ERRATA - 20 JULY 2016

To PCA report Number R 12278

Maher, S, 2015
'The Orangery Yard, Kensington Palace: An Archaeological Investigation', unpublished PCA report;

Archaeological site code KEN27

During recent works completed to the Orangery Lawn it was discovered that an incorrect Bench Mark had been used by PCA to calculate the OD heights of all archaeological features and remains during the project herein reported. At the fieldwork stage a bench mark located on the north-east face of the Orangery was used, believed to have a value of 27.66m OD.

It is now realised that this value was incorrect.

We have calculated and verified that the actual value of the BM used during the fieldwork is 28.04m OD.

In effect, therefore, all of the OD heights contained within this report are actually 0.38m too low, and should be increased by this amount to give their true value.

PRE-CONSTRUCT ARCHAEOLOGY

THE ORANGERY YARD, KENSINGTON PALACE

AN ARCHAEOLOGICAL INVESTIGATION

PCA REPORT NO: 12278

SITE CODE: KEN27

NOVEMBER 2015

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DOCUMENT VERIFICATION

THE ORANGERY YARD, KENSINGTON PALACE

AN ARCHAEOLOGICAL INVESTIGATION

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THE ORANGERY YARD, KENSINGTON PALACE

AN ARCHAEOLOGICAL INVESTIGATION

Site Code:	**KEN27**
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PCA Report No: R12278

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1 ABSTRACT

1.1 This report details the results of an archaeological investigation at Kensington Palace by Pre-Construct Archaeology Ltd. The works were conducted between the 10th and 25th August 2015 and 15th and 24th February 2016.

1.2 The work was commissioned by Historic Royal Palaces (HRP) and comprised the excavation of one evaluation trench (Trench 1), three test pits (TP2, TP3, TP4) and two starter pits for a borehole survey (BH1, BH2), to determine the nature of archaeological deposits surviving in the area to the rear of the Orangery at Kensington Palace. Excavation of TP 3 was stopped after a short period because of the concentration of live services.

1.3 Historic Royal Palaces commissioned the project primarily to ascertain the depth of the foundations of the Orangery and the presence or absence of archaeological remains. These works follow on from an earlier evaluation conducted by Pre-Construct Archaeology Ltd (Jackson & Brooks 2014).

1.4 Natural London Clay was noted in BH 1, BH 2 and Trench 1. In the northern end of Trench 1 a deposit of natural brickearth type material was seen sealing the clay.

1.5 The earliest archaeological activity seen on site came from layer of redeposited brickearth which contained sherds of late Iron Age pot.

1.6 The next phase of activity was represented by three possible plant beds which were covered by slightly later horticultural horizons, seen in BH 1. These are considered to pre-date the Orangery, which was built in 1704.

1.7 The base of the brick footings of the Orangery was noted in TP4 at 25.24m OD, as was a small section of the construction cut. Other structures dating to the 18th century including a brick wall (possibly contemporary with the Orangery), a compacted gravel foundation pad and a brick culvert were recorded in Trench 1. The wall and foundation pad suggest the presence of exterior structures in the area behind the Orangery. The brick culvert was also encountered in TP 2 where it appeared to terminate. A large void, possibly the remains of a well, was seen under and to the southeast of the culvert in the south of Trench 1 within the blind-arch in the northern façade of the Orangery.

1.8 In TP 2 the remnant of a mortar surface/bedding deposit was recorded; this was truncated by a brick inspection chamber and by modern live services. The inspection chamber extended into TP4.

1.9 Evidence of 18th-19th century garden related activities were seen in the north of Trench 1. These included four possible plant beds and the remains of a shallow red brick border.

1.10 In the late 19th century various landscaping and surface deposits were noted across Trench 1. Activity from the 20th century included the upper layers of the earthen bank that partly covered Trench 1 and the various live services that traversed the study area.

1.11 All masonry remains were recorded and left *in situ*.

2 INTRODUCTION

2.1 An archaeological investigation was conducted by Pre-Construct Archaeology Ltd at the Orangery Yard, Kensington Palace in the London Borough of Kensington and Chelsea (Figure 1). The Orangery Yard has been earmarked for potential development by Historic Royal Palaces.

2.2 The works comprised one evaluation trench, Three test pits against the northern wall of the Orangery to ascertain the depths of its foundations and two test pits to act as starter pits for two boreholes (Figure 2). The evaluation trench was designed to locate a wall which can be seen on the John Smith Drainage Plan 1754 (Figure 8) to enclose the yard, and to investigate the below ground elements of the blind arch seen on the northern wall of the Orangery as well as any other archaeological features or deposits that may be present.

2.3 The work was undertaken from 10th to 25th August 2015 and 15th to 24th February 2016 following a 'Brief' prepared by the Assistant Curator of Kensington Palace, Fiona Keith-Lucas of Historic Royal Palaces (2015).

2.4 The site comprises an area immediately to the rear (north) of the Orangery at Kensington Palace, partially situated in a plant bed covered in thick shrub, on fairly uneven ground. The central National Grid Reference of the site is TQ 2586 8019.

2.5 The evaluation was supervised by Shane Maher and was managed by Chris Mayo of Pre-Construct Archaeology Limited. The archaeological works were inspected and monitored by Fiona Keith-Lucas of HRP and Jane Sidell, Inspector of Ancient Monuments for Historic England.

2.6 The Orangery is a Grade I listed building and lies within the Kensington Palace Scheduled Ancient Monument. Scheduled Monument Consent for the investigative work was obtained by Historic Royal Palaces.

2.7 Previous investigations conducted at the site (Jackson & Brooks 2014) revealed a brick wall foundation, possibly associated with the construction of the Orangery or the yard wall, made ground layers pre-dating the wall foundation, compacted gravel deposits, 19th century landscaping material and a wall foundation associated with 19th century public toilets.

2.8 The site was given the unique site code KEN27 and accession number 3910013 by HRP and all site archive material was labelled with that code. The archive from the investigation will be deposited at the Historic Royal Palaces store at Hampton Court Palace.

3 GEOLOGY AND TOPOGRAPHY

3.1 The British Geological Survey 1:50,000 series Sheet 256 (North London) and Sheet 257 (South London) indicate that the site is underlain by Quaternary Post-diversionary Thames river deposits composed of Lynch Hill Gravels, located atop basal London Clay.

3.2 The site is located on a generally flat plateau at around 27.50m OD, although the topography of the area investigation is dominated by a raised planting bank to the north of the Orangery, which rises to approximately 28.50m OD

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The following archaeological and historical background is taken from the previous evaluation report (Jackson & Brooks 2014) and covers only the post-medieval period, which is of most relevance to this investigation.

4.1 16th Century

4.1.1 Hyde Park was acquired by King Henry VIII in 1536 and 600 acres were converted into a deer park. Bayswater Road, named Acton Road in the 16th century, marked the northern boundary of the park, whilst the forerunner of High Street Kensington delineated the southern boundary. In 1599, it was sold to Sir Walter Cope, joint Keeper of Hyde Park and Chamberlain of the Exchequer.

4.2 17th Century

4.2.1 At some point before his death in 1614, Sir Walter Cope sold off a strip of land that would later become the grounds of Kensington Palace. It was bounded by Hyde Park to the east, Kensington Church Street to the west, Acton Road to the north and the forerunner of Kensington High Street to the south. George Coppin, Clerk of the Crown and friend of Cope's, purchased the land between 1605 and 1614.

4.2.2 Coppin was responsible for the first phase of Kensington Palace's construction, between 1605 and 1620. He commissioned a villa-style Jacobean mansion, probably designed by land surveyor and antiquary John Thorpe. The villa was rectangular in plan, its long axis being orientated east-west. This would later become the Palace's core, around which later additions would be added.

4.2.3 The estate was sold to the Finch family sometime around 1630. Deeds from the sale suggest the grounds consisted of ornamental gardens combined with orchards, woodland, pastoral and arable land. A series of outbuildings are also listed, including barns and stables. The writings of Samuel Pepys, who visited the house in 1664, mention the presence of a fountain. A "marble conduit" and a grotto, situated in a plot next to the southwest corner of the main building, were documented in 1662. The estate remained in the possession of the Finch family for three generations. It became known as Nottingham House after Sir Heneage Finch II was made 1st Earl of Nottingham in 1681.

4.2.4 In 1689, the Monarchs William and Mary purchased Nottingham House from Daniel Finch, 2nd Earl of Nottingham. The building became known as Kensington House when the Royal Court took up residence, sometime after 1689.

4.2.5 There have been stages of modification, repair and improvements made to Kensington House throughout the 17th and 18th centuries which continue to modern day.

4.3 18th Century

4.3.1 During the reign of Queen Anne (1702-1714) as part of an extensive rejuvenation of the

gardens, to a cost of £26,000, several outbuildings to the Palace were constructed. The most prominent of these was The Orangery, which was constructed under the direction, and probably to the designs of Nicholas Hawksmoor and Sir John Vanbrugh in the style known as 'Queen Anne' or English baroque. The building has been used for several purposes through its history, including receptions, a greenhouse for the wintering of exotic plants and for ceremonies such as the distribution of the Maundy money and 'touching the King's (or Queen's) Evil'.

4.4 19th Century

4.4.1 After Victoria became Queen (1837-1901), Kensington Palace ceased to be occupied as a residence. The State Apartments were neglected and as a result, the structural fabric of the building deteriorated. In 1897, Parliament was persuaded to pay for restorative building work, the aim of which was to recreate the Palace of George II. After the work was completed, the State Apartments were opened to the public and used as an exhibition space. This took place on the Queens 80th birthday, on 24th May 1899.

4.4.2 During the period of neglect at Kensington Palace, the gardens and outbuildings also suffered, including The Orangery. The building experienced some decline, and by the 1880s was used as a potting shed. It was eventually restored in 1898 as an indoor shelter from the weather, and was occasionally used as a studio to restore paintings.

4.5 20th Century

4.5.1 The last major refurbishment of The Orangery took place in 1976 when the Portland Stone internal paving was re-laid. Since the 1980s the building has been used as a restaurant and venue for private functions.

4.6 Site Specific

4.6.1 A Brief prepared by Historic Royal Palaces in advance of previous investigations at the site (Prosser and Keith-Lucas 2013) included the following statement regarding The Orangery, which was constructed in 1704-5 under the direction, and probably to the designs of, Nicholas Hawksmoor and Sir John Vanbrugh.

> *No original plans for the building survive, but plans of The Orangery do survive from the early 18th century…[and the earliest detailed drawing showing the yard is represented by the so-called Drainage Plan of 1754, where the building appears on the periphery, with little surrounding context. Renewal of the stone paving in the 1970s revealed a system of underground culverts and vaults which channelled hot air through the building, as would be expected of a structure of this type, which was essentially used as a greenhouse in its early days. We must presume, in the absence of other evidence, that this was fuelled by a furnace nearby; the rear of the building seems the most likely location. The map evidence shows a yard to the rear of the building, which appears surrounded by a curtilage wall. Besides external entrances, a single door gave access from the rear apse – this survives today. A nineteenth century photograph of*

the Orangery suggests that this wall was fairly high, and survived until modern times.

Public lavatories were built on the east side of this rear plot in the early 20th century – these were reconstructed in the 1960s.

4.6.2 The brief for the most recent work (Keith-Lucas 2015) included a background more specific to the Orangery Yard:

3.1 A Statement of Significance for the Orangery and Orangery Yard at Kensington Palace was prepared by Curator Lee Prosser in 2011. The Orangery, dating from 1704, is Grade 1 listed and of exceptional architectural significance. Less is known, however, of the area immediately to the north; the Orangery Yard.

3.2 Early plans depict a green curtilage to the rear of the Orangery; a fairly plain and unpretentious area set against the formal arrangement of the Wilderness garden immediately to the north. A single entrance connected this area to the Orangery; a doorway through the rear apse of the Orangery which survives today.

3.3 A plan of 1754 shows the area bounded by a wall. This was targeted with five archaeological evaluation trenches by PCA in 2014 (Jackson and Brooks 2014). The trenches revealed the site to be covered with services; hence not all trenches were able to reach a satisfactory archaeological horizon. None of the trenches reached deposits predating the 17th century. The possibility of finding features from any period (prehistoric to early modern) must certainly be taken into account.

3.4 The earliest deposits encountered during the evaluation were in the central Trench (Tr 5) and Trench 4 to the west. Here, at c.1.5m below ground level, the deposits were interpreted as 17th century landscaping of the area prior to the construction of the Orangery and the Yard. Cut features were seen at this level and may well have survived unaffected by later intrusions across the footprint of the proposed development. It is therefore probable that the area preserves the pattern, at least in part, of the garden prior to the construction of the Orangery; most likely the original scheme for Kensington as designed by Wise and London, but perhaps also preserving elements of the garden laid out for 17th century Nottingham House.

3.5 The wall was seen only in Trench 4; to the west of the site. Here, the reused brick foundation was 0.90m wide, resting at 1.5m below ground level. The yard wall was thought to date from the same period as the Orangery itself. The foundation terminated 2.28m north of the Orangery indicating a wide opening into the Orangery Yard. The location of this opening was noted as different from that shown on the 1754 plan, bringing the plan's reliability into question. It may be that the wall was not encountered in Trench 5 (targeted from the 1754 plan to reveal the northern wall of the yard) due to the plan being inaccurate here also.

3.6 The extent of the original yard is therefore still unknown, and its purpose can currently only be speculated upon. The Orangery preserves an under-floor heating system

based on brick-built culverts that were excavated in 1976. The culvert that feeds into this system enters the Orangery via the northern apse, presumably from a furnace located within the Yard. It is supposed that this might have swung to the west of the yard since the doorway is located to the west (doors often overlie culverts), but this is conjecture. Nothing is known about the nature or extent of this heating supply, nor of any wider system of coal stores and associated structures. We are therefore entirely dependent on the archaeological record for understanding this system and the development of the yard during the 18th – 19th century.

3.7 A 19th-century photograph of the Orangery suggests that the yard wall was fairly high and survived until modern times. By the late-19th century the wall had disappeared, replaced by extensive shrubbery and planting. The nature of the enclosure at this time is not clear, but is likely to have been a low fence or railings.

3.8 The 1903 palace survey shows an enlarged rear yard, fringed on the east by the first public lavatories constructed on the site (found during the 2014 archaeological evaluation). This same plan is later annotated (after 1912) to depict the positions of the 'old shed removed' and the 'old stables etc. removed'; buildings which were no longer standing by 1916. The public lavatories were reconstructed further to the west in *c*.1966, with the rest of the back-of-house facilities growing up piecemeal ever since. The foundations of these buildings, along with the services that feed them, will have truncated much of the upper reaches of the archaeological sequence in the yard. Nevertheless, the evaluation demonstrated that the significant archaeological deposits lie below this later truncation; sealed by repeated building up of the area.

5 METHODOLOGY

5.1 All excavations at the site were undertaken and facilitated by a groundworks contractor (L. W. Burrows Ltd) appointed by HRP and working in close association with PCA.

5.2 Two starter pits (BH 1 and BH 2) were excavated to confirm the presence or absence of surfaces or structural remains prior to the borehole investigation. A CAT scanner was used on each pit to locate and avoid services before groundworkers employed by Historic Royal Palaces broke the ground. All underlying deposits were excavated by hand either by the groundworkers (under archaeological supervision) or by the archaeologists whenever significant horizons were encountered. A 360° mini digger was then used to dig 0.3m wide sondages through the base of each test pit to confirm the presence of natural deposits. The starter pit for BH 1 was recorded with the identifier BH 1, measured 1.2m x 1.2m and had a finished depth of 2.1m. The starter pit for BH 2 measured 1.2m x 1.2m and had a finished depth of 1.27m (Figure 2).

5.3 The evaluation trench (Trench 1) extended from the northern wall of the Orangery by a length of approximately 15.7m, to its practical limit of excavation (LOE) which was a number of live services. It incorporated the proposed Test Pit 1 at its southern extent (against the Orangery wall) (Figure 2). Various live services were detected by CAT scanner across the length of Trench 1 prior to the excavation. The trench was excavated to a depth of either 1.2m or to the top of significant archaeological deposits by the mini digger, then the investigations continued by hand. Shoring was installed when the depth of the archaeological deposits exceeded 1.2m.

Plate 1: Trench 1 looking south, pre-excavation, showing earthen bank and the blind arch on the north wall of the Orangery

Plate 2: Trench 1, with shoring, looking south showing foundation pad [23], wall [41] and the partially obscured blind arch on the north Orangery wall.

