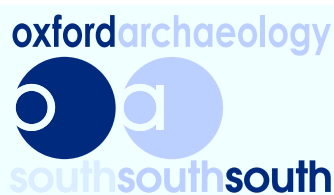


# Additional Works Base Court Hampton Court Palace



## Addendum to Assessment Report



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## Hampton Court Palace, Base Court Additional Works

*Addendum to Post Excavation Assessment Report on Resurfacing Works in Base Court*

*Written by Robin Bashford*

*with contributions from John Cotter and Alison Kelly and illustrated by Markus Dylewski*

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## **Summary**

*In July 2008 Historic Royal Palaces (HRP) undertook a major resurfacing project in Base Court at Hampton Court Palace. This involved the entire area of Base Court, with the exception of the central carriageway and existing pathways.*

*In March 2010, Oxford Archaeology were commissioned by Historic Royal Palaces (HRP) to undertake an archaeological watching brief in Base Court during additional works following the completion of the resurfacing. The work was undertaken during the installation of new signage and the excavation of a pit for a new floor hub box. The latter was for the installation of a reconstruction of a fountain within the Court, the base of which was uncovered during the resurfacing works. The reconstruction has been based on a fountain shown on a painting of The Field of the Cloth of Gold.*

*A total of 6 trenches were excavated, 5 for foundation pad pits for the new sign posts, and 1 for the new hub with an associated pipe trench. The stratigraphic sequence revealed appeared to generally correlate with that recorded during the resurfacing works.*

*In addition, the watching brief revealed the stepped brick footing of the northern end of the east range of the Court. The substantial nature of this foundation may reflect the location of this range over the backfilled moat of Lord Daubeney's house, the predecessor of Wolsey's Palace. A possible robber cut for a gatehouse of the earlier house was also seen, adjacent to the existing Anne Boleyn Gate. This appeared to correspond to structural remains and robbed elements of the earlier structure, which had been previously identified. The robber cut was itself cut by a polygonal feature, possibly the construction cut for the north-west turret of the Anne Boleyn Gatehouse.*

*The north-south aligned construction cut for the west range of Base Court was observed, and appeared to cut through an east-west aligned cut feature of uncertain origin and date, though potentially related to the medieval building(s) revealed during the recent resurfacing works.*

*A feature relating to Sir Christopher Wren's remodelling of the Palace was also identified. This was a brick culvert leading from a cast iron downpipe on the east range, to the main east-west aligned culvert on the north side of Base Court.*

*This report is submitted as an addendum to the Post-excavation assessment report for the main works at Base Court (OA 2009).*

## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 In July 2008 Historic Royal Palaces (HRP) undertook a major resurfacing project in Base Court at Hampton Court Palace. This involved the entire area of Base Court, with the exception of the central carriageway and existing pathways. In March 2010, Oxford Archaeology (OA) were commissioned by Historic Royal Palaces (HRP), to undertake an archaeological watching brief in Base Court during additional works.
- 1.1.2 The additional work was undertaken during the installation of new signage, and the excavation of a pit for a new floor hub box. The latter was to facilitate the installation of a reconstruction of a fountain within the Court, the base of which was uncovered during the resurfacing works. The reconstruction has been based on a fountain shown on a painting of The Field of the Cloth of Gold.
- 1.1.3 This document is presented as an addendum to the post excavation assessment report produced following the resurfacing works (OA, 2009).

### 1.2 Geology and topography

- 1.2.1 The site is defined as the quadrangle or courtyard formed within Cardinal Wolsey's ranges of Base Court, Hampton Court, and is centred on NGR TQ 156 684.
- 1.2.2 The site lies at c. 9 m OD on the first Gravel Terrace of the river Thames. Underlying the gravel is London Clay.

### 1.3 Archaeological and historical background

- 1.3.1 A comprehensive account of the archaeological and historical background of the site is presented in the main assessment report and is therefore not reproduced here.

## 2 EVALUATION AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 The trenches were hand excavated in stratigraphic sequence in order to characterise the archaeological nature of the deposits. The general aims were:
- To determine or confirm the general nature of any remains present.
  - To determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence.
- 2.1.2 Specific aims were:
- To attempt to correlate any stratigraphic data with that retrieved during the main works

### 2.2 Methodology

#### *Signage*

- 2.2.1 A total of 5 pits (Pits 2-6 - Fig. 2) were excavated to facilitate the installation of new sign posts within base court. These measured approximately 0.80m<sup>2</sup> and were around 0.75m deep. Where present, modern deposits associated with the recent resurfacing were removed by hand by the main contractor (Mansells), to the top of the recently laid



geotextile. The remaining *in-situ* archaeological deposits were excavated by hand by the supervising archaeologist.

### ***New Hub***

- 2.2.2 A trench measuring 1.50m long by 0.90m wide by 0.80m deep was excavated to facilitate the installation of the new hub (Pit 1 - Fig. 2). As this was almost exclusively within the recently excavated trench carrying the mains electricity supply, it was predominantly excavated by the main contractor. A further trench measuring 3.5m long by 0.30m wide by a maximum of 0.85m deep was also excavated by the main contractor (Fig. 2), to connect the new hub with a culvert to the north-east. This was in order to allow moisture to drain from the hub to the existing culvert. This trench was recorded as part of Pit 1.

### 3 RESULTS

#### 3.1 Introduction and presentation of results

- 3.1.1 Detailed context descriptions are presented in the context inventory (Appendix A), and within the descriptive text in Section 3.3 where they are integral to the interpretation of the context in question.
- 3.1.2 Finds reports are presented in Section 3.4. A discussion and interpretation of this evidence can be found in Section 4.
- 3.1.3 Trenches are referred to as Pits 1-6 to differentiate between this phase of work and an earlier phase of evaluation carried out by OA in April/May 2008.

