

Toy Green Hampton Court Palace



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Summary

Initial Watching Brief work during the removal of the railings on Toy Green in advance of the Olympics in July 2012 revealed uninteresting modern topsoil. Later that year in September, Oxford Archaeology carried out a field evaluation in advance of the re-landscaping and reconfiguration of Toy Green and the Trophy Gate entrance to Hampton Court Palace.

The evaluation revealed what is almost certainly the northern wall of The Toy Inn, together with a surviving remnant of an internal brick floor and a possible ancillary building or garden wall which does not appear to be depicted on any of the surviving cartographic sources. Additionally, evidence for 20th century landscaping was revealed, which is likely to relate to the construction of the new Hampton Court Bridge and the deepening of the river channel in the early 1930s.

Subsequently a watching was maintained during February 2013 during the re-surfacing and landscaping works. The watching brief revealed evidence for multiple phases of landscaping, in addition to deposits which are likely to represent earlier surfaces to the west of the Trophy Gate. The bedding layers for these surfaces comprised possible masons' waste which may have originated from the yards and workshops known to have occupied Outer Green Court in the 16th and 17th centuries. In addition to these surfaces, a brick built cruciform structure was revealed immediately to the west of the Trophy Gate - which was on the same alignment as a NE-SW aligned wall revealed during an earlier watching brief to the south - and may have represented a configuration of the entrance to the Palace pre-dating the construction of the existing structure in 1701. It is possible that this earlier structure is that known to have been constructed on the site of the later Trophy Gate in the first half of the 16th century.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 Oxford Archaeology (OA), was commissioned by Historic Royal Palaces (HRP) to undertake an archaeological watching brief on the removal of the railings at Toy Green, Hampton Court Palace in advance of the Olympics, the work took place in July 2012. Later that year in September HRP commissioned OA to undertake an evaluation at Toy Green, (Fig. 1), in advance of the re-landscaping and reconfiguration of the Toy Green area and Trophy Gate entrance. The evaluation was undertaken during September 2012, and the watching brief was undertaken by OA and Fiona Keith-Lucas of HRP during February 2013.

1.2 Geology and topography

1.2.1 The site is centred on TQ 15446 68572 and lies on the First Terrace drift geology of the River Thames, which overlies London Clay at c 9m above aOD.



1.3 Archaeological and historical background

Previous Archaeological Work

- 1.3.1 Between March 2009 and July 2012, OA carried out a programme of archaeological work in the vicinity of Trophy Gate. The results of these works are summarised below and shown on Figure 3 together with the recent trenching and extent of the landscaping works:

HCP67

- 1.3.2 In March 2009, a watching brief was undertaken during the installation of new pedestrian barriers at the Trophy Gate Drive. The watching brief revealed modern overburden related to the current road surface. Two of the excavated slots revealed foundations for the inner piers of the Trophy Gate, constructed in 1701. No other archaeological features were observed within the excavated slots (OA 2009 (1)).

HCP083

- 1.3.3 In May 2011, a watching brief was maintained during the excavation of service inspection test pits adjacent to Trophy Gate. The test pits were excavated through predominantly modern backfill and made ground deposits associated with the installation of service runs, although a brick structure, orientated approximately NE-SW was revealed in TP2. This was interpreted as almost certainly representing a wall footing at the western extent of a range of buildings that were likely to have originated in the 16th century and are clearly shown on a number of later cartographic sources. A mixed rubble layer with stone and brick inclusions overlay the structural remains, and probably derived from their demolition in the second half of the 19th century. The brick structure was constructed through an earlier buried soil horizon that probably represents the pre-existing ground surface. No natural deposits were encountered (OA 2011).

HCP89

- 1.3.4 On the 12th and 13th March 2012, a single trench measuring 20m NE-SW, 12.5m NW-SE, 0.45m wide and 0.4m deep was excavated across the main access road to the south-east of the Trophy Gate entrance in advance of the installation of new services. The watching brief only revealed modern tarmac and associated levelling (OA 2012(1)).

HCP093

- 1.3.5 In July 2012, a watching brief was maintained during the removal of railings around Toy Green in advance of the London 2012 Olympic cycling events. No impact was made below the existing topsoil.

Archaeological and Historical Background

- 1.3.6 The following summary is reproduced from the watching brief report on the earlier works (see above), and was sourced from Simon Thurley's article on the 16th-century kitchens at Hampton Court (Thurley 1990), and from Hampton Court, A Social and Architectural History (Thurley 2003), with italicised annotations. Additional information on the history of the Toy Inn (1.3.7 - 1.3.10) is taken from Appendix 5 of the Interim Statement of Significance (HRP 2009):
- 1.3.7 ".....[t]he second group of service buildings to be started in 1529 were 'howses of offyez without the baze court as the bakehouses the wodyerd with other howses needed appetaining as they were demanded by the surveyor of the same works' (April 1529). These were the offices, now vanished (*partially demolished in 1868 and finally in 1879*) that occupied the outer green court. Evidence of their form is provided by two



18th century plans *which have provided the basis for Thurleys reconstruction*. Parts of the building were also seen during excavation (*parts of the foundations were seen in a drainage trench dug in 1982*).....The accounts show how the complex contained the bakehouses, the bread house, the scalding house, the poultry, the rush house, and the woodyard. It is also clear that above the offices was accommodation for the staff. This still seems to have been the arrangement in 1674 when the survey of lodgings was taken...”

- 1.3.8 Additionally, the plans from the Public Record Office show a structure to the east of this range of buildings, which is labelled in the later of the two plans as *The Toy*. This is mentioned in 1653 in the Parliamentary Survey of Hampton Court as a 'Victualling house, worth by the yeare seaven pounds' (VCH 1911). A plaque on the wall adjacent to the southernmost pillar of the Trophy Gate reveals this to have been:

THE SITE OF THE TOY INN
An ancient Hostelry of Note
Built for Oliver Cromwell's Troops c.1650,
rebuilt c1700, demolished c1840 wherein
Pope wrote the Rape of the Lock, the Duke
of Clarence, afterwards William IV, formed
& presided over his Toy Club and Thomas
Dunckerley formed the Masonic Lodge
of Harmony 255 in 1785. The Lodge, held
here for 37 years, now erects this Tablet
July 1933

- 1.3.9 However, the Victoria County History suggests that it was built in the time of Henry VIII (VCH 1911), and if that is the case its original construction is more likely to be contemporary with the houses of offices described above.
- 1.3.10 A single drawing, made in 1817 exists for the Toy Inn, showing a symmetrical three storey block with the shallow roof typical of later 18th or early 19th century houses. The general form of the house can be traced with some accuracy from a block-plan made in 1823 which illuminates the functions of the various buildings once lying parallel to the river (*the houses of offices described above*) and the position of the Toy Inn in relation to the Trophy Gate. An even earlier plan of 1710 actually gives an extensive floor plan of the building, allowing its arrangement to be traced with some accuracy.
- 1.3.11 The building projected as a geometrical block beyond the gates, with its principal entrance flanking the gate itself. A through-way with a circular staircase was then encountered. This bipartite division of the building may suggest that the square appearance seen in the later print was a remodelling of an earlier structure. To the east, the associated buildings of the Scalding Office, continued with a range of yards and other structures. To the south a tap house and stables are shown, completing an ensemble which would normally be found on a hostelry or building of this kind.
- 1.3.12 The building was demolished in c 1840. This is known principally from contemporary maps, census returns and other material, where references to the building simply vanish. Judging from the earlier plan, the exact footprint of the inn was put down to grass, though only a small fragment exists today. The presence of the green can also be traced to the 19th century with the second edition Ordnance Survey map, which is a much more accurate representation of the area. The earlier bridge crossing the Thames



lay just to the north of the existing bridge, so that the carriageway of the road itself was also originally positioned to the north, its opposite side fringing the buildings of the Mitre Hotel, which today are set back slightly from the road.