5.4 The three test pits (TP2, TP3, and TP4) were hand excavated against the northern wall of the Orangery to ascertain the depth and form of the foundations (Figure 2). CAT scanning detected live services in all three test pits. TP2 was located to the east of TR1 and measured 1.6m (N-S) x 2.0m (E-W) with a finished depth of 1.25m. TP3 was located 0.4m to the east of TR1 and measured 1.5m x 1.5m and 0.4m deep. TP4 was located to the immediate east of TP2 and measured 2.0m x 1.9m x 2.45m deep. The foundations of the Orangery were encountered in TP4. In TP2 excavation ceased due to the presence of a late 18th-early 19th century culvert [55] and TP3 was abandoned because of the live services.

Plate 3: TP 3 looking west showing live services and Trench 1 in the background, 1.0m scale

5.5 Following excavations all relevant faces of each trench were cleaned using appropriate hand tools, and were recorded both in plan (at 1:20) and in section (at 1:10). Descriptions of all deposits were recorded on pro-forma sheets. Photographs were taken as appropriate. The trenches were located by measuring to nearby fixed points which could be correlated to OS

map detail.

5.6 Heights above Ordnance Datum used in this report were calculated from an OS benchmark (value 27.66m OD) on the northeast corner of the Orangery. A temporary benchmark was established at 26.99m OD on a rain water gulley located on the footpath in the north of the site.

6 ARCHAEOLOGICAL PHASE DISCUSSION

6.1 Phase 1: Natural

6.1.1 The earliest deposits encountered during the excavations were layers of London Clay seen in BH 1, BH 2 and Trench 1. In BH 1 the clay [9] was a mid-brownish yellow colour seen at 26.16m OD with a thickness of c. 3.3m. As seen in BH 2 the clay [16] was a light-brownish yellow colour, noted at 26.11m OD to be 1.2m thick. In Trench 1 the clay [60] was a light brownish grey colour and was recorded at 26.45m OD with a thickness over 0.8m.

Plate 4: BH2 looking east showing natural clay [16] at the base of the test pit and crushed red brick layer [14], 0.4m scale.

6.1.2 In the north of Trench 1 the London Clay [60] was overlain by a layer of mid to dark, brownish yellow brickearth type material [59], which was seen at 26.62m OD to be 0.25m thick. A deposit of similar material [73] was noted in the southern portion of the trench at 26.36m OD.

6.2 Phase 2: Iron Age

6.2.1 Two similar layers of disturbed brickearth material [58], [75], consisting of light brownish yellow, sandy clay with occasional charcoal flecks, were recorded in the north of Trench 1 (Figures 5 & 6). These were noted between 26.90m OD and 26.78m OD extending beyond the trench limits. Layer [58] was seen in section with a thickness of 0.29m and contained 3 sherds of late Iron Age pot.

6.3 Phase 3: Pre-1704

6.3.1 Three shallow pit cuts [6] (fill [5]), [8] (fill [7]), [12] (fill [11]) were noted above the natural alluvial clay [9] in BH1 (Figure 3). No brickearth was encountered in this borehole or in Borehole 2. These have been interpreted here as possible early garden features and were filled with similar deposits of light brownish grey, clay with occasional charcoal flecks and CBM. Pit [12] was only seen in section, with a gradually sloping northern edge and an almost even base, at 26.16m OD with a depth of 0.2m. The portion of [6] which was seen in plan was recorded at 25.95m OD measuring 0.4m (N-S) x 0.6m (E-W) with a depth of 0.15m, the rest of the feature

lay beyond the southern LOE. The cut was described as sub-rectangular shaped with steeply sloping sides and a horizontal base. *Circa* 0.2m to the west of [6], pit [8] was seen extending into the western and southern LOE at 25.95m OD. Only a fraction of the north-eastern edge of the feature was evident in plan, having a slightly curved shape with shallow gently sloping sides, only 50mm deep. As exposed it had dimensions of 0.1m (N-S) by 0.3m (E-W).

Plate 5: BH 1 looking south, showing shallow pits [6] and [8], 0.4m scale

6.3.2 The pits were sealed by a 0.3m-thick layer of light brownish grey clay [4] which was encountered at 26.35m OD and extended beyond the limits of excavation (LOEs) on all sides. Above this was a layer of mid-greyish brown sandy clay subsoil [3] with occasional CBM fragments, charcoal flecks, pot and CTP stems. The pot was dated 1600-1700.

6.3.3 A deposit of light to mid yellowish brown clay [84] was recorded in the base of TP4 at 25.42m OD. It was not possible to ascertain whether this was natural material as the confines of the test pit prevented further excavation.

6.4 Phase 4: 18th – 19th Century

6.4.1 The earliest activity from this phase was noted in TP4: this was the construction cut [88] for the Orangery. It was noted at 25.39m OD in the east-facing section and extended beyond the excavation limits. The visible portion of the cut measured 0.45m north to south with a depth of 1.14m.

6.4.2 The section of the Orangery wall [86] that was revealed during the works in TP4 comprised a three step brick footing that descended 2.4m (27.64m OD) from the present ground level to the base of the brickwork (25.24m OD). Each step was 60mm wide giving a combined width of 0.18m (Plate 16). The basal course of bricks appeared to sit on a thin bed of sandy mortar. It was not practically or safely possible to obtain any further information on the bedding material. Two construction backfill deposits were noted: the primary fill was a very compact, mid-grey brown clay [83] with moderate inclusions of CBM and charcoal flecks. This was noted at 26.16m OD to be 0.9m thick. The upper fill [82] was a compact light to mid brown grey silty clay with occasional charcoal flecks, CBM and small sub-rounded gravels. It was seen at

26.39m OD and was 0.27m thick.

6.4.3 A 0.06m thick layer of broken red roof tiles [81] was recorded at 26.46m OD sealing the construction back fill material. This is possibly a thin demolition layer or it could be the remnant of a working surface. The tile layer was covered by a 0.78m-thick deposit of mid grey brown silty sand [80], which was noted at 27.24m OD.

6.4.4 Approximately 3.1m to the north of the southern edge of TR1 (the north wall of the Orangery) a segment of an east to west wall [25] was recorded at 26.84m OD extending beyond 1.15m into the east and west LOEs (Figure 5). The brickwork was 11 courses high (0.95m) and 0.58m wide and consisted of whole narrow post great fire unfrogged bricks (fabrics 3032, 3046), 220mm x 100mm x 60mm, with hard grey type gravel mortar. The construction cut [70] for wall [25] was seen in plan and section, at 26.36m OD, with gentle to steeply sloping sides. It was not possible to reach the base of cut, which also extended beyond the trench edges leaving the visible segment measuring 0.45m (N-S) x 1.2m (E-W) x 0.5m deep. Two construction backfill deposits were noted: a clay [72] lower fill and an upper redeposited brickearth fill [71].

Plate 6: Trench 1 looking northeast showing foundation pad [23], wall [25] and the upper portions of section 4, 1.0m scale

6.4.5 To the south of [25] a sequence of layers that extended beyond the east and west trench limits were recorded. The earliest of these was a surface [61] consisting of compacted light to mid grey brown silty clay with occasional CBM and charcoal flecks. This was noted at a low point of 26.12m OD near to the north wall of the Orangery rising to a high point of 26.29m OD where the surface overlay [25]. Its overall length was 2.45m (N-S) and width was over 1.0m, as it went beyond the trench edges (Figures 5 & 6).

6.4.6 Covering this was a 0.28m-thick layer of dark blackish brown, sandy silt [31] with frequent charcoal flecks, ash and moderate mortar and CBM fragments. The layer had a length (N-S) of 2.05m and was seen descending in height from 26.45m OD at [25], to 26.29m OD c. 1m from the Orangery wall. Pottery, CTP, glass, CBM and animal bone were recovered from the

layer suggesting an 18th – 19th century date.

6.4.7 A layer of mid brownish grey clayey sand [39] containing pot, CBM and CTP sealed [31]. This was recorded at a high point of 26.40m OD and a low point of 26.29m OD. Its length was 0.53m and thickness 0.32m. The finds suggest a date in the late 18th century.

6.4.8 A thin deposit of pea-gravels [30] measuring 2.25m in length (N-S) and 0.15m thick was seen between 26.57m OD and 26.39m OD covering [39]. This has been interpreted as a possible surface deposit.

6.4.9 To the north of [25] and covering the upper backfill [71] a layer of redeposited brickearth [52] containing occasional, pot, CTP and CBM fragments was noted between 26.85m OD and 26.69m OD. This extended 3.0m north from [25] to a later truncation [50]. The finds recovered from the layer suggest an18th century date.

6.4.10 Made ground consisting of mid yellow brown clayey sand [22] was recorded in section sealing [52] and [30]. This was seen between 27.01m OD and 26.59m OD measuring 2.32m long (N-S) and 0.41m thick. The deposit included moderate to frequent pot, CTP, CBM fragments and animal bone which were dated to the late 18th to mid-19th century.

6.4.11 A layer of redeposited brickearth [46], containing occasional pot and very small CBM fragments was noted in the middle of the trench between 26.49m OD and 26.42m OD. The layer measured 1.2m long (N-S) and extended beyond the east and west LOE's. Pottery recovered was dated 1650-1800.

6.4.12 Covering [46] was a 0.14m-thick band of sandy pea-gravels [45], possibly the remains of a surface. The surface was noted descending to the north between 26.59m OD and 26.48m OD and measuring 1.2m in length (N-S).

6.4.13 The surface was sealed by a mid grey brown sandy gravel [44] which was recorded at 26.7m OD measuring 1.61m long (N-S) with a thickness of 0.21m.

6.4.14 What has been interpreted as a plant bed border [74] was seen extending into the east and west LOE's and truncating the northern edge of [44]. This comprised two rows (0.22m) of poorly preserved unfrogged, half-batt red bricks laid almost east to west with a slight slant in level to the south. A high point of 26.66m OD was recorded on the northern edge of the brickwork and the low point was at 26.57m OD on the southern edge.

6.4.15 Evidence of four possible plant beds was observed to the north of [74]. Three of the beds [63] (fill [62]), [65] (fill [64]), [67] (fill [66]) were seen in the southwestern section of Trench 1 (section 5 in Figure 6, Plate7) cutting into the late Iron Age layer [58]. These were filled with similar deposits of light brownish grey clayey silt. Bed [63] was recorded at 26.89m OD and measured 0.6m long (N-S) with a depth of 70mm. Circa 0.1m to the north, [65] was seen at 26.9m OD with a length of 0.7m and a depth of 0.18m. The northern edge [65] was truncated by [67] which was also seen at 26.9m OD. This bed measured 1.3m long (N-S) and 0.27m deep. The fourth bed [69] (fill [68]) was noted in plan c. 0.92m to the north of [74] at 26.78m

OD. The cut was sub-oval to sub-rectangular shaped with gently sloping sides and a concave base measuring 0.42m (N-S) x 0.54m (N-S) and 0.15m deep. A deposit of dark brownish grey silty clay [68] with occasional charcoal flecks, pot and CBM fragments filled the cut. Pottery dates suggest the feature is 18th/19th century.

Plate 7: Trench 1 looking southwest showing section 5.

6.4.16 A layer of made up ground consisting of mid-reddish brown sandy gravel material [43] was recorded at 26.96m OD sealing [69] and [74]. This was 1.6m long (N-S) with a thickness of 0.27m. To the south the layer was truncated by a modern service cut.

6.4.17 The construction cut [24] for a compacted sand and gravel foundation pad [23] was seen cutting into layer [22] at 26.87m OD. The pad [23] was at least 0.8m (N-S) x 0.7m (E-W) and 0.58m deep as it extended beyond the eastern LOE (Figure 6, Plate 6). No evidence of an upper structure was apparent during the investigations.

6.4.18 Covering foundation [23] was a layer of light brownish grey sandy gravel [48]. This was recorded between 27.16m OD and 26.99m OD, was 2.64m long (N-S) and 0.35m thick. At its northern extent it was truncated by the construction cut [50] for a collapsed and backfilled drain (Figure 6). A modern service cut truncating the northern side of [50] had caused the drain to collapse. It is possible that this feature was the drain indicated on the John Smith Drainage Plan of 1754 (Figure 8). The cut was noted at 26.98m OD and ran roughly east to west extending into both trench edges, to the north it was truncated by a modern service cut. This left the visible portion of the cut measuring 0.62m (N-S) x 1.2m (E-W) and over 0.36m deep (the cut was not bottomed). Two fills were recorded: the lower fill [49] was a clay silt deposit and the upper fill [51] consisted mainly of demolition material, some of which was dated to the later part of this phase (late 19th century). Of these fragments, one included a possibly intrusive post-1899 fragment of drain from Doulton's of Lambeth (Appendix 3), further suggesting that this cut was a drain which may have been decommissioned and removed.

6.4.19 A 2.83m-long (N-S) by 0.16m-thick layer of sand and gravels [20] was seen in section at 27.14m OD above layer [48]. It was sealed by layer [19] which consisted of dark brownish

grey silty sand, which was interpreted as a former topsoil. It was recorded at 27.25m OD and was 2.25m long (N-S) by 0.15m thick. To the south it was truncated by a cut [40] which was noted at 27.22m OD measuring 0.65m long (N-S) and 0.2m thick. Filling the cut was a deposit of mid to dark greyish brown silty sand [21], similar to [19] .The location and shape of the cut and the material filling it suggest it is the remnant of an old planting feature.

6.4.20 In the south of Trench 1 a 60mm-thick lens of loose mid-greyish brown silty sand [38] containing very frequent charcoal was observed at 26.76m OD, above [22]. The southern limit of [38] was covered by a layer of mid-greyish brown clayey sand [37] with occasional charcoal flecks and slate fragments. This was recorded at 26.62m OD measuring 1.25m long (N-S) and 0.13m thick. A heavily truncated made ground deposit [36], consisting of mid yellowish brown sandy silt with occasional CBM fragments, sealed most of [37]. The deposit was seen at 27.36m OD and was truncated to the north by a 20th century cut [32] and to the south by construction cut [35]. The base of the surviving material was 0.91m long and its thickness was 0.9m. These deposits [36], [37], [38] could be fills or possibly tip lines following the demolition of [25], but due to of the actions of cuts [32], [35] and the limited scope of the investigations this cannot be verified.

6.4.21 Cut [35] was a linear N-S construction cut for a brick culvert [41] which ran parallel to and abutted the northern wall of the Orangery. The cut was seen in section at 26.97m OD and extended beyond the eastern and western trench edges. The visible segment was 1.12m wide (N-S) and 0.59m deep. Culvert [41] was noted at 26.88m OD and had a curved roof set on two courses of brick laid on a tile base. The bricks were whole post great fire brick (fabrics 3032 and 3046), 230mm x 100mm x 70mm, that were bonded in a gravel mortar. The brick fabrics imply a date from the late 18th century (Appendix 3), and a fragment of red post medieval brick in a brown mortar was also noted suggesting at least some of the bricks were re-used. To east of Trench 1 in TP 2 the culvert continued and was recorded as [55]. In this location it was encountered at 26.66m OD and appeared to terminate (Figure 7). A slab of stone covering a possible access point into the culvert was mortared into the brickwork. Also a vertical niche was noted in the brickwork of the Orangery, possibly for a downpipe into the culvert. In Trench1 it was agreed with Historic England that part of the culvert could be removed. This revealed the remains of a very dry infill deposit [47] which consisted of mid greyish brown silty clay with frequent mortar. Construction backfill deposits were recorded in both locations. In Trench 1 this was a light to mid greyish brown silty sand [34] and in TP2 the backfill [54] was a similar deposit which contained late 17th to early 18th century glass and pottery. Of note was a fragment of architectural cornice made of Ketton stone, also recovered from [54] (see Appendix 3).

Plate 8: TP 2, post excavation, looking southeast showing culvert [55] with niche in the north wall of the Orangery and brick inspection chamber [27/56] in left of frame, 0.4m scale.

Plate 9: Trench 1 looking south showing culvert [41], 0.4m scale

Plate 10: Trench 1 looking southeast showing the north wall of the Orangery and culvert [41] with live services above.

Plate 11: Culvert [41] looking southeast after partial excavation showing internal void

6.4.22 A large void was noted to the east and behind the culvert. This extended under the "blind arch" seen on the north wall of the Orangery. Despite the limited access to the void, it was possible to ascertain that it was to be over 4m deep with water at the bottom. Photographic records also show the interior to be a curved brick structure suggesting it was a well, still containing water at its base. Precise measurements could not be obtained, but it appeared to have an internal diameter of approximately 1m and a depth to water level of at least 3m. |

Plate 12: Trench 1 looking southeast showing well within the void

6.4.23 In TP 2, backfill [54] was sealed by 0.4m of made ground consisting of mid to dark greyish brown silty clay [53] which was recorded at 27.24m OD. The made ground contained occasional CBM, pot, glass and bone dating to the 19th century.

6.4.24 Above the made ground [53] was an indurated layer of whitish sandy gravel mortar mixed with a hard grey type gravel mortar [26]. This was recorded at 27.34m OD to be 90mm-thick and extended beyond the east and west edges of TP 2. The layer was either a surface or a bedding deposit for a surface, possibly paving stones. To the north and south this was truncated by

live service runs.