#### 3.2 General soils and ground conditions

- 3.2.1 Soils at the base of the sequence within all trenches were clayey sands which, whilst friable upon initial exposure, soon became gelatinous and apparently waterlogged, although no groundwater was observed. The remaining deposits in the general stratigraphic sequence were soil and rubble layers with varying concentrations of brick and stone rubble throughout, which were quite loose in places, particularly where there were heavy concentrations of rubble. The upper part of the sequence consisted of deposits associated with the recent resurfacing.

#### 3.3 Description of archaeological deposits

##### *Pit 1*

- 3.3.1 Pit 1 was located to the south of the centre of Base Court, immediately to the east of the fountain base revealed during the resurfacing work. In addition to the pit, a trench was excavated in order to install a drainage pipe from the new hub to an existing culvert. The pit was excavated to a maximum depth of 0.80 m below existing ground level (bgl) at 8.60 m OD, with the pipe trench falling from west to east to a maximum depth of 8.48 m OD, or 0.86 m bgl.
- 3.3.2 A mid orange brown sand (10) was encountered at c0.72 m bgl (8.64 m OD). Within the pit for the new hub, this was overlain by a layer of rounded gravel pebbles, which may have been the remnants of a cobbled surface (11). Across the remainder of the trench, the clayey sand deposit was overlain by clay and rubble deposits (12-14) of indeterminate date.
- 3.3.3 Deposits 12-14 were overlain by the recently laid geotextile and further deposits associated with the recent resurfacing works.

##### *Pit 2*

- 3.3.4 Pit 2 was located to the south of the Great Gatehouse, by the eastern wall of the west range, and was excavated to a maximum depth of 0.82 m bgl at 8.46 m OD. A mid orangey brown sand with mid grey brown mottling (20) was encountered at 0.60m (8.68 m OD) and was cut by a roughly east-west aligned linear feature (21). This feature was cut by a north-south aligned linear feature which is likely to have been the construction trench for the west range of Base Court.
- 3.3.5 Overlying the fills of these features, and the top of the sandy deposit, was a 0.20 m thick deposit which was predominantly composed of brick rubble (26) and contained late 18th to early 19th century clay pipe. This was in turn overlain by a further 0.20 m of

mixed deposits, with significant amounts of clinker (27 and 28), which also produced 17th-18<sup>th</sup> century clay pipe. All three of these deposits are likely to be make-up / levelling layers for previous Base Court surfaces.

- 3.3.6 Overlying deposits 26-8 was the recently laid geotextile.

#### ***Pit 3***

- 3.3.7 Pit 3 was located to the north of the Great Gatehouse, also by the eastern wall of the west range, and was excavated to a maximum depth of 0.85 m bgl or 8.32 m OD. At 0.60 m bgl (8.58 m OD) was a mid orangey brown clayey sand deposit (30), which was truncated by what appeared to be the northern terminus of a linear feature (31).
- 3.3.8 The deposits (33 and 34) overlying the fill (32) of this feature may represent 18th-19<sup>th</sup> century made ground, although are potentially earlier (ref. 4.3.11). These were directly overlain by the recently laid geotextile.

#### ***Pit 4***

- 3.3.9 Pit 4 was located in the north-east corner of Base Court, to the north of a turret on the Buttery. The pit was excavated to a maximum of 0.90 m bgl, or 8.43 m OD. At 0.60 m bgl (8.75 m OD) was a mid orange brown clayey sand with mid grey silty clay mottling (40). This was cut by the barely discernible construction cut (41) for a stepped brick footing (43/44) for the western wall of the Buttery.
- 3.3.10 Deposit 40 was also cut by the construction cut (47) for a NE-SW aligned brick culvert (48). The stepped footing was overlain by two mixed rubble deposits (45 and 46). The relationship between these deposits and the fill (49) of the construction cut for the culvert was unclear, as the fills of both construction cuts were cut by a north-south aligned service trench with a cast iron pipe set in concrete in the base. The fill of the service trench was directly overlain by the modern resurfacing.
- 3.3.11 The dating evidence for Deposit 46, together with the fact that it was directly overlain by a small patch of 17th century cobbling (Fig.2), may suggest that it relates to Wren's resurfacing work.

#### ***Pit 5***

- 3.3.12 Pit 5 was located immediately to the west of the north tower of the Anne Boleyn Gatehouse, and was excavated to a maximum depth of 0.82 m bgl (8.50 m OD). A mid orangey brown clay sand (50) was encountered at 0.72 m bgl (8.64 m OD) and had been cut by a north-south aligned feature, running along the western edge of the pit (51). This was in turn cut by a polygonal feature (53), which was in turn cut by an east-west aligned linear feature (58), the southern edge of which appeared to correspond with the northern limit of the central walkway. The fills of this feature (56 and 57) produced 18th to 19th century finds and were overlain by the recently laid geotextile.

#### ***Pit 6***

- 3.3.13 Pit 6 was located in the south-east corner of Base Court, adjacent to the north wall of the south range, and was excavated to a maximum depth of 0.88 m bgl (8.55 m OD). Approximately 0.50 m bgl (8.95 m OD) was the top of a mid orange brown clayey sand deposit (61), with a concentration of brick dust towards the base (60). This was only visible in the east facing section on the western side of the trench, as it had been truncated by a north-south aligned cut (62), the fills of which (63-65) produced 18th to

19th century artefactual material. These fills were directly overlain by the recently laid geotextile.

## 4 FINDS SUMMARY

*by John Cotter (see also Appendix C)*

### 4.1 Pottery

4.1.1 A total of 4 sherds of pottery weighing 163 g. were recovered from four contexts. All of this is of late post-medieval date. All the pottery was examined and spot-dated during the present assessment stage. For each context the total pottery sherd count and weight were recorded on an Excel spreadsheet, followed by the context spot-date which is the date-bracket during which the latest pottery types in the context are estimated to have been produced or were in general circulation. Comments on the presence of datable types were also recorded, usually with mention of vessel form (jugs, bowls etc.) and any other attributes worthy of note (eg. decoration etc.).

