

Fulham
Palace
EST 104

The Dovecote Dig at Fulham Palace

October 2018



**An Assessment of an Archaeological Excavation at the
Fulham Palace Dovecote Community Project, Fulham
Palace, Bishop's Avenue, Fulham, London SW6 6EA**

Site Code: FPL17

DCMS SMC Reference: S00171241

Central National Grid Reference: TQ 23954 76153

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1 ABSTRACT

- 1.1 This report details the results of an archaeological excavation undertaken by Fulham Palace Trust within the Paddock Area at Fulham Palace, Bishop's Avenue, Fulham, London SW6 6EA. The site is located in the London Borough of Hammersmith (Fig. 1).
- 1.2 The excavation was conducted between the 9th of October and the 3rd of November 2017 and was undertaken as a Community Archaeology Project. The intention of excavation was to locate the former dovecote which stood in the Paddock area of the site until it was demolished in the late 18th century, and to investigate a linear zone of resistivity identified during a geophysical survey in 2013 (Young 2013, 11). Scheduled Monument Consent was requested and granted prior to the investigation (SMC REF: S00171241). The works comprised two trenches, with Trench 1 measuring 18m by 16m and Trench 2 measuring 13.4m by 4.68m (Fig. 2).
- 1.3 The archaeology encountered was multi-phase, with the features and deposits dating to eight historic periods: Prehistoric, medieval, 1480-1550, 1630-1680, 1680-1750, 1750-1760, 19th century and 20th century.
- 1.4 The earliest deposits encountered in both trenches were the natural Kempton Park River Terrace Gravels. The levels recorded suggested a slight drop in the gravels between Trench 1 and the south-western end of Trench 2, before rising again in Trench 2 towards the north-east.
- 1.5 The earliest evidence of archaeological activity on site comprised two pits which were recorded in Trench 2. Although one of these was sterile, the other was found to contain a flint blade dating to between the Late Mesolithic and Early Neolithic. The fill of the pit also contained evidence for a horse cremation. It seems unlikely that the cremation dates to such an early period, and for this reason the pit has been tentatively ascribed to between the Late Bronze and Early Iron Age. The damaged nature of the blade indicated that it was likely to be residual.
- 1.6 Evidence for medieval activity on the site comprised a worked horizon in Trench 2. In Trench 1 a metalled surface was observed which was likely to have functioned as a yard or an area of hard standing. This was associated with a large north-east south-west aligned ditch which may have formed part of an enclosure or, in being attached to the moat / Thames, may have functioned as a channel, dock or wharf.
- 1.7 In the years between 1480 and 1550 the ditch went out of use and it was backfilled with waste material, much of which appears to have derived from the proximate kitchens and slaughterhouse. The material evidence recovered from this feature provides an exceptional insight into the diet and material culture at Fulham Palace during the Tudor period.

- 1.8 The only activity concerning the period between 1630 and 1680 involved an episode of further infilling within the ditch. This was presumably to level off an extant depression within this now obsolete feature.
- 1.9 Between 1680 and 1750 a final episode of infilling within the ditch permanently closed the linear, while the area of Trench 1 appears to have been used as a midden. Food waste and building debris were dumped across the area, whilst evidence for associated pitting was recorded in both Trenches 1 and 2.
- 1.10 Further dumping took place in Trench 1 in the years between 1750 and 1760. Much of the material recorded in association with this episode consisted of moulded plaster. During this period Bishop Sherlock is known to have made alterations to the Great Hall and removed the old solar block, replacing it with a new dining hall which still stands today. The material recovered from Trench 1 is therefore likely to have derived from the Great Hall and / or the solar block. Stylistically the plaster follows the influence of Inigo Jones, and is likely to have been commissioned either by Bishop Juxon in the early 17th century, or by Bishop Robinson in the early 18th century.
- 1.11 The only archaeological activity recorded in association with the 19th century was a dog burial in Trench 1.
- 1.12 During the 20th century a layer of made ground was deposited in Trench 1. This was sealed by modern topsoil. Trench 2 was sealed by subsoil which was overlain by modern topsoil. Of interest were a number of screw pickets that were retrieved during the machining process in Trench 1. These may have an association with military training during World War 1. Alternatively they may have belonged to a barrage balloon emplacement which was established on the site during World War 2.

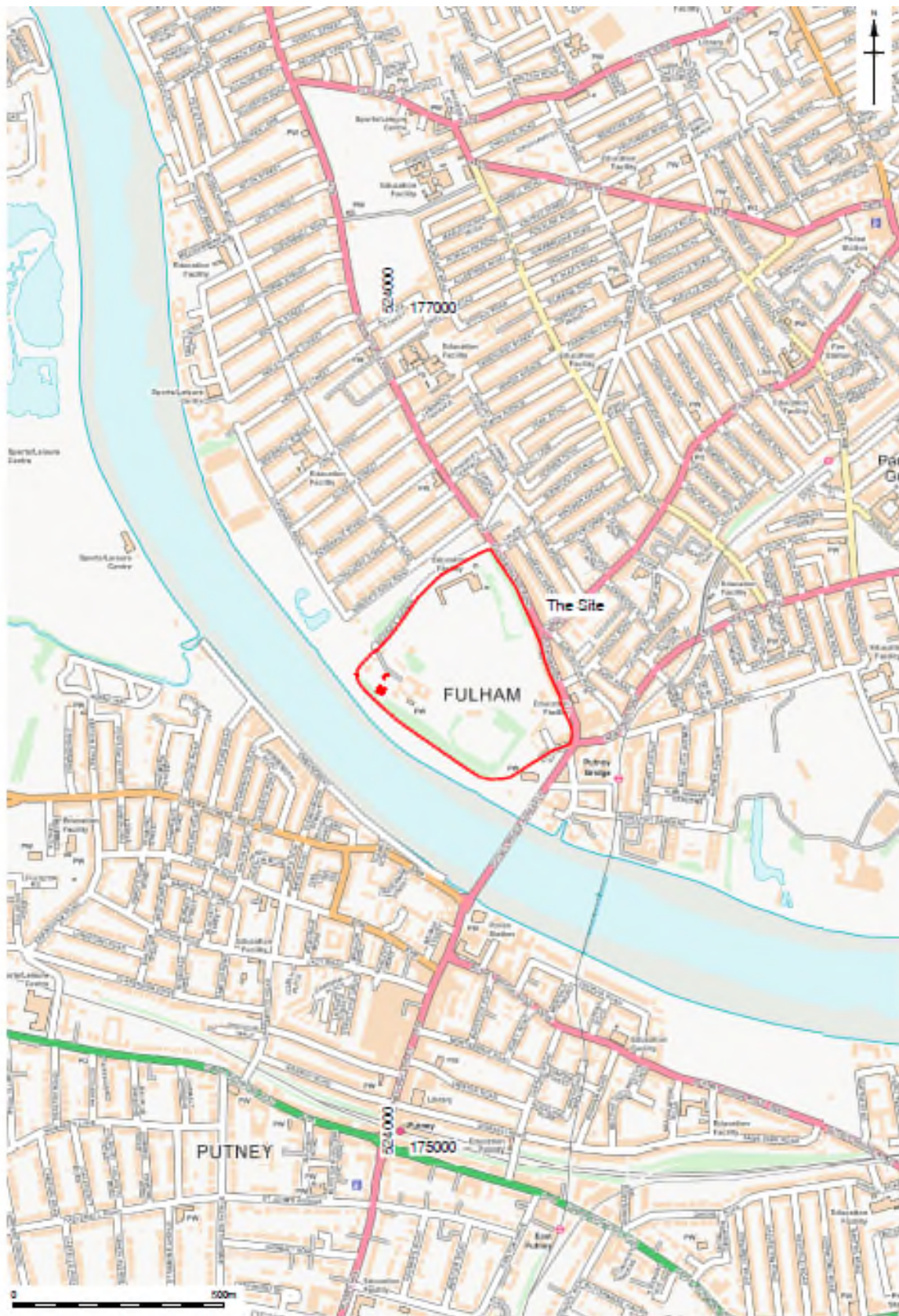
2 INTRODUCTION

- 2.1 An archaeological excavation was undertaken by Fulham Palace Trust between the 9th of October and the 3rd of November 2017 within the Paddock area at Fulham Palace, Bishop's Avenue, Fulham, London SW6 6EA (Fig. 1). The site is located in the London Borough of Hammersmith and Fulham. The project was commissioned and managed by Siân Harrington on behalf of Fulham Palace Trust. The site work was supervised by the author, Alexis Haslam (Community Archaeologist at Fulham Palace Trust), with the assistance of Poppy Alexander and Natasha Billson from Pre-Construct Archaeology Ltd.
- 2.2 The excavation comprised a total of two trenches, with Trench 1 measuring 18m by 16m and Trench 2 measuring 13.4m by 4.68m (Fig. 2). The trenches had been specifically positioned, with Trench 1 designed to investigate the former location of the Palace dovecote which was demolished in the late 18th century. Trench 2 was located to the north of Trench 1 and was opened up in order to investigate a linear zone of resistivity discovered during the geophysical survey of 2013.
- 2.3 Scheduled Monument Consent for the excavation was approved on the 24th of July 2017 (Historic England ref: S00171241). The works were undertaken by archaeological volunteers under the guidance of professionally trained archaeologists.
- 2.4 The paddock area has been subject to a number of previous archaeological investigations. A resistivity survey was undertaken in the area by the North East London Polytechnic in 1975, with this survey identifying a number of banks and ditches. This was followed by an archaeological excavation undertaken by the Fulham Archaeological Rescue Group (FARG) between 1975 and 1976. This excavation has never been reported, although a round-up in the London Archaeologist states that medieval occupation was revealed in the form of gravel surfaces, pits and ditches. More recent archaeological works undertaken by Pre-Construct Archaeology (PCA) identified a double ditch in front of the Tudor Court which may once have formed part of an enclosure. Further discoveries include a possible medieval chalk and flint wall foundation which was revealed to the rear of the Coachman's Lodge, and a Victorian garden path which was discovered in the current Nursery grounds.
- 2.5 A detailed specification for the archaeological works was included within the Written Scheme of Investigation (Mayo 2017). A Health and Safety Method Statement was also produced prior to the investigation (Haslam 2017). The Written Scheme of Investigation was approved by the Assistant Inspector of Ancient Monuments and advisor to the Department for Digital, Culture, Media and Sport (DCMS), Iain Bright of Historic England.
- 2.6 The excavation was located within the Fulham Palace moated site, which is designated as a Scheduled Monument (Lo. 134) under the Ancient Monuments and Archaeological Area Act 1979, amended by the National Heritage Act 1983. Scheduled Monument

Consent for the excavation was applied for by Fulham Palace Trust and was granted under DCMS SMC reference S00171241.

- 2.7 The National Grid Reference of the site is TQ 23954 76153.
- 2.8 The site was given the Museum of London code FPL 17.