Plate 13: TP 2 looking west showing mortar surface/bedding deposit [26], 1.0m scale

6.4.25 The surface was also truncated by a brick inspection chamber [27/56] in the northeast corner of the test pit. The brick chamber continued into TP4 (recorded there as [77]) revealing the length of the outer edge of the brickwork to be 1.62m long with a width of 0.22m and an overall depth of 1.16m. It appeared to be square or rectangular shaped and extended beyond the northern edges of both test pits, making it over 1.12m in this direction. Re-used bricks, with shallow frogs, (probably sourced from elsewhere at the Palace) were used to build the chamber, these were bonded with a light yellowish brown sandy mortar. A high point of 27.34m OD was recorded in TP2 and a low point at 27.10m OD in TP4. The construction cut [79] and associated construction backfill [78] were visible in section in TP4 but were not apparent in TP2. In TP4 the cut was seen truncating the made ground [80] at 27.13m OD.

6.4.26 In BH 2 a deposit of light brownish grey, silty clay, subsoil-type material [15] was observed at 26.53m OD to be 0.42m thick (Figure 4).

6.4.27 What was described as a 0.37m thick deposit of 19th century garden soil [2] was noted in section in BH 1 at 26.86m OD (Figure 3). A fragment of 19th century glass was recovered from this.

6.5 Phase 5: 20th Century

6.5.1 In the eastern edge of BH 1 a block of concrete kerbing [10] was seen at 26.86m OD measuring 200mm x 150mm x 50mm. This appeared to be *in situ* and either denoted the border of a planting or the edge of a path. A 0.15m-thick layer of topsoil material [1] was seen at 27.01m OD sealing [10]. The gravels of the modern yard area covered [1].

6.5.2 An indurated layer of crushed red brick and tile [14] was recorded in BH 2 at 26.61m OD. The layer had a thickness of 80mm and was probably a bedding deposit for an earlier path (Plate 4). Covering [14] was a heavily compacted to indurated layer of mid yellowish brown sandy gravels [13]. This was noted at 27.02m OD and was in turn sealed by the tarmac of the present

footpath.

6.5.3 Two possible yard surfaces were noted in Trench 1. To the north a moderately compacted layer of mid greyish brown silty sand [57] was recorded at 27.08m OD with a thickness of 0.26m. The layer had frequent small fragments of CBM. To the south a 70mm-thick layer of compacted light yellowish grey clayey gravels [42] was encountered at 27.04m OD. The gravels were sub-angular shaped.

6.5.4 These were covered by layer of mid yellowish brown, silty sand [18]. In the south of the trench this formed the lower layer of the current earthen bank which had a high point of 27.73m OD and a maximum thickness of 0.74m. Dog bone recovered from this deposit was from the same animal as that found in [31]. This suggests that [31] had been truncated and that any trace of this was removed (as it was not seen during the excavation) by later landscaping, the bone eventually finding its way into [18]. In the north where the layer covered [57] it was seen to be 50mm at is thinnest and had a low point of 27.02m OD.

6.5.5 In the south of Trench 1 a large cut [32] was observed in section at 27.73m OD truncating [18]. This was 1.7m (N-S) and 1.1m deep with steeply sloping sides and a concave base. A deposit of mid brownish grey silty clay [29] filled the cut, which was most likely a planting pit.

6.5.6 A layer of topsoil type material [17] was noted covering [32]. This formed the surface of the earthen bank that covered the southern portion of Trench 1. The layer was recorded at a high point of 28.09m OD in the south and 27.65m OD to the north. A similar deposit [89] was seen in TP4 where it was recorded at 27.39m OD and covered infill deposit [85].

6.5.7 During this phase the brick chamber [27/56/77] recorded in TP2 and TP4 went out of use and was backfilled. The backfill material was listed as a light to mid grey brown silty sand [85] which was seen at 27.10m OD. This was excavated to a depth of 0.4m and was not bottomed.

6.5.8 A large concrete foundation pad [87] was recorded to the immediate east of and truncating a clay drain pipe that fed into chamber [27/56/77] at 27.34m OD. This comprised sub-rounded gravels in a light yellow brown sand matrix and had an indurated compaction. The pad abutted the Orangery wall [86] and extended beyond the northern and eastern excavation limits, making the pad over 1.93m (N-S) by 1.02m (E-W) with a thickness of 1.2m.

6.5.9 A low brick wall [28/33] was noted in Trench 1 and TP 2 acting as the southern border for the earthen bank. This was laid on top of [17] (see Figure 5, section 4) with a maximum height of 0.83m and a highest level of 28.09m OD and a low of 27.74m OD. In TP4 a badly truncated continuation of this wall [76] was recorded under the make-up deposits for the existing tarmac footpath. The wall was noted at 27.41m OD with had a surviving height of 0.3m. Here the wall lay on top of [89] which was a modern deposit similar to [17].

7 INTERPRETATIONS AND CONCLUSIONS

7.1 Interpretations

7.1.1 In all interventions investigation proceeded to the maximum achievable depth permitted by the presence of services or health and safety constraints. The archaeological deposits and remains encountered during the work have been grouped into five phases.

Phase 1: Natural

7.1.2 Natural London Clay was noted in BH1 [9], BH2 [16] and Trench 1 [60]. The borehole investigation in BH 1 showed that the clay [9] was c.3.3m thick. It was at least 1.2m thick in BH 2 ([16]), although the bottom of the deposit was not recorded.

7.1.3 Deposits of natural brickearth [59] and [73] were seen covering the clay in Trench 1. In the north of the trench the brickearth was 0.25m thick.

Phase 2: Late Iron Age

7.1.4 A layer of redeposited brickearth [58] was seen in the north of Trench 1 which contained sherds of Late Iron Age pottery. No evidence of cut features were seen within the layer. To the south of [58] a similar deposit [75] was recorded although no finds were retrieved.

Phase 3: Pre-1704

7.1.5 Within BH1 probable garden features [6], [8] and [12] and deposits [3], [4] which pre-dated the Orangery, were encountered. The garden features comprised three shallow pits which cut into the alluvial clay [9]. These may have been part of the earlier formal gardens for the palace or for Nottingham House (Keith-Lucas 2015). The lack of brickearth noted in BH1 and BH2 is more than likely as a result of landscaping events.

7.1.6 It was not possible to determine to true nature of deposit [84], all that can be said is that it pre-dated the construction cut for the Orangery.

Phase 4: 18th-19th Century

7.1.7 The most notable features of this phase were the Orangery wall [86] and its construction cut [88], brick wall [25], culvert [41/55], foundation pad [23], construction cut [50] and the planting beds and landscaping deposits seen throughout Trench 1.

7.1.8 The portion of Orangery wall [86] revealed in TP4 showed that it had been built with a three step footing and that these steps were quite narrow, resting on a thin bed of sandy mortar. The construction cut [89] for the Orangery was also seen here but it was not possible to determine definitively from where it was cut or what it had originally cut into. Two backfill deposits, [82] and [83], filled the cut. The upper deposit [82] was capped with a thin layer of roof tiles [81], possibly the accumulation from contemporary or later works, which suggests that the top of [82] may have been the former ground level or surface.

7.1.9 Wall [25] is possibly associated with the original workings of the Orangery, maybe part of a

boiler house or external store. It was initially considered that this wall may have been the northern boundary wall to the yard as shown on the 1754 plan, however an overlay of the wall to the plan (Figure 8) suggests it is too far away from the likely position of the yard wall to be an inaccuracy of the 18th century plan. The foundation pad [23] was located in a position closer to the possible yard wall alignment, although there was no evidence of any upper structure visible during the investigations to confirm this. The feature may have been associated with the shed which occupied this general position in the later 19th century and which was pulled down around the turn of the 20th century (Gregory 2015, 11 and Figure 8). The feature was cut into layer [22] which was dated to the late 18th to early 19th century meaning whatever it was a base for was not contemporary with the Orangery.

7.1.10 The brick culvert [41/55] noted in Trench 1 and TP 2 was most likely a rainwater drain. A niche noted in the Orangery brickwork in TP 2 suggests that a gutter downpipe fed into the culvert. The investigations showed a fall in level from west (Trench 1) to east (TP 2) and a possible termination in TP 2. Bricks from the culvert are dated form the late 18th century, and at least one brick displayed evidence of reuse (Appendix 3). This date fits extremely well with a recorded overhaul to the structure in 1781 which "took-in the roof, north wall, sashes, doors, wainscot, gutters and pipes" (Gregory 2015, 6). Due to the limited scope of the investigations it is uncertain whether the culvert fed into the void noted in the southeast of Trench 1, although this does remain a possibility.

7.1.11 The void noted to the southeast of the culvert in Trench 1 and under the Orangery was a well shaft, with water extant within the structure. It is considered that the blind-arch built into the northern wall of the Orangery forms the above-ground superstructure to this well. Behind the blind-arch was a curved niche structure. Inspection of the well and the inside of the blind-arch was only possible by means of CCTV cameras and therefore the interpretation of them must remain subject to confirmation. It is uncertain if this feature is contemporary with, earlier to or later than the Orangery. How it was accessed when in use is also unclear as only a small portion was visible during the investigations.

7.1.12 The remnant of a mortar surface/bedding deposit [26] was seen in TP 2, this is probably the remains of the earlier footpath that served the rear of the Orangery (a precursor of the path present today). This was truncated by what appeared to be a brick inspection chamber to the northeast, for a later drain. The inspection chamber continued into TP4 and was seen extending to the north beyond the test pit limits.

7.1.13 The east-west aligned cut [50], seen in the middle of Trench 1, is possibly the remains of the drain shown on the 1754 plan (Figure 7), as it was filled with material consistent with a collapsed and decommissioned drain (Appendix 3). A 20th century service cut truncated the northern edge of [50] and caused the collapse of the drain, which explains the loose nature of the upper fill and the date of the backfill deposits, which may have fallen into the collapsed/truncated drain from layer [18]. The service cut also removed any visible relationships that the deposits to the north and south of [50] had with each other. It is possible

that the yard wall shown on the 1764 John Smith Drainage Plan (Figure 8) may have been sited here and that it the deposits to the north had accumulated against it.

7.1.14 In the north of the trench the small brick structure [74] was probably the edge of a planting bed, as the features and deposits to the north differed from those to the south. In the north these included the cuts of four possible planting beds or features [63], [65], [67] and [69] and in the south the deposits were more akin to dumped material or surfaces. It is entirely possible that surface [45] was a path between the Orangery Yard and a planted area to the north.

7.1.15 Between wall [25] and the Orangery wall an internal clay working surface [61] was encountered in the base of the trench. Various small layers were noted above this, some of which included what seemed to be boiler or fire rake-out material. The presence of these deposits suggests that the structure defined by wall [25] and the north wall of the Orangery may have been a space associated with the activities necessary to heat the Orangery, and are probably contemporary. It was agreed with Jane Sidell, Inspector of Ancient Monuments for Historic England that further excavation was neither necessary nor warranted. The compacted construction backfill deposit [82], seen in TP4 was noted on a similar level. In TP4 this was covered by a thin layer of broken tiles suggesting some kind of a working surface and may be related to [61].

7.1.16 A layer of old topsoil [19] was recorded in section 4 in Trench 1; this had what appeared to be a plant bed [40] at its southern extent. This is probably associated with the landscaping and restoration works known to have taken place in the late 19th century.

Phase 5: 20th Century

7.1.17 This period was dominated by the made ground deposits of the raised earthen bank in the south of Trench 1 and the make-up layers for the tarmac path and loose gravel surface in the southern area of investigation. In TP4 a large concrete foundation pad was noted extending to the east. Also the site was traversed by a series of modern live services.

7.2 Conclusions

7.2.1 The earliest deposits identified were natural London Clay seen in BH 1, BH 2 and Trench 1. In the north of Trench 1 this clay was seen to be sealed by a layer of natural brickearth.

7.2.2 A layer of reworked or redeposited brickearth which contained sherds of late Iron Age pot was seen above the natural brickearth in Trench 1.

7.2.3 Possible evidence of activity that pre-dated the Orangery was seen in BH 1. This activity was represented by the three small pits or planting beds noted in the base of the trench and the horticultural horizons which covered them. These were possibly associated with the formal gardens of the palace from the late 17th century.

7.2.4 The construction cut and the base of the Orangery wall, the latter at 25.24m OD, were recorded in Test Pit 4 (Plates 16-17). The upper fill of the cut may have acted as a surface as it was compacted and lay on a similar level to that of the surface deposit seen in Trench 1.

7.2.5 The east-west wall seen in Trench 1 could be the external wall of a building associated with and contemporary to the Orangery, maybe part of a boiler/store room, as the clay floor between it and the Orangery did not appear to be external.

7.2.6 The brick culvert encountered in Trench 1 and TP 2 was most likely a drain which was fed by downpipes to remove the rainwater from the roof of the Orangery. The fall in level to the east suggests that the culvert may have fed into another larger drain, possibly that shown on the 1754 drainage plan.

7.2.7 The well shaft noted under and to the southeast of the culvert in Trench 1 extended under the main building of the Orangery in the area where a blind arch is seen in the brickwork of the northern wall. This is likely a well which acted as a water source for the plants kept in the building, or for the boilers thought to have existed in the yard behind. How this was accessed is uncertain, whether from inside the Orangery or from the building to the rear (boiler/store room). It is also uncertain if the culvert fed rainwater into it. The relationship between the well and the blind arch is unknown as only a tiny section was seen and this was obscured by the culvert.

7.2.8 A compacted gravel foundation pad hints at the presence of another now demolished structure in the area to the north of the building external to the Orangery. It was noted that its position is close to the suggested line of the yard wall (Figure 7), although no firm conclusions about its function could be drawn. The cut noted to the north of the foundation pad aligned east-west could be the remains of the drain shown on 1754 plan.

7.2.9 Later 19th century landscaping deposits were noted across the southern portion of Trench 1. These could possibly be associated with the restoration work which was completed in 1898.

7.2.10 In Trench 1 previous landscaping episodes and services up to a depth of 1.20m had impacted extensively on earlier archaeological deposits.

7.2.11 All masonry remains were recorded and left *in situ*. In Trench 1 the brick culvert in the south of the trench was partially excavated.

7.2.12 The archive from the site work, comprising written, drawn, photographic and artefactual evidence all identified with unique site code KEN27, will eventually be transferred to Historic Royal Palaces for long-term curation and storage.

7.2.13 The results of the archaeological investigation will be published as an entry in the *London Archaeologist* 'Round Up'. Further archaeological work will be undertaken in advance of any development groundworks should planning consent be granted, and that work will incorporate a full suite of analysis and publication works for the archaeological project which will include the results of this and previous projects to the Orangery Yard.

