench 2 was difficult due to the constraints of the small trench. However, the position of the trench lies within the Palace, and specifically in an area defined as a kitchen on a plan of the grounds from 1816. In this particular area the 1816 plan corresponds exactly to the earlier 1740s map, although the latter did not mark the separate room functions. It is possible, therefore, that wall **205** represents the footings for a fireplace located within the kitchen.

Trench 3 (not illustrated)

- 5.4.21 Trench 3 was located close to the north-western end of the north-east wall of Palace House Mansion, to test the state of preservation of archaeological remains of the Palace.
- 5.4.22 The trench was excavated to a depth of 0.30m, but at this point a series of services was encountered, which meant that it was impractical to proceed with this trench and it was therefore abandoned.

Trench 4 (Figure 8)

- 5.4.23 Trench 4 was positioned within the area of the Palace House Mansion garden to identify any possible garden features associated with the Royal Palace.
- 5.4.24 The trench contained a single gully (**405**) cut into the subsoil (**403**). Its full width was not exposed as it was situated along the northern edge of the trench. It ran east to west and had a maximum recorded depth of 0.20m. This gully is thought to be post-medieval or modern due its location within the subsoil. Due to time constraints the trench was not fully excavated and the possibility remains of further archaeological features beneath the excavated level.

6 FINDS

6.1 Introduction

- 6.1.1 A small assemblage was recovered from the Site, consisting almost entirely of metalwork. Most of the finds came from Trench 1, with a few metal items from Trench 4; no finds were recovered from Trenches 2 and 3.
- 6.1.2 With the exception of the worked flint (a prehistoric waste flake), the finds are all definitely or probably of medieval or post-medieval date (although many are not morphologically datable).
- 6.1.3 All finds have been quantified by material type within each context, and the results are summarised by material type and by trench in **Table 1**.

6.2 Pottery

- 6.2.1 The pottery assemblage includes sherds of medieval and post-medieval date.

Medieval

- 6.2.2 All of the medieval sherds are in sandy fabrics. Four of these can be identified as Ely type wares (Cambridgeshire fabric MEL), five as Essex type micaceous sandy wares (Essex fabric 20), and two as possible Colchester type oxidised sandy wares (Essex fabric 21a), one of which carries white painted slip decoration. There are no diagnostic sherds, but the likely date range is 13th to 14th century.
- 6.2.3 The only context in which pottery provides the primary dating evidence is layer **114**, pre-dating the stable construction; in other contexts (demolition layer **102**; **175**, possible backfill around wall **105**) sherds were residual finds with later material.

Post-Medieval

- 6.2.4 The majority of the assemblage is post-medieval or modern, and includes coarse redwares (not closely datable), and one sherd of tinglazed earthenware (17th/early 18th century) alongside factory-produced finewares and stonewares of the later 18th century and later.

6.3 Ceramic Building Material

- 6.3.1 This category includes fragments of roof tile, brick, wall tile and drainpipe. The roof tile is all of medieval date, and occurs mainly in poorly-wedged,

pale-firing fabrics. One piece preserves a complete width (160mm); this tile has an off-centre nail/peg hole that does not entirely perforate the tile. Other fragments have irregular or oblique nail/peg holes. The brick fragments are all small, and are from bricks of unknown form or dimensions; all are post-medieval. The drainpipe and wall tiles are modern.

6.4 Wall Plaster

- 6.4.1 Further building material was recovered in the form of wall plaster, from demolition layer **102**. All fragments carry a monochrome plaster coating, in a creamy yellow colour.

6.5 Clay Pipe

- 6.5.1 Most of the clay tobacco pipe fragments recovered comprise plain stems, which cannot be dated closely. There is one bowl fragment of 18th century date or later (modern service trench **112**); and a stem/spur fragment with the base of a decorated bowl, of 18th/19th century date (demolition layer **102**).

6.6 Glass

- 6.6.1 This category includes vessel and window glass, and one bead (globular, opaque turquoise, modern).
- 6.6.2 Of the vessel glass, four pieces are diagnostic of the earlier post-medieval period. One is from the base of a green wine bottle of 'onion' form (c. 1680-1730); this came from service trench **104**. Phials are represented by one rim/neck fragment, while a sharply pointed basal 'kick' could come either from a phial (perhaps the same vessel as the rim/neck?) or drinking vessel; both came from demolition layer **102** and both are of probable 17th or early 18th century date. Finally, a rim fragment from a small, thin-walled, cylindrical vessel in clear glass may be from a fineware drinking vessel; this was recovered from modern service trench **112**. Ten other fragments of bottle/jar glass are less closely datable, or are obviously modern.
- 6.6.3 Thirteen fragments are of window glass. Three tiny fragments from context **114** (layer pre-dating stable construction) are discoloured and in poor condition; these were associated with medieval pottery and could also be of medieval date. Other fragments are more likely to be post-medieval, although not modern.

6.7 Metalwork

- 6.7.1 The metalwork includes items of copper alloy, lead and iron. The condition of the ironwork in particular is poor, and objects are in general heavily abraded. This has hampered identification, which has relied heavily in X-radiographs.

Copper alloy

- 6.7.2 The 15 copper alloy objects include three coins and seven buttons. Other objects are less easily identifiable.
- 6.7.3 The coins comprise two pennies (one dated 1770 and the other illegible) and a halfpenny (1775).
- 6.7.4 Four of the buttons, all from demolition layer **102**, are plain discs with rear loop attachments (diameters 12-18mm); one has a backstamp of 'DOUBLE

GILT ORANGE COLOUR'. The use of gilding on buttons originated at the end of the 18th century, and involved the adding of gold grains to mercury, the amalgam then being brushed over the button. The use of 'double gilt' and 'triple gilt' as button descriptions refers to the use of additional gold grains, or additional brushings of amalgam. The other three buttons are more decorative. One is a small disc (19mm diameter) which carries moulded decoration in the form of a central 8-pointed star surrounded by a rosette border; it has a backstamp of 'GOLD TWIST LONDON'. One is a larger, hollow domed form (diameter 26mm) with an integral drilled shank and an engraved 4-petalled rosette as decoration (Read 2005, nos. 143-5); while the third is a small oval button with an inset of some off-white material. The domed button is probably 17th century in date, while the others, which all have rear loop attachments, belong to the 18th century or later.