- 1.3.13 The creation of the existing bridge in the early 1930s entailed the repositioning of the road and the truncation of the former inn site, though about half its original footprint is now occupied by the remnant of Toy Green.
- 1.3.14 The two central piers to Trophy Gate (built by Wren, 1701) are constructed of stock brick with Portland stone bases and pedestals. The statuary on the piers was sculpted by Grinling Gibbons and cast in bronze by John Oliver.
- 1.3.15 The two outer piers were carved with a suit of armour with flags, shield and axe, with bow, arrow and trumpet and the inner piers show the two most famous of the heraldic royal beasts: the lion and the unicorn. The lion and the unicorn were erected here in July 1701 and the trophies of armour on either side in November of the same year. The actual gates were not put in place until January 1767.

2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

General

- To determine the presence or absence of any archaeological remains which may survive.
- To determine or confirm the approximate extent of any surviving remains.
- To determine the date range of any surviving remains by artefactual or other means.
- To determine the condition and state of preservation of any remains.
- To determine the degree of complexity of any surviving horizontal or vertical stratigraphy.
- To assess the associations and implications of any remains encountered with reference to the historic landscape.
- To determine the potential of the site to provide palaeoenvironmental and/or economic evidence, and the forms in which such evidence may survive.
- To determine the implications of any remains with reference to economy, status, utility and social activity.
- To determine or confirm the likely range, quality and quantity of the artefactual evidence present.

Specific Aims and Objectives

- 2.1.1 The specific aims and objectives of the evaluation were:



- To assess the state of preservation of the surviving elements of the buildings which formerly occupied Toy Green and to establish whether the proposed works will impact on them.
- To attempt to correlate the cartographic evidence with any physical remains encountered.

2.2 Methodology

Evaluation

2.2.1 In total three trenches each measuring 2.5m x 1.5m were hand excavated (Fig 2, Trenches 1-3).

Watching Brief

2.2.2 The watching brief monitored the excavation of trenches to locate the existing services prior to the general ground reduction (Trench 7) in addition to the excavation of new service runs (Trenches 4, 5, 6 and 8). The area to be re-surfaced and landscaped was then reduced to formation depth (an average of 8.40m OD) and the archaeological features and deposits revealed at that level were recorded in plan. Some targeted excavation was undertaken where obvious features were apparent.

Site specific methodology

2.2.3 A summary of OA's general approach to excavation and recording can be found in Appendix A of the OA Fieldwork Manual (1992). Standard methodologies for Geomatics and Survey, Environmental evidence, Artefactual evidence and Burials can also be found in that document (Appendices B, C, D and E respectively).

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The following section summarises the results from each trench from the earliest to the latest deposits encountered during the archaeological works. Detailed context descriptions are presented in the context inventory (Appendix A), and within the descriptive text where they are integral to the interpretation of the context in question.

3.2 Trench Descriptions

Evaluation

Trench 1 (Fig. 4 and Plate 1)

3.2.1 The trench measured 2.5m x 1.5m and was excavated to a maximum depth of 1.34m below ground level (8.02m aOD). The earliest deposit encountered was a mid greyish brown sandy silt (104), at least 0.17m thick. This was overlain by a series of gravel rich deposits (amalgamated as contexts 102 and 103) which were approximately 0.65m thick and contained tarmac and concrete.



- 3.2.2 The gravel rich layers were overlain by modern topsoil/landscaping (101) and the existing turf (100) which together measured 0.5m thick.

Trench 2 (Fig. 5 and Plate 2)

- 3.2.3 Trench 2 also measured 2.5m x 1.5m and was excavated to a maximum of 1.7m (7.46m aOD) below ground level (this in a shovel-width sondage in the base of the trench). The earliest deposit reached in the base of the sondage appeared to be a fairly compacted mortar deposit (211) which may have represented a floor layer, or a bedding deposit similar to that seen in Trench 3 (see below) - although this is very circumspect given the limited extent of the sondage. This was overlain by two deposits (200, 210 - 0.32m and 0.25m thick respectively) which contained relatively high concentrations of building material (this was particularly true of 210).
- 3.2.4 Deposit (200) was overlain by a 0.22m thick deposit (201) which was similar in composition to deposit (104) in Trench 1. This was in turn overlain by a 0.4m thick layer which was of more mixed composition (202), but may have been part of the same phase of deposition. Deposit (201) had been cut by a trench for a ceramic service pipe [203] which appeared to feed from a square-built brick structure/manhole 209 located at the eastern end of the trench (there was some evidence that this pipe had been broken and repaired). Both deposits had been cut by a feature(s) [205] marking the northern extent of the gravel rich deposits seen in Trench 1 (102, 103) and again in Trench 2 (206). If this was a single feature, then the northern edge was very irregular in plan. The gravel rich deposit was overlain by modern landscaping/topsoil (207) and turf (208) which together were 0.45m thick.

Trench 3 (Figs 3 and 6, Plate xx)

- 3.2.5 Trench 3 measured 2.5m x 1.5m and was excavated to a maximum depth of 1.15m below ground level (7.80m aOD). The earliest deposit encountered was a 0.15m+ thick dark greyish brown sandy silt layer (305) with charcoal and oyster shell throughout. This had been cut by the construction trench [312] for a NW-SE aligned stepped brick wall footing 307 which had the remnant of a brick floor surface on its southern side 309 which overlay a mortar bedding deposit (310), in which could be seen the impressions of the removed brick surface. The highest surviving element of the wall was at c 0.75m below ground level (8.20m aOD). Also overlying deposit (305) was a NE-SW aligned brick built structure 308, which may have represented an outbuilding to the north of structure 307. Both structures 307 and 308 had been truncated and were overlain by demolition deposits (304 and 306), the top of which were 0.6m below ground level (8.35m aOD). These levels had been cut by pit [303], which were in turn overlain by 0.6m of modern topsoil/landscaping and turf (301 and 300 respectively).

Watching Brief

Reduced Dig (Fig. 3 and Plates 4-5)

- 3.2.6 The reduced dig was generally to 8.40m aOD and the area reduced is indicated on Figure 3.
- 3.2.7 Characterisation of the deposits revealed following the general ground reduction was problematic given the archaeologically arbitrary elevation of the formation level for the re-surfacing and landscaping works. Consequently, the deposits recorded have been divided into 5 broad categories based primarily on their composition (see table below).



	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D	CATEGORY E	CATEGORY F
COMPOSITION OF DEPOSIT(S)	crushed and compacted limestone and riegate sandstone	re-deposited sand and gravel	crushed and compacted brick and tile	rubble and sand	mixed	mixed
INTERPRETRATION OF CATEGORY	rudimentary surface/ masons waste	levelling	rudimentary surface - ? construction horizon	demolition deposit	demolition deposit	modern
CONTEXTS IN THIS CATEGORY	600	601 604 606 607 640	602 642 646	603 638 645	605 608 626 627 628	634 635 636 637 639 647 650 651 656 657 658 659 660 661

3.2.8 As these deposits were only revealed in plan, the stratigraphic relationships between them was difficult to establish with any degree of certainty, the exception being where service inspection test pits were excavated (see Trenches 4-6 below).

3.2.9 Also revealed during the general reduction was a 4.5m long brick wall footing on a roughly NE-SW alignment (Plate 5), with a cruciform configuration at its northern end (629). The structure was of unfrogged bricks bonded with a yellow sandy lime mortar. Immediately to the west was a single course of brick 630 covering an area approximately 3m x 1.9m and heavily truncated by modern services. This was initially thought to potentially represent a brick drain as the base was slightly concave, although it is possible that it is the remnant of a surface. The relationship between this structure and the deposits listed above was unclear.