4.1.2 This small pottery assemblage is in a fairly fresh but fragmentary condition. Normal domestic pottery types are represented. These appear to be of 19th-century date and most likely from the mid or later part of the century, although two pieces of flowerpot are only broadly datable to the 18th or 19th century. Apart from the latter, a piece of late English stoneware and a Staffordshire whiteware plate rim were also discovered. Fuller descriptions of these may be found in the spreadsheet catalogue. No further work on the assemblage is recommended.

### 4.2 Clay Tobacco Pipes

4.2.1 The excavation produced a total of 8 pieces of clay pipe weighing 31 g. These have been catalogued and recorded on an Excel spreadsheet in a similar way to the pottery. The catalogue records, per context, the spot-date, the quantity of stem, bowl and mouth fragments, the overall sherd count, weight, and comments on condition and any makers' marks or decoration present. Oswald's simplified typology (Oswald 1975) has been used to date the pipes.

4.2.2 The assemblage comprises a mixture of fresh and worn pieces. Two pieces of pipe bowl are present. These can only be dated approximately to the late 17th- to early 18th-century (context 46), and possibly the early 18th century (64). Other stem pieces in the assemblage are broadly datable to the 17th century (57), and the late 18th- to 19th-century (26). All the pipes are plain with no evidence of makers' marks. The material generally has the character of ordinary domestic rubbish. Aside from these observations the assemblage is unremarkable.

## 5 DISCUSSION

### 5.1 Reliability of field investigation

- 5.1.1 Whilst the coverage of the site area was limited, a reasonable interpretation of the range and preservation of surviving archaeological deposits can be presented, given the correlation with the well characterised features and deposits from the recent resurfacing works.

### 5.2 Evaluation objectives and results

- 5.2.1 The aim of the excavation was to facilitate the installation of the new sign posts and hub; as such it was not necessary to excavate the full stratigraphic sequence. Despite this, the features and structures revealed within the trenches are reasonably well understood within the context of the known history of Base Court. Interpretation of a number of the features is necessarily tenuous, given the restricted nature of the excavations.
- 5.2.2 The interpretation of the deposits in relation to the stratigraphic sequence recorded during the earlier works is more problematic, as the sequence was truncated in all but two of the trenches. The phasing below is taken from the assessment report.

### 5.3 Phase 1 – Landscaping: Late 13th - Early 14th Century

#### **Reclamation**

- 5.3.1 The sterile clay sand deposit which was consistently encountered within the trenches at an average depth of 8.60m OD, may correlate to the “*extensive levelling of the area predominantly using sterile clayey sand [and] represent[ing] the first major phase of activity recorded on site*” recorded during the resurfacing works (Stratigraphic Groups: SG1710, SG2334, SG3529 and SG4200). However, despite the fact that the clay sand deposits were encountered at a relatively consistent level, any conclusion that they all form part of the same phase of deposition must be circumspect, particularly given the lack of dating evidence, restricted nature of the trenching, and distance between the pits.
- 5.3.2 The fact that the sandy clay deposits in Pits 2, 4 and 5 appeared to be cut by trenches for the construction of the existing ranges of Base Court, implies that the levelling deposits seen during the watching brief are unlikely to relate to phases of landscaping which post-date that construction. However, other phases of landscaping were identified during the recent works to which these deposits may relate. For example:
- a substantial layer of levelling sands SG1711 was found extending into the majority of quadrant Q2 (as SG2336). It served in part to consolidate the area of the Base Court and in part as a working surface for the main phase of construction on the ranges. The pottery finds were fairly scarce with spot-dates ranging widely from c. 1350 to 1700, but concentrating in the early 16th C. A similar, probable, working surface SG 3530 was also exposed in section in quadrant Q3, to the east of building BG3390.*
- 5.3.3 A comparison between the levels at which these deposits were encountered during the watching brief and the earlier works was undertaken. Whilst the levels at the top of the earlier deposit varied considerably, largely due to later truncation, the level at the top of

the later phase appears to be consistently around 8.90 m OD. Whilst it is acknowledged that the deposits encountered during the watching brief were also subject to significant truncation (and consequently the top of the deposit may originally have been higher), where not disturbed by later cut features (i.e. Pit 1) the height at the top of the deposit would appear to suggest that it is more likely to correlate to the earlier phase. The table below gives an indication of the varying heights:

Group No. Context No.	Section No.	OD height at top of deposit (m)
<b>1710</b>		
1131	1018	8.75
1623	1066	8.23
1168	1019	8.4
1284	1023	8.7
<b>1711</b>		
1142	1016	8.92
1142	1017	8.95
1165	1019	8.9
1240	1021	8.98
1240	1022	8.81

- 5.3.4 It was also noted that this material was very similar in composition to a deposit at the base of the stratigraphic sequence revealed during recent work in the Privy Garden to the south east. Dating evidence from the latter suggested that it was contemporary with the late 17th century reconstruction of the Palace, considerably later than the suggested date of the deposit in Base Court. Consequently, it is feasible that these deposits represent the re-worked or re-deposited upper element of a naturally deposited fluvial sand which overlies the gravel.

#### ***Ditches***

- 5.3.5 The assessment report also notes that a number of ditches were cut through the levelling layer, and it is possible that the east-west aligned cut in Pit 2 and the possible terminus in Pit 3 represent the southern edge and northern terminus of two of these features. However, it is also possible that these features are related to the 14th to early 16th century structure(s) revealed during the recent works.