- 6.7.5 Of the other objects, one comprises two short, narrow strips adhering to one another, just possibly a strapend (demolition layer **120**). Another, presumably some form of fitting, consists of a short, narrow strip with a longitudinal rear 'sleeve' attached. Another small fitting comprises a double loop attached to a small scrap of sheet, which is all that survives of the object. A small curved fragment is part of a cast object, possibly a rumbler bell. The final object is a small disc (only roughly circular) with a small central perforation, of unknown function. The last four objects all came from demolition layer **102**.

Lead

- 6.7.6 The lead includes two window came fragments, but otherwise consists entirely of waste fragments and offcuts.

Iron

- 6.7.7 Most of the ironwork consists of nails of various sizes (67 examples, including both structural and horseshoe nails) and other structural items. Other identifiable items include a heel iron (demolition layer **102**), a loop handle (service trench **104**), and four weights (demolition layer **102**, service trench **104**). The weights are all pear-shaped, with central perforations; their weights were recorded as 780g (c. 27.5oz), 867g (c. 30.5oz), 1245g (c. 44oz) and 1265g (c. 44.5oz). These could have been used as counterweights on halters to secure the horses within their stalls (see, for example, Worsley 2004, figs. 155 and 205).

6.8 Animal Bone

- 6.8.1 A total of 111 fragments (or 498g) of animal bone were recovered from the Site, the majority from post-medieval demolition layers and modern service trenches located in Trench 1. In addition a small number of fragments were recovered from medieval layer **114**.
- 6.8.2 Bone preservation is excellent and the number of gnawed bones is extremely low. Approximately 40% of fragments are identifiable to species and skeletal element. Identified species include the following, which are listed in order of relative abundance: sheep/goat, cattle, pig, fallow deer and domestic fowl. The range of body parts is fairly mixed (i.e. both primary waste and domestic refuse) but this is typical of most urban assemblages of this period. The assemblage also includes a complete rat skeleton from layer **102**. These commensal species are common inhabitants of barns and stables where stored animal feeds make for an easy meal.

- 6.8.3 Bones recovered from medieval layer **114** include a cattle third molar tooth, sheep/goat tibia and pig humerus.

6.9 Other Finds

- 6.9.1 Other finds comprise six pieces of worked flint (5 flakes, 1 core), one broken whetstone, a single small piece of metalworking slag; and a small quantity of oyster shell.

6.10 Potential and further recommendations

- 6.10.1 This small assemblage has provided some dating information, but consists largely of undatable structural items such as nails, although some artefacts with a possible relation to the use of the stables were identified (horseshoe nails, weights). Many of the objects came from demolition layers or modern service trenches. All objects have been recorded to an appropriate archive level, and no further analysis is proposed.
- 6.10.2 Given the likely date range of the assemblage (largely post-medieval), the preponderance of items in an unstable condition (actively corroding metalwork), and the absence of any items of intrinsic interest, their retention would not normally be recommended. If these items are to be retained for long-term curation, their condition should be closely monitored, and it should be noted that the ironwork in particular will not survive for any length of time, even in stable storage (airtight containers with a drying agent). Further conservation treatment, in the form of the removal of corrosion products from the ironwork, is not recommended, as this process could lead to further deterioration in the objects, and would not prolong their survival significantly.

7 CONCLUSIONS

7.1 Stable complex

- 7.1.1 The evaluation demonstrated that the foundations of Charles II's stables were still preserved beneath the current disused stable site, although they had been heavily affected by later services. The stables showed at least two phases of building.

17th century stables

- 7.1.2 The first phase of building comprised the outer walls, with the main entrance at the centre of the southern wall; a central east-west wall dividing the building into two equal parts; and a corridor leading from the entrance towards a stairwell. The outer walls and the central wall survive as clunch foundations, with brick facing the foundations along the frontage wall; the entrance corridor was brick-built, and floored in brick.
- 7.1.3 All these components can be correlated with Chapman's plan from the 1740s (although there is a slight discrepancy in the trench overlay in **Figure 2**), which depicts a building approximately 27.5m x 21m, with 13 equally spaced stalls in the northern half, and six stalls in each room either side of the entrance corridor, with all stalls backing on to the spinal wall. No trace of the original stalls was recorded, but any evidence was probably removed during later remodelling of the stables (see below). The only point at which the excavated evidence diverges significantly from the 1740s plan is in the presence of an 'extra' wall foundation, running parallel to the entrance corridor (and approximately 6.5m from it) across what would have been the

south-eastern room. This seems only ever to have been a foundation, and was not subsequently built on; there is possible evidence in the geophysical data for a wall in a corresponding position in the south-western room, but this one appears to have been completely removed at some stage.

- 7.1.4 The evidence, then, is for a large, imposing structure of at least two storeys, brick-built, with decorative stonework (as seen reused in later remodelling), the whole probably conforming to the Classical style prevalent throughout most of the 17th century and essentially representing a smaller version of the contemporary country house (Worsley 2004, 87 and fig. 95). Some of the architectural details can be seen from upstanding remains incorporated within the later Trainer's House, such as the voussoir-style windows reminiscent of Inigo Jones' early 17th century stable designs. These stables, however, have elements which mark them out particularly grand, even by contemporary standards, presumably linked to their royal status. These include the stairs and the arrangement of the stalls.
- 7.1.5 The importance of the stairs leading to the upper floor, as depicted on Chapman's plan, is that they incorporated a turn; most other stable staircases at this period consisted of a single flight, and did not lead up from the entrance. It suggests that the upper room was used for more than just storage or grooms' accommodation, and may have served as a viewing station for the stableyard. Other subsidiary stairs at the back of the building, shown on Chapman's plan, probably led up to the stable offices and hay loft.
- 7.1.6 Chapman's plan also shows a particularly wide space, in both front and rear rooms, between the stalls and the outer wall, in other words the 'turning' area for the horses. This is larger than was necessary for strict functionality, and was presumably to allow more leisurely viewing of the horses.