Trench 4 (Fig. 7)

3.2.10 Trench 4 measured 1.0m x c 0.5m and was excavated to a maximum depth of 1.0m below the reduced ground level (see above) during the installation of new services. The earliest deposit encountered was a mid-brown silty sand (406), probably natural brickearth, the top of which was at 7.75m aOD which was overlain by a 0.04m thick layer of concreted stone surface (405). This was in turn overlain by a layer of crushed and compacted limestone and Reigate sandstone (404) which was likely to have been deposited as a bedding layer for the overlying 0.08m thick layer of crushed and compacted brick (403) metallised surface. A 0.2m thick layer of sandy silt (402) had been deposited between this surface and a second layer of limestone and sandstone (401) similar in composition and compaction to deposit (404).

Trench 5 (Fig. 7)

3.2.11 Trench 5 measured 1.0m² and was excavated to a maximum depth 0.7m below reduced ground level. The earliest deposit encountered was a mid brown silty sand (504), possibly natural brickearth, the top of which was at 7.77m aOD and was overlain by a 0.38m layer of compacted limestone and Reigate sandstone (503) which was in turn overlain by a c 0.07m thick bedding deposit (502) for a possible gravel surface (501). The latter was overlain by 0.3m+ of dark brownish grey homogeneous humic material, which may have represented an imported topsoil (500).

*Trench 6 (Fig. 7)*

- 3.2.12 Trench 6 was the number allocated to a test pit within an existing service trench to establish the depth of the pipe it carried. The service trench cut through a sequence comprising a mid brownish orange silty sand (633), possibly natural brickearth, the top of which was recorded at 7.99m aOD. This was overlain by a deposit (632) of a similar crushed and compacted brick composition to that recorded at the same elevation in Trench 4 (403), which was in turn overlain by a series of mixed deposits (621-625) approximately 0.25m thick and likely to represent levelling deposits for the overlying sequence of surfacing deposits (617-620) which were 0.16m thick and ultimately overlain by Category A surfacing deposit (600).

Trench 7

- 3.2.13 Trench 7 was the number allocated to service inspection pits on Toy Green which were excavated predominantly through the backfill of the service trenches, although a number of deposits were revealed which appeared to broadly correspond to the upper part of the sequence within Trenches 1-3.
- 3.2.14 They comprised a dump of 20th century material (703) overlain by 0.95m of imported 'landscaping' deposits (701, 702), which were in turn overlain by the existing topsoil and turf (700).

Trench 8

- 3.2.15 Trench 8 was a new service run to the north of the reduced dig area, the base of the trench falling from 8.62m aOD at its northern end, to 8.44m aOD to the south. The deposits revealed appeared to broadly correspond to those within the reduced dig area to the south, and at a similar elevation.
- 3.2.16 They comprised buried soil horizon (808) which may equate to the buried soil horizon seen at the base of the sequence in Trench 3 (305) as the top of the deposit was at a similar elevation (7.99m aOD and 7.95m aOD respectively); a 0.45m thick layer of crushed and compacted limestone and Reigate sandstone (807), and a crushed and compacted tile layer (806). These latter two deposits are likely to correspond to Category A and C deposits respectively, given the similarity of the elevation of the top of the deposits (8.44m aOD and 8.47m aOD) to that of the general reduced dig (8.40m aOD).
- 3.2.17 Deposit (806) was overlain by a mid-reddish brown silty sand layer (805) which may be a re-deposition of the material seen at the base of the sequences within Trenches 4, 5 and 6.



4 DISCUSSION

4.1.1 The piecemeal nature of the works together with the arbitrary elevation of the reduced dig made the characterisation and phasing of the structures and deposits encountered problematic. Consequently, the phasing outlined below is very tentative and very much open to re-interpretation should further works be undertaken in the area.

- Phase I Bickearth/Alluvium
- Phase II ?16thC re-working/disturbance of brickearth, primary levelling and rudimentary surfaces - possibly representing construction horizon(s) for Houses of Offices and?original gate configuration
- Phase III pre-17thC buried soil/occupation (Trench 3)
- Phase IV 17thC construction of The Toy
- Phase V early 18thC construction of Trophy Gate - secondary levelling and surfaces
- Phase VI 19thC demolition of The Toy and Houses of Offices
- Phase VII 20thC construction of New Bridge and landscaping

Phase I: Brckearth/Alluvium

4.1.2 The sterile sandy deposit seen at the base of the sequence in Trenches 4, 5 and 6 was similar in composition to deposits seen to overlie the terrace gravels during recent works in Base Court (OA 2009 (2), 2010 (2)) and the Privy Garden (OA 2009 (1)), and also during landscaping works at Kensington Palace c 9 miles to the north east (OA 2012(2)). The Base Court report references an unpublished text on earlier works undertaken during the reconstruction of the Privy Garden, and notes that :

A truncated argillic brown sand [has been] located at the Privy Garden, where there had been natural Holocene pedogenic clay translocation (Avery, 1990; Duchaufour, 1982), [this] was identified using bulk studies and soil micromorphology (unpublished report by Northampton Archaeological Unit) (references can be found in OA, 2009(2))

4.1.3 It is possible that the sandy deposit encountered during the recent works is a variant of the Ham River Sands/River Brickearths or alluvial material which characterise the deposits overlying the gravel on the British Geological Survey (BGS sheet 270), although the locations of the respective palaces do not completely correspond with the limits of these deposits as shown. The top of the deposit was also significantly higher in the Privy Garden and Base Court (8.5m - 8.6m OD respectively) than that recorded within the recent trenches (7.77m -7.99m OD) and as such any correlation between these deposits is necessarily tentative.

4.1.4 In Trenches 4 and 5, the top of this deposit was at approximately the same elevation (7.75m and 7.77m respectively), whereas in Trench 6 it was significantly higher (7.99m



OD) given that Trenches 4 and 6 were only 2.5m apart. This may suggest that the top of the deposit has been truncated in Trenches 4 and 5, prior to the deposition of the primary 'levelling' (404, 503 - see Phase II below).

Phase II - ?16th century

Primary levelling

- 4.1.5 The composition of the levelling deposits overlying the "brickearth" in Trenches 4 and 5 was predominantly of crushed and compacted limestone and Reigate sandstone, and it is possible that this originated as mason's waste which has been used here to make up or consolidate the ground outside the western entrance to the palace grounds. Similar deposits were recorded during the recent works in Base Court (OA 2009 and 2010) and it is likely that these originated from the area outside the west front of the palace as *"...ever since Henry VIII took the palace from Wolsey it had been a building site, and many of the yards, storehouses and workshops necessary for the progress of the works were sited at the western entrance of the palace."* (Thurley 2003, 60).
- 4.1.6 As discussed above, the higher elevation of the top of the sandy "brickearth" deposit in Trench 6 would suggest that it has been truncated in Trenches 4 and 5. However, it is possible that in Trench 6 this deposit (633) represents a re-deposition of the sandy layer, and is a variation in this phase of levelling - particularly as the top of all 3 deposits (633, 404 and 503) was relatively consistent at around 8m aOD, and may even have been overlain by the same rudimentary surface of crushed brick (632, 403 and to a lesser extent (502/501) which was more sand and gravel in composition), the top of which was 8.1m OD.

Construction of Houses of Offices

- 4.1.7 From 1529 the construction of the range of buildings known collectively as "houses of offeys without Base Court" was begun (Thurley 1990, 21), and it is possible that the rudimentary surface(s) referred to above (4.1.7) represents a construction horizon for these works.
- 4.1.8 The wall revealed in TP3 of the HCP083 works was interpreted as *"...almost certainly represent[ing] a wall footing at the western extent of a range of buildings that are likely to have originated in the 16th century and are clearly shown on a number of later cartographic sources."* (OA 2011). However, when the location of the test pit is plotted over Thomas Fort's ground plan of c 1732-42 (Fig. 3), it is clear that the wall extends beyond the north-east corner of the Houses of Offices. The cruciform structure revealed during the general ground reduction is likely to be the north-eastern continuation of this structure, although it does appear to be on a slightly more northerly alignment.
- 4.1.9 In 1535-6, the yards, storehouses and workshops outside the west front of the palace were removed *".....providing the opportunity for creating a more dignified and magnificent forecourt. A new gate was erected where Trophy Gate is today, and a wall built stretching from there to the palace along the north side of a new forecourt soon to be known as the 'Outer Green Court'."* It is possible that the cruciform structure represents this pre-cursor to Trophy Gate - particularly given the fact that the alignment of this structure and that of the wall in TP3 corresponds with that of the north east corner of the near contemporary Houses of Offices.