Figure 1 – Site Location



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23/05/15 AT

Figure 1
Site Location
1:12,500 at A4



Map Data supplied by the client, based on the Bishops Park Survey dwg, May 2009

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23/07/18 AT

Figure 2
Detailed Site and Trench Location
1:1,250 at A4

3 PLANNING BACKGROUND

- 3.1 Archaeological investigations and / or development of the site are subject to planning guidance and policies contained within the National Planning Policy Framework (NPPF), The London Plan and policies of the London Borough of Hammersmith and Fulham, which fully recognise the importance of the buried heritage for which they are custodians.
- 3.2 The Dovecote investigations of 2017 were undertaken as a part of a community archaeology project and the areas of excavation were not subject to subsequent development. Following the project the two trenches were backfilled and the previously extant lawn areas and planting beds were reinstated.

3.3 Regional Policy: The London Plan

- 3.3.1 The London Plan, published 2016, includes the following policy regarding the historic environment in central London:

POLICY 7.8 HERITAGE ASSETS AND ARCHAEOLOGY

Strategic

- A London's heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilising their positive role in place shaping can be taken into account.
- B Development should incorporate measures that identify, record, interpret, protect and, where appropriate, present the site's archaeology.

Planning decisions

- C Development should identify, value, conserve, restore, re-use and incorporate heritage assets, where appropriate.
- D Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail.
- E New development should make provision for the protection of archaeological resources, landscapes and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.

LDF preparation

- F Boroughs should, in LDF policies, seek to maintain and enhance the contribution of built, landscaped and buried heritage to London's environmental quality, cultural identity and economy as part of managing London's ability to accommodate change and regeneration.

3.4 Local Policy: Hammersmith and Fulham Core Strategy (2011) Borough Wide Strategic Policy - BE1

'protect and enhance the character, appearance and setting of the borough's conservation areas and its historic environment, including listed buildings, historic parks and gardens, buildings and artefacts of local importance, archaeological priority areas and the Fulham Palace Moated Site scheduled ancient monument.

Justification

8.75 *The existing character of the borough is heavily influenced by a variety of historical, landscape and architectural assets. Some of these are of national importance, such as listed buildings and the Fulham Palace Moated Site, whereas others are of borough importance, including archaeological priority areas and locally listed buildings of merit. However, whether they are of national or local importance they should be considered in all developments in accordance with PPS5 and associated English Heritage Historic Environment Planning Practice Guide.*

3.5 Local Policy: The London Borough of Hammersmith and Fulham Development Management Local Plan (2013) Policy DMG7

Heritage and Conservation

The Council will aim to protect, restore or enhance the quality, character, appearance and setting of the borough's conservation areas and its historic environment, including listed buildings, historic parks and gardens, buildings and artefacts of local importance, archaeological priority areas and the scheduled ancient monument. When determining applications for development affecting heritage assets, the council will apply the following principles:

- a) The presumption will be in favour of the conservation and restoration of heritage assets, and proposals should secure the long term future of heritage assets. The more significant the designated heritage asset, the greater the presumption should be in favour of its conservation.*
- b) Proposals which involve harm to, or substantial harm to, or loss of, any designated heritage asset will be refused unless it can be demonstrated that they meet the criteria specified in paragraph 133 of the National planning Policy Framework.*
- c) Development affecting designated heritage assets, including alterations and extensions to buildings will only be permitted if the significance of the heritage asset is preserved or enhanced or if there is clear and convincing justification. Where measures to mitigate the effects of climate change are proposed, the benefits in meeting climate change objectives should be balanced against any harm to the significance of the heritage asset and its setting [for further detail see the relevant SPD].*
- d) Applications for development affecting heritage assets (buildings and artefacts of local importance and interest) will be determined having regard to the scale and impact of any harm or loss and the significance of the heritage asset.*
- e) Development should preserve the setting of, make a positive contribution to, or better reveal the significance of the heritage asset. The presence of heritage assets should inform high quality design within its setting.*
- f) Particular regard will be given to matters of scale, height, massing, alignment, materials and use.*
- g) Where changes of use are proposed for heritage assets, the proposed use should be consistent with the aims of conservation of the asset concerned.*

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- h) Applications should include a description of the significance of the asset concerned and an assessment of the impact of the proposed development upon it or its setting. The extent of the requirement should be proportionate to the nature and level of the asset's significance.*
 - i) Where a heritage asset cannot be retained, the developer should ensure that a suitably qualified person carries out an analysis [including photographic surveys] of its design before it is lost, in order to record and advance the understanding of heritage in the borough. The extent of the requirement should be proportionate to the nature and level of the asset's significance; and*
 - j) it respects the principles of accessible and inclusive design*

Justification

4.146 Hammersmith and Fulham has maintained a much-valued built heritage, much of which falls within the Borough's 45 designated conservation areas (See proposals Map and Table 3). In many of these areas, the street provides a sense of scale and the setting for the consistent terraces of uniform architectural design. Within the borough, there are over 500 statutorily Listed Buildings and approximately 2,150 locally designated Buildings of Merit, as well as a number of archaeological priority areas and the ancient monument of the Fulham Palace moated site (see Proposals Map and Core Strategy Appendix 4). The heritage assets make an important contribution to the townscape character of the Borough.

4.147 Heritage assets are a non-renewable resource. The council considers the historical character and architectural heritage of the borough should be preserved for future generations.

4.148 New developments should have a good relationship with the character of the surrounding historic context. The character of a conservation area will be derived from the individual buildings within it, their relationship to each other, and the spaces between them; from the townscape in its broadest sense, and from the interrelationship between the public realm, open spaces and the built form. The character of the conservation area may be uniform, or, in larger conservation areas may vary within its boundaries. The character may also be defined by its land uses and by its archaeological potential.

4.149 The special character of the conservation areas makes it essential that new development accords with their special architectural and visual qualities. The Character Profiles produced for the borough's conservation areas will assist in interpreting the scale, massing, height and alignment of development and also the finer grain elements such as vertical and horizontal rhythms, materials and decorative or architecturally important features. Reference will also be made to street building lines and local building traditions where appropriate. New buildings will not necessarily be required to copy their older neighbours, although there will be places where a facsimile development will be appropriate. The aim should be to promote high quality design which contributes positively to the area, harmonising the new development with its neighbours in the conservation area. Valued historic assets can inform quality design.

4.150 The council will protect its listed buildings from demolition or harmful alteration and from development which has a harmful impact on their setting.

4.151 No specific powers other than normal planning controls are available to regulate the use to which listed buildings are put, but the council considers that it is important that these buildings should not be used in manner which is harmful to their character. It will therefore take every opportunity to persuade those involved to co-operate in finding appropriate uses and may in certain circumstances be prepared to allow a use that would not normally be approved on other policy grounds, provided this will protect the character of the building. The council expects the owners and/or users of listed buildings to play their part in their upkeep, and will use its legal powers to ensure proper maintenance of buildings and their settings.

4.152 The Council will work with English Heritage to maintain the Heritage at Risk Register and reduce the number of heritage assets at risk in the borough.

4.153 The council wishes to promote simple and uncomplicated access, into and around listed buildings. The goal is for disabled people or people with mobility problems to use the property in the same way as everyone else. This will call for creative and sensitive solutions though there may be cases when a compromise solution is necessary.

4.154 There are many buildings in the borough, in addition to the listed buildings, which are of merit and which contribute to the character of the locality because of their townscape value, architectural value or historic associations. Many of these buildings and artefacts are included in a Local Register. Most buildings on the register have been selected through external inspection on the basis of their architectural character and/or their contribution to the visual quality of the street scene. However, there may be instances where the interior of the buildings is valuable. Proposals to add to, or in exceptional cases remove buildings from, the Local Register will be considered as and when appropriate and in consultation with the relevant amenity societies. Furthermore, the council may recommend that particular buildings on the Local Register should be added to the Statutory National List of Buildings of Special Architectural or Historic Interest.

4.155 Locally important buildings are of value in terms of townscape, architectural or historic interest, and it is especially important that they should not be demolished. Any alterations should only be carried out in a way that respects the scale, character and materials of the building (see relevant supplementary planning document).

4.156 There will be a presumption against proposals which would involve significant alteration of, or cause damage to, or have a harmful impact on the setting of, Archaeological Remains of National or Local Importance, whether scheduled or not.

4.157 Applicants will be required to arrange for archaeological field evaluation of any such remains within the archaeological priority areas defined on the Proposals Map before applications are determined or if found during development works in such areas or elsewhere. Proposals should include provision for the remains and their settings to be protected, enhanced or preserved. Where it is accepted that physical preservation in situ is not possible or not merited, planning permission may be subject to conditions and/or formal agreement requiring the developer to secure investigation and recording of the remains and publication of the results. It is therefore important for developers to consult English Heritage at an early stage. New buildings will normally destroy any archaeological remains and therefore these should be excavated by a qualified archaeological unit before work commences. This is because the context of any archaeological find is an essential part of the historical value of any remains. The council considers it is reasonable for a person thus threatening part of the community's heritage to fund adequate excavation, the subsequent academic and popular reports, as well as publicity both for the excavation and the reports. The council will encourage developers to inform local archaeological societies of the start of any archaeological excavation and to make arrangements for public viewing of excavations in progress, wherever possible, and for subsequent analysis, interpretation and presentation to the archaeological and amenity societies and the public of any archaeological results and finds.

3.6 The site is located in the grounds of Fulham Palace Moated Site, Scheduled Ancient Monument (No. 134) under the Ancient Monuments and Archaeological Areas Act 1979, amended by the National Heritage Act 1983. Scheduled Monument Consent was approved prior to the reported archaeological works (DCMS / Historic England Ref: S00171241).

3.7 Government guidance provides a framework which:

- Protects Scheduled Ancient Monuments
- Protects the settings of these sites
- Has a presumption in favour of in-situ preservation of nationally important remains
- In appropriate circumstances seeks adequate information (from field evaluation) to enable informed decisions
- Provides for the excavation and investigation of sites not important enough to merit in-situ preservation

3.8 Scheduled Monument Consent Conditions

Scheduled Monument Consent was granted under Section 2 of the 1979 Act providing that the conditions set out below were adhered to:

- a) The works to which this consent relates shall be carried out to the satisfaction of the Secretary of State, who will be advised by Historic England. At least 2 weeks' notice (or such shorter period as may be mutually agreed) in writing of the commencement of work shall be given to Iain Bright (Assistant Inspector of Ancient Monuments), Historic England, Waterhouse Square, 138-142 Holborn, London, EC1N 2ST; iainbright@historicengland.org.uk, in order that an Historic England representative can inspect and advise on the works their effect in compliance with this consent.
- b) The specification for work for which consent is granted shall be executed in full.
- c) The community excavation will be undertaken in accordance with a Written Scheme of Investigation (WSI) which is to be submitted to and approved by Historic England in advance.
- d) All archaeological features, deposits and horizons encountered during excavation are to be investigated and recorded before fieldwork can be deemed complete.
- e) If any significant archaeological remains are encountered requiring further investigation a methodology will be agreed between the Fulham Palace Trust and Historic England.
- f) All those involved in the implementation of the works granted by this consent must be informed by the owner, occupier and / or developer that the land is designated as a scheduled monument under the Ancient Monuments and Archaeological Areas Act 1979 (as amended); the extent of the scheduled monument as set out both in the scheduled monument description and map; and that the implications of this designation include the requirement to obtain Scheduled Monument Consent for any works to a scheduled monument from the Secretary of State prior to them being undertaken.