19th century stables and Trainer's House

- 7.1.7 The second construction phase can probably be linked to the remodelling of the stables in the mid 19th century by Baron de Rothschild. At this point, a second wall, also on a clunch foundation, was built about 2m to the south of the original spinal wall, and presumably replacing it. At the same time the original stable floor was dug up and rebuilt (at least on the southern side of the central wall) in yellow brick, incorporating a drain, and with the subdivisions for the individual stalls marked out in red brick. A number of brick pads to the north of the wall are of uncertain function, but the evidence suggests that the stalling was now confined to the southern part of the building. Elsewhere the original entrance and central corridor seem still to have been in use.
- 7.1.8 The remodelled stables, however, seem only to have functioned for a short period. By 1886 the stables had been partially demolished and adapted for use as the Trainer's House which incorporated the existing northern wall of the stables and some of its architectural features, including the voussoir windows.

7.2 Palace House Mansion

- 7.2.1 As for the stables, the foundations of the Palace were preserved, and a small portion was recorded in Trench 2, although heavily truncated by later services. The position of the surviving walls suggests that it was part of the domestic area, probably a kitchen, of the Palace.

- 7.2.2 Neither Trenches 3 nor 4 produced significant archaeological results.

8 FURTHER RECOMMENDATIONS

- 8.1.1 Detailed publication of the results of the Time Team evaluation is not warranted, but it is proposed that a brief summary is submitted to the *Proceedings of the Suffolk Institute of History and Archaeology*, for inclusion in the annual gazetteer of archaeology in the county.
- 8.1.2 An online OASIS (Online Access to the index of Archaeological Investigations) entry will be created for this evaluation and its findings and submitted to the website.

9 ARCHIVE

- 9.1.1 The archive, which includes artefacts, written, drawn and photographic records, and digital data relating directly to the investigation, is currently held at the offices of Wessex Archaeology in Salisbury under the project number 77506. It comprises ten boxes of finds, one file of records, four A1, six A3 and four A4 drawing film, X-ray plates, and digital data including photographic images. In due course, the archive will be deposited with the National Horseracing Museum, Newmarket.

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10.2 Historic Environment Records

County SMR/HER

10.3 Cartographic Sources

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1932 Ordnance Survey 6" 1:10,560 Third Edition

1938 Ordnance Survey 6" 1:10,560 Fourth Edition

1961 Ordnance Survey 6" 1:10,560 Fifth Edition

1997 Ordnance Survey Explorer 155 (1:25,000)

2008 Ordnance Survey Landplan (1:10,000)

Geological Survey of Great Britain (England & Wales) 1:63,360 sheet 265

10.4 Online resources

<http://www.magic.gov.uk>

<http://lbonline.english-heritage.org.uk/>

Table 1: Finds totals by material type and by trench (number / weight in grammes)

Material	Tr 1	Tr 4	Total
Pottery	43/628	39/274	82/902
<i>Medieval</i>	11/52	-	11/52
<i>Post-Medieval</i>	32/576	39/274	71/850
Ceramic Building Material	19/2168	15/326	34/2494
Wall Plaster	8/227	-	8/227
Clay Pipe	5/36	8/28	13/64
Stone	1/62	-	1/62
Flint	3/6	3/36	6/42
Glass	25/235	4/24	29/259
Slag	-	1/12	1/12
Metalwork (no. objects)	128	22	150
<i>Coins</i>	3	-	3
<i>Copper Alloy</i>	12	-	12
<i>Lead</i>	23	-	23
<i>Iron</i>	84	22	106
<i>Other Metal</i>	6	-	6
Animal Bone	102/449	9/49	111/498
Shell	2/10	3/37	5/47

APPENDIX 1: TRENCH SUMMARIES

Trench 1	Dimensions: 13m x 10.4m, max depth : 0.3m		
	Land use: disused stable block		
	Coordinates:		
Context	Category	Description	Depth/Height
101	layer	Tarmac flooring of disused stable yard.	0-0.05m
102	Layer	Backfill; rubble demolition layer. Mid brown-grey sand with a touch of clay. Inclusions: CBM <110mm, poorly sorted, sub-rounded, density 40-50%; flint <60mm, subangular, poorly sorted, density 10%.	0.05m-0.35m
103	Fill	Deliberate backfill. Light yellow-brown sandy clay. Inclusions: stone and gravel, frequent (50%). Moderate builders' rubble (10%). Fill of service trench 104.	0.42m thick
104	Cut	North-south service trench; filled with 103.	0.42m deep
105	Wall	NE- SW aligned clunch foundation on south side of building; was faced on south side (frontage) with brick 106. Clunch blocks shaped into roughly square blocks; no bonding on the blocks. Individual blocks varied in size, the largest measured up to 0.60m by 0.25m with a height of 0.15m. Wall recorded for length of 8.10m within the trench and is 0.75m wide. Same as 110.	0.85m high
106	Wall	Red brick facing for wall foundation 105. Header coursing, although some bricks are aligned N-S and others have been split; two halves have been split and two halves mortared together in E-W alignment. Bricks 3 courses high.	0.20m high
107	Wall	Internal partition wall, red brick, heavily truncated by services. No clear bond changes, depending on the part of the wall. Lime mortar.	0.39m high
108	Cut	Square foundation trench for wall 107. Extends 0.5m from the E edge of wall. Cut comes to abrupt end at NE end, half way down wall length. Cut not visible on western side of the wall, as truncated by service trench 115.	0.25m deep
109	Fill	Deliberate backfill of foundation trench 108. Mid yellow-brown sandy silt. Inclusions: clunch, occasional, small and subrounded; brick, small, occasional; pebbles, small and angular.	0.25m thick
110	Wall	Clunch foundation wall; same as 105. Carved into roughly square bricks. Lime mortared. Unclear coursing. Faced with red brick 111.	0.50m high
111	Wall	Red brick facing for wall foundation 110. Same as 106. Lime mortared header coursing; bricks quite badly damaged. Facing into stable yard.	0.30m-0.50m high
112	Cut	NW-SE service trench; modern.	0.25m+ deep
113	Cut	NW-SE service trench; modern.	0.25m+ deep
114	Layer	Mid-dark brown sandy silt, compact. Soil layer pre-dating stable construction, containing some fragments of medieval pottery.	0.25m +
115	Cut	East-west service trench; modern.	0.35m+