Phase III: 16th-17th century

- 4.1.10 As the charcoal rich deposit at the base of the excavated sequence in Trench 3 was demonstrably truncated by the construction cut for the brick wall footings, it seems likely that it represents occupation pre-dating the construction of the Toy Inn - ostensibly in the mid-17th century. Given that the top of this deposit (c 7.95m aOD) corresponded with the putative construction horizon described above (4.1.8), it is possible that this represents a contemporary buried soil horizon.

Phase IV: 17th century

- 4.1.11 Although the date of this buried soil horizon is somewhat circumspect (no datable finds were recovered), it was demonstrably truncated by the construction trench for the north-west/south-east aligned wall in Trench 3. This wall corresponded with the projected line of the northern wall of The Toy Inn - thought to have originally been constructed at the western end of the Houses of Offices around 1650. The surviving element of brick flooring is likely to represent an internal surface.
- 4.1.12 The mortar layer at the base of the sequence in Trench 2 may also represent the bedding for a floor surface, although this was only seen in a very small sondage and this interpretation is necessarily tentative. The north-south aligned wall in Trench 3 was less substantial and may have represented an outbuilding or 'garden' wall not depicted on the later cartographic sources.

Phase V: early 18th century

Trophy Gate

- 4.1.13 The main outer gate of the western approach to the palace was re-built in 1701 to a design by Grinling Gibbons to be known as Trophy Gate, which is the structure which survives today. If the interpretation of the structures revealed during the recent works which is presented above is correct, then the new gate to the western approach was set back c 2m from its predecessor. The reasons for this are unclear, although may have been aesthetic rather than practical.

Secondary levelling

- 4.1.14 Although considerably more mixed, the composition of these deposits was not dissimilar to those of the earlier phase of levelling in that they contained fragments and concentrations of limestone and crushed limestone and Riegate sandstone. It is possible that a similar origin can be inferred and that masons waste was routinely used for levelling and landscaping during works in and around the palace grounds.
- 4.1.15 It is possible that the putative secondary phase of levelling and rudimentary surfaces to the west of the gate was contemporary with this phase of works, and Categories A, B and C as described above (3.2.7) are likely to represent the uppermost of these surfaces. The levelling deposits directly overlay the possible construction horizon described above, although in Trench 5 the composition of the deposit overlying this horizon was a homogeneous dark grey silt clay deposit - as opposed to the more mixed composition of the deposits found in Trenches 4 and 6. The more humic composition in Trench 5 may suggest an imported topsoil on the periphery of the Trophy Gate apron - in contrast to the more compacted levelling deposits and surfaces of the approach to the gate in the location of Trenches 4 and 6.



- 4.1.16 However, the deposits revealed within Trench 8 would suggest that the compacted stone and tile 'surfaces' do continue to the north of the reduced dig area.
- 4.1.17 With the exception of the two undated post holes to the west of the reduced dig area (609 and 613), all other negative features which cut these deposits appeared to be of modern origin and were predominantly service trenches.

19th Century

- 4.1.18 The rubble rich deposits overlying the structures in Trench 3 (304 and 306) and the mortar layer in Trench 2 (200, 210) - together with Categories D and E as described above (3.2.7) - are almost certainly associated with the demolition of The Toy Inn - probably in the first half of the 19th century. Finds of 19th century pottery, CBM and clay tobacco pipe fragments found with (210) and (304) would further support this. These appeared to be overlain by a fairly homogeneous silty deposit (104, 201, 202) which may represent landscaping post-dating the demolition of the Toy Inn but prior to the demolition of the houses of offices in the 1860s and 70s.

20th Century

- 4.1.19 The gravel rich material in Trenches 1 and 2 is likely to have originated from the deepening of the river channel during the construction of the new Hampton Court bridge in the early 1930s, and tip lines sloping from south to north in Trench 1 would appear to be consistent with this interpretation. The material appears to have been deposited within a negative feature(s) which truncated the ?19th century landscaping deposits described above. The feature(s) also appeared to post-date the ceramic pipe and brick built manhole structure in Trench 2. Whilst far from certain, it is possible that the negative feature(s) represents the clearance of a plantation shown on a plan of 1877 prior to the works in the 1930s, the gravel rich spoil from which has been used to subsequently landscape the area before the deposition of the c 0.5m thick modern topsoil deposit (101, 207, 301).



APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
Trench 1						
100	Deposit		0.08	Topsoil and turf	Mid greyish brown silt	
101	Deposit		0.48	Modern topsoil/garden soil	Mid greyish brown silt	19c clay pipe, e20c pot, coal, farthing (1866), horseshoe, bottles (20c)
102	Deposit		0.62	Landscaping	Mixed but predominantly mid yellowish brown sand and gravel	18/19c pot, shell, bottle (119/e20c)
103	Deposit		0.68	Landscaping	Mixed but predominantly mid yellowish brown sand and gravel	
104	Deposit		>0.14	Landscaping	Mid greyish brown sandy silt	
Trench 2						
200	Deposit		0.32	Possible demolition deposit	Mixed but predominantly mid-light greyish brown sandy silt with brick rubble; occasional stone; charcoal flecks and gravel throughout	
201	Deposit		0.22	Landscaping	Dark brownish grey friable sandy silt with occasional brick fragments and gravel pebbles	L18/19c pot
202	Deposit		0.4	Landscaping	Predominantly mid grey sandy silt with 5-10% charcoal and 2-3% gravel fragments	
203	Cut	>1.5	0.3	Cut for ceramic service pipe		
204	Fill		0.3	Fill of service trench 203	Mid-dark grey sandy silt	
205	Cut	>1.5	0.6	Northern limit of deposit 206 - negative feature		
206	Fill		0.6	Fill of feature 205	Predominantly re-deposited gravel	Limestone moulding (med/post-med)



Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
207	Deposit			Post-1930s landscaping deposit	Predominantly mid-grey sandy silt with 3-4% gravel pebbles and occasional cbm fragments	?19C Clay pipes, m-l19c pot
208	Deposit			Topsoil and turf		
209	Struct			?19thC Manhole for ceramic service pipe in cut 203		
210	Deposit		>0.1	Possible demolition deposit	Mixed brick rubble/mortar/stone in sandy silt matrix	19c pot
211	Deposit			Possible mortar bedding layer		
Trench 3						
300	Deposit			Topsoil and turf		
301	Deposit			Garden soil	Mid-dark brownish grey clayey silt	19c clay pipes, m-l19c pot, coal, shell, penny (1999), 19/20c bottles, slate
302	Fill		0.5	Fill of pit 303	Mid greyish-brown sandy silt	
303	Cut	>0.4	0.5	Pit cut		
304	Deposit		0.55	Demolition deposit	Mixed cbm, mortar etc in mid yellowish brown sandy silt matrix	L17-19c clay pipes, 19c pot, shell, spoon, nail, stone (18/19c), mortar sample (19c)
305	Deposit		0.98	Buried soil horizon	Dark greyish brown silt	
306	Deposit		0.6	Demolition deposit	Mixed building materials in mid greyish brown sandy silt matrix	
307	Struct			NW-SE aligned wall footing		
308	Struct			NE-SW aligned wall footing		
309	Struct			Remnant of brick floor surface		
310	Deposit			Mortar bedding for surface 309		
311	Fill			Fill of cut 312		
312	Cut			Construction cut for		



Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
				structure 307		
Trench 4						
400	Deposit		0.12	Modern made ground		
401	Deposit		0.1	Levelling/consolidation	Compact pale white reigate stone	Mortar sample
402	Deposit		0.2	Levelling	Mid reddish brown sandy silt	
403	Deposit		0.08	Rudimentary surface	Crushed and compacted cbm	
404	Deposit		0.17	Levelling/consolidation	Compact pale white Reigate stone	Mortar sample
405	Deposit		0.04	Rudimentary surface	Compact very dark brown stones	
406	Deposit		0.3	?brickearth	Soft mid brown silty sand	
407	Cut			Service trench		
408	Fill			Fill of service trench		
Trench 5						
500	Deposit		0.32	Possible buried soil horizon	Friable grey brown silty sand	
501	Deposit		0.04	Rudimentary surface	Brown orange silty gravel	
502	Deposit		0.09	Bedding for rudimentary surface 501	Friable grey brown sand and silt	
503	Deposit		0.23	Levelling/consolidation	Compact pale yellowish white limestone and Reigate stone	Mortar sample
504	Deposit			?brickearth	Friable orange brown sandy silt	
Trench 6						
600	Deposit			Category A: levelling/consolidation or rudimentary surface	Compact pale white reigate stone and limestone	Mortar sample
601	Deposit			Category B: levelling/consolidation	Loose brownish grey sandy gravel	Shell
602	Deposit			Category C: rudimentary surface	Compact reddish brown crushed cbm	M16-17c pot
603	Deposit			Category D: demolition deposit	Mixed rubble and sand layer	17c clay pipes, pot (1580-1700), window came
604	Deposit			Category B: levelling/consolidation	Mid yellowish brown sand	



Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
605	Deposit			Category E: demolition deposit	Mixed rubble deposit	Shell
606	Deposit			Category B: levelling/consolidation	Brown gravelly sand	
607	Deposit			Category B: levelling/consolidation	Compact orange brown sand	
608	Deposit			Category B: demolition deposit	Moderate yellowish white gravelly sand	
609	Cut	0.6	0.36	Post hole cut		
610	Fill		0.36	Fill of post hole 609	Friable grey white sandy chalk with 5% stone inclusions	Worked stone
611	Cut	0.54	0.31	Modern cut		
612	Fill		0.31	Fill of modern cut 611		Aggregate, shell, nail
613	Cut	0.5	0.53	Post hole cut		
614	Fill		0.48	Fill of post hole 613	Friable mid reddish brown sandy silt	
615	Fill		0.05	Fill of post hole 613	Friable light yellowish brown sandy silt	
616	Fill		0.41	Fill of post hole 613	Friable mid reddish brown sandy silt	
617	Deposit		0.04	Possible rudimentary surface	Compact pale grey chalky sand	
618	Deposit		0.07	Possible rudimentary surface	Compact light grey brown sand	
619	Deposit		0.03	Possible surface/bedding layer	Compact pale yellow chalk, sand and stone	
620	Deposit		0.04	Possible rudimentary surface	Compact brown sandy silt	
621	Deposit		0.08	Levelling/consolidation	Compact pale yellow chalky sand with 20% limestone fragments	
622	Deposit		0.03	Levelling/consolidation	Compact brown sandy silt	
623	Deposit		0.05	Levelling/consolidation	Compact pale yellow/white limestone and Reigate stone	
624	Deposit		0.07	Levelling/consolidation	Compact pale yellow/white limestone and Reigate stone	
625	Deposit		0.11	Levelling/consolidation	Compact brown/grey sand	
626	Deposit			Category E: demolition deposit	Mixed demolition deposit	Clay pipes (1650-1700), shell, lace



Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
						chape
627	Deposit		0.08	Category E: demolition deposit	Mixed brick and stone fragments in reddish brown sand and gravel	
628	Deposit		0.04	Category e: demolition deposit	Mixed brick compact brown silty sand	
629	Struct			Cruciform wall footing		
630	Struct			?brick Surface		
631	Deposit		0.02	Levelling/consolidation	Loose grey sand	
632	Deposit		0.06	Rudimentary surface/construction horizon	Compact mid brown sandy silt with brick and stone fragments throughout	
633	Deposit			?brickearth	Loose brown orange silty sand	
634	Deposit			Category F: tarmac		
635	Deposit			Category F: Type 1 hardcore		
636	Deposit			Category f: asphalt		
637	Deposit			Category F: made ground		
638	Deposit			Category D: demolition deposit	Compact mid brown orange sandy silt with building material throughout	Clay pipes (17c), 18c pot, shell
639	Deposit			Category F: made ground		
640	Deposit			Category B: levelling/consolidation	Compact yellow orange sand and gravel	
641	Void	Void	Void	Void	Void	Void
642	Deposit			Category C: rudimentary surface	Crushed and compacted cbm	
643	Cut			Modern cut		
644	Fill			Fill of modern cut 643		
645	Deposit			Category D: demolition deposit	Compact, reddish brown rubble and sand	
646	Deposit			Category C: rudimentary surface	Moderate-compact pale white mortar	
647	Deposit			Category F: modern		
648	Cut			Robber cut		
649	Fill			Fill of robbing along eastern edge of structure 629	Firm mid brown silty clay	
650	Deposit			Category F: modern		



Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
651	Deposit			Category F: modern		
652	Deposit			Category F: modern		Coping stone?
653	Cut			?modern Cut		
654	Fill			Fill of ?modern Cut	Friable grey brown silty sand	
655	Fill			Fill of ?modern Cut	Friable orange brown silty sand	
656	Deposit			Category F: modern		
657	Deposit			Category F: modern		
658	Deposit			Category F: modern		
659	Deposit			Category F: modern		
660	Deposit			Category F: modern		
661	Deposit			Category F: modern		
Trench 7						
700	Deposit		0.08	Topsoil and turf		
701	Deposit		0.3	Subsoil	Friable dark yellowish brown silty sand	
702	Deposit		0.65	Imported topsoil	Loose dark brownish grey sandy silt	
703	Deposit			20thc landscaping	Friable mid brownish yellow silty sand with 80% gravel	
Trench 8						
800	Fill			Fill of modern services		
801	Cut			Cut of modern services		
802	Deposit		>0.1	Demolition deposit	Friable mid brownish red silty sand with up to 60% cbm fragments	
803	Deposit			Demolition deposit	Friable mid brownish red silty sand with 30% cbm fragment and 30% limestone and Reigate stone fragments	
804	Deposit		0.15	?trample Over deposit 507	Loose mid grey/reddish brown silty sand	
805	Deposit		0.08	Buried soil horizon?	Loose mid reddish brown silty sand	
806	Deposit		0.03	Rudimentary surface	Crushed and compacted roof tile and cbm in a mid reddish brown sandy silt matrix	
807	Deposit		0.45	?levelling/consolidation	Crushed and compacted limestone and Reigate stone	



Context	Type	Width (m)	Depth (m)	Comment	Soil description	Finds
808	Deposit		0.03	Buried soil horizon	Moderate mid yellowish brown silty clay sand	

APPENDIX B. FINDS AND ENVIRONMENTAL ASSESSMENTS

B.1 Introduction

B.1.1 Unfortunately, Trenches 4 and 5 initially duplicated numbers which had already been allocated to what have here been designated as Trenches 7 and 8. Consequently, the finds from contexts 500, 504 and 505 are likely to be mixed as this error was not recognised until the finds had been processed. This is the reason for the apparently anomalous fact that the "brickearth" in Trench 5 (504) produced 17th-18th century pipe and pottery despite being overlain by 16thC levelling. Contaminated contexts are shaded on the following tables.