Plate 14: TP4 Looking east showing Orangery wall [86] in the right of the frame, Inspection chamber [27/56/77] in the bottom left and concrete pad [87] in the top

Plate 15: TP4 post-excavation looking southwest showing the north Orangery wall [86] and section 7 in the right of the frame, scale 0.4m

Plate 16: TP4 post-excavation looking south, showing the base of the Orangery [86], concrete pad [87]

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10 APPENDIX 1: CONTEXT INDEX

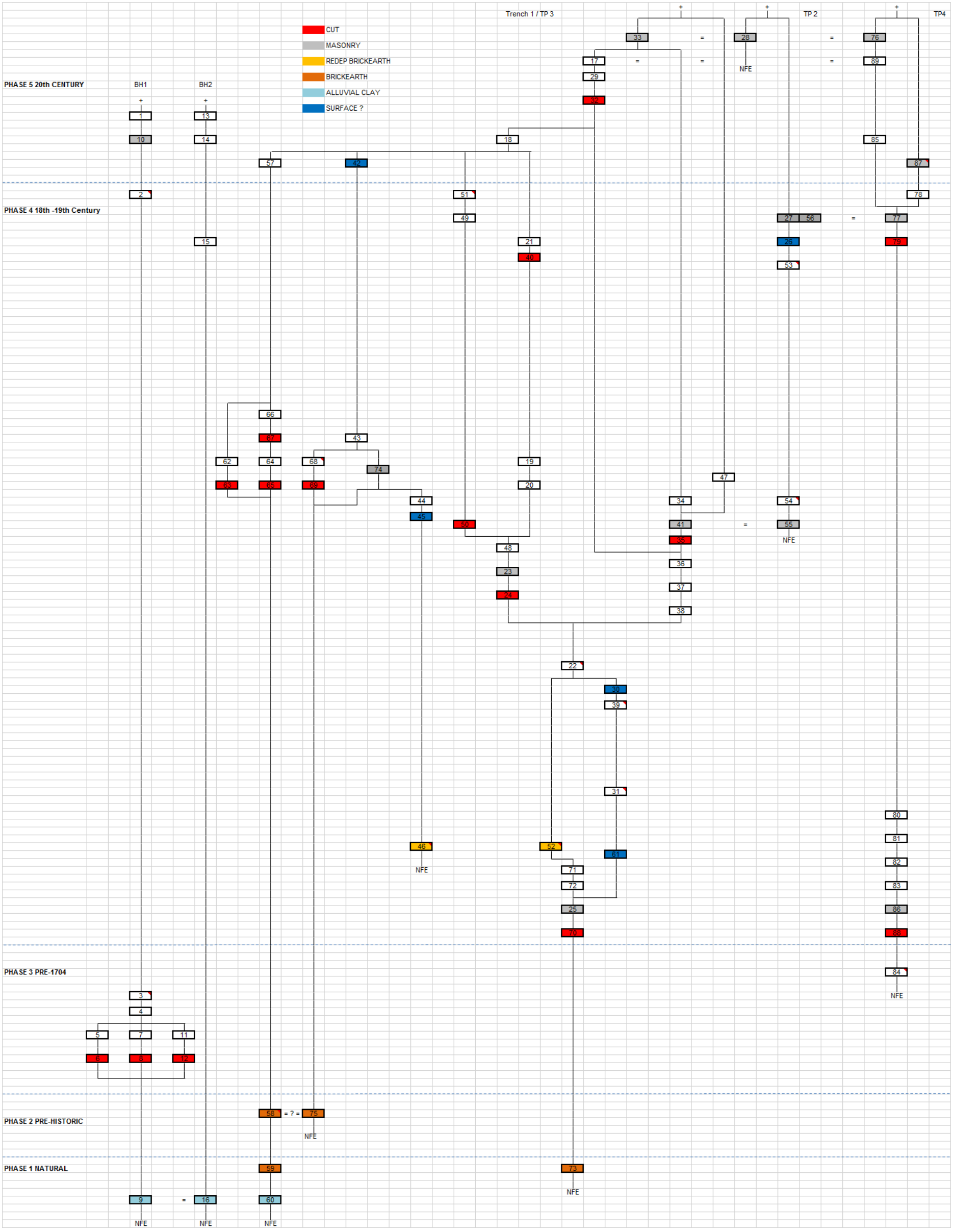
								Levels		Dimensions			
Site Code	**Context No.**	**Location**	**Plan**	**Section**	**Type**	**Description**	**Phase**	**Highest**	**Lowest**	**N-S**	**E-W**	**Thickness / Depth**	**Finds**
KEN 27	1	BH 1	N/A	1, 2	Layer	Compacted former topsoil	5	27.01m OD	N/A	1.2m	1.2m	0.15m	N/A
KEN 27	2	BH 1	N/A	1, 2	Layer	19th century garden soil	4	26.86m OD	N/A	1.2m	1.2m	0.37m	POT, GLASS, BONE, CBM
KEN 27	3	BH 1	N/A	1, 2	Layer	19th century subsoil	3	26.55m OD	26.24m OD	1.2m	1.2m	0.2m	CTP, POT
KEN 27	4	BH 1	N/A	1,2	Layer	Pre-19th century subsoil	3	26.35m OD	26.25m OD	1.2m	1.2m	0.3m	N/A
KEN 27	5	BH 1	N/A	1	Fill	Fill of early garden feature [6]	3	25.95m OD	N/A	0.4m	0.6m	0.15m	CBM
KEN 27	6	BH 1	BH 1	1	Cut	Cut of early garden feature	3	25.95m OD	25.80m OD	0.4m	0.6m	0.15m	N/A
KEN 27	7	BH 1	N/A	1	Layer	Fill of early garden feature [8]	3	25.95m OD	N/A	0.1m	0.3m	0.05m	N/A
KEN 27	8	BH 1	BH 1	1	Layer	Cut of early garden feature	3	25.95m OD	25.90m OD	0.1m	0.3m	0.05m	N/A
KEN 27	9	BH 1	BH 1	1, 2	Layer	Natural Alluvial clay	1	26.16m OD	25.95m OD	1.2m	1.2m	3.3m	N/A
KEN 27	10	BH 1	BH 1	2	Masonry	Kerb/ garden border	5	26.86m OD	N/A	0.05m	0.2m	0.15m	N/A
KEN 27	11	BH 1	N/A	2	Layer	Cut of early garden feature	3	26.16m OD	N/A	0.9m	N/A	0.2m	N/A
KEN 27	12	BH 1	N/A	2	Layer	Fill of early garden feature [12]	3	26.16m OD	25.95m OD	0.9m	N/A	0.2m	N/A
KEN 27	13	BH 2	N/A	3	Layer	Indurated gravel make-up layer	5	27.02m OD	N/A	1.2m	1.2m	0.41m	N/A
KEN 27	14	BH 2	14	3	Layer	Crushed red brick leveling	5	26.61m OD	N/A	1.2m	1.2m	0.08m	CBM
KEN 27	15	BH 2	N/A	3	Layer	Subsoil	4	26.53m OD	N/A	1.2m	1.2m	0.42m	N/A
KEN 27	16	BH 2	BH 2	3	Layer	Natural Alluvial clay	1	26.11m OD	N/A	1.2m	1.2m	1.2m	N/A
KEN 27	17	TR 1	N/A	4	Layer	Modern topsoil	5	28.09m OD	27.65m OD	8.75m	N/A	0.47m	POT, CTP
KEN 27	18	TR 1	N/A	4, 5	Layer	20th century made ground	5	27.73m OD	27.02m OD	6.2m	N/A	0.74m	POT, CTP, GLASS, CBM, BONE
KEN 27	19	TR 1	N/A	4	Layer	19th century topsoil	4	27.25m OD	27.19m OD	2.25m	N/A	0.15m	N/A
KEN 27	20	TR 1	N/A	4	Layer	19th century layer	4	27.14m OD	27.09m OD	2.83m	N/A	0.16m	N/A
KEN 27	21	TR 1	N/A	4	Fill	Fill of planting [40]	4	27.22m OD	N/A	0.65m	N/A	0.2m	N/A
KEN 27	22	TR 1	N/A	4	Layer	Bedding layer	4	27.01m OD	26.59m OD	2.32m	N/A	0.41m	POT, CTP, BONE, CBM
KEN 27	23	TR 1	TR 1	4	Masonry	Gravel foundation pad	4	26.87m OD	N/A	0.8m	0.7m	0.58m	N/A
KEN 27	24	TR 1	TR 1	4	Cut	Construction cut for [23]	4	26.87m OD	26.29m OD	0.8m	0.7m	0.58m	N/A
KEN 27	25	TR 1	TR 1	4	Masonry	18th/19th century wall	4	26.84m OD	N/A	0.58m	1.15m	0.94m	CBM

								Levels		Dimensions			
Site Code	**Context No.**	**Location**	**Plan**	**Section**	**Type**	**Description**	**Phase**	**Highest**	**Lowest**	**N-S**	**E-W**	**Thickness / Depth**	**Finds**
KEN 27	26	TP 2	TP 2	6	Layer	Make up deposit for path	4	27.34m OD	27.32m OD	2.0m	0.4m	0.09m	N/A
KEN 27	27	TP 2	TP 2	N/A	Masonry	Truncated top of [56]	4	27.31m OD	N/A	0.12m	0.29m	0.12m	N/A
KEN 27	28	TP 2	TP 2	N/A	Masonry	20th century shrubery border	5	27.84m OD	27.64m OD	0.4m	2.6m	0.80m	N/A
KEN 27	29	TR 1	N/A	4	Fill	Fill of [32]	5	27.73m OD	N/A	1.75m	N/A	1.1m	N/A
KEN 27	30	TR 1	N/A	4	Layer	Possible pea-gravel surface	4	26.57m OD	26.39m OD	2.25m	N/A	0.15m	N/A
KEN 27	31	TR 1	N/A	4	Layer	Ashy rake-out deposit	4	26.45m OD	26.29m OD	2.05m	1.2m	0.28m	POT, CTP, BONE, CBM, GLASS
KEN 27	32	TR 1	N/A	4	Cut	Large 20th century cut	5	27.73m OD	26.64m OD	1.75m	N/A	1.1m	N/A
KEN 27	33	TR 1	N/A	4	Masonry	20th century shrubery border	5	27.74m OD	26.97m OD	0.11m	N/A	0.83m	N/A
KEN 27	34	TR 1	N/A	4	Fill	Construction backfill in [35]	4	26.97m OD	26.7m OD	0.8m	>1.2m	0.59m	N/A
KEN 27	35	TR 1	N/A	4	Cut	Construction cut for [41]	4	26.97m OD	26.39m OD	1.12m	>1.2M	0.59m	N/A
KEN 27	36	TR 1	N/A	4	Layer	Remnant of Layer	4	27.36m OD	26.49m OD	0.91m	N/A	0.90m	N/A
KEN 27	37	TR 1	N/A	4	Layer	Dumped layer	4	26.63m OD	26.49m OD	1.25m	N/A	0.13m	N/A
KEN 27	38	TR 1	N/A	4	Layer	Dumped layer	4	26.76m OD	26.67m OD	0.5m	N/A	0.06m	N/A
KEN 27	39	TR 1	N/A	4	Layer	Dumped layer	4	26.40m OD	26.29m OD	0.53m	N/A	0.32m	POT, CTP, CBM
KEN 27	40	TR 1	N/A	4	Cut	Cut for planting	4	27.22m OD	27.01m OD	0.65m	N/A	0.2m	N/A
KEN 27	41	TR 1	TR 1	4	Masonry	Brick culvert	4	26.88m OD	26.62m OD	0.6m	>1.2	0.39m	CBM
KEN 27	42	TR 1	TR 1	4	Layer	20th century yard surface	5	27.04m OD	26.99m OD	3.26m	>1.2m	0.07m	N/A
KEN 27	43	TR 1	N/A	4	Layer	18th/19th century bedding layer	4	26.96m OD	26.93m	>1.6m	N/A	0.27m	N/A
KEN 27	44	TR 1	N/A	4	Layer	18th/19th century bedding layer	4	26.7m OD	26.67m OD	>1.61m	N/A	0.21m	N/A
KEN 27	45	TR 1	N/A	4	Layer	Pea gravel surface	4	26.59m OD	26.48m OD	1.2m	N/A	0.14m	N/A
KEN 27	46	TR 1	N/A	4	Layer	Redeposited brickearth	4	26.49m OD	26.42m OD	1.2m	N/A	0.09m	POT
KEN 27	47	TR 1	N/A	4	Fill	Infill of [41]	4	26.69m OD	N/A	N/A	N/A	0.15m	N/A
KEN 27	48	TR 1	N/A	4	Layer	Bedding layer	4	27.16m OD	26.99m OD	2.64m	N/A	0.35m	N/A
KEN 27	49	TR 1	TR 1	4	Fill	Fill of collapsed drain	4	26.98m OD	26.77m OD	0.62m	>1.2	0.36m	N/A
KEN 27	50	TR 1	N/A	4	Cut	Cut for collapsed drain	4	26.98m OD	N/A	0.62m	>1.2	>0.36m	N/A
KEN 27	51	TR 1	N/A	4	Fill	Fill of collapsed drain	4	27.03m OD	26.98m OD	0.47m	N/A	0.23m	POT, GLASS, CBM, METAL
KEN 27	52	TR 1	TR 1	4	Layer	Redeposited brickearth	4	26.85m OD	26.69m OD	3.0m	N/A	0.46m	POT, CTP, CBM, METAL, WHETSTONE
KEN 27	53	TP 2	N/A	6	Layer	19th century made ground	4	27.24m OD	N/A	0.85m	N/A	0.4m	POT, CBM, CTP, GLASS

								Levels		Dimensions			
Site Code	**Context No.**	**Location**	**Plan**	**Section**	**Type**	**Description**	**Phase**	**Highest**	**Lowest**	**N-S**	**E-W**	**Thickness / Depth**	**Finds**
KEN 27	54	TP 2	TP 2	6	Layer	Made ground/backfill	4	26.84m OD	N/A	0.85m	N/A	>0.45m	POT, CBM, BONE
KEN 27	55	TP 2	TP 2	N/A	Masonry	Brick culvert, same as [41]	4	26.66m OD	26.64m OD	0.58m	1.2m	0.42m	N/A
KEN 27	56	TP 2	TP 2	6	Masonry	Brick Manhole	4	27.34m OD	N/A	0.6m	0.74m	>0.92m	N/A
KEN 27	57	TR1	N/A	5	Layer	Bedding for surface	5	27.08m OD	26.84m OD	>2.75m	>1.2m	0.26m	N/A
KEN 27	58	TR1	N/A	5	Layer	Brickearth layer	2	26.90m OD	26.62m OD	>2.75m	>1.2m	0.29m	POT
KEN 27	59	TR 1	N/A	5	Layer	Natural Brickearth	1	26.62m OD	N/A	>2.75m	>1.2m	0.25m	N/A
KEN 27	60	TR1	N/A	5	Layer	Natural Alluvial clay	1	26.45m OD	26.36m OD	>2.75m	>1.2m	N/A	N/A
KEN 27	61	TR 1	TR 1	4	Layer	Surface	4	26.29m OD	26.12m OD	2.45m	>1.0m	>0.06m	N/A
KEN 27	62	TR1	N/A	5	Fill	Fill of [63]	4	26.89m OD	26.85m OD	0.6m	N/A	0.07m	N/A
KEN 27	63	TR1	N/A	5	Cut	Cut for plant bed	4	26.89m OD	26.79m OD	0.6m	N/A	0.07m	N/A
KEN 27	64	TR1	N/A	5	Fill	Fill of [65]	4	26.90m OD	26.89m OD	0.7m	N/A	0.18m	N/A
KEN 27	65	TR1	N/A	5	Cut	Cut for plant bed	4	26.90m OD	26.70m OD	0.7m	N/A	0.18m	N/A
KEN 27	66	TR1	N/A	5	Fill	Fill of [67]	4	26.90m OD	26.84m OD	1.3m	N/A	0.27m	N/A
KEN 27	67	TR1	N/A	5	Cut	Cut for plant bed	4	26.90m OD	26.62m OD	1.3m	N/A	0.27m	N/A
KEN 27	68	TR 1	TR 1	N/A	Fill	Fill of [69]	4	26.78m OD	N/A	0.42m	0.54m	0.15m	POT, CBM
KEN 27	69	TR 1	TR 1	N/A	Cut	Cut for plant bed	4	26.78m OD	26.63m OD	0.42m	0.54m	0.15m	N/A
KEN 27	70	TR 1	TR 1	4	Cut	Construction cut for [25]	4	26.36m OD	25.85m OD	0.45m	>1.2m	>0.5m	N/A
KEN 27	71	TR1	N/A	4	Fill	Upper fill of [70]	4	26.36m OD	N/A	0.45m	>1.2m	>0.5m	N/A
KEN 27	72	TR 1	TR 1	4	Fill	Lower fill of [70]	4	25.87m OD	N/A	0.15m	>1.2m	0.02m	N/A
KEN 27	73	TR1	TR 1	4	Layer	Natural Brickearth	1	26.36m OD	N/A	>1.3m	>1.2m	N/A	N/A
KEN 27	74	TR 1	TR 1	N/A	Masonry	Brick plant border	4	26.66m OD	26.57m OD	0.22m	>1.2m	N/A	N/A
KEN 27	75	TR 1	TR 1	N/A	Layer	Brickearth layer	2	26.78m OD	N/A	2.26m	>1.2m	N/A	N/A
KEN 27	76	TP4	76	7	Masonry	Same as [28] and [33]	5	27.41m OD	N/A	0.22m	>1.7m	0.3m	N/A
KEN 27	77	TP4	TP4	7	Masonry	Brick Manhole same as [27/56]	4	27.10m OD	N/A	>1.12m	>0.92m	1.16m	N/A
KEN 27	78	TP4	N/A	7	Fill	Construction backfill in [79]	4	27.13m OD	N/A	N/A	0.6m	1.11m	
KEN 27	79	TP4	N/A	7	Cut	Construction cut for [77]	4	27.13m OD	25.94m OD	N/A	>1.1m	1.18m	
KEN 27	80	TP4	N/A	7	Layer	Possible made ground deposit	4	27.24m OD	N/A	N/A	N/A	0.78m	
KEN 27	81	TP4	N/A	7	Layer	Tile dump, a possible surface	4	26.46m OD	N/A	0.56m	N/A	0.06m	
KEN 27	82	TP4	N/A	7	Fill	Orangery construction backfill	4	26.39m OD	N/A	0.65m	N/A	0.27m	
KEN 27	83	TP4	N/A	7	Fill	Primary construction backfill	4	26.16m OD	26.11m OD	0.65m	N/A	0.9m	CBM, CTP

								Levels		Dimensions			
Site Code	**Context No.**	**Location**	**Plan**	**Section**	**Type**	**Description**	**Phase**	**Highest**	**Lowest**	**N-S**	**E-W**	**Thickness / Depth**	**Finds**
KEN 27	84	TP4	TP4	7	Layer	Yellow brown clay deposit	3	25.42m OD	N/A	>0.45m	N/A	>0.22m	
KEN 27	85	TP4	TP4	7	Fill	Infill of [77]	5	27.10m OD	N/A	>0.74m	>0.68m	>0.4m	
KEN 27	86	TP4	TP4	7	Masonry	Orangery wall	4	N/A	25.24m OD				
KEN 27	87	TP4	TP4	7	Masonry	Concrete foundation pad	5	27.34m OD	N/A	1.93m	1.02m	1.2m	
KEN 27	88	TP4	N/A	7	Cut	Orangery construction cut	4	25.39m OD	N/A	>0.45m	N/A	1.14m	
KEN 27	89	TP4	N/A	7	Layer	Same as [17]	5	27.39m OD	N/A	N/A	N/A	>0.4m	N/A

11 APPENDIX 2: PHASED SITE MATRIX



12 APPENDIX 3: ASSESSMENT OF CERAMIC BUILDING MATERIAL

By Dr Kevin Hayward, Pre-Construct Archaeology Limited

12.1 INTRODUCTION AND AIMS

12.1.1 Three sacks of stone, brick and mortar were retained from the evaluation at The Orangery Yard, Kensington Palace, London Borough of Kensington and Chelsea (KEN 27)

12.1.2 This moderate sized assemblage (146 examples 28.9kg) was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the post medieval ceramic building material in particular to identify the date of the walls uncovered.
- Identify the fabric of any of the worked stone in order to determine what the material was made of and what is was used for.
- Reference should also be made to the access catalogues for the building material (Ken27.mdb)
- Made recommendations for further study.