- g) Equipment and machinery shall not be used in the scheduled area in conditions or in a manner likely to result in damage to the monument / ground disturbance other than that which is expressly authorised in this consent.
- h) Provision will be given for the publication of results of the archaeological work.
- i) A report on the archaeological recording (which shall include a synopsis of proposals for the publication of results) shall be sent to the Greater London Historic Environment Record and to Iain Bright at Historic England within 6 months of the completion of works.
- j) The contractor shall complete and submit an entry to OASIS (On-line access to the Index of Archaeological Investigations – <http://oasis.ac.uk/england/>) prior to project completion, and shall deposit any digital project report with the Archaeology Data Service, via the OASIS form, upon completion.

4 GEOLOGY AND TOPOGRAPHY

4.1 Geology

4.1.1 According to the British Geological Survey (BGS) of England and Wales (Sheet 270, South London) the site lies upon the Kempton Park River Terrace Gravels on the north side of the River Thames. These gravels formed during the Devensian period and are described as a post-diversionary Thames River Terraced deposit: gravel, sandy and clayey in part.

4.2 Topography

4.2.1 The site is situated approximately 75m to the north-east of the River Thames.

4.2.2 Although the topography within the Palace is generally flat, a slight slope from the south-west to the north-east was recorded within the excavation area. Whereas the highest ground level was recorded at 3.63m OD in Trench 1, the lowest ground level was observed at 3.03m OD in Trench 2. Interestingly this suggests that in this area of the site the land marginally drops from the moat north-eastwards towards the Palace driveway.

4.2.3 At the time of the Archaeological Works Trench 1 was partially situated within land occupied by the Fledglings at the Palace Day Nursery. Prior to the excavation an old railway carriage was removed from this area along with some fencing. The remainder of the Trench was located within the Palace grounds and was covered by a planting bed and lawn. The area of Trench 2 comprised lawn on the south-western side of the entrance driveway.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 General

5.1.1 The origin of the moat which surrounds Fulham Palace and the Walled Garden is unknown, with theories suggesting an Iron Age date having been postulated. The Palace was founded during the medieval period, but it is suggested that the early medieval manor was located to the north-west of the current Palace in the location of the Paddock, now partially occupied by a Nursery. An archaeological excavation towards the south-western corner of the moated enclosure between the walled garden and the moat in 1972-3 found Neolithic and Roman activity (Arthur & Whitehouse 1978). While survival of earlier structures and features on the site is believed to be high, modern landscaping has masked the position and extent of features. The line of the moat, which is known from Ordnance Survey maps, was filled in with builders' debris between 1921 and 1924, with the fill spilling over the tops of the banks in some places.

5.2 Prehistoric

5.2.1 Residual artefacts dating to the Mesolithic, Neolithic, Bronze and Iron Age have been recovered from various interventions across the moated enclosure. Excavations to the north of the palace have also produced residual material dating to the Neolithic and Iron Age. It is considered likely that the area now delimited by the moat was the location of some form of settlement from the later prehistoric and / or late Roman period.

5.2.2 In addition, it is known that the terrace gravels of the Thames flood plain were widely exploited in the Mesolithic, Neolithic, Bronze and Iron Age periods. Transitory hunting and fishing in the area gave way to early farming settlements but the location of these settlements in the vicinity of the study area is not known. However, Fulham and Putney are situated on one of the few places along the Thames where the stable terrace gravels are not overlain by alluvial deposits and this, combined with their location at the extreme south of a large meander in the Thames are thought to have made this area of strategic importance throughout the prehistoric period.

5.2.3 The origins of occupation appear to be centred on a prehistoric ford across the river, a little up-river of the present Putney Bridge. This lay at the southern end of the conjectured route of a contemporary trackway, thought to run to the northeast along the line of Fulham Road. The conjectured line for this trackway is emphasised by a series of high quality finds dating from the Neolithic to the early Roman period which have been recovered from dredging of the River Thames.

5.3 Roman

- 5.3.1 Until 1972, the evidence for Roman activity in Fulham was limited to the discovery of the 1st century A.D. 'Fulham Sword' recovered from the Middlesex bank of the river in 1887. In 1972-73 excavations across the inner bank of moat produced evidence of fourth century Roman occupation of the palace site. This took the form of a bank and gravel surfaces. This was preceded by a destruction / demolition phase which in turn was preceded by a possible construction phase.
- 5.3.2 Excavations in the grounds immediately to the north of the palace produced evidence for 4th century occupation with a boundary ditch and demolition debris deriving from a Roman building (GLHER Number 051004).
- 5.3.3 In addition a number of finds of Roman / Romano-British pottery have been recovered from interventions within the Fulham Palace grounds. The GLHER records a find of Romano-British pottery from the throw of a tree to the south of the walled garden.

5.4 Saxon and Medieval Periods

- 5.4.1 During the Saxon and medieval periods the manor of the bishops of London was established on the site, potentially to the north-west of its current position within what is known as the 'homestead moat', a double ditched rectangular enclosure in the western corner of the main moated site.
- 5.4.2 A number of finds dating to this period have been retrieved, most notably at the extreme northern limit of the moat where an assemblage of Saxon pottery was recovered.
- 5.4.3 The manor was rebuilt during the 13th century to the south-east of the homestead enclosure when a less restricted site was needed for a larger residence. It was sited around the current eastern courtyard and was thought to be associated with the formal delineation of the great moated enclosure, giving rise to the claim that this was the largest medieval domestic moated enclosure in England. The earliest documentary reference to the moat was a mention of the 'magna fossa' (Great Ditch) in 1392, but dendro-chronological analysis of samples from the remains of a timber moat bridge, excavated in 2011, indicated felling dates between 1249 and 1285 (Emery 2011).
- 5.4.4 During the 14th century the loose arrangement of buildings forming the manor house were restyled into one coherent structure set around the eastern courtyard. The later 15th century saw the erection of the great hall and service rooms.
- 5.4.5 The GLHER also contains an entry for the medieval bridge and gate piers although those visible today are 19th century.

5.5 Post-Medieval

- 5.5.1 The early post medieval period saw the Palace undergo substantial alteration and enlargement. The three-storey porch at the western end of the screens passage was added in c.1500 when the western courtyard was developed.

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- 5.5.2 Between 1506 and 1522 the bishop in residence was Fitzjames who built a new service range along the south side of the west court along with enclosing the walled garden to the south-east of the house. One of the gateways into this garden survives on the north-west side of the current walled garden.
- 5.5.3 Also during the 16th and early 17th centuries, a state wing was added to the north side of the east court and a long gallery projecting from the east side of the same court. The latter was supported on a stone built garden gallery. These additions resulted in the creation of two further minor courtyards. This is thought to be the maximum size of the palace as during the 18th and 19th century the palace was rebuilt and contracted in size as a result.
- 5.5.4 Excavations carried out immediately to the north of the palace produced evidence for the 17th century gardens along with the remnants of a contemporary wall.

5.6 Eighteenth & Nineteenth Centuries

- 5.6.1 In 1715 the state wing on the north side of the east court was demolished to make way for a new north range.
- 5.6.2 Bishop Sherlock was responsible for a radical remodelling of the great hall. In c. 1750 he demolished the early parlour and solar block at the north end and built a grand new drawing room.
- 5.6.3 During the occupancy of Bishop Terrick (1764-1777) the eastern part of the house was completely changed with the demolition of the medieval chapel and restructuring of the east court which was embellished with the trappings of the new and fashionable "Strawberry Hill Gothic" style. This prompted the change of the layout of the grounds which changed from a formal style to an informal landscape garden. Demolition of the 'dovehouse' took place when Terrick was in office.
- 5.6.4 During the early 19th century Bishop Howley largely undid the ornamentation carried out by Terrick. He also demolished the medieval kitchens and had an entirely new range built on the north side of the west court.
- 5.6.5 In 1866 the last major development was undertaken on the house when a new chapel was constructed as a projecting limb from the junction of the courts.

5.7 The Dovecote

- 5.7.1 The precise age of the dovecote is unknown, although it is first mentioned in William Dikes' Parliamentary Survey of 1647 which states

'In the outer court a fair brick dovehouse standing in the southwest corner thereof a house wherin dwelleth Robert Lee housekeeper of the foresaid mansion house'.

The dovecote was still extant a century later and is depicted on Rocque's map of 1746. By 1761 it was in poor condition, and Stiff Leadbetter's estimate for repairs on the 12th of November of that year stipulated that the dove house in the yard by the moat required

'680ft of pointing to wall and cutting out bad bricks'

at a cost of 3d per foot (totalling £8 10s). Further repairs were necessary to the tiling and turret at a cost of £1 5s.

It was again featured on the Leadbetter Faculty Plan of 1763 and was described as octagonal in plan. It was however still in poor condition as the repairs had not been completed under Bishop Hayter due to his death in 1762. The subsequent list of required works were quoted at £18 5s 3d:

'To repair and point the external Brick work the Tylering and Turret, repair the (?) Twining post under the beam, repair the Door, put one new Hinge to Do., repair the window frames and (?) place' (De Quincey CMP appendix 2 2016, 24).

Again these works were not undertaken however, and on the 3rd of August 1764 it was recorded that

'There is a dovehouse or Pigeon house in the said outermost yard which hath long since been disused and is not now of any use whatsoever but is rather a nuisance as it serves only to harbour Rats and other vermin which Shelter themselves therein and this building the said Bishop of London also proposeth to take down intirely and remove'

5.7.2 It is therefore unsurprising that Terrick chose demolition as opposed to conservation in this instance.

5.8 Twentieth Century

5.8.1 Between 1921 and 1924, the Bishop charged Fulham Borough Council to infill the moat, with builders and contractors paying a fee per load to dump demolition rubble and builders' waste.

5.9 Previous Relevant Archaeological Investigations

FARG Investigations

5.9.1 Investigations at Fulham Palace by FARG in 1975-6 in the paddock area revealed evidence of medieval occupation, provided by gravel surfaces, ditches, pits together with residual Roman coins and worked flints (Bloice 1976).

- 5.9.2 A resistivity survey in 1975 by the North East London Polytechnic on behalf of FARG confirmed that the north-west corner of the moated grounds (paddock) of Fulham Palace was moated off separately in medieval period by multiple banks and ditches enclosing c.1 acre. Building debris and a large quantity of mainly 13th – 14th century pottery sherds recovered during the excavation indicate that this is the site of the Palace buildings from at least the 12th to 14th centuries. The resistivity survey suggested that there were possible foundations situated to the north-east beyond the limits of the excavation area.

PCA Investigations

- 5.9.3 The Stage 1 mitigation works undertaken by PCA revealed the double ditches of the original Palace sub-moat enclosure, dating from the medieval period (Bright 2014). The inner ditch, context [252], was recorded at an upper height of 3.2m OD whilst the outer ditch (context [243] and recut [242]) were recorded at only around 2.2m OD.
- 5.9.4 During the Stage 2 mitigation project, the only works within the paddock were within the external area to the south of nursery (Trench 151) – this revealed a brick lined garden path at 3.16m OD (Bright 2014).
- 5.9.5 A chalk and flint rubble wall was also recorded to the rear of the Coachman's Lodge during a watching brief. The date of this wall was unclear, yet it was cut into a ploughsoil horizon which contained pottery dated to between 1050 and 1200 (Bright 2014, 77).