## **5.4 Phase 2 – Medieval Occupation, 14th - Late 15th /Early 16th century**

### ***Pre-1514 Structures***

- 5.4.1 Excavations in the 1920s, 1960s and 1970s have revealed a significant amount of evidence for the layout of the house of Lord Daubeney, which preceded Cardinal Wolsey's building, and lay largely within the footprint of what is now Clock Court - the existing kitchens also survive from this phase of building (Thurley 2003, p10 and p61). The conjectured ground plan of this building would suggest an earlier gatehouse on the site of what is now the Anne Boleyn Gatehouse, with a section of wall revealed in 1923 marking its western limit.

- 5.4.2 It is feasible that the polygonal cut (53) in Pit 5 is the robbed out foundation of the north-western corner of this structure, although it does appear to be too far east. Alternatively, the north-south aligned cut (51) in the same trench may represent the northern continuation of the wall revealed in 1923, with the polygonal cut being for the construction of the north-west turret of the Anne Boleyn Gatehouse (see below).
- 5.4.3 If Cut 51 does represent the robbing of Lord Daubeney's gatehouse, the origin of the sandy deposit (50) which it cuts is unclear. The fact that Pit 5 lay within the projected line of the backfilled moat would suggest that Deposit 50 cannot be part of the early levelling phase described above. However, if it is part of the phase of landscaping which post-dates the backfilling of the moat and is associated with the original construction of Base Court, then the fact the possible robber trench (51) cuts it would imply that Lord Daubeney's gatehouse was demolished and robbed after the moat was backfilled and the later levelling layers deposited.
- 5.4.4 Alternatively, either the interpretation of Cut 51 is incorrect, or the western limit of the moat is further to the east than was previously supposed. Although the latter is unlikely given the evidence from the recent works (see 4.3.14), if this is the case then the interpretation of Cut 53 presented below is also dubious.

#### **Building BG1698**

- 5.4.5 The assessment report characterises the foundations of this building as follows:

*The walls were set in shallow construction trenches cut into SG1710, and consisted of tightly packed, roughly hewn chalk block foundations, brought to a level by horizontally coursed roof tile with limited amounts of yellow and red brick (attesting to later modification). Roughly hewn green stone blocks (Reigate stone?) were also used, predominantly at the corners but also in the eastern wall.*

- 5.4.6 Given the concentration of chalk fragments in the fill (22) of the east west aligned cut in Pit 2, and the green stone present within the fill (32) of the possible terminus in Pit 3, it is possible that these features relate to the robbing of Structure BG1698. The deposits overlying the latter fill (33 and 34) also contained green stone and other building material, and may also be part of this robbing/demolition phase. However, both these features and the overlying deposits in Pit 3, lie outside the projected footprint of BG1698, and any correlation between them and the structure is based largely on the stone inclusions noted within the fills/deposits. Consequently, the function and date of both of these features is uncertain.

#### **External surfaces and occupation**

- 5.4.7 The assessment report also details evidence for external surfaces probably associated with building 1698:

*Abutting the northern wall of the BG1698 was a gravel surface 1561, which directly overlaid levelling layer SG1710. A contemporary surface 2306 was truncated by the construction cut for the later southern range of the Base Court.*

*Because these gravel surfaces and make-up layers were only exposed in limited sondages it is hard to establish whether they represent metalled paths and roads or larger yard areas.....*

.....In quadrant Q3, surface SG3522, approximately 9.5m north of BG 1698, was similar to surface 1561 but more robust in construction consisting of larger pebble metalling.

- 5.4.8 It is possible that the cobbled surface in Pit 1 (11) relates to the surfaces described above, particularly given its relationship with the underlying sandy clay deposit (10) - which potentially correlates to the levelling deposits seen during the resurfacing works (ref. 4.3.1); the fact that the location of Pit 1 would place this surface immediately to the east of the eastern wall of BG1698.

## 5.5 Phase 3 – Construction of Base Court, Early 16th Century

### ***External surfaces and moat backfill***

- 5.5.1 The following paragraph from the assessment report summarises the evidence for a backfilled moat along the eastern side of the Court, probably associated with Lord Daubeney's house, which preceded Wolsey's Palace:

.....a series of substantial deposits, consisting of sand and clay dumps as well as stone and brick rubble, sloping at a shallow angle to the east. These deposits represent the deliberate backfill of a substantial cut feature 2010, located approximately 10m west from the walls of the eastern range of the Base Court. A corresponding sequence was discovered in the eastern part of quadrant Q4, where, approximately 8m in from the eastern range, an early landscaping event and the overlying occupation horizon appear to be truncated by a N-S aligned cut, sloping at 30 to 45 degrees. As with 2010 this cut was filled with building debris. The cuts were aligned with the large linear feature first identified, and interpreted as a moat, by Pacito in 1971.

- 5.5.2 Whilst these deposits were not encountered during the watching brief, two of the Pits (4 and 5) were located over the projected line of the moat, and the potential presence of deeply stratified deposits at these locations is an important factor in the interpretation of some of the features revealed.

### ***Base Court ranges and construction debris***

- 5.5.3 Very limited sections of the walls of Base Court were exposed during the resurfacing works. Where the foundations were revealed, they appeared to vary in nature. The northern range incorporated an offset of five courses of brickwork beneath the wall, which overlay foundations constructed of tightly packed, roughly hewn chalk blocks set within the construction cut. Elsewhere, the walls directly overlay the chalk block foundation.
- 5.5.4 The stepped footing in Pit 4 was considerably more substantial than those revealed during the resurfacing works. The upper step was offset from the standing wall by 0.60 m and consisted of 6 courses of brick. This overlay a second brick step, which was offset from the western face of the upper step by a further 0.20 m. Only the top course of this second step was revealed within the trench. It is possible that the more substantive nature of these foundations is due to the fact that the east range of Base Court is constructed over the backfilled moat of Lord Daubeney's house.
- 5.5.5 As discussed above (4.3.8), the fact that the orange brown sandy deposits in Trenches 4 and 5 are over the projected line of the backfilled moat suggests that the interpretation of these deposits as part of the early phase of levelling sands may be incorrect. As such it seems more likely that the sandy clay deposit through which the



features in Pit 4 are cut relates to the later phase of landscaping, contemporary with the original construction of Base Court.