12.2 METHODOLOGY

12.2.1 In accordance with Pre-Construct Archaeology sampling guidelines, two whole brick samples were retained from each structure at excavation.

12.2.2 The application of a 1kg masons hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10) and compared with Pre-Construct Archaeology's stone and ceramic building material reference collection. The appropriate Museum of London building material fabric code is then allocated to each item.

12.3 POST MEDIEVAL CERAMIC BUILDING MATERIAL (144 examples 25.kg)

12.3.1 As was to be expected with the post medieval structural development of the Orangery all the brick, roofing tile and mortar broadly corresponds to a 17th to 20th century date.

Brick (29 examples 2.2 kg)

3046 (1500-1800) Early post medieval red 15 examples 1.5kg
3047 (1690-1900) Red paving brick 1 example 290g
3032; 3032R *purple clinker rich post great fire bricks* (1664-1900) 12 examples 10.4kg
3032nr3035 *yellow post great fire brick* (1780-1900) 1 example 2.9kg

12.3.2 The presence of earlier post medieval red bricks in fabric 3046 in the confines of the City of London and Southwark would normally suggest buildings dating from 1450 to 1700. However this far out, in West London red bricks were still being manufactured into the 18th and 19th century, which is in keeping with the Orangery construction. These nearly all come from phases 3 and 5 garden features and dumps with only a small reused fragment incorporated into the 19th century culvert [41].

12.3.3 All the whole bricks retained from structures at the site [25] and [41] were made out of purple post great fire bricks. A majority are small conform in width (98-102mm) and thickness (60mm) to the brick tax regulations brought into force after 1776 (Fig 1) With this in mind the wall [25] and culvert [41] can be dated to between 1780 and 1800.

Brick size regulation Act: took effect July 1777, first blanket national legislation. Min. size of bricks at 8 ½ x 4 x 2 ½ ''. Last legislation on sizes until the 20th century, remained in force until the 19th century	**216 x 101.5 x 63.5**	Parliament (Act)

1776 brick tax regulation Act

12.3.4 One paving brick from a phase 4 crushed levelling surface [14] may have been used for the interior of the orangery.

Mortar

12.3.5 A summary of the mortar types as well as their period of use from the excavations at KEN 27 are given below (Figure 2). There is some slight variation in fabric between the mortar used in wall [25] and culvert [41] suggesting that the two were separate builds. But the preference for using a quality hard gravel mortar as early as the late 18th century is in keeping with buildings associated with Kensington Palace

Mortar/Concrete Type	Description	Use at KEN27
T1 Hard grey type gravel mortar	Hard grey type gravel mortar	Phase 4 18-19th century brick masonry wall [25]
T2 Brown gravel Mortar	Hard brown gravel mortar	Phase 4 18th – 19th century brick culvert [41]

List of mortar types identified from the excavation KEN 27

Roofing Material (111 examples 9.3kg)
Peg Tile (106 examples 7.8kg)

2586 [1400-1800) 2 examples 0.2kg 2276 (1480-1900) 104 examples 7.6kg

12.3.6 Unglazed flat rectangular peg tiles in the iron oxide fabric *2586* and common London red sandy *2276* are a feature of roofing tile in 17th to 19th century buildings in capital. Their presence in phase 2 to 5 dumps and garden features near to the Orangery and outbuildings should therefore not be seen as surprising at all.

12.3.7 There are two large dumps from [18] and an ashy rake out deposit from [31] where a single group of peg tile in 2276 (7.8kg) accounts for nearly a quarter of the entire building material assemblage. Whether this relates to discarded remnants of a post medieval heated structure or oven where post medieval peg tiles may have been stacked vertically to enhance insulation

Pan Tile 2279 (1630-1850) 5 examples 1.5kg

12.3.8 The fashion for using curved nibbed imported Dutch Pan Tile began only after 1630. With this in mind it is perhaps not surprising some has turned up in and around the orangery.

Garden Border Ornamentation

2279 2 examples 0.2kg

12.3.9 On first inspection a black glazed curved element from a phase 3 collapsed drain [51] appeared to be an early-mid 17th century pan tile. However a likelier explanation is that is formed a form of glazed decorative garden border tile, a type which was popular in Georgian and Victorian England e.g. Montagu Place, (Hayward 2011, in prep.)

Drain Pipe

3261 2 examples 500g

12.3.10 Part of a drain in brown glazed yellow fabric 3261 stamped DOULTON & CO LIMITED LAMBETH was recovered from a 19th century garden soil layer [2] from BH 1 with a second (intrusive?) fragment from the fill of a 19th – 20th century collapsed drain from Trench 1 [51]. Doultons at Lambeth only changed their name to DOULTON & CO LIMITED LAMBETH after 1899 so its presence would indicate drainage from the early part of the 20th century.

Stone (2 examples 3.875kg)

3124 Ketton stone yellow-orange oolitic limestone Middle Jurassic (Bajocian) Lincolnshire Limestone Formation, Rutland
3130 Fine Millstone Grit – sugary granular quartz arenite Namurian (Upper Carboniferous) Derbyshire – South Yorkshire

12.3.11 An example of an architectural stone cornice made from Ketton stone, a prominently golden yellow oolitic limestone from Lincolnshire from late 18th early 19th century backfill layer [54] was a feature of the assemblage. This material was introduced in from the 17th century to embellish large houses for example Montagu House where a large chunk of ashlar was recovered (Hayward 2010=1; in prep).

12.3.12 A hone made from a York type sandstone recovered from a 19th century re-deposited brick-earth layer [52] is likely to be a post medieval rather than medieval, Roman or prehistoric artefact. The use of these fine grained sandstones for sharpening tools, for e.g. butchery are quite common for 17th to 18th century London (Hayward 2011; in prep).

12.4 Distribution

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
2	3261 2279 3032	Sewer Pipe stamped *Doulton & Co Limited Lambeth London* Pan Tile Post Great Fire Brick	3	1630	1950	1899	1950	1899-1950	No mortar
5	2586 3046	Fragments of peg tile	2	1180	1800	1450	1800	1600-1800	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		and post medieval red brick							
14	3046 3047	Post medieval red brick and paving brick	3	1450	1900	1690	1900	1700-1800	No mortar
18	3032R 3032 3046 2276	Narrow post great fire brick, post medieval red brick and post medieval peg tile	30	1480	1900	1664	1900	1780-1900	No mortar
22	2276 3046	Post medieval red brick and post medieval peg tile	5	1450	1900	1480	1900	1600-1800+	No mortar
25	3032 3101	Whole Narrow post great fire unfrogged brick with hard grey type gravel mortar	1	1664	1900	1664	1900	1780-1900	1700-1900
26	3101	Sandy gravel mortar with hard grey type gravel mortar	1						1700-1900
31	2276 2279	Post medieval peg tile fine moulding sand' One pan tile	79	1480	1900	1480	1900	1700-1900	No mortar
39	3032 2279 2276	Narrow Post Great fire brick, Pan Tile and post medieval peg tile	14	1480	1900	1664	1900	1780-1900	No mortar
41	3032; 3046	Whole Post Great fire brick narrow bonded in gravel mortar also a fragment of red post medieval brick in a brown	2	1450	1900	1664	1900	1700-1900	1700-1900 Mortar latest but there is a soft brown mortar 1600-1800 on the red brick which may be reused

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		mortar							
51	3261; 2279	Drain Pipe and Early pan tile Black Glazed or more probably garden border glaze	2	1630	1950	1850	1900	1899-1950	No mortar
52	3130 2586 3032nr3035; 3101	Millstone Grit Whetstone early post medieval peg tile; Whole Yelow post great fire brick gravel mortar as 41	3	50	1900	1780	1900	1780-1900	1700-1900
53	2276	Post medieval peg tile	1	1480	1900	1480	1900	1700-1900	No mortar
54	2276; 3124	Post medieval peg tile; Ketton stone architectural cornice	2	200	1900	1480	1900	1600-1800	No mortar
68	3032; 3046	Fragments of post medieval red and post great fire brick	4	1450	1900	1664	1900	1664-1900	No mortar

12.5 RECOMMENDATIONS / POTENTIAL

12.5.1 An evaluation of the building materials (stone; ceramic building material) from The Orangery Yard buildings Kensington Palace shows that all of it is 17th-20th century in date. This in keeping with its 18th century construction and subsequent Victorian and 20th century modification. Of interest are the two walls from [25] and the culvert [41] both of which, on the basis of brick size and fabric, typify very late 18th to mid 19th century builds. This is in keeping with the assemblage from nearby KEN22 (Hayward 2014) which also had a majority of bricks defined size by the brick tax legislation brought into force between 1776 and 1850. The small number of dumped red *3046* bricks may relate to the earliest Queen Anne construction (1702-1714) of the Orangery and outbuildings.

12.5.2 The only items of interest are a piece of weathered cornice in Lincolnshire Limestone (Ketton stone) from [54] which may relate to the 1702 to 1714 Orangery construction, Kensington House, or even its predecessor Nottingham House. Ketton stone has been associated with 17th and 18th large town-house construction elsewhere in West London (e.g. Montagu House)

12.5.3 To summarise, the building material assemblage merely represents the 18th and 19th century

development of utilitarian ancillary buildings associated with the Orangery

12.6 BIBLIOGRAPHY

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13 APPENDIX 4: ASSESSMENT OF ANIMAL BONE

By Kevin Rielly, Pre-Construct Archaeology Limited

13.1 Introduction

13.1.1 Excavations took place adjacent to the Orangery just to the north of Kensington Palace consisting of a reasonably sized trench (TR1), one test pit (TP2) and two boreholes (BH1 and BH2). The earliest levels, a sequence of brickearth deposits (Phase 2) were found below a series of post-medieval and then modern features and dumps (Phases 3 and 4 respectively), largely comprising various dumps, soils and garden features. Animal bones, all hand collected, were found within each of the topmost phases, a somewhat larger collection taken from the later levels.

13.2 Methodology

13.2.1 The bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered.

13.3 Description of faunal assemblage

13.3.1 The site provided a hand recovered total of 56 animal bones, these taken from collections with no obvious signs of heavy fragmentation. The level of preservation is generally good with the exception of a partly abraded cattle scapula from deposit [52] and a severely root etched cattle scapula from [54]. This evidence would suggest that there has been some redeposition, corroborative evidence for some movement of artefacts also shown by fragments of the same bones turning up in different deposits i.e. [18] in Phase 4 and [31] in Phase 3 (see below).

13.3.2 Much of the bone was derived from 6 contexts dating to Phase 3 (see Table 1), comprising various layers, these accompanied by potsherds and clay tobacco pipes suggesting they were deposited between the mid 17 and 18th centuries. There is a variety of food (cattle, sheep/goat, rabbit and chicken) as well as non-food species (dog and cat), the latter notably represented by partial articulations, perhaps signifying the disturbed burials of household pets. All but one of the food waste bones is within the dressed carcass part of the skeleton, thus perhaps mainly representing kitchen waste. The Phase 4 collection is relatively similar, dividing into food (cattle and pig) and non food (dog), again represented by mainly kitchen waste and articulated bones respectively. There is insufficient evidence to compile an age profile of the food animals, although it can be seen that the latest collection includes two juvenile pig bones, possibly from the same individual, as well as a scapula from a veal calf. In addition the earlier phase clearly includes some adult sheep/goat. In addition both collections also provided some evidence for large animals, suggestive of late post-medieval improved domestic breeds.

Phase:	**3**						**3**	**4**
Context:	**2**	**22**	**31**	**52**	**53**	**54**	**All**	**18**
Trench:	**BH1**	**TR1**	**TR1**	**TR1**	**TP2**	**TP2**	**TR1**	**TR1**
Species								
Cattle			1	1	1		3	2
Cattle-size						1	1	1
Sheep/Goat	1	1				2	4	
Pig								2
Sheep-size		1	2				3	1
Dog			3				3	27
Cat						4	4	
Rabbit						1	1	
Small mammal		1	2				3	
Chicken			1				1	
Grand Total	**1**	**3**	**9**	**1**	**1**	**8**	**23**	**33**

Table 1. Species abundance in each hand collected context and phase assemblage

13.3.3 The cat skeleton from [54] includes one humerus and two limb bone pairs (femurs and tibias), clearly from a rather large animal; while the dog bones are all clearly from the same animal (found in deposits [18] and [31]) incorporating the skull, both mandibles and scapulas, plus a major part of the vertebral column (the atlas and axis, 5 cervicals, 11 thoracics, 15 ribs and 5 lumbar). The latter belong to a moderately sized dog, possibly 40 to 50 cm at the shoulder.

13.4 Conclusions and recommendations for further work

13.4.1 This small assemblage incorporates a variety of species indicative of the types of meat consumed by the local populace (presumably from the palace) as well as perhaps their treatment of deceased pets. The skeletal representation certainly suggests that the food bones can be interpreted as table waste, perhaps derived from the palace kitchens. However, these collections also appear to include an element of redeposition, as indicated by the mixed preservation states in some deposits and most tellingly by the presence of the same dog skeleton in two apparently distant (spatially and temporally) levels in Trench 1.

13.4.2 The quantity of bones so far recovered, if representative of this site bodes well for additional material following further excavation. Unfortunately, the aforementioned problem concerning the dating of these deposits may have a deleterious effect on the potential value of these collections.

14 APPENDIX 5: POST-ROMAN POTTERY ASSESSMENT

By Chris Jarrett, Pre-Construct Archaeology Limited

14.1 Introduction

14.1.1 A small sized assemblage of pottery was recovered from the site (two boxes). The pottery dates to the prehistoric and post-medieval periods. Only the prehistoric pottery shows evidence for abrasion, while residual material is not easily detectable, indicating that the pottery was deposited fairly rapidly after breakage and deposited mostly under secondary circumstances. The assemblage consists of mostly sherd material and can be considered as fragmentary: none of the vessels have complete profiles. The pottery was quantified by sherd count (SC) and estimated number of vessels (ENV's), besides weight. The sizes of the groups of pottery are mostly small (fewer than 30 sherds) and only two deposits contain medium sized groups (31–100 sherds).

14.1.2 In total the assemblage consists of 178 sherds, 76 ENV, 9.215kg (none of which are unstratified). The assemblage was examined macroscopically and microscopically using a binocular microscope (x20), and entered into a database format, by fabric, form and decoration. The classification of the pottery types follows the Museum of London Archaeology (Museum of London Archaeology 2013) typology (form and fabric series). The pottery is discussed by types and its distribution.

14.2 The Pottery Types and Their Forms

14.2.1 The quantification of the pottery by chronological period is as follows:

- Prehistoric: three sherds, 2 ENV, 31kg
- Post-medieval: 175 sherds, 74 ENV, 9184kg

14.2.2 Prehistoric

The two sherds of prehistoric pottery occur as a sherd of grog-tempered ware (one sherd/1 ENV/7g) and two sherds of fine burnt flint-tempered wares. The fabrics indicate a probable Late Iron Age date for the pottery. All of the sherds are abraded and their forms are uncertain.