116	Wall	Red brick wall; 8 courses remaining. Appears to comprise alternating courses of headers and stretchers. Western side of wall appeared to be faced with crumbly stone (limestone) with yellow wash. Internal wall abutting wall 146 to north. Although relationship truncated, would almost certainly have joined wall 105 to south. Recorded for length of 6.88m, NE-SW aligned, but heavily truncated in places by modern services. 0.36m wide.	0.60m high
117	Layer	Primary demolition layer; mid-grey sandy silt. Slightly organic 'ashy' lenses within. Not fully excavated. Located directly to the east of wall 116. Contained ceramic roof tiles, glass and iron nails. Not fully exposed but at least 0.58m wide in section. Most probably the same as 118.	0.06m thick
118	Layer	Layer; dark brown, organic-feeling silt. Inclusions: mortar fragments, common/abundant, small; occasional glass fragments; rare iron nails; occasional wood fragments. Organic feel probably from timber used in the stalls. Exposed for 1m in diameter. Probably the same as 117, but area not fully exposed. Not excavated.	-
120	layer	Mid-brown-grey sandy clay. Inclusions: clunch, <200mm, poorly sorted, subangular to subrounded, abundant; CBM, <110mm, subrounded, poorly sorted, density 10%. Demolition layer around clunch wall. Extent unclear; same as 102 but differentiated by large clunch inclusions. Located on top of later wall 153.	-
122	Cut	Foundation trench for NE-SW wall 116. Contained fill 123; 0.7m wide. Although not visible in plan it presumably ran the length of the wall.	0.34m deep
123	Layer	Deliberate backfill layer of foundation trench 122. Backfilled around wall 116. Mid-brown sandy silt. Inclusions: flint, small, common; CBM, small, moderate.	0.34m thick
124	Layer	Mid-yellow sand. Inclusions: flint, very rare. Sand bedding layer for brick surfaces 158 and 159.	0.09m thick
125	Layer	Mid-yellow sand. Inclusions; very rare flint grits. Presumably a bedding layer for brick surface that has been removed.	0.06m thick
126	Layer	Mid-white soft clunch. Probably original flooring layer or bedding layer for floor surface. Heavily truncated.	0.05m thick
127	Cut	Foundation trench for walls 105/106. Filled with 128. Not visible in plan; only visible in section. Full depth and width of cut not fully exposed, but at least 1.80m wide.	0.52m+
128	Fill	Deliberate backfill of foundation trench 127. Backfilled against wall 105/106. Mottled yellow/mid-brown with black patches; very sandy silt. Inclusions: pebbles, angular and frequent; red brick: occasional; tarmac, frequent.	0.52m+
129	Cut	East-west, concrete capped service trench. 0.35m wide.	-
130	Cut	NNW-SSE service trench. 0.33m wide.	-
131	Fill	Light brown sandy clay. Inclusions: gravel, small subangular, frequent; CBM, moderate, medium, angular. Gravelly demolition layer, possibly result of robbed-out structure. Fill of 132; lies beneath stable floor surface 152. 1.15m wide in section.	0.58m thick
132	Cut	Foundation trench or robber trench to grub out existing structural features (possibly to remove previous internal stable features) then levelled with	0.58m thick

		fill 132 to lay surface 152 on top. Irregularly shaped cut with steep, straight sides.	
133	Layer	Mid reddish-brown clay sand. No inclusions. Possibly redeposited; only visible within section. Very similar to 134 which it sealed. In section measured 0.36m wide. Cut by foundation trench/robber trench 132.	0-0.13m thick
134	Layer	Mid reddish-brown clay sand. Inclusions: flint, occasional, subangular; clunch, small frags/flecks, subrounded, poorly sorted, moderate density. Redeposited layer, very similar to layer 133 which sealed it.	0.11m thick
136	Wall	Single course of bricks of unknown function, aligned NE to SW. Nine bricks long, one brick wide and a single brick deep. Lime mortared. No mortar on top suggests was never more than one brick high and not load-bearing. One in a sequence of brick alignments (with 137-142). Header bond.	0.05m thick
137	Wall	Single course of bricks of unknown function, aligned NE to SW. Six bricks long, one brick wide and a single brick deep. Lime mortared; no mortar on top. One in a sequence of brick alignments (with 136 and 138-42). Header bond.	0.05m thick
138	Wall	Single course of bricks of unknown function, aligned NE to SW. Ten bricks long, one brick wide and a single brick deep. Lime mortared; no mortar on top. One in a sequence of brick alignments (with 136-7 and 139-42). Header bond.	0.05m thick
139	Wall	Single course of bricks of unknown function, aligned NE to SW. 13 bricks long, one brick wide and a single brick deep. Lime mortared; no mortar on top. One in a sequence of brick alignments (with 136-8 and 140-2). Header bond.	0.05m thick
140	Wall	Single course of bricks of unknown function, aligned NE to SW. Seven bricks long, one brick wide and a single brick deep. Lime mortared; no mortar on top. One in a sequence of brick alignments (with 136-9 and 141-2). Header bond.	0.05m thick
141	Wall	Single course of bricks of unknown function, aligned NE to SW. Three bricks long, one brick wide and a single brick deep. Lime mortared; no mortar on top. One in a sequence of brick alignments (with 136-40 and 142). Header bond.	0.05m thick
142	Wall	Single course of bricks of unknown function, aligned NE to SW. Eight bricks long, one brick wide and a single brick deep. Lime mortared; no mortar on top. One in a sequence of brick alignments (with 136-41). Header bond.	0.05m thick
143	Layer	Very light grey-brown silt sand. Inclusions: gravels, subrounded to angular, density 30-40%. Levelling deposit for demolition material. Bedding layer for brick structures 139-142.	0.18m thick
144	Cut	Modern feature, unexcavated. Possibly associated with drainage of standing stable blocks.	-
145	Layer	Mid yellowish-grey silty sand. Inclusions: gravel: 40-50% density. Same purpose as 143: levelling deposit. Bedding layer for brick structures 137 and 138.	0.18m thick
146	Wall	East-west clunch wall foundation. Central spinal wall of stable block. Clunch blocks faced roughly; 3 courses visible above foundation courses. Only 2 courses of	0.40m thick