GeoArch Geophysical Survey

- 5.9.6 In November 2013 GeoArch Ltd undertook a geophysical survey of the paddock area, with the aim of informing the scoping of the forthcoming archaeological excavation (Young 2013)

6 ARCHAEOLOGICAL METHODOLOGY

- 6.1 The Fulham Palace Trust secured Scheduled Monument Consent (Historic England Ref: SMC S00171241) in order to undertake archaeological works within the paddock area of Fulham Palace. These works comprised the excavation of two trenches. Trench 1 was partially situated within land occupied by the Fledglings at the Palace Day Nursery. The remainder of the Trench was located within the Palace grounds and was covered by a planting bed and lawn. Trench 2 was situated to the north of Trench 1 on the lawn area on the south side of the entrance driveway.
- 6.2 The excavation was undertaken as a community archaeology project as volunteers partook in the archaeological investigation under the guidance of professional archaeologists. Trench 1 was designed to investigate the possible location of the Palace's Tudor dovecote which was depicted on the plans of Stiff Leadbetter prior to its demolition in the late 18th century. A geophysical survey of this area was undertaken in 2013, although no clear recognition of the footprint of the dovecote was identified (Young 2013, 1). Trench 2 was specifically situated in the central area of the north lawn in order to investigate a north-west south-east aligned linear area of resistivity identified during the geophysical survey (Young 2013, Fig. 9).
- 6.3 Prior to the excavation both trenches were marked out by hand. The turf covering Trench 2 was removed by the Fulham Palace gardeners with a turf cutter and was re-used elsewhere on the site. Excavation was undertaken in both trenches with the use of a 360° 7.5 tonne mechanical excavator fitted with rubber tracks and a flat bladed grading bucket. In order to access the trenches the machine crossed the grassed areas on solid boards which were laid down in order to prevent damage to the underlying archaeology. Both areas were scanned with a Cable Avoidance Tool (CAT scanner) prior to excavation.
- 6.4 Excavation continued in spits under archaeological supervision until the top of the archaeological deposits were reached. Topsoil and subsoil were separated for backfilling purposes.
- 6.5 Hand excavation was then undertaken by the archaeological volunteers under the guidance of and direction of the Community Archaeologist and professional archaeologists from Pre-Construct Archaeology Ltd. Prior to the excavation the volunteers had undergone training in archaeological excavation, recording, site formation processes and stratigraphic analysis. The community dig itself provided an opportunity for members of the public to take part in an archaeological excavation, to learn about the methodology and practices used in urban archaeological excavation and recording, and to learn about the history of the site whilst embracing a hands on approach in unmasking further evidence about the site's past.
- 6.6 Throughout the project there were numerous visits from both school and uniform groups who got to partake in the excavation, undertake an archaeological site tour and take part

in finds processing. Daily 'ask the archaeologist' sessions enabled the general visiting public to ask the professional archaeologists about the excavation and archaeology in general. In October half term there was also a family activity day entitled 'Astonishing Archaeology' along with a Family Archaeology Experience and Interactive Archaeology for Adults.

- 6.7 In regards of the archaeology, all layers and features were recorded in plan. The single context recording system, developed out of the Department of Urban Archaeology Site Manual, was used throughout the excavation process. Plans were recorded at a scale of 1:20 and sections were recorded at a scale of 1:10.
- 6.8 A grid was established in Trench 1 with the use of a Total Station whilst a baseline was set up in Trench 2. The baseline was again surveyed in using the Total Station. A Temporary Bench Mark (TBM) was established on the site with the use of a GPS system. This TBM had a value of 3.86m OD and was used to level all layers and features as well as both trenches. All exposed archaeological horizons and spoil were metal detected throughout the archaeological excavation. The author was in possession of a Section 42 Licence (Historic England Ref: AA/52987).
- 6.9 All finds were retrieved. Finds processing took place at Fulham Palace after the excavation and was undertaken by volunteers. This followed a day's training from Pre-Construct Archaeology's Finds Manager. Finds were washed, marked, bagged and boxed before being transferred to Pre-Construct Archaeology for specialist analysis.

7 PHASED ARCHAEOLOGICAL SEQUENCE

TRENCH 1

7.1 Phase 1 – Natural

7.1.1 The earliest deposit encountered at the base of Trench 1 comprised the natural Kempton Park River Terrace Gravels [36]. These were revealed within a sondage in the north-western corner of the trench which measured 3.4m in length and 1.32m in width. Described as a compact deposit of light brown sandy gravel this natural horizon was observed at between 2.25m OD and 2.30m OD.

7.2 Phase 3 – Medieval (Fig. 4)

A Metalled Surface

7.2.1 Sealing the natural gravels [36] within the sondage was a firm deposit of mid brown yellow gravel bonded in a clay and silt matrix [33]. Extending up to 0.16m in thickness, this layer was recorded at a highest level of 2.43m OD. Finds recovered from the deposit were limited and comprised a tibia from a fallow deer and one intrusive sherd of post-medieval slipped redware dated to between 1480 and 1650.

7.2.2 This same horizon was again identified within the centre of the trench where it was given the context number [40] and recorded at a highest level of 2.66m OD. Here it extended into the north-eastern limit of excavation and was only revealed beneath a partially excavated layer. As such it measured 9.5m in length, 1.84m in width as seen and was left *in situ*.

7.2.3 Along the eastern edge of the trench an identical horizon [35] was observed again and almost certainly formed part of the same gravel surface as [33] and [40]. Here it extended into the north-eastern and south-western limits of excavation and was truncated along both its eastern edge by a ditch and partially along its western edge by a modern soakaway trench. Recorded at a highest level of 2.85m OD this layer measured 14.24m in length and 6.24m in width as seen. As with [40] it was also left *in situ* and was not excavated.

A Ditch

7.2.4 Cutting [40] along the eastern edge of the trench and extending into the south-western, south-eastern and north-eastern limits of excavation was a substantial north-east south-west aligned ditch. Assigned the group no [43], this linear was at least 14.3m long and 2.66m wide and extended up to at least 1.5m in depth at a highest level of 2.92m OD. Two slots were excavated across the ditch, with the southern slot assigned the cut number [44] and the northern slot assigned the cut number [29]. Slot [44] was 1m wide

and as the cut extended into the south-eastern limit of excavation. As such, only the western side of the ditch was revealed. This was up to 1.3m deep at 2.85m OD and the exposed western edge was sharply sloping. The base of the ditch was partially revealed and was flat at 1.55m OD.

7.2.5 The northern slot [29] was 1.08m in width and again revealed a sharply sloping western edge to the ditch at 2.79m OD. At up to 1.5m in depth the ditch was again discovered to have a flat base as far as could be discerned at a lowest level of 1.29m OD.



Plate 1 – Metalled surface with Ditch [43] in foreground

7.3 Phase 4 – Post-medieval (1480-1550) (Fig. 5; Fig. 9)

Backfill of the Ditch

- 7.3.1 At some point between 1480 and 1550 the ditch went out of use and it was backfilled. It was the material recovered during this episode of infilling however which proved particularly informative in regards of the diet and material culture at Fulham Palace during the early post-medieval period.
- 7.3.2 Within slot [44] the primary fill of the ditch [32] comprised a stiff to loose deposit of mid brown grey silty gravelly clay which extended up to 0.98m in thickness at 2.37m OD. Finds recovered from this deposit included Flemish floor tile, a buckle and cat bones. Sealing [32] was [21], a loose deposit of grey to dark brown silty sand which contained substantial quantities of oyster shell and animal bone. At up to 1.17m in thickness at 2.70m OD, finds retrieved from this deposit included more cat bone, Flemish floor tile, peg tile and brick, the remnants of a possible glass bottle and window pane fragments. Pottery included continental tin glaze and a non-local barrel shaped jug which was possibly manufactured in either Huntingdon, Northamptonshire or the South Midlands. Small finds comprised lace chapes, pins, a spur, lead shot, a Nuremberg jetton dated to between 1500 and 1600, a buckle, a teetotum die made of antler and a key. Raptor bones in the form of both red kite and kestrel were also recovered.
- 7.3.3 In slot [29] primary fill [30] survived as a friable deposit of yellow clay sand containing frequent gravel and measured up to 0.30m in thickness at 1.62m OD. This was sealed by [28], a stiff fill of grey silty clay which was up to 0.29m thick at 1.79m OD. Both of these deposits were somewhat sterile and appeared to be representative of natural silting within the ditch.
- 7.3.4 Overlying [28] was [27], a compact deposit of mottled orange brown clay sand which contained occasional oyster shell and animal bone. Finds recovered from this context included Tudor brick and peg tile. The next fill within the sequence [25] was a stiff deposit of very dark brown sand silt clay which was 0.10m thick at 1.88m OD and which contained frequent fragments of charcoal. An environmental sample of this deposit identified wood charcoal along with fruit stones, grasses, nightshades, daisies and charred culm. Fragments of glass were also present in the form of vessel glass and window pane. Dog bone was recovered along with Flemish floor tile and peg tile.
- 7.3.5 The final fill within slot [29]'s Phase 4 sequence was [23], a compact deposit of dark brown clay silt which was 0.88m thick at 2.74m OD. This fill contained frequent oyster shell along with window came, dog bone, peg tile, vessel glass and further evidence for raptors in the form of red kite bone. An environmental sample of the deposit produced evidence for wood charcoal, pea, stitchwort, dock, campion, goosefoot and charred culm.

- 7.3.6 Collectively, the various fills of both slots contained pottery vessels in local coarse sandy redwares, red slipwares, German stoneware and Cistercian ware in the form of cups and jugs. All of these ceramics fit with the material culture of contemporary Renaissance high status households.
- 7.3.7 The animal bone was perhaps the most exciting material recovered however. The bulk of the assemblage consisted of the usual domesticates in the form of cattle, sheep and pig, with butchery marks providing evidence for both on site processing and food waste. Further evidence for meat consumption was defined by the presence of high status waste including fallow deer, pheasant, goose and mallard. There were numerous rabbit bones including evidence for small rabbits suggesting that they were being caged and bred on site. Chicken bone was also recovered, with small chicken bones possibly indicating the presence of a mews with chicks being fed to birds of prey. This would fit in with the kestrel bone, although red kites were scavengers and were unlikely to have been used for falconry.
- 7.3.8 Further bone identification signifies that woodcock and both rock and stock doves were being consumed on site, with squab bones indicating that the doves were being bred within a dovecote. Of particular significance was the recovery of two turkey bones from context [21]. This is very early for turkey in England and is significant. Further identification needs to be undertaken on much of the bird bone, and the possible remains of partridge, song thrush, greenfinch, moorhen, large galliforms (turkey / geese / peacock) and other passerines still need positive identification.
- 7.3.9 The successful recovery of fish bones on site via both hand collection and environmental processing has produced evidence for cod / haddock, plaice, flounder, salmon, ling, thornback ray, eel and conger eel, while possible pit fall victims and controlled vermin remains include mole, shrew, rat, other rodents and amphibians.