- 5.5.6 Initially, it was considered that feature 53 in Pit 5 was too far west to be a construction trench for the north west turret of the Anne Boleyn Gatehouse. However, as discussed above, the foundations of the east range in the location of Pit 4 have been shown to comprise stepped brick footings, possibly due to their location over the backfilled moat. If the gatehouse turrets have similarly offset footings, this might account for what would be an exceptionally wide construction trench. It should be noted that the stepped footing within Trench 4 belongs to Henry VIII's building phase whilst the gatehouse is from Wolsey's phase I (Thurley, 2003, p61). Despite this - assuming that the interpretation of the reason for the stepped footing in Trench 4 is correct - it is reasonable to suggest that a similarly substantial foundation was required for the footings of the gatehouse where they correspond with the backfilled moat.
- 5.5.7 It seems likely that the north-south aligned cut in Pit 2 was the construction trench for the west range of Base Court.
- 5.5.8 Whilst the deposits overlying the sandy clay layers in most of the trenches have been truncated by later features, they survive in Pits 1 and 2. In Pit 1, the upper part of the sequence was recorded during the general reduction as part of the recent works. The deposits immediately over the sandy clay levelling were observed during the watching brief, and may relate to this phase of construction as they appear to correlate to the description of the construction debris recorded during the previous works:
- Large numbers of sand, charcoal, crushed brick and stone layers were found scattered throughout the Base Court area, representing the remains of debris related to the construction of the Base Court ranges.*
- 5.5.9 The composition of the deposits in Pit 2 (26, 27, 28), together with the 18<sup>th</sup> - 19<sup>th</sup> century clay pipe recovered from them, would suggest that they belong to a later phase of Victorian landscaping (see below).

## 5.6 Phase 5 – Wren's works Late 17th century

### ***Culverts***

- 5.6.1 The north-east/south-west aligned culvert in Pit 4 forms part of the system of culverts installed during Wren's work. Typically, two kinds of culvert were revealed during the resurfacing work. Side culverts measuring up to 0.5 m in width and main culverts, as wide as 0.9 m. Side culverts brought rainwater via downpipes from the roofs of the surrounding ranges to the main culverts. The alignment of the culvert in Pit 4 indicated that it fed from a cast iron downpipe on the east range, to the main east-west aligned culvert on the north side of base court (SG4151 & SG3524).
- 5.6.2 Layers relating to Wren's resurfacing work were recorded and largely removed as part of the general mitigation works and were consequently not seen during the watching brief. The exception to this was Deposit 46 in Trench 4, which lay directly under a possible surviving patch of Wren's cobbled surface in the north-east corner of Base Court.

## 5.7 Phase 6 – Culvert remodelling, levelling, turfing, and other activity, 18th - 19th century

- 5.7.1 The function of the cut in Pit 6 is less clear. Dating evidence recovered from the fills of this feature would indicate that it is 19th century at the earliest and is therefore unlikely

to relate to Wren's works. Additionally, no culvert was encountered within the trench, and there was no downpipe on the south range which corresponded to the north-south alignment of the cut. A north-south aligned section of re-modelled culvert was revealed to the north-west of Pit 6 during the re-surfacing work (part of SG2341), and it is possible that the cut in Pit 6 is associated with this section of culvert. However, the cut in Pit 6 is not aligned with the previously recorded section of remodelled culvert, which also corresponds with an extant cast iron down pipe.

5.7.2 The assessment report characterises some of the deposits from this phase as follows:

*Across the site levelling and dump deposits raised the whole court area by an average of 0.4m. Many of these deposits contained clinker, slag and construction debris such as chimney bricks, which are thought to have derived from contemporary refurbishment works in the surrounding ranges. Dating evidence from these deposits is almost exclusively of mid 19th-century date. This series of deposits were capped by the site-wide make-up deposit 5002, which effectively acted as the subsoil to the overlying turf of the new scheme.*

5.7.3 Where the impact of the resurfacing works was minimal (Pit 2), the deposits immediately under the recently laid geotextile are likely to relate to this phase. However, if Deposit 20 does represent the Phase 1 levelling/landscaping (as would be suggested by the fact that it is cut by the construction trench for the west range), this would imply that the Base Court construction debris and later levelling episodes have been removed prior to the deposition of these deposits (26, 27 and 28).

5.7.4 As its southern edge appeared to correspond with the northern limit of the central carriageway, it is possible that the cut truncating the fills of the earlier features in Pit 5 may represent a 19<sup>th</sup> century border along the northern side of the path. Additionally, it was on a similar east-west alignment and contained fairly humic/topsoil-like fills which produced 19<sup>th</sup> century artefactual material.