		foundation visible, where it steps out 0.10m from the wall. Width of foundation 0.80m; rest of wall 0.60m.	
147	Layer	Mid-brown sandy silt. Inclusions: flint, angular, < 60mm, rare. Possible levelling layer. Butts against wall 146 from the north.	0.35m thick
148	Cut	WNW-ESE service trench.	0.40m deep
149	Wall	North-south clunch wall foundation. Six courses deep, lime mortared; no mortar on top. 0.95m wide and 8.00m long. Abutted wall 146 to north and wall 106 to south. May never have been built up beyond present height.	0.65m high
150	Layer	Mottled mid brown sandy silt. Inclusions: mortar, common flecks and small lumps; clunch, common/abundant small fragments. Only seen in plan. Stratigraphically below layer 143. Possibly represents construction debris for wall 146.	-
151	Structure	Brick drainage channel for stables. Mainly made of red brick with occasional yellow brick. Heavily truncated by modern services. Cuts wall 146. Survived up to 4 courses in parts, and for a length of 1.70m. Single brick width with a total width of 0.50m. Lime mortared.	0.35m high
152	Floor	Yellow brick floor; part of 19th century stable remodelling. Red bricks denote stall edges. Single brick thick; lime mortared. Stalls 1.7m wide. Flooring survived for length of 3.30m by up to 1.0m wide. Lay on top of bedding layer 166 and beneath that levelling layer 131.	0.10m high
153	Wall	Clunch wall, E-W aligned. Occasional brick inclusions. Poorly made, degraded mortar mixed with rubble debris with lots of voids; reused material. Belongs to 19th century remodelling phase. Respected alignment of floor 152; recorded length 8.00m; approx. 0.5m wide.	0.55m high
155	Fill	Light yellow-brown silty sand; fill of unexcavated feature 156.	—
156	Cut	Unexcavated subrectangular feature, truncated to south by service trench 162. Relationship to central wall 146 unclear; could be robbed-out wall that abutted it or possibly truncated by the wall. Measured 0.63m by 0.61m.	—
157	Wall?	Single brick course, three bricks long and one brick wide; unknown function. Lime mortared; no mortar on top. Aligned NE-SW.	0.06m high
158	Floor	Red brick floor surface, running north-south. Butted wall 107, but unclear which laid first (most probably the wall). Overlay mortared bricks 159. Bedded within yellow sand layer 166. Surviving dimensions 1.75m by 0.75m. Single brick thickness; lime mortared.	0.06m high
159	Structure	Single course of ten bricks (1.30m in length), one brick wide. Lime mortared; no mortar on top. Floor surface 158 sits partially on top of this line of bricks, but bricks are a different style (dark orange-red, possibly heat affected).	—
160	Floor	Floor layer abutting clunch spinal wall 146 and brick internal partition wall 116. Poor condition; large parts missing. Single brick thickness; 8 bricks wide. Laid as stretchers apart from east end where the coursing appeared to alternate headers and stretchers. Heavily truncated by services 162 and 163. 1.30m by 0.98m.	0.06m high
161	Wall	NW-SE wall; single brick wide, lime mortared. Heavily truncated by services 163. Length 1.05m within trench;	0.06m high