14.2.3 Post-Medieval

The range of post-medieval pottery types is shown in Table 1.

Pottery type	Fabric	Date range	SC	ENV	Weight
London area (Nenk and Hughes 1999: Orton 1988)					
London-area post-medieval redware	PMR	1580–1900	160	61	7590
English tin-glazed ware	TGW	1570–1846	2	2	21
London tin-glazed ware with	TGW BLUE	1630–1846	1	1	5

Pottery type	Fabric	Date range	SC	ENV	Weight
plain pale blue glaze					
Essex (Nenk and Hughes 1999)					
Essex-type post-medieval fine redware	PMFR	1580–1700	1	1	32
Midlands					
Midlands purple ware	MPUR	1400–1750	1	1	21
Surrey-Hampshire (Pearce 1992; 1999)					
Surrey-Hampshire border whiteware with brown glaze	BORDB	1600–1700	1	1	22
Surrey-Hampshire border whiteware with green glaze	BORDG	1550–1700	1	1	2
Surrey-Hampshire border redware	RBOR	1550–1900	1	1	31
Britain (Hildyard 2005)					
Black basalt ware	BBAS	1770–1900	1	1	3
Bone china	BONE	1794–1900	1	1	10
Bone china with lustre decoration	BONE LUST	1794–1900	1	1	8
English stoneware with Bristol glaze	ENGS BRST	1830–1900	1	1	244
Refined white earthenware with under-glaze polychrome-painted decoration in 'chrome' colours	REFW CHROM	1830–1900	3	1	1195

Table 1. KEN27: post-medieval pottery types quantified by sherd count (SC), ENV and weight.

14.2.4 Pottery sourced from the London provides the largest quantity of ceramics in the assemblage and found as 163 sherds, 64 ENV, 7.616kg. The main type of pottery represented in the assemblage is London-area post-medieval redware (PMR) (see Table 1 for quantity) and this occurs mostly in the form of flower pots. The latter are found as wasters at Woolwich (there wrongly called strainers) dating to the late 17th century and paralleled by other wasters found at Deptford (Pryor and Blockley 1977; Jarrett 2004). The flower pots found at The Orangery therefore appear to date from the late 17th century through to the19th century. There are a wide range of sizes and rim forms represented in the flower pots. The earliest types dating to the late 17th and 18th century additionally have a piercing for drainage at the base of the wall (a characteristic dated up to *c*. 1730: Currie 1993) and these were found in context [39], [51], [53] and [54], cordons below the rim (found in context [31] and the same contexts as those with the extra piercings), reduced surfaces and glaze runs. Context [31] also produced a sherd of a flower pot with white slipped/painted surfaces. Flower pots dating to the 19th-century

appear to be more consistent and are fully oxidised. Two flower pots found in deposit [51] have an external stamp below the rounded rim consisting of the letters V and R each side of a crown. The stamp would most obviously refer to *Victoria Regina*; however the letters may refer possibly to the pottery where these flowerpots were made.

14.2.5 A small number of PMR forms are also recorded and include a jar with a flanged rim (context [22]) and this form may have had a horticultural function, such as for a garden urn. There are also present the distinctive footing bases of two sugar refining jars and these may also have been reused as garden urns.

14.2.6 The only other pottery types recorded from a London source are in tin-glazed wares and these consist of 18th century dated items in the form of a small albarello (context [18]) and plate fragment (context [52]) both decorated in blue and white, while a plain blue ware (TGW BLUE) chamber pot rim was found in context [22].

14.2.7 Pottery made on the Surrey-Hampshire borders occurs as a small quantity of pottery (three Sherds/3 ENV/55g) and in the whiteware fabric it is recorded a green-glazed (BORDG) sherd, possibly derived from a drinking jug (context [31]) and a brown-glazed (BORDB) 17th-century medium rounded jar, surviving as a rounded rim with continuous thumbed decoration (context [3]). The redware (RBOR) from this source occurs as a sherd of a chamber pot (context [22]).

14.2.8 Non-local wares are restricted to a sherd of Midlands purple ware (MPUR), probably derived from a butter pot (context [31]) and the splayed base of a probable drinking vessel made in Essex-type post-medieval fine redware (PMFR) (context [2]).

14.2.9 Pottery types made at a number of locations in Britain is recorded as seven sherds/5 ENV/1.460kg. This material is mostly comprised of a vase or flower pot holder made in refined white earthenware with under-glaze polychrome-painted decoration in 'chrome' colours (REFW CHROM) and consists of a thick walled vessel with moulded decoration consisting of a basket motif, flowers and berries painted in blue (context [51]). It occurs with the base of a bone china (BONE) teacup. A sherd of a pink lustre decorated bone china (BONE CHIN) cylindrical vessel was found in context [52] and part of a teapot made in black basalt ware (BBAS) was recovered from context [51]. The upper half of a ginger beer bottle made English stoneware with Bristol glaze was present in context [17].

14.3 Distribution

14.3.1 Table 2 shows the contexts containing pottery, the phases they occur in, the size/number of sherds, ENV and weight, the earliest and latest date of the most recent pottery type (Context ED/LD) and a considered (spot) date for the group. All of the pottery was recovered from Phases 2–4 dated deposits.

Context	Phase	Assemblage size	SC	ENV	Weight	Context ED	Context LD	Context considered date
2	3	S	5	5	235	1580	1700	Late 17th century

Context	Phase	Assemblage size	SC	ENV	Weight	Context ED	Context LD	Context considered date
3	3	S	1	1	22	1600	1700	1600–1700
17	4	S	1	1	244	1830	1900	1830–1900
18	4	M	66	21	1933	1580	1900	18th century
22	3	S	11	8	443	1630	1846	18th century
31	4	S	7	7	347	1580	1900	1650–1700
39	3	S	7	4	781	1580	1900	Late 17th–18th century
46	3	S	1	1	29	1580	1900	1650–1800
51	3	S	8	6	1859	1830	1900	1830–1900
52	3	S	4	4	95	1580	1900	18th century
53	3	M	49	8	1448	1794	1900	19th century
54	3	S	14	7	1738	1580	1900	Late 17th – early 18th century
58	2	S	3	2	31	-	-	Late Iron Age
68	4	S	1	1	10	1580	1900	18th/19th century

Table 2. KEN27. Distribution of pottery showing individual contexts containing pottery, what phase the context occurs in, the number of sherds (SC), ENV and weight, the date range of the latest pottery type (Context ED/LD) and a suggested deposition date.

14.4 Significance of the collection

14.4.1 The assemblage of pottery recovered from KEN27 is of some significance at a local level. The Late Iron Age pottery is of interest for demonstrating activity for this period on the site. As the archaeological intervention was located within The Orangery then it is not surprising that the assemblage is dominated by horticultural wares, particularly by flower pots of different dates and sizes made in London area post-medieval redware. There are also a number of vessels used probably to display plants, most notably as a blue and white refined whiteware item (REFW CHROM), however it is also of interest that vessels used in the sugar refining industry, i.e. the PMR syrup collecting jars, could have been reused for displaying plants. The flower pot stamped 'V R' may represent an order by the head gardener for flower pots from a pottery during the reign of Queen Victoria. Similar assemblages of horticultural wares from high-status residences have been excavated for comparison to that of The Orangery, *e.g.* Hampton Court Palace (Musty 1977) and Montague House/The British Museum (Jarrett 2011).

14.5 Potential of the assemblage

14.5.1 The pottery has the potential to date the features in which it was found and to provide a sequence for them. The assemblage can also demonstrate what horticultural practices were undertaken at The Orangery.

14.6 Recommendations for further work

14.6.1 There are no recommendations for further work on the assemblage at this stage, although in the light of further archaeological work on the site, then the importance of the pottery from the evaluation should be reviewed with any new ceramic finds excavated.

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15 APPENDIX 6: GLASS SPOT-DATING INDEX

By Chris Jarrett, Pre-Construct Archaeology Limited

15.1 Introduction

15.1.1 A small sized assemblage of glass was recovered from the site (one box). The glass dates only to the post-medieval period. All of the fragments show no or little evidence for abrasion and so were probably deposited fairly rapidly after breakage. Some of the glass fragments have natural weathering deposits resulting from burial conditions. The glass assemblage is in a very fragmentary state, although most of the fragments could be assigned to a vessel shape. The glass was quantified by the number of fragments and estimated number of vessels (ENV) and was recovered from six contexts as small sized groups (under 30 fragments).

15.1.2 All of the glass (sixteen fragments, 11 ENV, of which none was unstratified) was entered into a database format, by type, colour and form. The assemblage is discussed by the vessel shapes, *etc*. and its distribution.

15.2 The forms

15.2.1 All of the identifiable forms are dated to the post-medieval period and are mainly itemised according to their functions and by the number of fragments and ENV. A breakdown of the basic shapes is as follows:

- Bottle: English wine; one fragment, 1 ENV
- Bottle: eight fragments, 4 ENV
- Bottle, soda or mineral water: one fragment, 1 ENV
- Cloche: two fragments, 2 ENV
- Vessel glass: 1 fragment, 1 ENV
- Window pane: three fragments, 2 ENV

15.2.2 Alcohol storage

Bottle: English wine bottle (generic fragment)

Pale olive green, natural glass, wide, kicked base, free-blown, weathered, one fragment, 1 ENV. Possibly from a mallet-type wine bottle. Late 17th-mid 18th century: context [54]

15.2.3 Drink/liquid/food storage

Bottles (generic)

Clear, soda glass, rounded thickened rim, one fragment, 1 ENV. Mid-late 19th century: context [51].

Clear, soda glass, rounded thickened rim with a cordon, one fragment, 1 ENV. Mid-late 19th century: context [51].

Aquamarine, high-lime low alkali (HLLA) glass, base, moulded, embossed on the underside

'...RETIT'S...' and wall sherds, five fragments, 1 ENV. Mid-late 19th century: context [51].

Aquamarine, HLLA glass, rim, bevelled string finish and a bevelled cordon, one fragment, 1 ENV. 19th century: context [53].

Bottle, soda or mineral water

Aquamarine, HLLA glass, base, moulded, embossed on wall side 'S...', one fragments, 1 ENV. Mid-late 19th century: context [51].

15.2.4 Horticultural

Cloche

Olive green, soda glass, base, free-blown, hollow externally rolled finish, weathered, one fragments, 1 ENV. 18th/19th century: context [31].

15.2.5 Olive green, soda glass, wall fragment, large vessel with a cordon, free-blown, one fragment, weathered, 1 ENV. 18th/19th century: context [18].

15.2.6 Vessel glass

Aquamarine, HLLA glass, base, kicked slightly, possible demijohn, two fragments, 1 ENV. Mid-late 19th century: context [51].

15.2.7 Architectural

Window pane

Clear soda glass, two fragments, 1 ENV. 18th/19th century: context [31].

Clear soda glass, thick walled, one fragment, 1 ENV. ?19th century, context [53].

15.3 Distribution

15.3.1 The distribution of the glass is shown in Table 1 and was recovered from Phase 3 and 4 dated deposits .

Context	Phase	Size of Assemblage	No. of fragments	ENV	Forms	Spot date
2	3	S	1	1	Vessel glass	19th century
18	4	S	1	1	Cloche?	18th/19th century
31	3	S	3	2	Cloche, window pane	18th/19th century
51	3	S	8	4	bottle, soda bottle	Mid-late 19th century
53	3	S	2	2	Bottle, window pane	19th century
54	3	S	1	1	English wine bottle	Late 17th-mid 18th century

Table 1. KEN 27: distribution of the glass, showing for each context glass was found in, its phase, the size/number of fragments, ENV, forms and a spot date.

15.4 Significance and potential of the assemblage and recommendations for further work

15.4.1 The glass has some significance at a local level and despite many of the glass types and forms being those expected in the London area for the post-medieval period (and mostly representing domestic refuse), the fragments of the cloches are of interest. The latter would be expected in an area of horticultural activity such as The Orangery. The main potential of the glass is to date the features it occurs in as well as inferring upon horticultural activities in the environs of the study area. At this time there are no further recommendations on the assemblage although its importance should be reviewed in the event of more glass being recovered from further archaeological work on the site.

16 APPENDIX 7: CLAY TOBACCO PIPE SPOT-DATING INDEX

By Chris Jarrett, Pre-Construct Archaeology Limited

16.1 Introduction

16.1.1 A small sized assemblage of clay tobacco pipes was recovered from the site (one box). Most fragments are in a good condition indicating that most of the material was deposited soon after breakage. Clay tobacco pipes were found in eight contexts, as small sized (under 30 fragments) groups.

16.1.2 All of the clay tobacco pipes (33 fragments, of which none are unstratified) were entered in to a database format file and classified using Atkinson and Oswald's (1969) typology (AO), while 18th-century types are defined according to Oswald (1975) and prefixed OS. The pipes are further coded by decoration and quantified by fragment count. The tobacco pipes have been discussed by their types and distribution.

16.2 The Clay Tobacco Pipe Types

16.2.1 The clay tobacco pipe assemblage from the site comprises five bowls and 27 stems and one nib (mouth part). The pipe bowls range in date between *c*.1700 and 1845. All of the bowls show evidence of use.

1700–1740

16.2.2 OS10: two upright, heeled bowls with thick stems, contexts [31] and [39].

1730–1780

16.2.3 OS12: one upright, heeled bowl with a thin stem. The bowl is damaged and has part of an incuse stamp surviving on the back of the bowl, probably in the shape of a shield, context [18].

1770–1845

16.2.4 AO27: one upright, square heeled bowl which has a mark on each side of the heel consisting of four petals in a Greek cross formation, context [22].

Nibs and stems

16.2.5 The nibs and stems have been broadly dated according to their finish, thickness and bore diameter.

16.3 Distribution

16.3.1 The tobacco pipes are found in Phases 3 and 4 and their distribution is shown in Table 1.

Context	Phase	Assemblage size	No. of Fragments	Context ED	Context LD	Bowl type, part	Context considered date
3	3	S	3	1580	1910	x3 stems	1580–1740
17	4	S	1	1580	1910	x1 stems	1580–1740
18	4	S	3	1730	1780	x1 OS12	1730–1780

22	3	S	2	1770	1845	x1 AO27, x1 stem	1770–1845
31	3	S	11	1700	1740	x 1 OS10, x1 nib, x9 stems	1700–1740
39	3	S	2	1700	1740	x1 OS10, x1 stem	1700–1740
52	3	S	6	1580	1910	x6 stems	1580–1740
53	3	S	5	1580	1910	x 5 stems	1580–1740

Table 1. KEN27. Distribution of the tobacco pipes showing, the phase, size of the assemblage, the number of fragments, the date of the latest clay tobacco pipe bowl or fragment (Context ED and LD), the bowl types or part and a deposition spot date (context considered date) for each context.

16.4 Significance, potential and recommendations for further work

16.4.1 The clay tobacco pipes are of little significance at a local level and the bowl types present fit within the typologies for London. It is assumed that the assemblage is derived from use on the site, perhaps by gardeners smoking and discarding broken pipes. There is no evidence for clay tobacco pipe production at the site. The main potential for the tobacco pipes is as a dating tool for the contexts in which they were found. There are no recommendations for further work on the assemblage at this stage, although should further archaeological work occur on the site and more clay tobacco pipes are excavated, then the importance of this part of the assemblage should be reviewed with the new material.