B.2 The clay tobacco pipe by John Cotter

Context	Description	Date
101	1 bowl 10 stems, including 1 burnt, 40g	1700-1780 19th century
207	1 stem with mouthpiece, 3g	?19th century
301	3 stems, 8g	19th century
304	1 bowl 12 stems 3 stems, 79g	1680-1710 17th- early18thc Late18th- 19thc
500	3 bowls 4 stems, 34g	1610-1640 3 - 1610-1640 1- Late17th- 18thc
504	1 bowl 4 stems, 22g	Late17th - early 18thc
603	2 bowls 6 stems, 346g	1620-1640 17th c
626	9 stems, 37g	1650-1700
638	3 stems, 15g	17th c



B.3 The pottery by John Cotter

Context	Description	Date
unstratified	1 body sherd chip from a tin glazed ware pot or wall tile, 8g	18th C
101	2 sherds porcelain electrical insulator Sherds of modern stoneware ginger beer bottles Flowerpot sherds, 502g	1900-1920
102	Flowerpot sherds White glazed stoneware sherds, 142g	18th-19th C 1720-1780
201	1 sherd Staffordshire mottled brown glazed ware, 7g	Late 18th- 19th C
207	Sherds of transfer printed ware stoneware preserve jars, 163g	1850-1900
210	1 transfer printed ware cup handle, 3g	19th C
301	Sherds of transfer printed ware Modern stoneware 1 sherd tin glazed ware. 112g	1850-1900
304	1 handle 17th-18th c border ware – residual 1 sherd blue moulded stone/earthen ware vase 1 flowerpot sherd, 128g	17th-18th C 1830-1900
500	1 sherd German stoneware – Bellarmine coat of arms fragment with harp and prancing beast 1 transfer printed ware mug sherd Flower pot Tin glazed ware jar Border ware, 134g	1600-1650 1850-1900 19th C Early 17th c
504	Sherds of a purple speckled tankard in tin glazed ware Bellarmine fragments Black glazed redware, 66g	1650-1700
602	3 sherds from same vessel of German Frechen stoneware (Bellarmine), 6g	1550-1700
603	1 sherd German Frechen Bellarmine flat base, 32g	1580-1700
638	London stoneware tankard sherd, 6g	1710-1800

B.4 The coal, charcoal and aggregate by Geraldine Crann

Context	Description
101	1 fragment coal, 18g
301	4 fragments coal, 10g
301	2 fragments charcoal, 5g
500	2 fragments charcoal, 8g
612	2 fragments aggregate, 199g



B.5 The shell by Geraldine Crann

Context	Description
Unstratified	1 oyster shell left valve with sub-square central hole, 13g
102	1 oyster shell left valve, 30g
301	6 oyster shells left valve, including 2 with sub-square central holes, 130g
304	8 oyster shells, 3 right valves & 5 left valves, 1 shattered with possible sub-square central damage, 178g
500	1 oyster shell, left valve, 18g
504	6 oyster shells, 4 left valve & 2 right valve, 79g
601	2 oyster shells, left valves, 44g
605	6 oyster shells, 3 right valves 1 left valve, 27g
612	1 oyster shell right valve, 12g
626	1 oyster shell left valve, 19g
638	1 oyster shell right valve, 8g

B.5.1 The unworked assemblage is of low potential and requires no further work.

B.5.2 The deliberately holed oyster shells (one collected by Ian Franklin and with a letter from Roberta Gilchrist (conservation) to Fiona (Keith-Lucas)) may warrant further research.

B.6 The small finds by Ian R Scott

Introduction (Table 1)

B.6.1 There are 19 small finds (23 frags) from 8 contexts. The finds comprise 14 iron objects (18 frags), 3 copper alloy objects (3 frags), 1 lead object (1 frag) and 1 bone object. The finds include 17 nails (10 frags).

Table 1: Summary quantification of metals by context and function (object and fragment counts)

Ctxt		Function										Totals
		Coin	Transport	Personal	Household	Window	Structural	Nails	Misc	Query	Undiag	
101	Count	1	1					1			0	3
	Fragt	1	1						1		1	4
301	Count	1		1			1	3	1	2		9
	Fragt	1		1			1	3	1	2		9
304	Count				1			1				2
	Fragt				1			1				2
500	Count							3				3
	Fragt							3				3
504	Count							0				0



	Fragt							2				2
603	Count					1						1
	Fragt					1						1
612	Count											0
	Fragt							1				1
626	Count			1								1
	Fragt			1								1
Total	Count	2	1	2	1	1	1	7	2	2	0	19
Total	Fragt	2	1	2	1	1	1	10	2	2	1	23

Catalogue

Context 101

- (1) **Farthing**, Victoria, 1866. Cu alloy.
 - (2) **Horseshoe**, one branch with thickened square heel. At least 2 nail holes. Very worn towards toe. L extant: 123mm. Fe.
 - (3) **Galvanised iron sheet**, fragment with no original edges. 76mm x 66mm. Fe.
- Undiagnostic fragment**, small. Fe.

Context 301

- (4) **One new penny**, Elizabeth II, 1999. Cu alloy.
- (5) **Button**. Turned bone disc with central hole for wire shank. D: 28mm. Bone.
- (6) **Mushroom shaped terminal** (Ht: 17; D: 15mm) attached to short length iron rod or bar. Perhaps for attaching an eyelet on a canvas or tarpaulin cover. L: 48mm. Fe and cu alloy.
- (7) **Oval plate**, fragment with an elongated slot. One side largely missing. May not be symmetrical. 45mm x 24mm. Fe.
- (8) **Rod**. L: 206mm. Fe.
- (9) **Holdfast**, with tapering spike topped with a rolled over hook or loop. L: 141mm. Fe.
- (10) **Nail** with circular section stem and chisel tip. Flat circular head. Complete. L: 89mm. Fe.
- (11) **Nail**, slim with rectangular section stem and chisel tip. Small sub-rectangular head. Complete. L: 73mm. Fe.
- (12) **Wire nail**, modern (c 4 inch). L: 105mm. Fe.

Context 304

- (13) **Spoon**, iron incomplete. Part of spoon bowl and much of handle survives. L: 96mm; W: 45mm. Fe.
- (14) **Nail**, rectangular to square section tapering stem, small lozenge shaped head. Stem



clenched. L extant: 81mm; L extended: c 120mm. Fe.

Context 500

(15-17) **Nails**. 3 x heavily encrusted small nails or nail stem fragments. Not measured. Fe.

Context 504

Nail stem fragments. 2 x heavily encrusted. Not measured. Fe.

Context 603

(18) **Window came**, twisted fragment. No obvious signs of milling. L: 48mm. Pb.

Context 612

Nail stem fragment, encrusted. Not measured. Fe.

Context 626

(19) **Lace chape** with folded in butted joint and single pin or rivet. L: 32mm. Cu alloy.

Discussion

B.6.1 With the exceptions of the 2 coins none of the finds is closely datable. The lace chape (no. 19) from context 626 is late medieval or early post medieval in date. The drawn wire nail (no. 12) from context 301 is more recent in date. The horseshoe fragment (no. 2) from context 101 is probably late post medieval in date.

B.7 The glass by Ian R Scott

B.7.1 There are 30 pieces of glass comprising 21 sherds of vessel glass and 9 pieces of window glass. In addition there is a hard rubber screw cork from a bottle (context 301).

Summary Quantification of the glass by glass type (fragment count)

Context	vessel	window	other	Totals
101	14			14
102	1			1
301	5	2	1	8
500	1	2		3
626		5		5



Totals	21	9	1	31
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Catalogue

Context 101

(1) **Large milk bottle**. Part of base and heel, embossed with a label and inscription: 'UNITED DAIRIES LTD'. D: 98mm. Colourless. Machine moulded. 20th-century.

(2) **Soda water bottle**, complete (3 x frags). Machine moulded. Embossed back and front with monogram 'JB'. Also 'J BURGESS' 'LUTON' embossed vertically on body. Embossed around heel: 'GOLD MEDAL MINERAL WATERS'. Ht: 240mm; D: 64mm. Blue green metal. Early 20th century.

(3) **Bottle neck**. Short neck with added metal forming tooled finish with internal screw for screw cork. Ht extant: 67mm. Emerald green metal. Late 19th- early 20th-century.

(4) **Phial or pharmaceutical bottle**. Short neck and finish which could be from mould blown or free blown vessel. Out turned fire polished rim. Ht extant: 20mm. Colourless. 18th- to early 19th century.