		at NW end disappeared into section; at SE end abutted wall 116.	
162	Cut	East-west modern service trench, with a concrete cap.	-
163	Cut	NE-SW modern service trench.	-
165	Cut	East west modern service trench.	0-0.5m
166	Layer	Mid-yellow coarse sand. Inclusions: stones, small, subangular, <5mm, density 10%. Sand bedding layer for brick floor 152. Sealed levelling layer 131.	0.02m thick
167	Layer	Very light grey degraded mortar layer. Bedding layer and partial fill of stone wall 153, was probably dumped after a phase of robbing. Contained occasional, small angular stones (flint) and demolition debris.	0.41m thick
168	Fill	Deliberate backfill of service trench 170 with gravel inclusions. Whole and fragmented brick (yellow and red) and fragmented clunch pieces. Not excavated.	-
169		VOID	
170	Cut	NW-SE modern service trench; length 3.70m, 0.40m wide. At SW end trench turns to NE for 0.80m before disappearing into section. Filled with 168. Unxcavated.	-
171	Cut	NW-SE modern service trench, 8.68m by 0.50m wide.	0.35m deep
172	Layer	Mottled mid-brown sandy silt with yellow brown sandy lenses; contains rare flint grits and medium subangular flint fragments. Interface between buried soil layer 114 and bedding layer 124, created from trample and bioturbation when stable floor laid. 0.15m thick and recorded for 0.25m within the section.	0.15m thick
173	Fill	Mixed mid-yellow-brown silty clay and dark brown humic soil; very dark organic drain fill. Deposited as drain filled up. 0.27m wide and 0.15m thick. Fill of drain 151.	0.15m thick
174	Layer	Mid-grey-white layer of crushed chalk clunch. Heavily truncated by later services. Most probably internal yard surface or possibly bedding layer for floor surface. 0.60m long by 0.36m wide and 0.05m thick	0.05m thick
175	Layer	Mid-brown sandy silt, fairly soft soil layer with flint inclusions, < 50mm, subrounded, moderately sorted, very rare. No cut for wall 105 was visible; therefore likely that this is part of backfill for cut - possibly part of the backfill placed around wall 105. Contained residual medieval pottery.	0-0.66m
176	Layer	Light grey-brown sandy silt with 70% mortar inclusions with c. 5% clunch fragments and small flint grits. Bedding levelling layer for brick structure 157. 0.44m by 0.44m.	0.10m thick
177	Layer	Mid-dark brown compact sandy silt with rare small flint grit inclusions. Secondary fill overlying clunch foundation 149; same as 114 but differs stratigraphically - on top of the clunch wall rather than beneath it.	0.09m thick
178	Layer	Light yellow-brown sand; contained redeposited patches of 180. Redeposited layer may have been created during construction phase, possibly due to trample. Same as 181. Stratigraphically below 174 and above 179.	0.08m thick
179	Layer	Mid blue-white chalk/clunch with small clunch inclusions <80mm, subrounded, poorly sorted, density 80%. Redeposited chalk/clunch layer, possibly related to	0.06m thick

		general wastage from building construction. Same as 182 but truncated by service 112.	
180	Layer	Mid-brown silty clay. Soil layer, possibly medieval in date. Layer that all later buildings were cut through. 0.31m wide in section.	0.19m thick
181	Layer	Light yellow-brown sand with redeposited patches of 183. Same as 178, but divided by cut of service trench 112.	0.08m thick
182	Layer	Mid blue-white chalk/clunch. Chalk clunch inclusions <80mm, subrounded, poorly sorted, density 80%. Same as layer 179, but cut by service trench 112.	0.10m thick
183	Layer	Mid-brown silty clay layer that later building was cut into. Same as 180 but divided in section by service trench 112.	0.17m thick

Trench 2	Dimensions: 2.8m x 2.5mm, max depth : 1.6m		
	Land use: pasture		
	Coordinates:		
Context	Category	Description	Depth
201	Layer	Current car park surface, hard compact sand/gravel, mid yellow-brown frequent flint pebbles.	0-0.20m`
202	Layer	Modern concrete raft.	0.20-0.28m
203	Layer	Hard compact sand/gravel mid brown, frequent flint pebbles.	0.28m-0.58m
204	Wall	Brick wall, aligned NE-SW. Heavily truncated by modern services; footings were visible. Bricks (unfrogged) much worn. Wall ran for 1.40m within the trench, 0.70m wide with maximum height of 0.70m; 6 courses high and 3 courses wide; lime mortared. Wall forms part of palace complex; bonded to wall 209.	0.70m high
205	Wall	Brick wall, aligned ?east – west. At western end appeared to be bonded to wall 206, although possible that they were part of the same wall. Wall very well worn due to demolition and later services running through the area. Only visible for 0.88m within the trench; width of 0.40m with maximum height of 0.20m. Lime mortared.	0.20m high
206	Wall	Brick wall, aligned NE-SW, with brick footings; butted by wall 205 (possibly part of same wall as 205). Lime mortared; unfrogged bricks. Length 0.50m; width 0.70m; maximum height 0.50m.	0.50m high
207		VOID	
208	Cut	Modern services, aligned east – west; length 2.47m within trench, and 0.4m wide.	Not fully excavated
209	Structure	Footings for wall 204, consisting of clunch blocks and occasional broken brick fragments; lime mortared. 0.49m long and 0.92m within trench.	0.30m thick
210	Cut	Cut of possible drain culvert, aligned NE-SW; not fully excavated. Undated.	1.02m deep
211	Layer	Natural mid-white-grey chalk with flints. Flints <20mm, angular, poorly sorted.	1.02m thick
212	Cut	Service trench, aligned east-west; length 2.24m by 0.56m wide.	1.40m deep
213	Fill	Mid brown-white sand with flint inclusions, subrounded-sub angular, <100mm, poorly sorted, occasional. Contained demolition material, chalk, glass and roof tile,	Not excavated

		subrounded, frequent to abundant, poorly sorted. Fill of cut 210.	
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Trench 3	Dimensions: 3m x 2m, max depth: 0.3m		
	Land use: pasture		
	Coordinates:		
Context	Category	Description	Depth
301	Layer	Mid yellow-brown sand with gravel inclusions, <150mm, subrounded, moderately well sorted, density 50%. Forms current car park. Trench abandoned due to high frequency of services running through area.	0-0.3m

Trench 4	Dimensions: 3m x 0.8m, 0.9m		
	Land use: pasture		
	Coordinates:		
Context	Category	Description	Depth
401	Layer	Topsoil: mid-brown sandy silt with moderate chalk flecking. Bioturbated through grass rooting.	0-0.11m
402	Layer	Subsoil: mid-brown sandy silt with frequent small angular and rounded fragments of chalk. Bioturbated through rooting.	0.11m-0.29m
403	Layer	Mid-brown sandy silt with occasional small angular chalk fragments.	0.49-0.72m
404	Fill	Light yellowish-brown silty sand with small angular to rounded frequent chalk fragments, occasional small, subangular flints, occasional fragments of CBM. Deliberate backfill of possible linear 405.	0.20m thick
405	Cut	Cut of possible linear, aligned east-west, probably fairly modern. Length 3.00m within trench; although not fully exposed was at least 0.20m wide. Possibly acted as drainage channel for garden.	0.20m deep
406	Layer	Mixed deposit of mid-brown sandy silt and patches of light grey silty sand with occasional rounded flints, charcoal flecks and bone. Seemed to be deliberate backfill layer, but not excavated. Visible within sondage (0.9m) dug into trench.	0.78m+
407	Layer	Mid-brown, sandy silt layer with very occasional angular flint. Possibly the beginning of the backfill layer before reaching archaeological deposits.	0.6m-0.9m