16.5 Bibliography

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17 APPENDIX 8: OASIS REPORT FORM

OASIS ID: preconst1-223372

Project details	
Project name	An evaluation at The Orangery Yard, Kensington Palace
Short description of the project	An archaeological evaluation was conducted at the Orangery Yard, Kensington Palace by PCA comprising 1 evaluation trench, two test pits and 2 borehole starter pits. The investigations showed the natural sequence to be London clay overlain with brickearth. The earliest archaeological activity was noted in a layer of reworked brickearth which contained of late Iron Age pottery. Three possible garden features overlain by two horticultural horizons predating the construction of the Orangery building were seen in the west. 18th to 19th century activity on site was represented by an east to west aligned brick wall, a compacted gravel foundation pad and a brick drainage culvert, encountered in the evaluation trench. The culvert was also encountered in the eastern test pit where it appeared to terminate. To the north of the foundation pad a cut for what has been surmised as a collapsed drain was seen. Garden features dating within this period were noted in the north of the evaluation trench and included four possible plant beds and a shallow brick border. Later 19th century activity was represented by various surface/landscaping features possibly associated with the late 19th century restoration of the Orangery. The site was covered by 20th century deposits. All masonry remains were recorded and left in situ.
Project dates	Start: 10-08-2015 End: 25-08-2015
Previous/future work	Yes / Yes
Any associated project reference codes	KEN27 - Sitecode
Type of project	Field evaluation
Site status	Scheduled Monument (SM)
Current Land use	Other 8 - Land dedicated to the display of a monument
Monument type	WALL Post Medieval
Monument type	FOUNDATION Post Medieval
Monument type	PITS Post Medieval
Monument type	SURFACES Post Medieval
Monument type	CULVERT Post Medieval
Monument type	CUT Post Medieval
Monument type	LAYER Late Iron Age
Monument type	LAYERS Post Medieval
Significant Finds	POT Late Iron Age
Significant Finds	POT Post Medieval
Significant Finds	CBM Post Medieval
Significant Finds	CTP Post Medieval
Significant Finds	BONE Post Medieval
Significant Finds	GLASS Post Medieval
Methods & techniques	"Targeted Trenches","Test Pits"
Development type	Not recorded
Prompt	Scheduled Monument Consent
Position in the planning process	Pre-application

Project location	
Country	England
Site location	GREATER LONDON KENSINGTON AND CHELSEA KENSINGTON The Orangery Yard, Kensington Palace
Postcode	W8 4PX
Study area	775 Square metres
Site coordinates	TQ 2586 8019 51.506112156642 -0.186302587667 51 30 22 N 000 11 10 W Point
Lat/Long Datum	Unknown
Height OD / Depth	Min: 26.11m Max: 26.45m
Project creators	
Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	Historic Royal Palaces
Project design originator	Chris Mayo
Project director/manager	Chris Mayo
Project supervisor	Shane Maher
Type of sponsor/funding body	Charity
Name of sponsor/funding body	Historic Royal Palaces
Project archives	
Physical Archive recipient	Historic Royal Palaces
Physical Archive ID	KEN27
Physical Contents	"Animal Bones","Ceramics","Environmental","Glass"
Digital Archive recipient	Historic Royal Palaces
Digital Archive ID	KEN27
Digital Contents	"Stratigraphic"
Digital Media available	"Images raster / digital photography","Images vector","Spreadsheets","Text"
Paper Archive recipient	Historic Royal palaces
Paper Archive ID	KEN27
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet","Diary","Drawing","Matrices","Plan","Report","Section","Unpublished Text"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	The Orangery Yard, Kensington Palace: An Archaeological Investigation
Author(s)/Editor(s)	Maher, S.
Other bibliographic details	PCA R12278
Date	2015
Issuer or publisher	Pre-Construct Archaeology Limited
Place of issue or publication	London
Description	A4 grey literature report with PCA covers
Entered by	Chris Mayo (cmayo@pre-construct.com)
Entered on	12 November 2015

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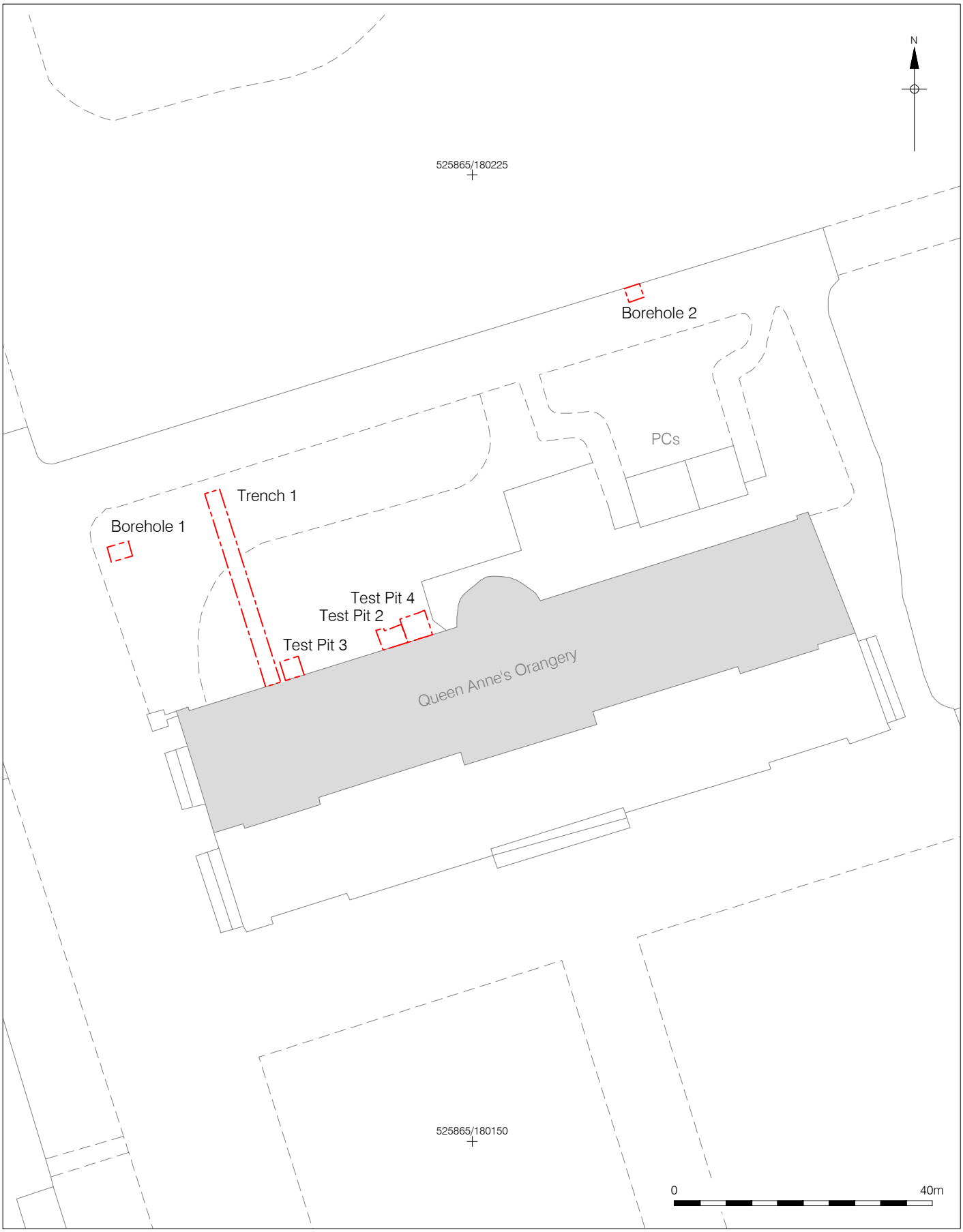
Figure 1
Site Location
1:20,000 at A4



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26/02/16 RM

Figure 2
Trench Location
1:400 at A4

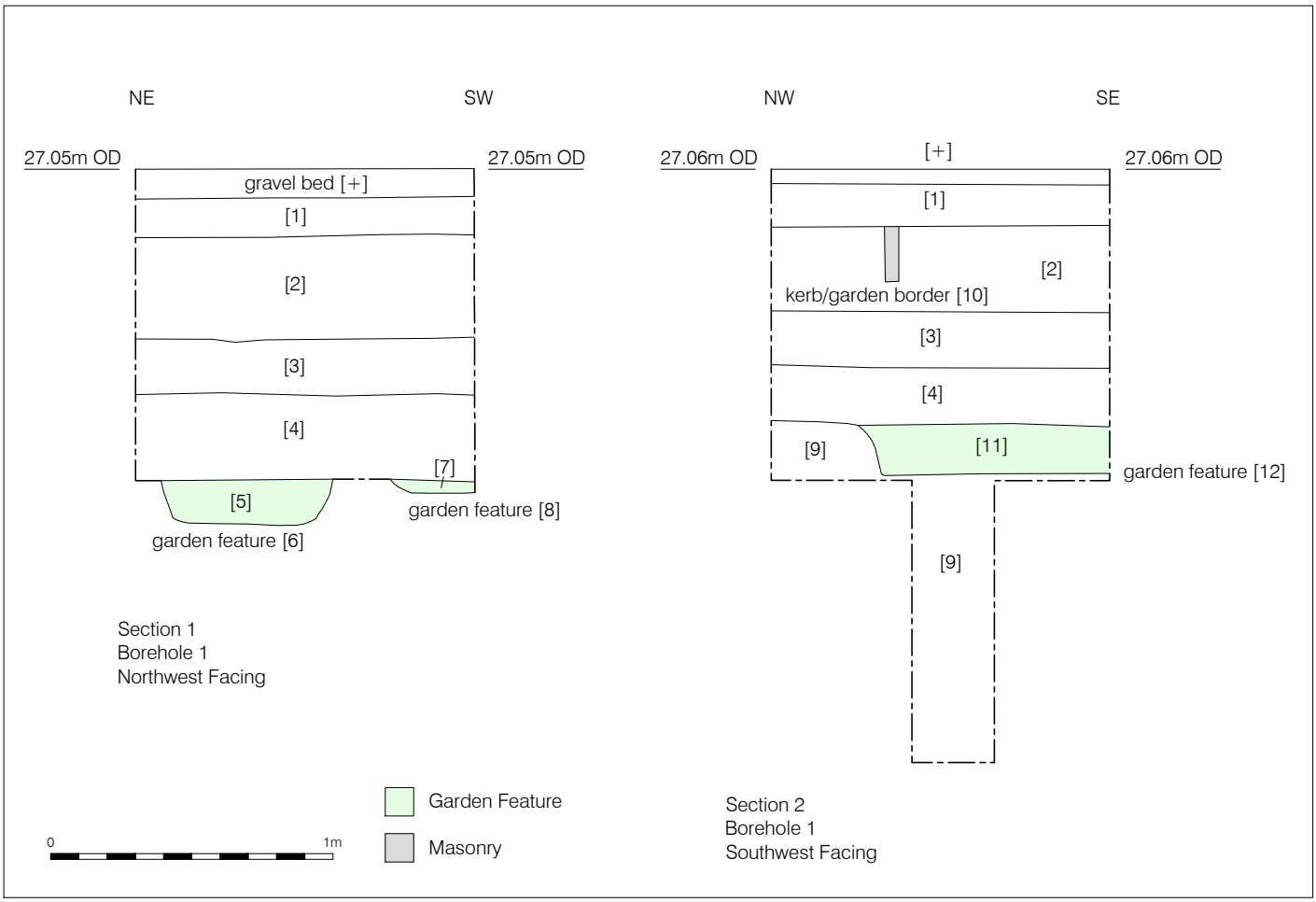

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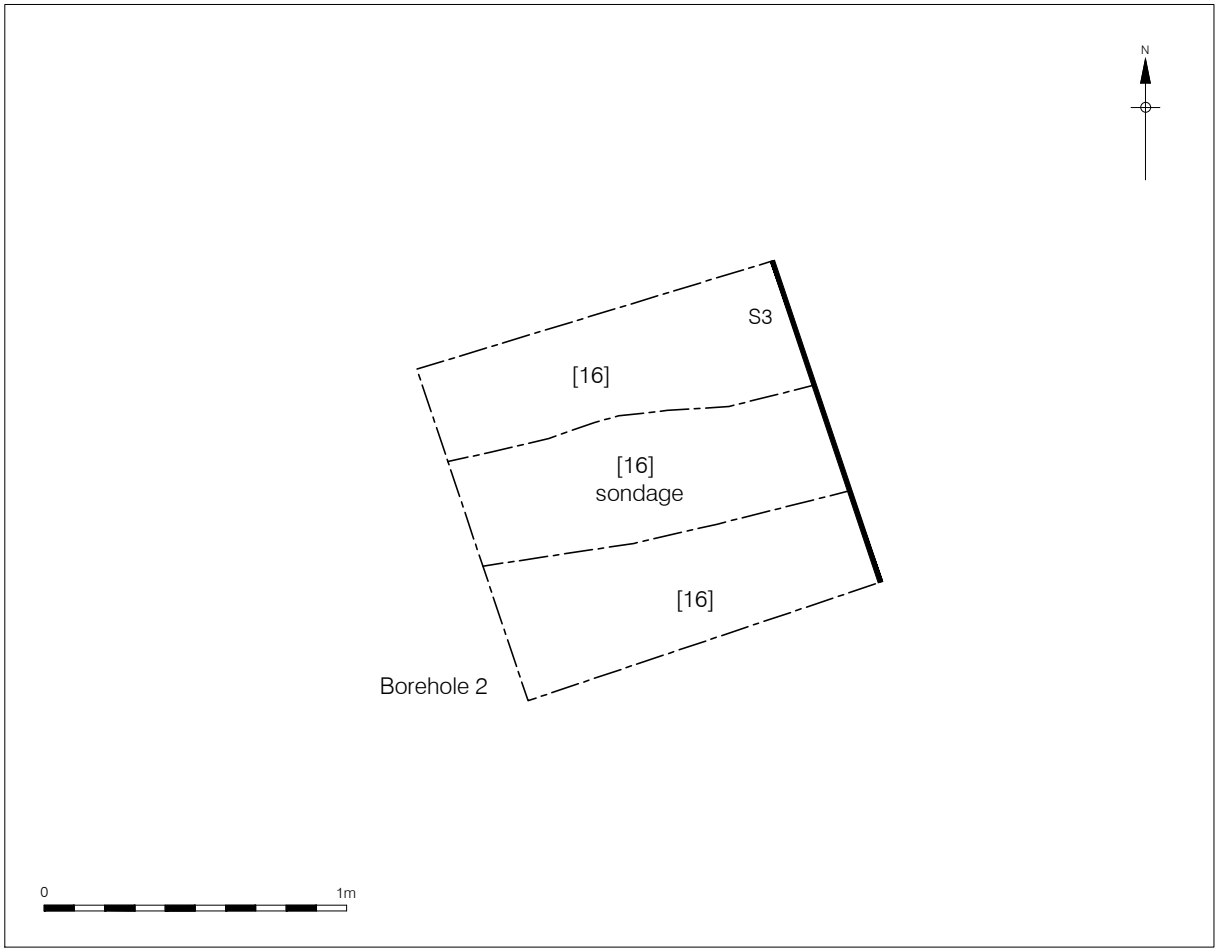
Figure 3
Borehole 1 Plan and Sections
1:25 at A4



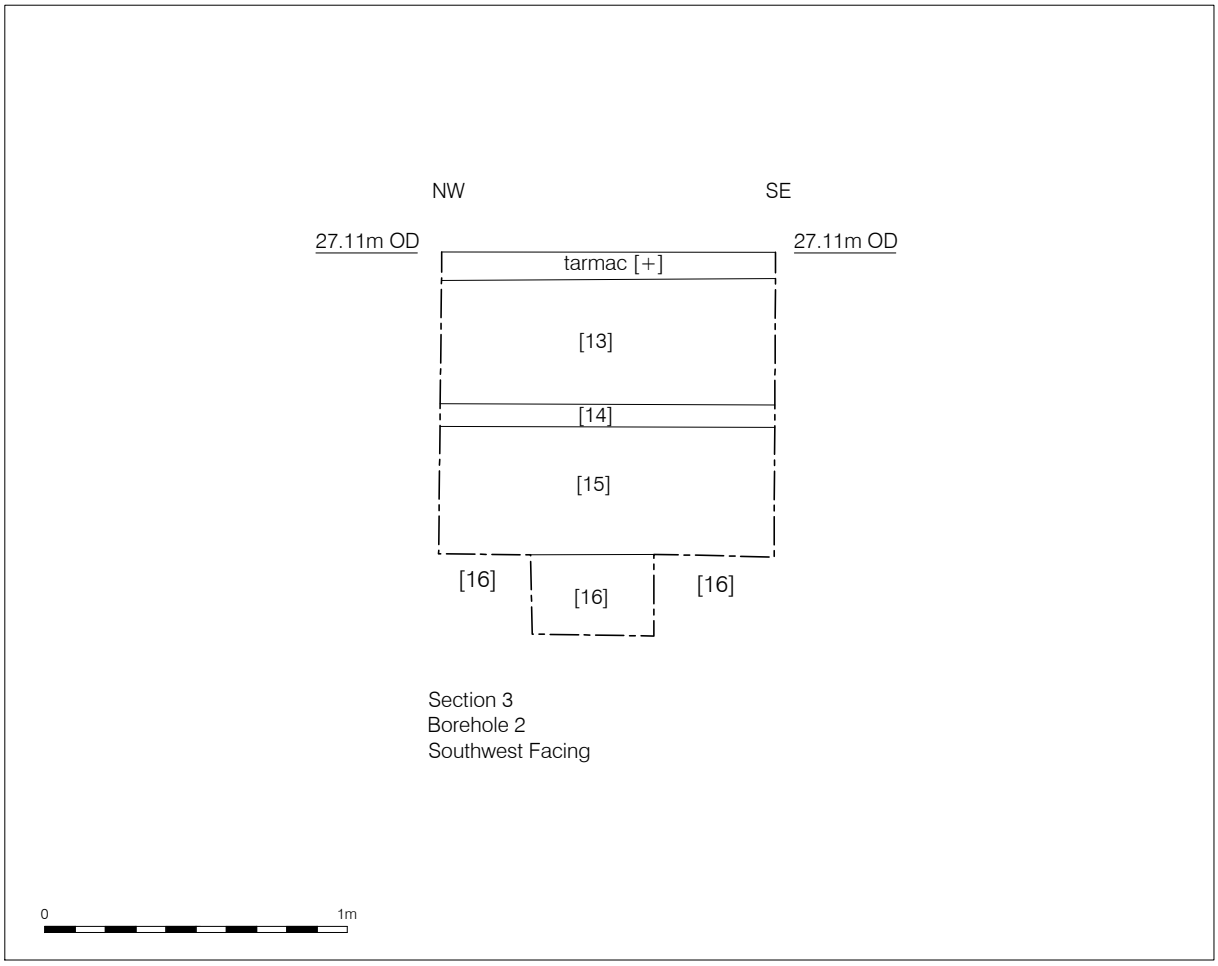


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Figure 4
Borehole 2 Plan and Section
1:25 at A4