(5) **Wine bottle base** with conical kick and mamelon. Ht extant: 50mm; D: 76mm. Light green metal. Probably 19th-century moulded bottle.

(6-7) **Wine bottle**. 2 x body sherds. Olive green metal. Not closely datable but may be machine moulded (ie. 20th-century).

(8) **Wine bottle**, sherd from neck. Dark green metal. Not closely datable.

(9) **Wine bottle** base /body. 2 x sherds, no clear refit, but similar metal, almost certainly parts of the same bottle. Ht extant: 60mm; D: 80mm. Dark green metal. Moulded. 20th-century.

(10) **Stemmed wine glass** with a plain foot and thin plain stem. . Colourless. D of foot: 64mm. Probable 20th-century.

(11) **Cylindrical bottle or vessel**, plain body sherd.

Context 102

(12) **Bottle neck**. Short neck with added metal forming tooled finish with internal screw for screw cork. Blue green metal. Late 19th- early 20th-century.

Context 301

(13) **Wide necked milk bottle**, rim sherd. Rim/finish has internal ledge or seating for card seal. Colourless. Machine moulded. 20th-century.

(14) **Wine bottle** body sherd. Olive green metal. Possibly moulded bottle of 19th-century date.

(15) **Wine bottle** body sherd. Olive green metal. Possibly moulded bottle of 19th-century date.

(16) **Wine bottle**. Body sherd from wine bottle. Olive green metal. Probably modern. Wine bottle. Body sherd from wine bottle. Olive green metal. Probably modern.

(17) **Screw cork** for soda or lemonade bottle, Embossed on top with a large 'W' with 'R WHITE & SONS Ld. LONDON' around edge. Late 19th- to mid 20th-century.

(18) **Body sherd**, small thick walled. Undiagnostic to vessel form. Pale blue green.

(19) **Window glass**, modern. Colourless with blue green tint.



Context 500

(20) **Stemmed glass**, incomplete bowl, probably round funnel, large merise between bowl and plain thick stem, small merise at junction of stem and incomplete foot. Ht extant: 86mm. Colourless. Not closely datable, late 18th-century or later.

(21) **Window glass**. Small weathered sherd. Post medieval or modern.

Context 626

(22) **Window glass** (5 x frags). Two largest fragments refit (46mm x 36mm). Weathered and partly devitrified. Possibly colourless. Post medieval.

Discussion

- B.7.1 The glass from context 101 comprises for the most part glass of late 19th- or early 20th-century date glass, but included part of milk bottle that probably dates to the 1st half of the 20th-century and a complete soda bottle which dates to the early 20th century. The neck and finish from small phial or pharmaceutical bottle could date as early as the 18th century and certainly unlikely to date later than the 19th century. The bottle neck and finish from context 102 is of late 19th- or early 20th-century date.
- B.7.2 The glass from context 301 includes a rim of a machine moulded wide necked milk bottle as well a number of sherds from wine bottles possibly of 19th-century date. Most of the sherds of wine bottle lack distinctive features that might reveal their date with some confidence. The hard rubber screw cork for an 'R Whites' bottle dates to the late 19th century or first half of the 20th century.
- B.7.3 The glass from context 500 could date to the late 18th or early 19th-century, but the dating is not absolutely certain. Post medieval window glass is difficult to date. The glass from context 626 cannot be closely dated.
- B.7.4 Overall the glass from all contexts would fit happily in a late 19th- or early 20th-century context.

B.8 The architectural stone by Alison de Turberville

Introduction and Methodology

- B.8.1 A total of 13 pieces of stone fragments were recovered from 5 different contexts. Each piece was examined for evidence of toolmarks and moulded detail. Without specialist lithological knowledge the source of the stone could not be identified on the majority of pieces.

Description/recommendations



- B.8.2 Reigate stone is present within the assemblage. This stone type is local to the region and it is used extensively the palace and pre palace buildings and because of this it is difficult to date. The fragments found in context (206) and (610) show no decorative details that can identify their use.
- B.8.3 The two fragments of moulded limestone may have originated from the nearby palace however the type of moulding cannot be identified and matched to known types.
- B.8.4 The samples recovered from context (304) have similar characteristics to the samples of paving recovered from the Hampton Court Palace Base Court excavation and so a tentative date can be given for these items.
- B.8.5 Overall the assemblage is of low potential and requires no further work.

Catalogue

Context	Description	Date
206	2 x fragments Reigate sandstone 1 x fragment limestone with fine quality scroll moulding detail	Medieval to post-medieval
301	1 x fragment dark brown coloured slate	Medieval to post-medieval
304	1 x fragment paviour in Purbeck Limestone with worn upper face 1 x limestone panel/paving stone, finely smoothed surfaces 1 x rubble limestone	18/19th century
610	1 x fragment Reigate sandstone 3 x fragments limestone with worked surface 1 x offcut of moulded limestone	Medieval to post-medieval
652	1 x fragment of moulded limestone, possible coping stone.	Medieval to post-medieval

B.9 The mortar samples *by Alison de Turberville*

Introduction and Methodology

- B.9.1 A total of 5 samples of mortar were recovered from different contexts. Each sample was examined for evidence of inclusions and lime content.

Catalogue

Context	Description	Date
304	Portland Cement sample. Mortar is white in colour with lime, charcoal and stone inclusions. Sample is small and flattened so formed part of a bonding or flat surface.	19th Century
401	Sample is a hard cream coloured lime mortar with pebble inclusions. Gritty to touch.	Medieval to post-medieval
404	Large sample of friable grey/white coloured lime mortar sample with many large limestone and some brick inclusions within. Possible fill or surface.	Medieval to post-medieval
503	Sample of grey/white coloured friable lime mortar with small limestone inclusions.	Medieval to post-medieval



Context	Description	Date
600	Small sample of friable grey/white coloured lime mortar. Tiny stone fragments and small quantity of lime in content.	Medieval to post-medieval

B.10 The bulk samples by Julia Meen

Introduction

B.10.1 Bulk samples were taken from three features for the recovery of artefacts. Context (610) was the primary fill of posthole [609]. Context (650) was an organic trample layer associated with context (600) and probably represented demolition. Context (504), from the basal layer encountered in a service trench, was thought to represent Ham River brickearth or alluvium which may have been reworked or redeposited. The three samples were given sample numbers <600>, <613> and <615> respectively.

Methodology

- B.10.2 Sample <600> was 15L in volume and was a loose, pinkish grey (7.5YR 6/2) sand with angular to subangular pebbles and small cobbles of pale yellow sandstone and green fine sandstone. Sample <613> was 10L in volume and was a loose, brown (7.5YR 5/3) silty sand with light greenish grey (10YR 7/1) mottles, with frequent angular to subangular pebbles and rare cobbles of sandstone. Sample <615> was 10L in volume and was a yellowish brown (10YR 5/4) soft, silty sand with rare pebbles and cobbles.
- B.10.3 The entirety of each sample was wet-seived to 0.5mm, with the residues separated into successively finer fractions and dried in a heated room. The residues were then sorted by eye for bones and artefacts.

Results

(Fish bone identifications by Rebecca Nicholson and Mammal bone identifications by Lena Strid)

- B.10.4 Sample <600> contained a small number of fragments of ceramic building material (CBM), a small concreted iron item, and four fish bones.
- B.10.5 Sample <613> contained a fragment of oyster shell (*Ostrea edulis*), several fragments of CBM, and a small fragment of copper alloy. Fish bone was present, mostly of small flatfish, with herring (*Clupeidae*), cod/whiting (*Gadidae*), and possible small pike (*Esox* sp.) also present. The mammal bone assemblage included sheep (*Ovis* sp; tooth and tibia) and chicken (*Gallus gallus*; femur). A bird sternum and rib, and several ribs and a vertebra belonging to a medium sized mammal, were also present.



B.10.6 Sample <615> contained two burnt flints, a vertebra of eel (*Anguillidae*), a bone of a small non-passerine, and two teeth of a hedgehog (*Erinaceus europaeus*) sized mammal.