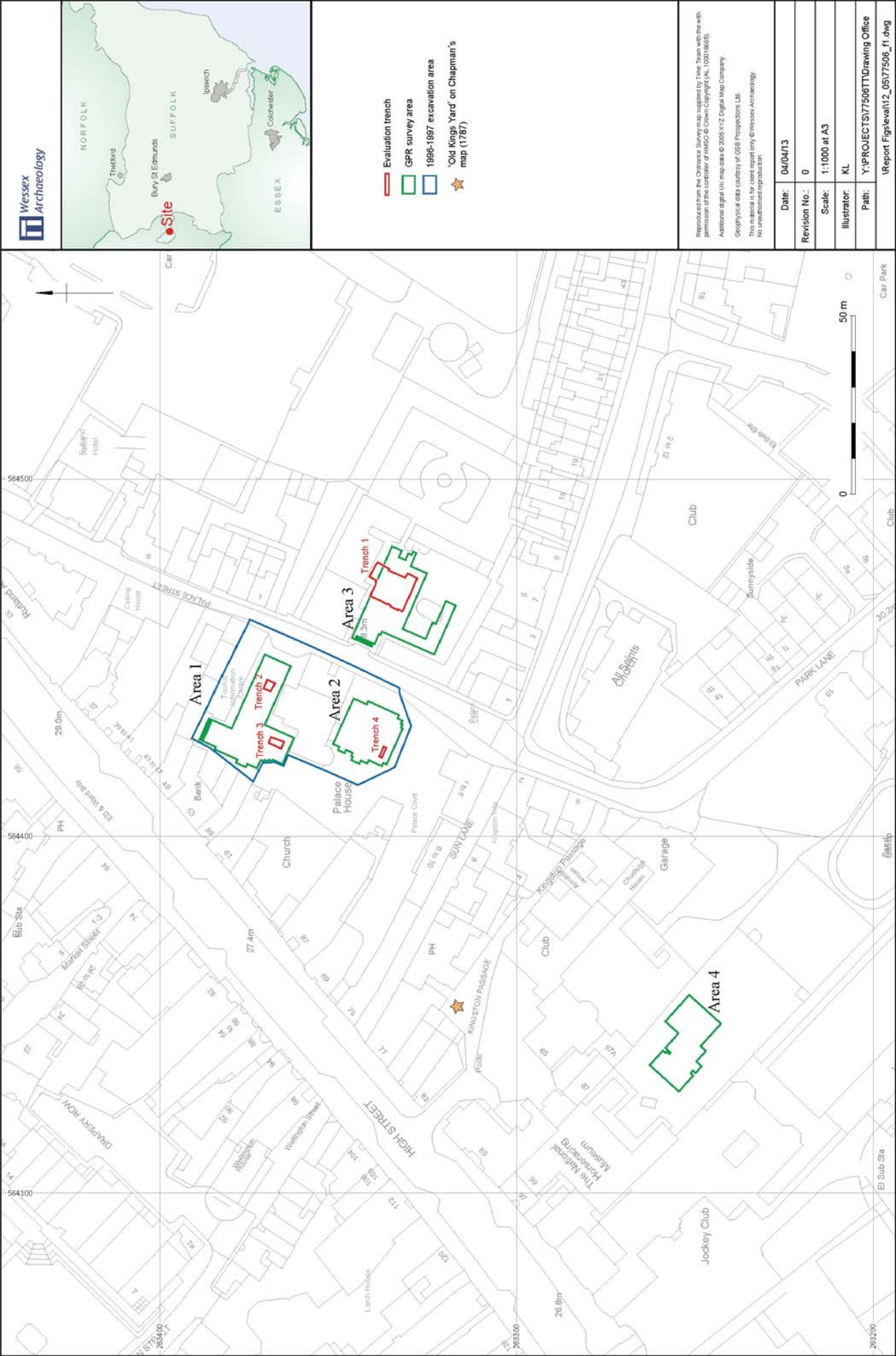


Figure 2
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Areas 1, 2 and 3



Area 4

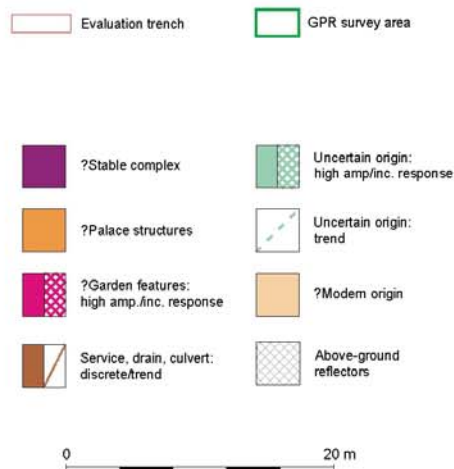




Plate 1: Reuse of northern stable wall within later trainer's house



Plate 2: Reuse of remnants of voussoir windows from original stables



Plate 3: Thomas Jekyll design fireplace c. 1870, in Trainer's House



Plate 4: Moulded stone pieces reused within staircase on outside of later stable block

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Plate 5: North-west view of stable entrance corridor, walls 107 and 116



Plate 6: Main entrance to stables with internal walls 107 and 116 and front walls 105 and 110, view from south-west



Plate 7: Trench 1, second phase stable renovation, internal floor 152 and clunch wall 153, view from south-east