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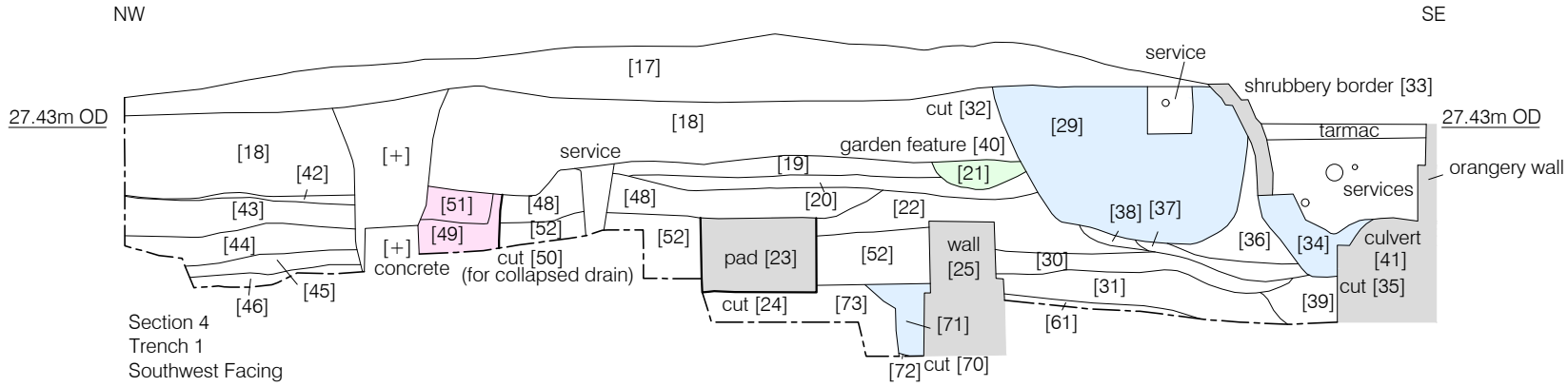
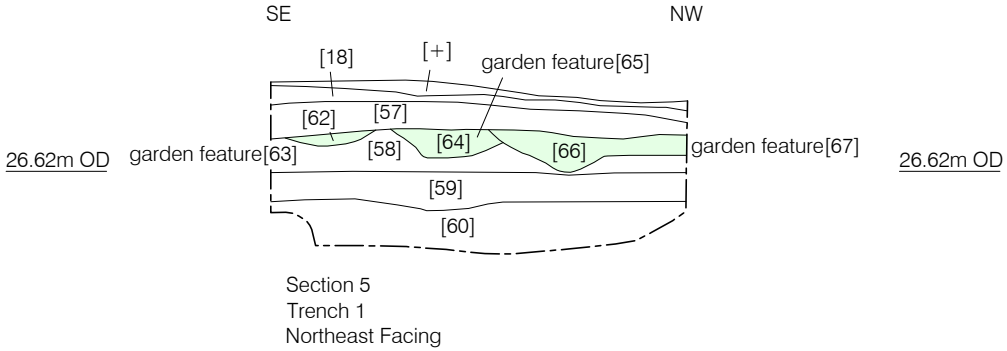
Figure 5
Trench 1 and Test Pit 3 Plan
1:75 at A4





Garden Feature

Collapsed Drain

Other Cut Feature

Masonry

0 2m

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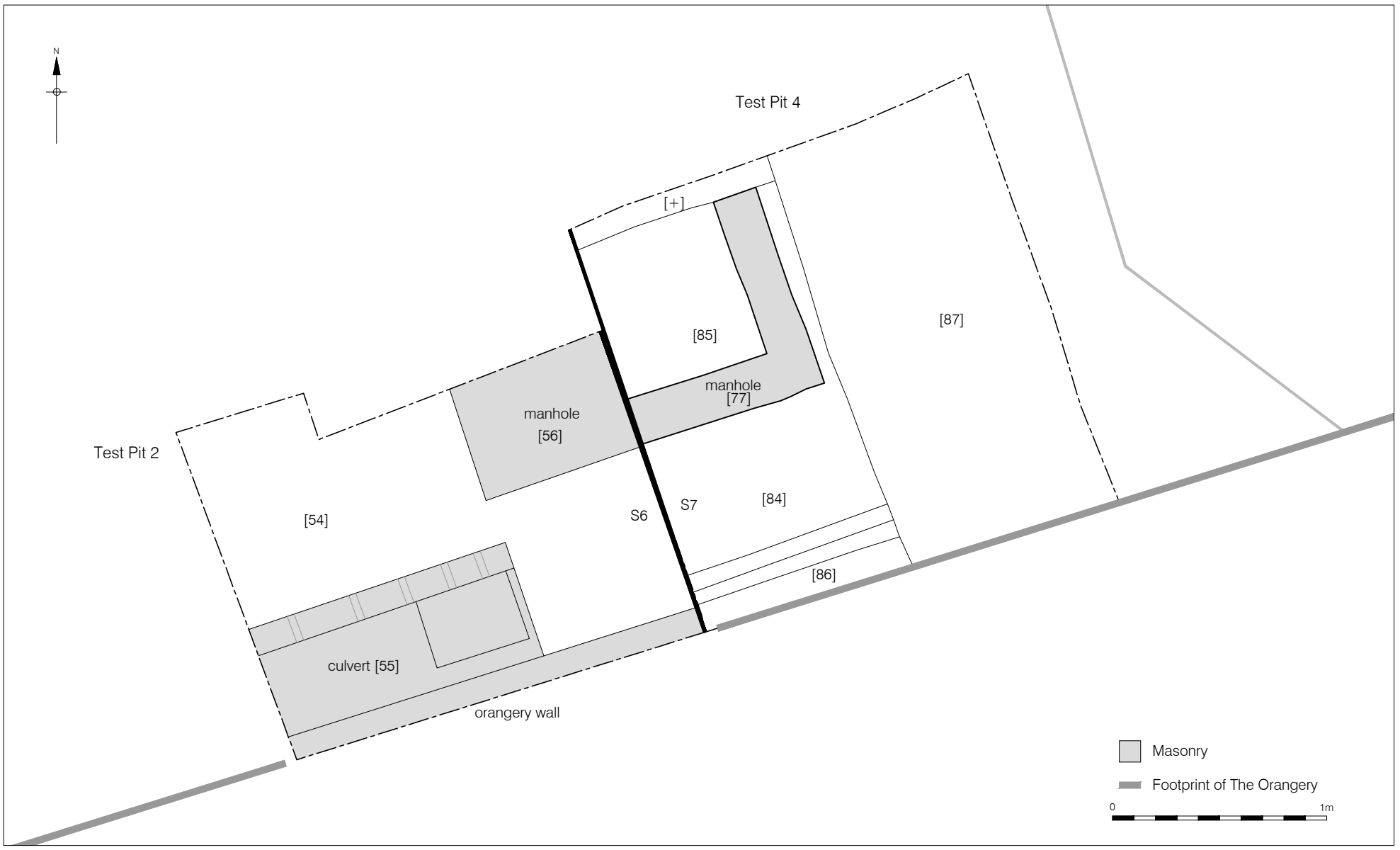
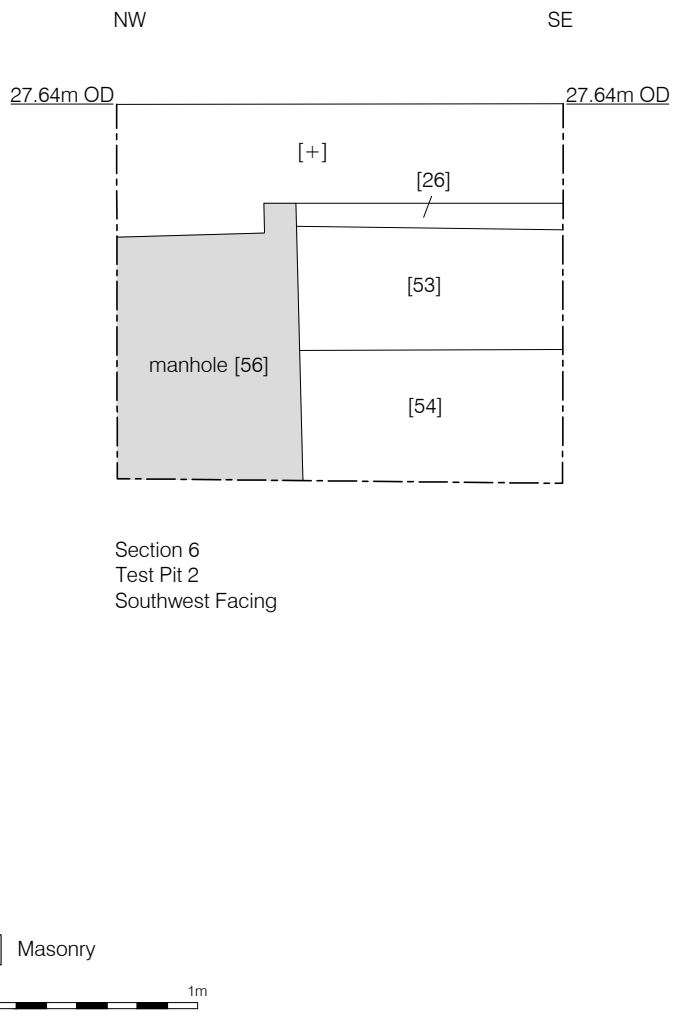
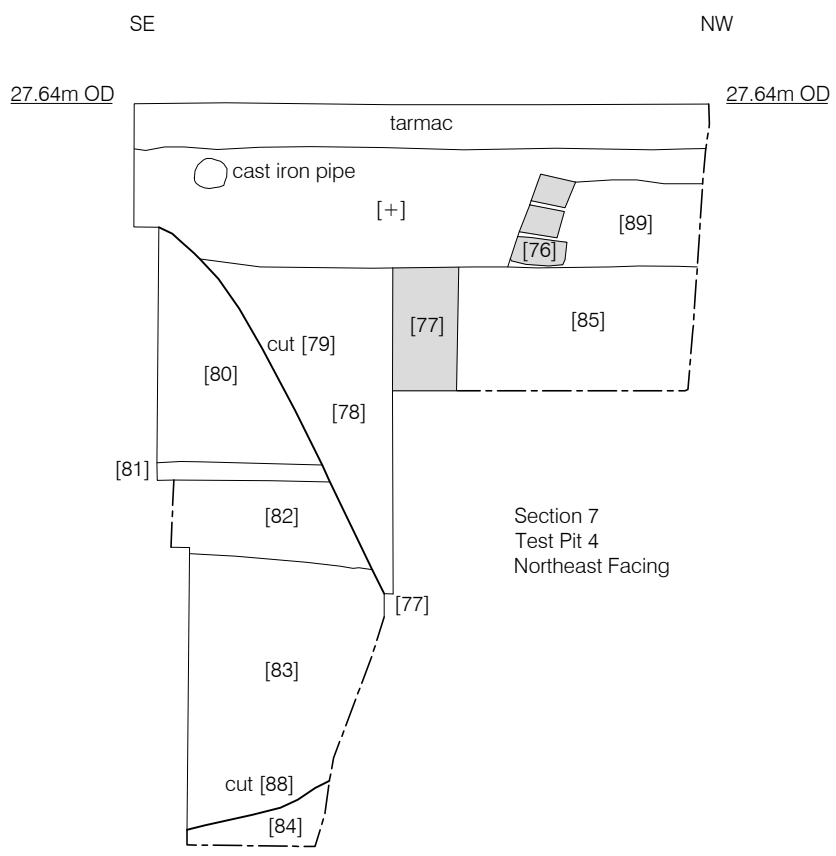
Figure 6
Sections 4 & 5 from Trench 1
1:50 at A4





Section 6
Test Pit 2
Southwest Facing



Section 7
Test Pit 4
Northeast Facing

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Figure 7
Test Pits 2 and 4 Plan and Section
1:25 at A3

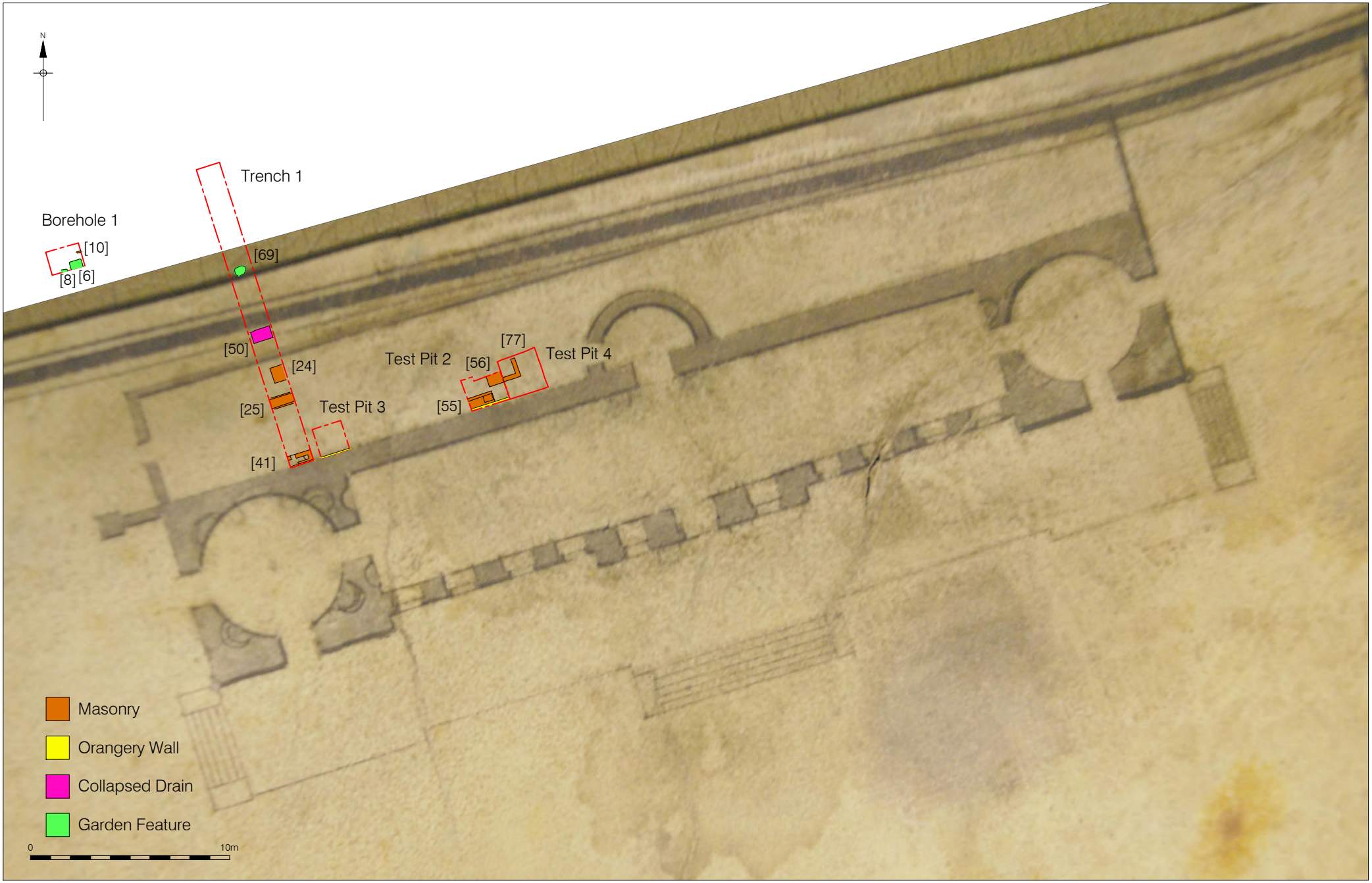

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Figure 8
All Features Overlain onto John Smith Drainage Plan, 1754
1:250 at A4

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