Plate 2 – Fills of Ditch Slot [29]

7.4 Phase 5 – Post-medieval (1630-1680)

Landscaping / Further Infill

- 7.4.1 There was no evidence for archaeological activity within Trench 1 during the period between 1550 and 1630. Within slot [44] of ditch [43] a final fill [11] sealed Phase 4 fill [21]. Surviving as a compact deposit of dark brown silt clay, [11] was up to 0.35m thick at 2.72m OD and was interpreted as a landscaping episode designed to level off an extant depression within this area of the ditch. Also containing frequent oyster shell a substantial quantity of animal bone was recovered from this deposit and included cattle, sheep, pig, rabbit, rat, chicken, goose, dove, cod and plaice. It is quite possible that these remains represented a disturbance associated with underlying fill [21], yet the presence of Essex fine redware provided a likely deposition date of between 1630 and 1680. This later date was supported by a silver three halfpence of Elizabeth I dated to 1569 and a number of clay tobacco pipe stems dated to between 1580 and 1700. Further small finds recovered included pins, lace chapes, a gaming piece and a curtain ring.
- 7.4.2 The only other deposit associated with this phase was [46], a generic fill number assigned to the group number for the ditch [43]. This deposit was not excavated but was recorded at a highest level of 2.92m OD.

7.5 Phase 6 – Post-medieval (1680-1750) (Fig. 6)

Landscaping / Final Infill

- 7.5.1 The final episode in relation to ditch [43] concerned fill [6] within slot [29]. This sealed Phase 4 fill [23] and comprised a compact deposit of mid brown silty sand. Extending up to 0.38m in thickness at 2.79m OD, finds recovered included oyster shell, both peg and pan tile, lace chapes, iron nails and a set of iron shears. Clay tobacco pipe stems provided a deposition date of between 1580 and 1700, whilst the pottery dated to between 1720 and 1760. As with Phase 5 fill [11], context [6] most probably represented an effort to level off a visible dip within the former ditch.

Dump Layer

- 7.5.2 Sealing Phase 3 gravel surface [33] was a substantial layer [4], which extended into the north-eastern, north-western and south-western limits of excavation before petering out to the east. As seen it covered an area of 14.3m from north-east to south-west and 13.40m from north-west to south-east at between 2.43m OD and 2.77m OD. Interpreted as a dumped deposit, [4] was a friable to compact horizon of light brown silty clay and extended up to 0.10m in depth at between 2.43m OD and 2.77m OD. Finds recovered from this context consisted of cattle, sheep and pig bones, as well as peg and pan tile, clay tobacco pipe dated to between 1700 and 1740, and pottery dating to between 1720 and 1780.

7.5.3 Within the sondage in the north-western corner of Trench 1, context [4] was excavated as [31] and sealed gravel layer [33]. Here it measured up to 0.17m in thickness and contained pan tile, a stone marble and a small quantity of pottery dating to between 1550 and 1700.

7.5.4 Sealing [4] and forming part of the same dumped sequence within the centre of the trench was [41], a friable deposit of dark black to mid brown grey silty sand. Extending 3.16m in length and 2.66m in width, [41] was truncated along its eastern edge by a modern soakaway trench. Containing frequent flecks of charcoal, brick and tile this deposit was not excavated. No finds were recovered from [41] which was observed at a highest level of 2.69m OD.

A Large Pit

7.5.5 Cutting into [4] and extending into the south-western limit of excavation was a large pit [42]. The precise shape of this feature could not be determined, but as far as could be seen it was sub-rectangular in plan and extended at least 10.6m in length and 3.5m in width at 2.88m OD. A slot was excavated across the pit at its south-eastern end, with the slot dimensions measuring 1.6m by 1.64m. This investigation revealed the pit to have gradually sloping edges and a concave base with a maximum depth of 0.54m.

7.5.6 Filling [42] was [34] a single, loose deposit of dark greyish brown sand and demolition rubble. The clay tobacco pipe recovered from this context provided a deposition date of between 1700 and 1740, which suggested that building waste was being dumped in this area of the site during this period.

7.6 Phase 7 – Post-medieval (1750 - 1760) (Fig. 7)

Demolition Dump

7.6.1 Sealing pit [42] along with deposits [41] and [31] was a large dumped layer which spread across the trench into the north-eastern, north-western and south-western limits of excavation before petering out to the south-east. Due to the method of excavation this horizon was assigned the context number [3] along the western side of the trench and [12] within the centre. Effectively however, both context numbers belonged to the same episode of dumping. Described as a light white brown compact deposit, this layer was primarily composed of building material and mortar. As seen it extended over a distance of 15.88m from north-east to south-west and 13.02m from north-west to south-east. Observed at between 2.71m OD and 3.28m OD it was up to 0.30m thick.

- 7.6.2 In regards of the material recovered from both [3] and [12], the CBM mostly comprised peg and pan tile and floor tiles, but there was also evidence for Belgian red and white marble, Dutch bricks, Reigate stone and moulded stone, some of which may have derived from a window. The animal bone indicated a preference for sheep / goat over cattle by this point in time, and the cattle also reflected improvements in regards of stock size which is contemporary with 18th century livestock breeding. Further evidence for the consumption of venison, rabbit and poultry was also recovered. The glass included onion type bottles dated to between 1680 and 1730, yet mallet type bottles were also present and date to between 1725 and 1760. The presence of a wine glass dated to c. 1740 would also push the deposition date of this material towards the latter end of the range.
- 7.6.3 The pottery has been dated to between 1720 and 1760, although a *Terminus Post Quem* of 1750 has been suggested. Later intrusive sherds were also present, but it should be noted that root activity had caused a significant degree of disturbance within the upper layers of Trench 1. A modern finger ring had also been pushed down into the demolition horizon. The remaining small finds included a residual jetton dated to between 1500 and 1600 from [12] and lead window came was recovered from both contexts. The clay tobacco pipe within [3] has been dated to between 1730 and 1780 and also included a non-local bowl and one with an *Agnus Dei* stamp. In combination therefore, the finds recovered provide a reasonably secure deposition date of between 1750 and 1760.
- 7.6.4 The most significant material recovered from both [3] and [12] was however the plaster. Three separate schemes were recovered from the layer and are all likely to have been dumped within the Paddock area at the same time, almost certainly when the Palace underwent a phase of demolition and subsequent construction works. The plaster associated with 'Scheme 1' was by far the largest of the three and comprised moulded material manufactured from a lime mortar mix with sand, hair, charcoal, silt and iron ore inclusions. Elements of the scheme correspond with at least six different cornice designs, whilst the presence of fruit, flowers and foliage suggest that these fragments would have once formed part of a high relief garland. Two grotesques are also likely to have belonged to a high relief, whilst a partial cartouche most probably formed part of an overmantle.
- 7.6.5 Very little could be stated about 'Scheme 2' from which few fragments were recovered. This material was however far more charcoal rich than 'Scheme 1'. 'Scheme 3' was found to have been manufactured from near pure lime, with many of the elements again suggesting that they once formed part of a cornice.
- 7.6.6 Given the date associated with the cultural material recovered from both [3] and [12], it seems most likely that the plaster was removed and dumped during Bishop Sherlock's renovations at some point during his residency of 1748-1761.

7.7 Phase 8 – Post-medieval (19th century) (Fig. 8)

Dog Burial

7.7.1 Cutting into the backfill [46] of ditch [43] was grave cut [9]. Sub rectangular in plan, this cut measured 1.37m in length, 0.80m in width and 0.12m in depth at 2.65m OD. Recorded with steeply sloping sides it had a flat base and contained dog skeleton [10]. The dog was buried on its right side with its head at the north-western end of the grave and its front legs flexed up beneath its jaw. The rear legs were also flexed and drawn up towards the ribs as if the dog were in a sleeping position. Recorded at 2.65m OD the dog has been identified as a large male of advanced age as evidenced by joint disease. The size of the skeleton is comparable to a Mastiff sized canine.

7.7.2 Filling the grave was [45], a firm deposit of light brown silty clay. The only finds recovered from this context were two peg tile fragments.

Buried Soil Horizon

7.7.3 Sealing [3] and [12] and later ditch fills [6] and [11] was buried soil horizon [47]. The relationship between this layer and grave [9] was unclear. Recorded as a soft deposit of dark brown silt, loam and sand, [47] extended across the entire trench. It was up to 0.25m thick at between 2.87m OD and 3.15m OD. No finds were retrieved from this layer.



Plate 3 – Dog burial [10]

7.8 Phase 9 – Post-medieval (20th century)

Made Ground & Topsoil

- 7.8.1 Overlying [47] and grave fill [45] was [2], a compact deposit of orange brown silty clay. Covering the entire trench area this deposit was up to 0.35m thick at a highest level of 3.45m OD. Finds recovered from [2] included residual material such as an Aldgate Pothouse wall tile and clay tobacco pipe dated 1610-40. Further plaster associated with deposits [2] and [13] was also retrieved along with an English wine bottle dated to between 1810 and 1900 and a 20th century French wine bottle.
- 7.8.2 Overlying [2] was topsoil [1] which covered Trench 1 and extended up to 0.22m in thickness at 3.63m OD. Finds recovered from [1] included clay tobacco pipe dated 1700-1740, a late 19th to early 20th century wine bottle, several coins dated to between 1878 and 1921, a penknife, a rumble bell, a cloth seal, a livery button, a bullet case and a number of screw pickets.

TRENCH 2

7.9 Phase 1 – Natural

7.9.1 The earliest deposit encountered at the base of Trench 2 was the natural Kempton Park River Terrace Gravels [20]. These were revealed within an 'L' shaped sondage at the south-western end of the trench which extended 6.06m from north-west to south-east and 2.54m from north-west to south-east at the north-eastern end. The slot was up to 0.84m wide and the gravels were observed at between 2.06m OD and 2.31m OD.

7.9.2 Sealing [20] and covering the base of the trench was [19], a coarse to compact mid yellow brown deposit of gravel and sand which was up to 0.35m thick at 2.69m OD. This layer was also interpreted as a natural horizon, although it was somewhat dirtier than the clean underlying horizon [20].

7.10 Phase 2 – Prehistoric (Fig. 2; Fig. 10)

A Cremation

7.10.1 Cutting into [19] at the south-western end of the trench and extending into the north-western limit of excavation was pit [38]. As far as could be discerned this cut was circular in plan with sharply sloping edges and a concave base. It measured 0.24m by 0.40m as seen and was up to 0.22m deep at 2.43m OD.

7.10.2 Filling [38] was [37], a friable deposit of dark grey brown silty sand. Due to the presence of substantial quantities of charcoal and what appeared to be burnt bone within this context it was environmentally sampled. The results of this sample produced both wood charcoal and burnt bone which was subsequently identified as belonging to cattle sized limb bones. The presence of the head of an equid femur indicated that this feature was in fact a horse cremation, with the presence of a Late Mesolithic to early Neolithic struck flint suggesting a prehistoric date. Some intrusive material was also recovered from the sample, although this was not surprising as the sampling of the material also meant digging in to the section in order to retrieve as much information as possible.

A Pit

7.10.3 To the immediate north-east of [38] was another pit [18] which again extended into the north-western limit of excavation. Interpreted as circular in plan, this feature measured 0.82m by 0.40m as seen and was up to 0.09m deep at 2.32m OD. Recorded with sharply sloping edges and a flat base it was filled by [17], a firm deposit of light red brown silt clay. No finds are recorded as recovered from this deposit on the context sheet, although the CBM report suggests the presence of peg tiles, Flemish floor tiles and post Great

Fire brick. Given the size of [18] this seems most improbable, and the CBM is more likely to have derived from the much later deposit [7].