Plate 8: Brick pads 136-142 at north-east end of trench 1, view from south-east



Plate 9: Trench 1, stable drain 151, view from south-east



Plate 10: Trench 1, north-west view of walls 105-107

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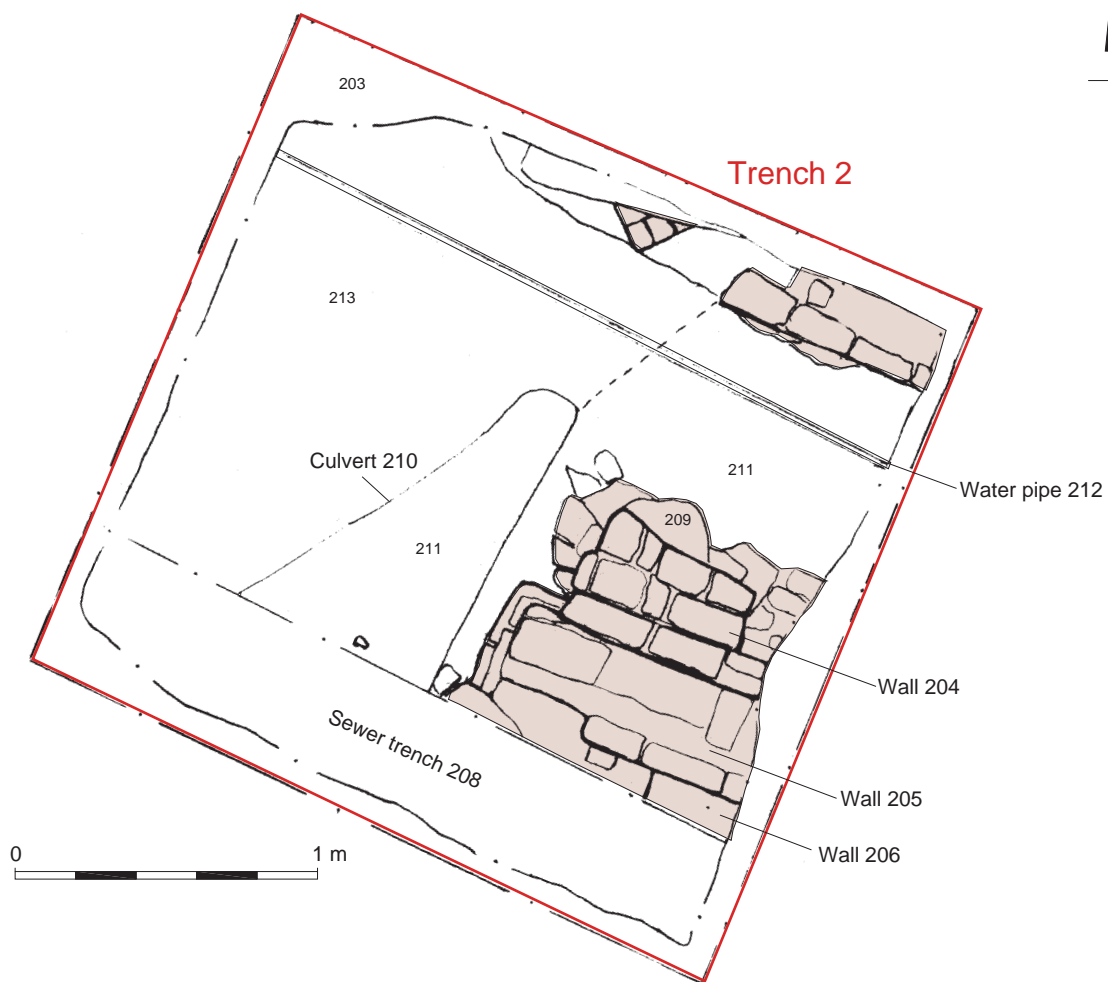


Plate 11: Walls 204, 205 and 206, view from north-east

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Evaluation trench

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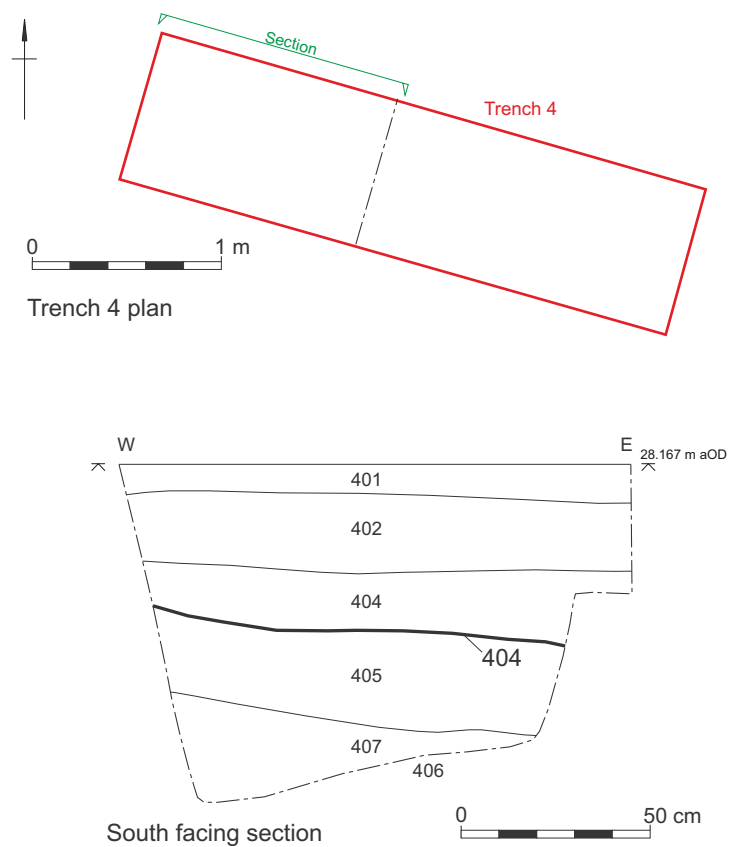



Plate 12: North-facing section of trench 4

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