## **5.8 Phase 7 – Modern**

5.8.1 Modern services were revealed in Pits 3, 4 and 6.

## APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Pit 1						
General description					Orientation	N/A
Sandy clay horizon overlain by possible external surface to BG1698, overlain by layers of possible 16thC construction debris					Avg. depth (m)	0.8
					Width (m)	0.75
Contexts						
context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
10	Deposit	-	0.07+	landscaping/levelling deposit	Mid orangey brown clay sand	Phase 1
11	?Surface	-	0.08	Possibly remnants of cobbled surface	Rounded, well sorted gravel pebbles	Phase 2
12	Deposit	-	0.18	?Base Court construction debris	Mid brownish grey silty clay, brick rubble throughout	Phase 3
13	Deposit	-	0.08	?Base Court construction debris	Mid orangey brown sandy clay, lens of gravel within	Phase 3
14	Deposit	-	0.04	?Base Court construction debris	Lens of re-deposited gravel – possible surface, possible variation in Deposit 13 – heavily truncated	Phase 3
Pit 2						
General description					Orientation	N/A
Sandy clay horizon cut by possible medieval east-west aligned linear which is in turn cut by north-south aligned construction cut for west range. Fills overlain by 18th-19thC made ground					Avg. depth (m)	0.8
					Width (m)	0.75
Contexts						
context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
20	Deposit	-	0.20+	landscaping/levelling deposit	Mid orangey brown sand with mid grey brown mottling	Phase 1
21	Cut	-	-	Possible east-west aligned cut truncated by cut 23	-	Phase 2

context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
22	Fill	-	-	Rubble rich fill of possible east-west aligned cut	Mid grey brown silty clay, chalk fragments throughout	Phase 2
23	Cut	-	-	Probably construction cut for east wall of west range	-	Phase 3
24	Fill	-	-	Fill of construction cut	Mid brownish grey clay silt, CBM throughout	Phase 3
25	Fill	-	-	Fill of construction cut	Mixed re-deposited 20 and mid grey clay silt; occasional CBM	Phase 3
26	Deposit	-	0.18	?19thC levelling	Brick rubble in mid-dark grey silty clay matrix	Phase 6
27	Deposit	-	0.08	?19thC levelling	Mixed orange brown sand and mid grey brown silty clay	Phase 6
28	Deposit	-	0.07	?19thC levelling	Loose clinker	Phase 6
<b>Pit 3</b>						
<b>General description</b>					<b>Orientation</b>	N/A
Sandy clay horizon cut by northern terminus of north-south aligned linear feature of uncertain origin. Overlying deposits either upper fills of same feature or demolition layer from BG1698?					<b>Avg. depth (m)</b>	0.8
					<b>Width (m)</b>	0.75
<b>Contexts</b>						
context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
30	Deposit	-	0.26	landscaping/levelling deposit	Mid orangey brown clay sand	Phase 1
31	Cut	-	-	Terminus of n-s aligned linear feature	-	Phase 2
32	Fill	-	-	Possible ?Robber trench associated with late medieval structures	Mixed ?riegate stone, chalk, brick and tile rubble	Phase 2
33	Deposit	-	0.08	Possible demolition deposit associated with late medieval structures	Predominantly mortar and green ?riegate stone rubble	Phase 2

context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
34	Deposit	-	0.22	Possible demolition deposit associated with late medieval structures OR Base Court construction debris	Mixed brick rubble, mortar, charcoal in mid-dark grey clay silt matrix	Phase 2/3
<b>Pit 4</b>						
<b>General description</b>					<b>Orientation</b>	N/A
Sandy clay horizon cut by construction cut for stepped brick footing of east range and NE-SW aligned construction cut for brick culvert. Fills truncated by north-south aligned service trench with cast iron pipe set in concrete.					<b>Avg. depth (m)</b>	0.8
					<b>Width (m)</b>	0.75
<b>Contexts</b>						
context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
40	Deposit	-	0.30+	landscaping/levelling deposit	Mid orange brown clayey sand with mid grey silty clay mottling	Phase 3?
41	Cut	-	-	Possible construction cut for offset brick footing	-	Phase 3
42	Fill	-	-	Fill of possible construction cut	Mid orangey brown clayey sand with ? brick dust and occasional mortar	Phase 3
43	Structure	-	-	Top course of lower step of offset brick footing	-	Phase 3
44	Structure	-	-	6 courses of upper step of offset brick footing	-	Phase 3
45	Deposit	-	0.12	Deposit overlying stepped brick footing) Possible Base Court construction debris (Henry VIII phase)	Mid orangey brown clayey sand with occasional CBM and ?brick dust	Phase 3
46	Deposit	-	0.12	Wren made ground, overlain by cobbles	Mixed dark grey clay silt with brick and stone rubble throughout	Phase 5
47	Cut	-	-	Cut for culvert	-	Phase 5
48	Structure	-	-	Brick culvert	-	Phase 5
49	Fill	-	-	Fill of construction cut for culvert	Mid-dark grey clay silt	Phase 5

Pit 5						
General description					Orientation	N/A
Sandy clay horizon cut by north-south aligned ?robber cut of Lord Daubeney's house? Which is cut by the possible construction cut for the north tower of the Anne Boleyn Gatehouse, which is subsequently cut by a 19thC cut, possibly a flower bed??					<b>Avg. depth (m)</b>	0.8
					<b>Width (m)</b>	0.75
Contexts						
context no	type	Width (m)	Depth (m)	comment	description	Suggested Assessment phase
50	Deposit	-	0.12+	landscaping/levelling deposit	Mid olive brown clay sand	Phase 3?
51	Cut	-	-	North-south aligned ? robber cut	-	Phase 3
52	Fill	-	-	Fill of N-S aligned ?robber cut	Re-deposited 50 with brick rubble and mortar throughout	Phase 3
53	Cut	-	-	Possible construction cut for north tower of Anne Boleyn Gate	-	Phase 3
54	Fill	-	-	Fill of possible construction cut	Mixed re-deposited 50 with frequent brick rubble green ?riagate stone etc	Phase 3
55	Fill	-	-	Fill of possible construction cut	Brick dust	Phase 3
56	Fill	-	0.18	Fill of possible flower bed	Mid-dark grey clay silt	Phase 6
57	Fill	-	0.12	Fill of possible flower bed with later intrusive rubble	Mid dark grey clay silt with brick and stone rubble throughout	Phase 6
58	Cut	-	-	Cut for possible flower bed/ 19thC feature	-	Phase 6