7.11 Phase 3 – Medieval (Fig. 3)

A Layer

7.11.1 Sealing both pits [38] and [18] was layer [13]. This deposit was up to 0.16m thick and covered the area of the trench, sloping up from south-west to north-east from a low of 2.63m OD to a high of 2.80m OD. It survived as a soft deposit of mid grey brown silty sand which had been subject to frequent root disturbance. Inclusions comprised occasional flecks of charcoal and gravels, whilst finds comprised animal bone including both cattle and Fallow deer as well as a lead cloth seal, a cut silver halfpenny of Henry III dated 1251-1272, and a copper alloy letter 'D'. In regards of diagnostic material there was no clay tobacco pipe and no glass. This led to the interpretation of a medieval date. This horizon may well have been worked however, as aside from medieval peg tile and ragstone fragments, two intrusive sherds of pottery were recovered along with early post-medieval floor tile and peg tile. This suggested that [13] continued to be exposed or at least disturbed during the early post-medieval period.

7.12 Phase 6 – Post-medieval (1680-1750) (Fig. 6)

Pitting

7.12.1 Cutting into [13] in the centre of the trench was a large pit cut [16]. Sub-circular in plan this cut extended into the north-western limit of excavation, but as seen measured 3.88m in length and 1.6m in width. It had a shallow sloping edge on the south-west side but was far more steeply sloping along the north-eastern edge which created an uneven sloping base. At up to 0.55m in depth at 2.72m OD it was filled by [15], a compact deposit of light grey brown rubble and mortar which contained charcoal inclusions. Finds recovered from [15] mostly comprised CBM in the form of late medieval and early post-medieval floor tile, peg tile, Carrara marble and both ragstone and Reigate stone. Vessel glass and window pane were also retrieved, whilst the animal bone mostly consisted of cattle, much of which was quite large and again reflected livestock improvements during the 18th century. Only a small quantity of pottery was recovered which dated to between 1580 and 1700, whilst the small finds retrieved included an ivory comb.

7.12.2 To the south-east of [16] and situated within the centre of Trench 2 was a further pit [26]. This feature was sub-circular in plan with a sharp break of slope at the top of the cut descending onto a more gradual slope and an uneven base. Measuring 1.50m by 1.36m it was 0.20m in depth at 2.71m OD and was filled by [14], a soft deposit of dark grey brown silt sand clay with occasional charcoal flecks. The CBM recovered from this deposit comprised early post medieval brick, floor and peg tile as well as ragstone whilst

the clay tobacco pipe provided a deposition date of 1680-1710. This was complemented by an onion type wine bottle dated 1680-1710 and pottery, including a chicken feeder and flower pots, dating to between 1640 and 1700. In combination this material provides a fairly tight deposition date of 1680-1700.



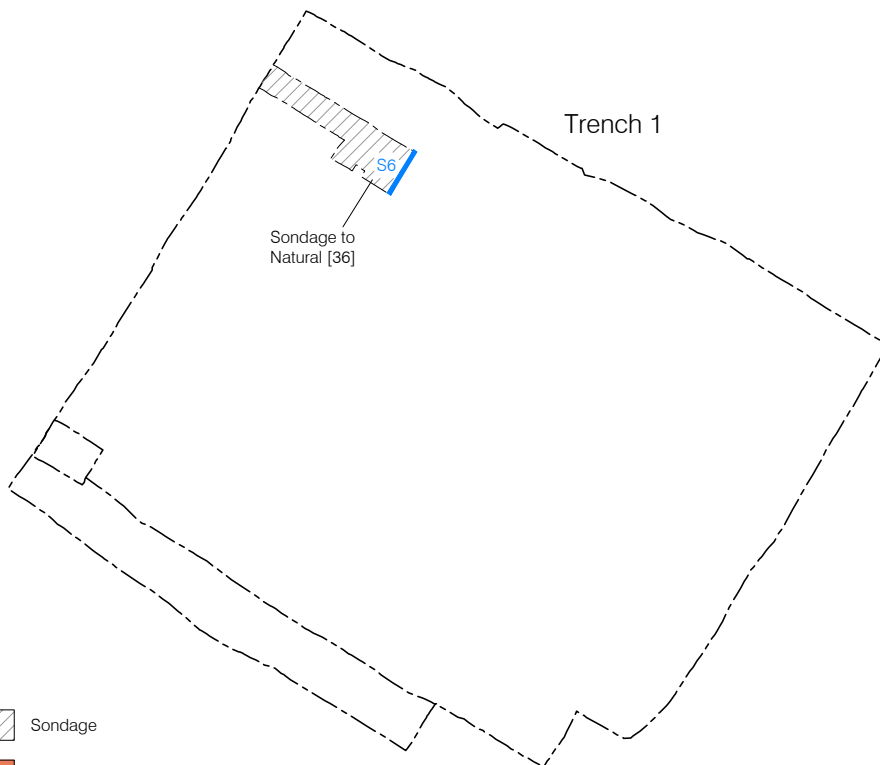
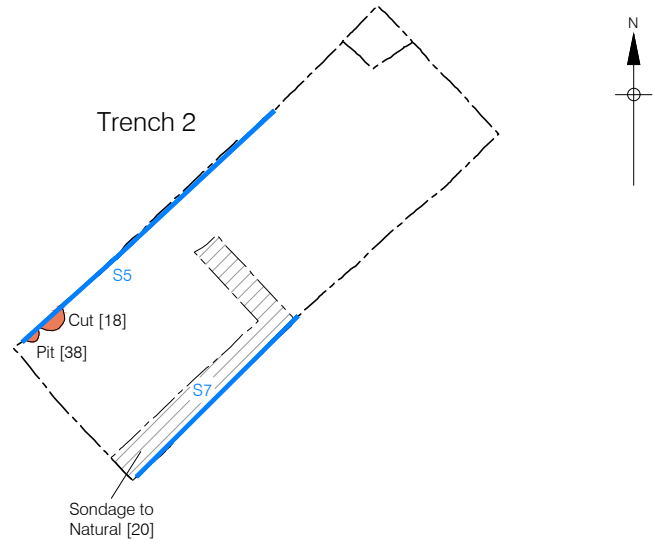
Plate 4 – Pit [16]


7.13 Phase 9 – Post-medieval (20th century)


Subsoil & Topsoil

7.13.1 Sealing both [16] and [26] was subsoil [7], a loose deposit of dark grey brown silt clay sand containing occasional flecks of charcoal. Covering the trench this deposit was up to 0.23m thick at between 2.82m OD and 3.02m OD. Finds retrieved included a dog whistle, numerous coins of early 20th century date (one of which was a centime of Leopold II of Belgium), and a Roman nummus of Gratian dated AD 367- 375.

7.13.2 Sealing the trench was modern topsoil [7] which was up to 0.27m thick at between 3.03m OD and 3,27m OD.

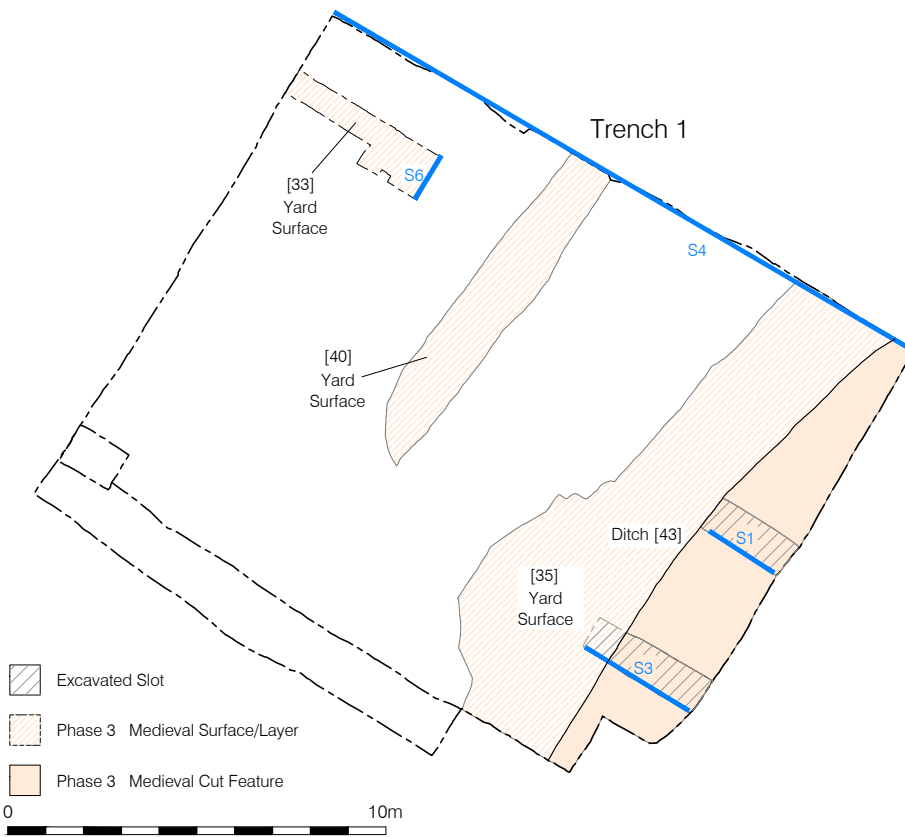
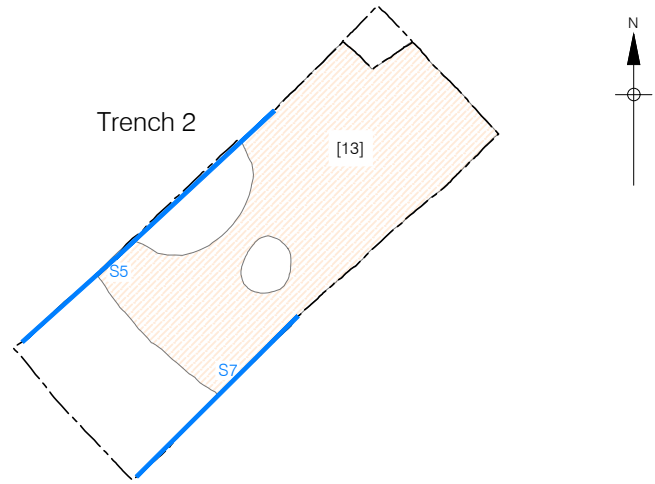