APPENDIX C. BIBLIOGRAPHY AND REFERENCES

HRP, 2009 Interim Statement of Significance: Trophy Gate, Hampton Court Palace

OA, 1992 Field work Manual (ed. D.Wilkinson)

OA, 2009(1) Hampton Court Palace, Trophy Gate: Archaeological Watching Brief Report

OA, 2009(2) Hampton Court Palace, Base Court Resurfacing Works: Post excavation Assessment

OA, 2010(1) Hampton Court Palace Privy Garden Collapse: Archaeological Evaluation Report

OA, 2010(2) Hampton Court Palace, Base Court Resurfacing Works: Addendum to Assessment Report

OA, 2011 Hampton Court Palace, Trophy Gate Apron Project: Archaeological Watching Brief Report

OA, 2012(1) Trophy Gate Trench: Archaeological Watching Brief Report

OA, 2012(2) Kensington Palace: A Palace for Everyone: Archaeological Watching Brief report

Page, W (ed.), 1911A *History of the County of Middlesex*: Volume 2 VCH

Thurley, S, 1990 The Sixteenth-century kitchens at Hampton Court, *Journal of the British Archaeological Association*, **CXLIII**

Thurley, S, 2003 *Hampton Court: A Social and Architectural History*, London: Yale University Press



APPENDIX D. SUMMARY OF SITE DETAILS

Site name: Toy Green, Hampton Court Palace
Site code: HCP099
Grid reference: TQ 15446 68572
Type: Evaluation and Watching Brief
Date and duration: September 2012, 5 days; February 2013, 10 days

Summary of results:

During September 2012, Oxford Archaeology carried out a field evaluation in advance of the re-landscaping of Toy Green, Hampton Court Palace. The evaluation revealed what is almost certainly the northern wall of The Toy Inn, together with a surviving remnant of an internal brick floor and a possible ancillary building or garden wall which does not appear to be depicted on any of the surviving cartographic sources. Additionally, evidence for 20th century landscaping was revealed, which is likely to relate to the construction of the new Hampton Court Bridge and the deepening of the river channel in the early 1930s.

During February 2013 a watching brief was also maintained during the re-surfacing and landscaping works. The watching brief revealed evidence for multiple phases of landscaping, in addition to deposits which are likely to represent earlier surfaces to the west of the Trophy Gate. The bedding layers for these surfaces comprised possible masons' waste which may have originated from the yards and workshops known to have occupied Outer Green Court in the 16th and 17th centuries. In addition to these surfaces, a brick built cruciform structure was revealed immediately to the west of the Trophy Gate - which was on the same alignment as a NE-SW aligned wall revealed during an earlier watching brief to the south - and may have represented a configuration of the entrance to the Palace pre-dating the construction of the existing structure in 1701. It is possible that this earlier structure is that known to have been constructed on the site of the later Trophy Gate in the first half of the 16th century.

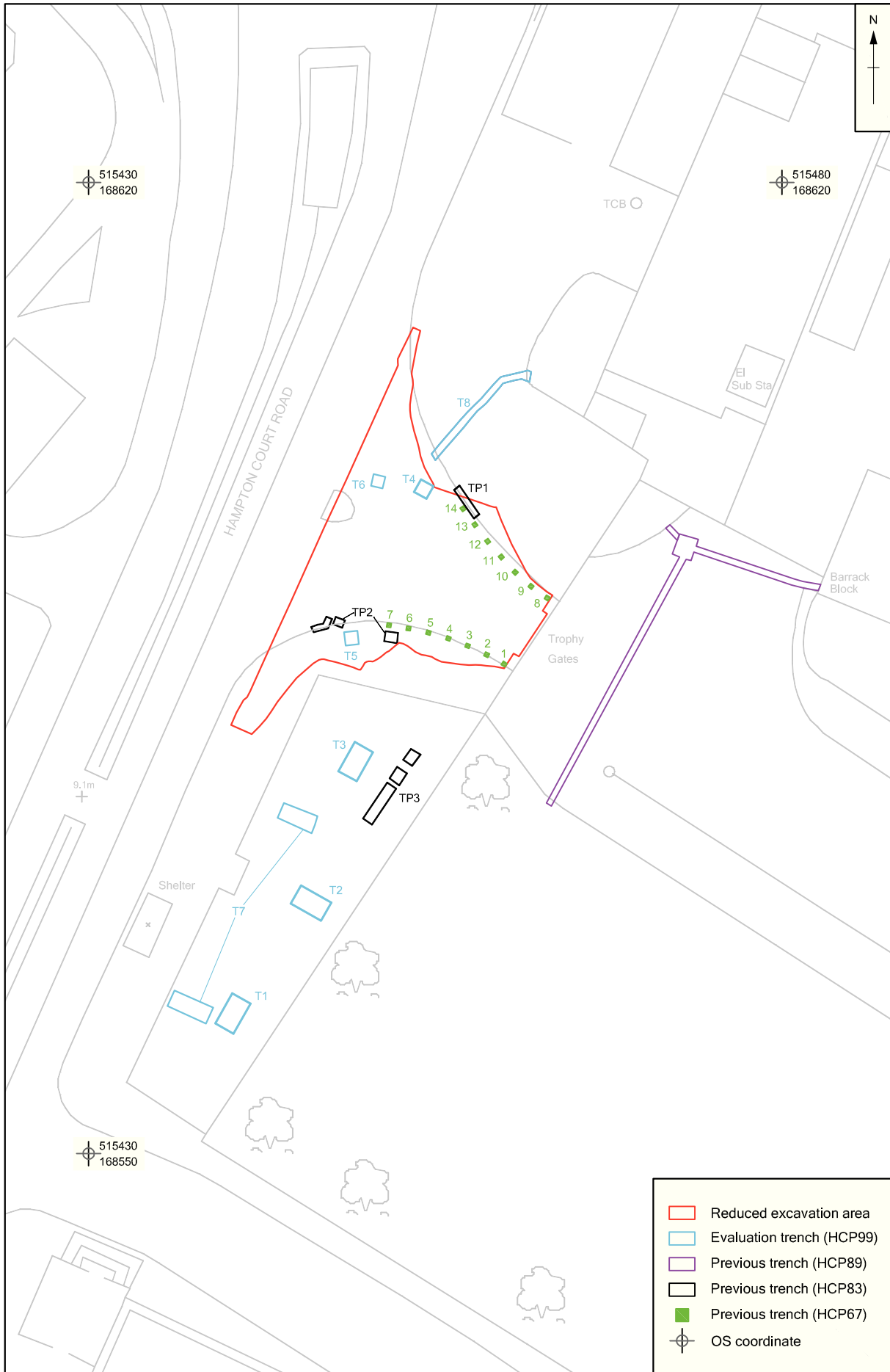
Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with HRP, in due course, under the following accession number: TBC



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Figure 1: Site location

X:\HCP099EV_Toy Green\010Geomatics\02 CAD\001current\HCP99EV_Toy Green_Fig3_160713.dwg(Figure 2)***HCP99EV\leo.heatley* 16 Jul 2013



0 20 m
Scale at A4 1:400

Figure 2: Location of previous archaeological works



- Reduced excavation area
- Evaluation trench (HCP99)
- Previous evaluation trench (HCP83)
- Gas main
- Structure — Phase II
- Structure — Phase IV
- Crushed & compacted limestone (Category A)
- Re-deposited sand & gravel (Category B)
- Crushed & compacted brick and tile (Category C)
- Rubble & sand, possible demolition (Category D)
- Demolition (Category E)
- Basemap
- ↔ Section line
- + OS coordinate

0 10 m
Scale at A3 1:200

Figure 3: HCP99 - Trenches in relation to Thomas Fort Map

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Plate 1: Trench 1 - looking SE



Plate 2: Trench 2 - looking SE



Plate 3: Trench 3 - looking NW



Plate 4: Reduced dig - looking NW



Plate 5: Wall 629 - looking N



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