<b>Pit 6</b>						
<b>General description</b>				<b>Orientation</b>	N/A	
Sandy clay horizon overlying layer of brick dust, both cut by 18th-19thC north-south aligned cut.				<b>Avg. depth (m)</b>	0.8	
				<b>Width (m)</b>	0.75	
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>description</b>	<b>Suggested Assessment phase</b>
60	Deposit	-	0.2	landscaping/levelling deposit	Brick dust	Phase 1
61	Deposit	-	0.35	landscaping/levelling deposit	Mid olive brown clay sand	Phase 1
62	Cut	-	-	North south aligned cut	-	Phase 6
63	Fill	-	-	Fill of north south aligned cut	Mixed redeposited 61, mid-dark grey clay silt, brick rubble and gravel pebbles	Phase 6
64	Fill	-	-	Fill of north-south aligned cut	Predominantly mid-dark grey clay silt	Phase 6
65	Fill	-	-	?top fill of north south aligned cut	Predominantly mid-dark grey clay silt with brick rubble throughout	Phase 6

## APPENDIX B. BIBLIOGRAPHY AND REFERENCES

- |                       |      |   |
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## APPENDIX C. TABLES

## Pottery Spot Dates and Description

Context	Spot-date	No.	Weight	Comments
56	18-19C	1	88	Flowerpot base. Fresh
57	c1835-1900+	1	22	Mod Eng stoneware bottle base with Bristol-type glaze
64	18-19C	1	47	Flowerpot base. Slightly worn
65	c1850-1900	1	6	Rim Staffs whiteware plate with purple banded trim
<b>TOTAL</b>		<b>4</b>	<b>163</b>	

## Clay Tobacco Pipe Spot Dates and Description

Context	Spot-date	Stem	Bowl	Mouth	Tot sherds	Tot Wt	Comments
26	L18-19C	2	0	0	2	8	1x stem bore (SB) c1mm. 1x 18C c2mm. Fresh
27	L17-18C	1	0	0	1	2	SB c2.5mm. Fresh
46	c1675-1725	0	1	0	1	5	Oval heel with SB c2mm. Worn
57	17C	1	0	0	1	6	SB c3mm. SI worn
64	E18C?	2	1	0	3	10	Oval heel frag with SB c2mm. 2 stems SB c2mm. SI worn
<b>TOTAL</b>		<b>6</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>31</b>	

## APPENDIX D. SUMMARY OF SITE DETAILS

**Site name:** Hampton Court Palace, Base Court Additional Works  
**Site code:** HCP7610  
**Grid reference:** TG 159 687  
**Type:** Watching Brief  
**Date and duration:** March 2010, 1 week  
**Area of site:** Base Court

**Summary of results:** In July 2008 Historic Royal Palaces (HRP) undertook a major resurfacing project in Base Court at Hampton Court Palace. This involved the entire area of Base Court, with the exception of the central carriageway and existing pathways.

In March 2010, Oxford Archaeology were commissioned by Historic Royal Palaces (HRP), to undertake an archaeological watching brief in Base Court during additional works. The work was undertaken during the installation of new signage, and the excavation of a pit for a new floor hub box. The latter was to facilitate the installation of a reconstruction of a fountain within the Court, the base of which was uncovered during the resurfacing works. The reconstruction has been based on a fountain shown on a painting of The Field of the Cloth of Gold.

A total of 6 trenches were excavated, 5 for foundation pad pits for the new sign posts, and 1 for the new hub and an associated pipe trench.

The general stratigraphic sequence revealed appeared to correlate with that recorded during the resurfacing works.

In addition, the watching brief revealed the stepped brick footing of the northern end of the east range of the Court. The substantial nature of this foundation may reflect the location of this range over the backfilled moat of Wolsey's Palace. A possible robber cut for a gatehouse of the earlier Palace was also seen, adjacent to the existing Anne Boleyn Gate. This appeared to correspond to structural remains and robbed elements of the earlier structure, which had been previously identified.

Additionally, the north-south aligned construction cut for the west range of Base Court was observed, in addition to an east-west aligned cut of uncertain origin - although potentially related to the medieval building revealed during the recent resurfacing works.

A feature relating to Sir Christopher Wrens remodelling of the Palace was also identified. This comprised a brick culvert leading from a cast iron downpipe on the east range, to the main east-west aligned culvert on the north side of Base Court. The remaining features were 19th century or later.

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Historic Royal Palaces in due course, under the following accession number: **TBC**