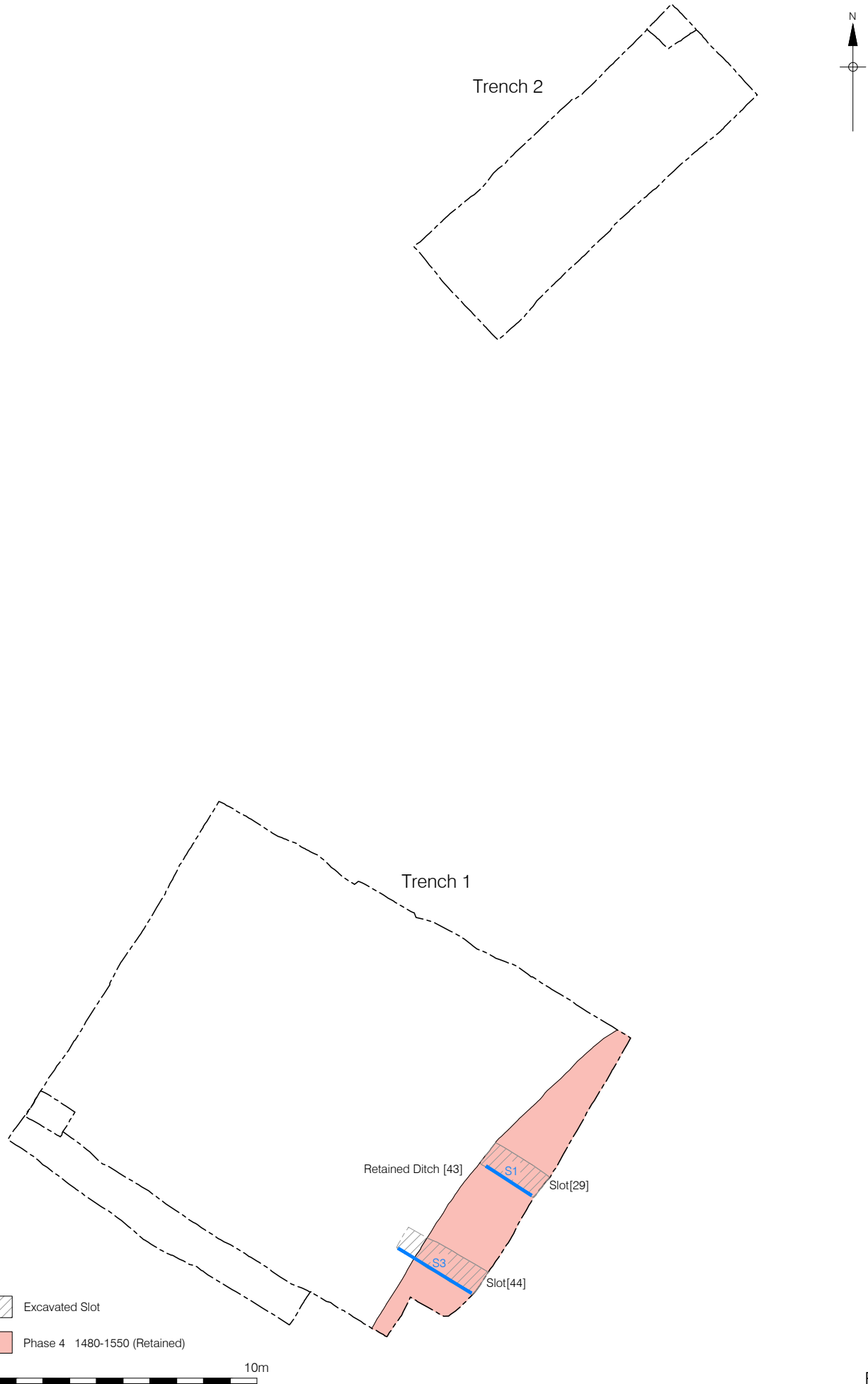
 Sondage

 Phase 2 Prehistoric

0 10m







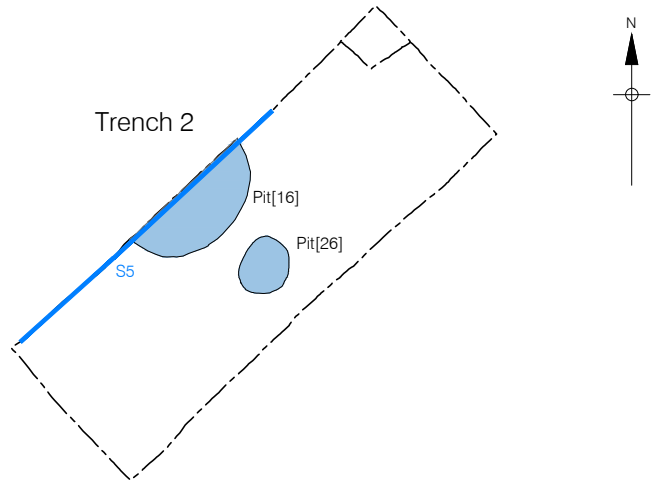
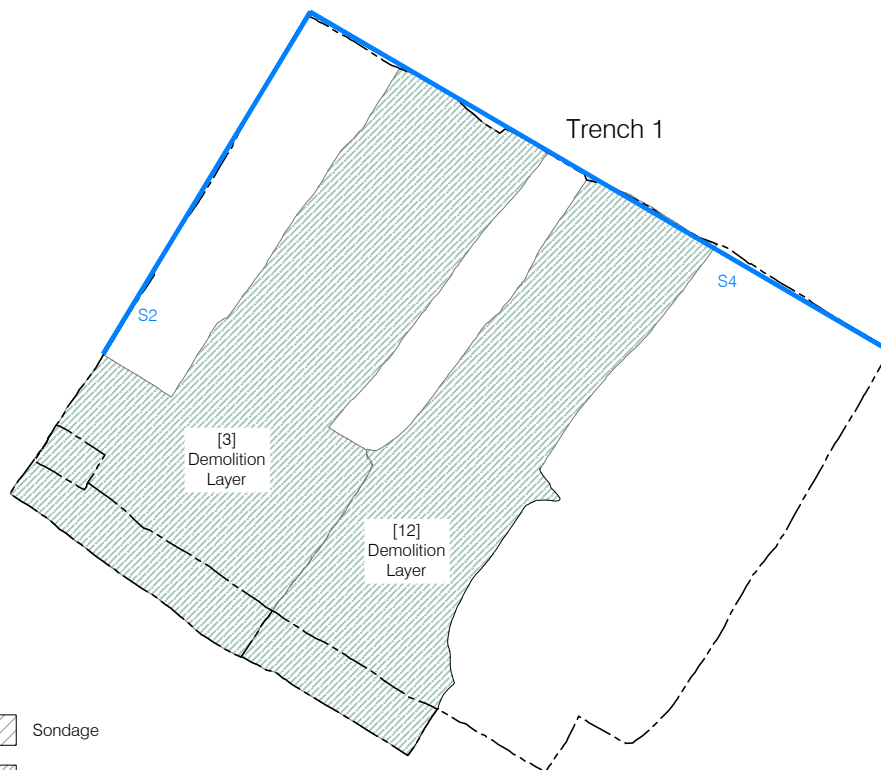
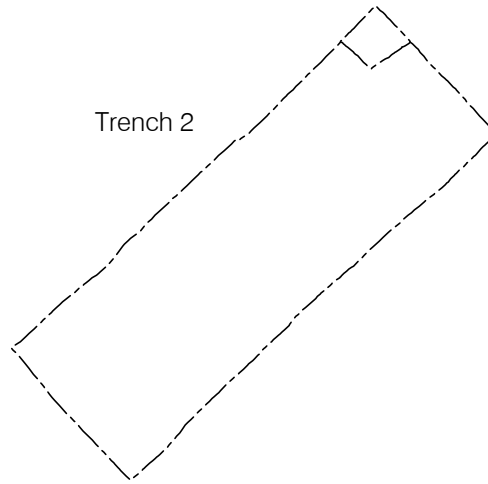


Figure 6
Plan Phase 6
1:200 at A4

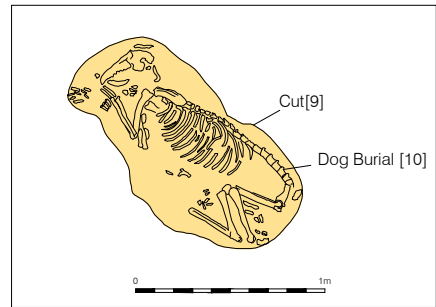
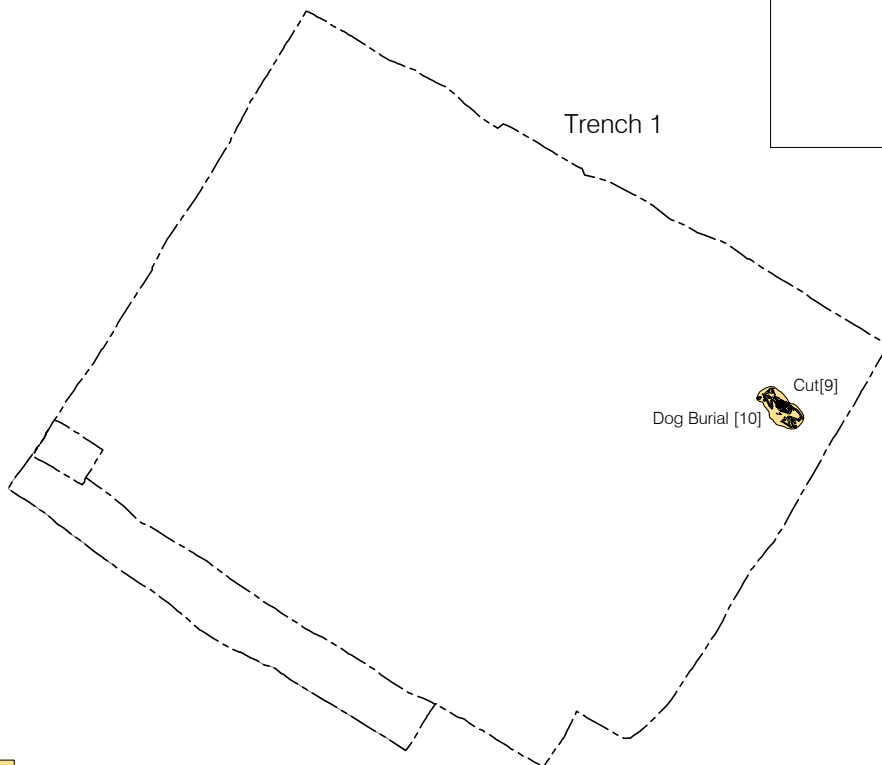
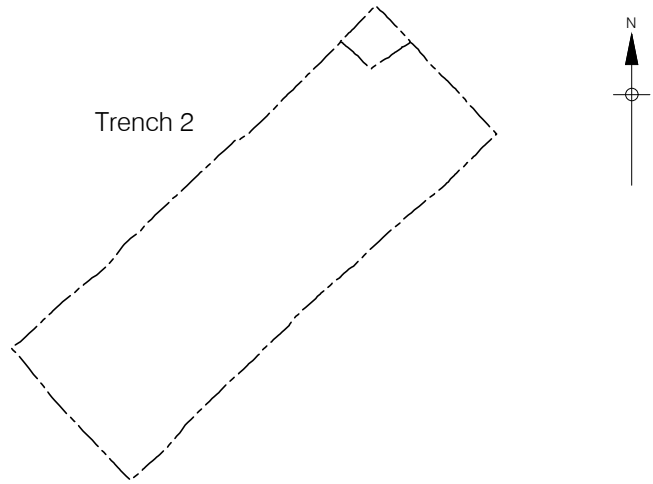