Figure 1: Site location

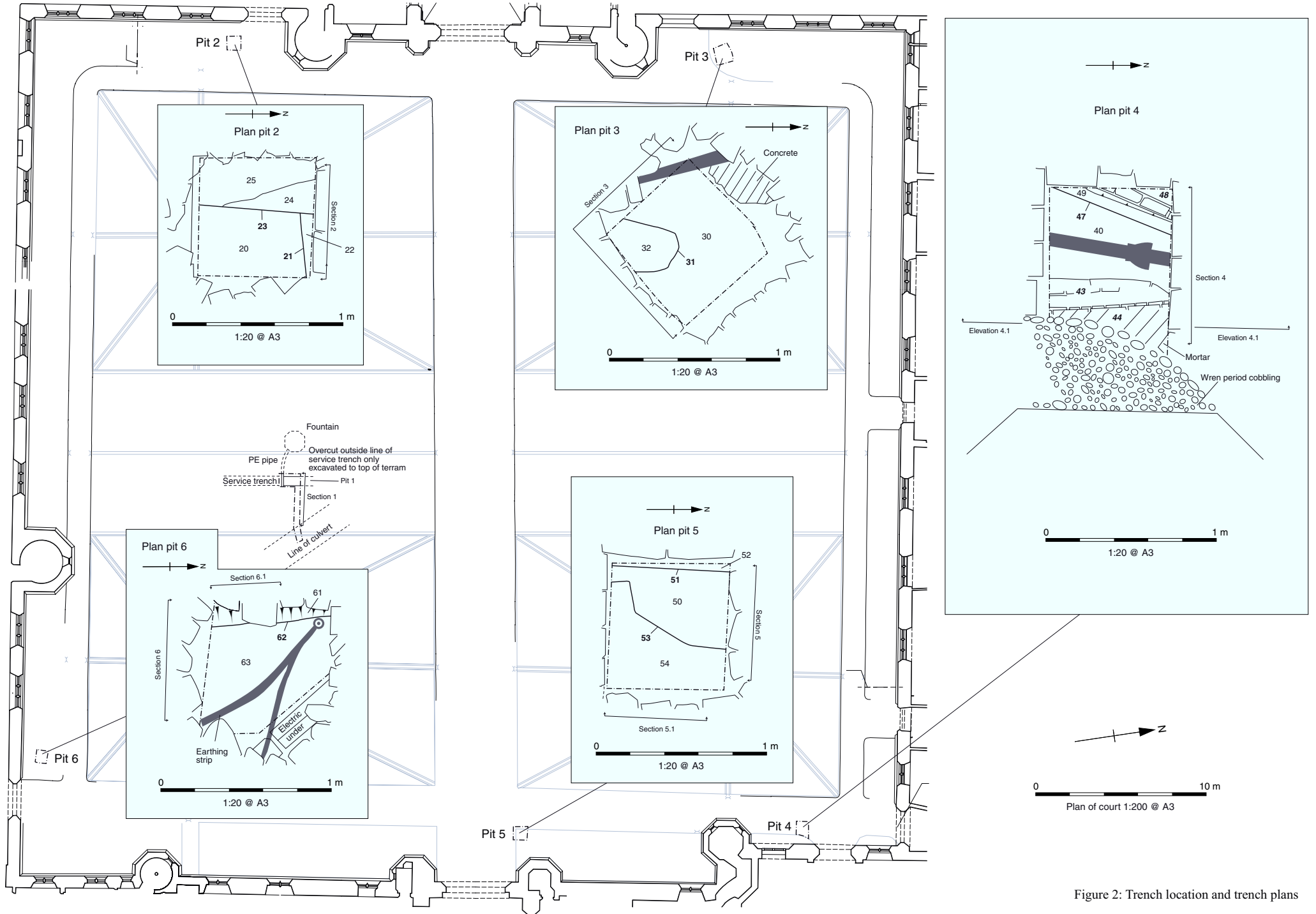


Figure 2: Trench location and trench plans

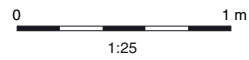
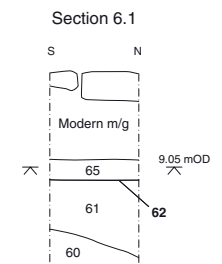
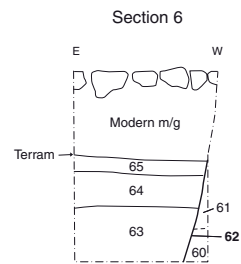
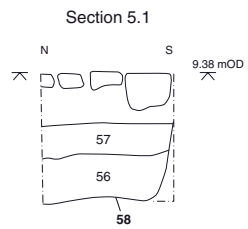
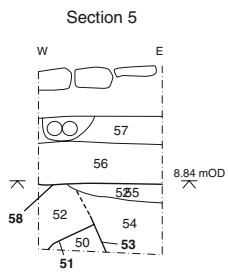
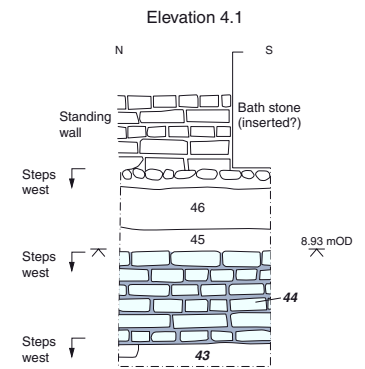
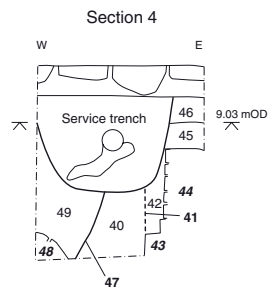
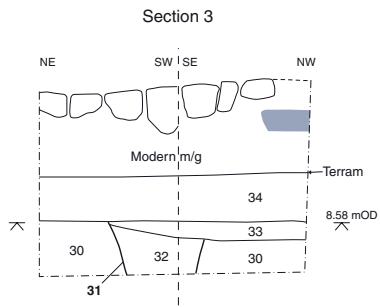
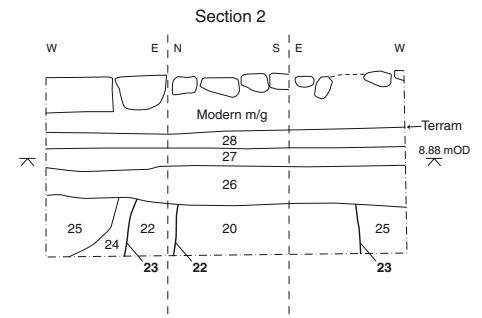
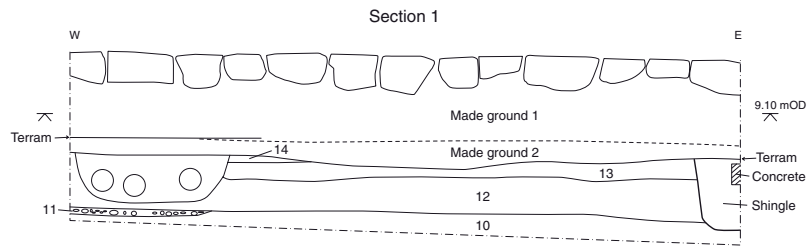


Figure 3: Sections





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