 Sondage

 Phase 7 1750-1760 Layer

0 10m

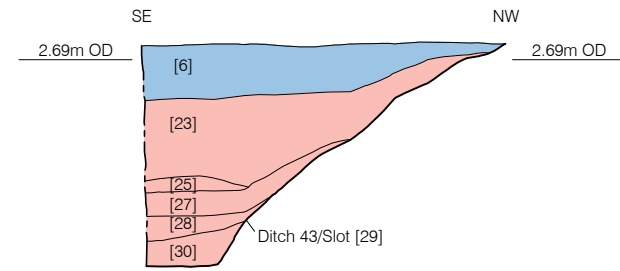




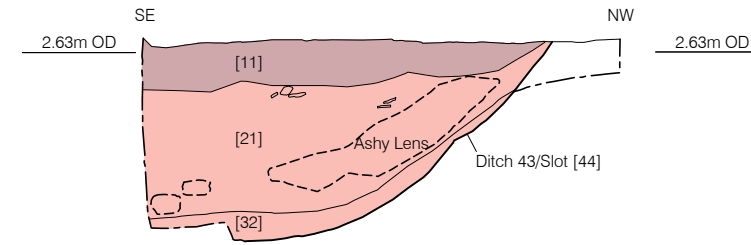
Phase 8 19th Century



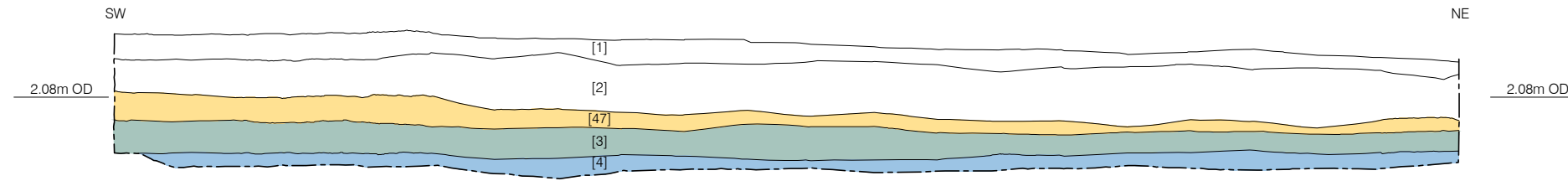
- Phase 1 Natural
- Phase 3 Medieval
- Phase 4 1480-1550 (Retained)
- Phase 5 1630-1680
- Phase 6 1680-1750
- Phase 7 1750-1760
- Phase 8 19th Century
- Phase 9 Modern



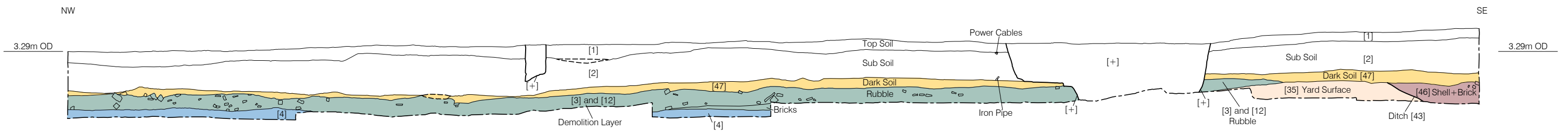
Section 1
North East Facing
Trench 1



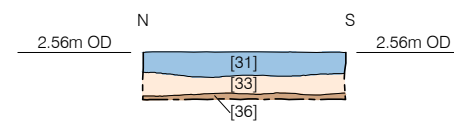
Section 3
North East Facing
Trench 1



Section 2
South East Facing
Trench 1

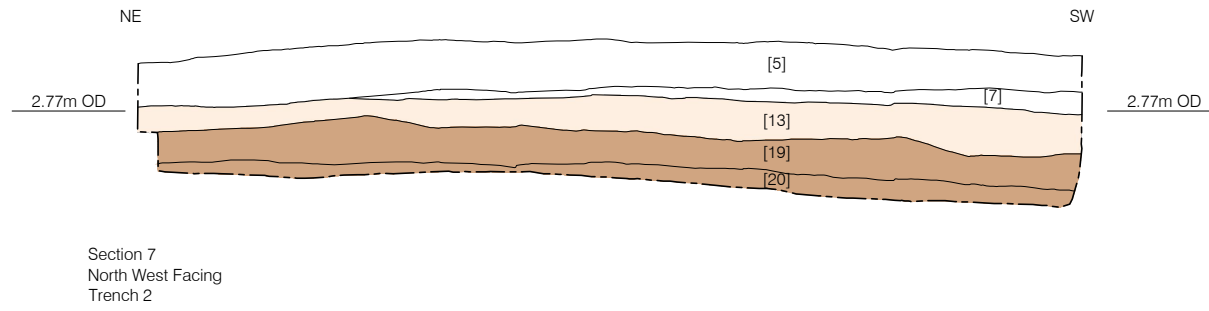
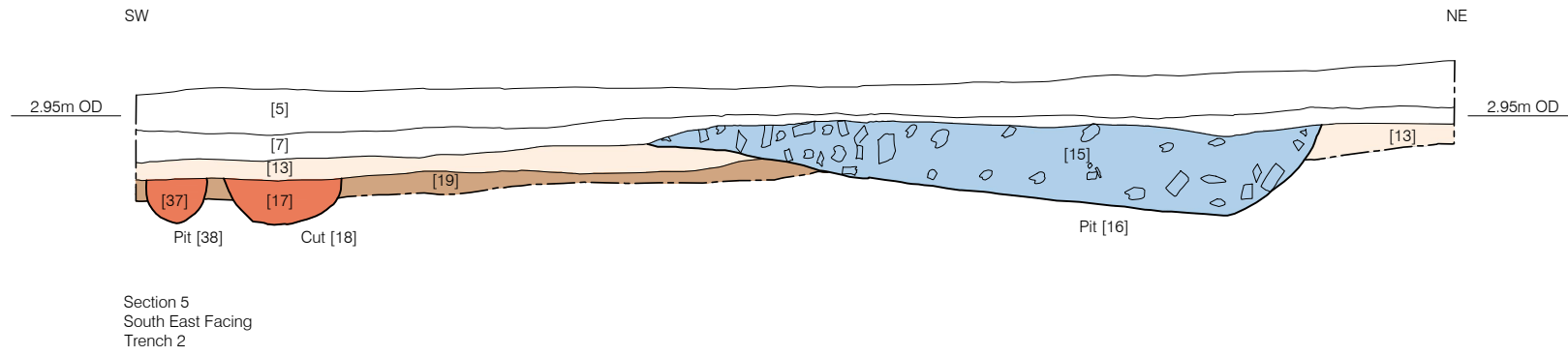


Section 4
South West Facing
Trench 1



Section 6
West Facing
Trench 1





- Phase 1 Natural
- Phase 2 Prehistoric
- Phase 3 Medieval
- Phase 6 1680-1750
- Phase 9 Modern



Figure 10
Sections 5 and 7 Trench 2
1:50 at A4

8 ARCHAEOLOGICAL PHASE DISCUSSION

8.1 Discussion of Phase 1 – Natural

8.1.1 The earliest deposits encountered during the excavation were the natural Kempton Park River Terrace Gravels. These were observed within a sondage in Trench 1 at 2.25m OD whereas in Trench 2 they were revealed at 2.06m in the south-western end and at 2.31m OD towards the north-east. This indicates a marginal drop between Trench 1 and Trench 2 before the gravels begin to rise again towards the north-east. In Trench 2 an overlying darker deposit of natural gravel was observed, although this was absent in Trench 1. At present the reasons behind this are unclear, although the darker material may simply represent an exposed or weathered surface. Similar evidence of up to four separate natural horizons has previously been observed within the grounds of the Scheduled Ancient Monument (Bright 2014, 35).

8.2 Discussion of Phase 2 – Prehistoric

8.2.1 Only two small, shallow pits were recorded in association with this phase of activity and both were revealed in Trench 2. Whereas no diagnostic material was recovered from pit [18], pit [37] produced the remains of a horse cremation. The prehistoric date attributed to this feature was based upon the recovery of a prismatic flint blade situated within the fill of the pit. Initial analysis suggests a Mesolithic to early Neolithic date for the flint, although the chipped and damaged condition of the blade may well indicate redeposition and hence a residual presence.

8.2.2 Prehistoric activity at Fulham Palace remains poorly understood, with identified features and deposits confined to a soil horizon revealed within the stable yard which contained late Bronze Age to early Iron Age pottery, and a pit containing bone and struck flint previously excavated on the North Lawn (Bright 2014, 36). During the excavation of 1972-73 on the south side of the walled garden two gullies, four hollows and two pits were revealed although all were sterile in regards of finds. An associated clay deposit contained fragments of Neolithic pottery (Arthur & Whitehouse 1978, 48-49).

8.2.3 In terms of understanding prehistoric activity at Fulham Palace, dating the Trench 2 pits is therefore somewhat complex. This is due to a long established (although intermittent) human presence on the site. Much of the prehistoric material recovered from the Scheduled Monument has been residual, as evidenced during the Orchard Project in the walled garden. This investigation produced 52 pieces of struck flint, the majority of which also dated to between the Mesolithic and Early Neolithic (Haslam 2015, 39). The discovery of the horse cremation is therefore significant. There is certainly evidence for Neolithic cremation practices within Britain as revealed at Milton Ham in Northamptonshire (Carlyle & Chapman 2012, 29-35), yet this is rare. Even more unusual is evidence of Mesolithic cremation, with excavations on the effluent pipeline between

Chelmsford and Langford in Essex revealing the very first evidence of cremated human bone dating to the Mesolithic period in Britain (Gilmour 2015, 9).

8.2.4 It would therefore be most surprising if the horse cremation dated to either of these periods, despite the presence of the flint blade. A far more likely period candidate would be the Late Bronze Age to Early Iron Age which would correlate with the material recovered from the soil horizon in the stable yard. It was during this period that the lower Thames Valley witnessed a phase of agricultural intensification reflecting the emergence of a fully-fledged agricultural society. This managed and controlled landscape is represented in the archaeological record by the appearance of field systems, droveways, watering holes and stockyards (Yates 2001, 65).

8.2.5 The fact that the Fulham Palace cremation concerns a horse rather than a human is also of interest. The significance of horse during the prehistoric period is well attested, and both horse and dog were certainly favoured for both sacrifice and special treatment. Throughout the Iron Age horse was regularly deposited in a selective manner either in the form of complete or partial carcasses (Hill 1995, 61), yet there is also evidence of this practice throughout the Bronze Age. At Brabham Road in Cambridgeshire horse remains dating to between 1755 and 1415 BC were recovered from a ditch and have been associated with evidence for butchery and / or feasting (Hinman 2001, 38). There is certainly evidence for the defleshing of horse bones during the prehistoric period, and the possibility of the Fulham Palace cremation relating to an episode of human consumption should certainly not be discounted. Further evidence for Bronze Age horse remains have also been recovered somewhat closer to Fulham at Runnymede. Here a pit contained large parts of a horse skeleton. Such deposition practices have been referred to by Brück as representing a

'symbolic reference to the social transitions effected by such rites' (Brück 2001, 153-154),

with these rites of passage concerning events such as initiation, marriage and death. A more comprehensive date for the Fulham Palace horse cremation will certainly assist in the interpretation of this intriguing feature.

8.3 Discussion of Phase 3 – Medieval

8.3.1 Evidence for medieval occupation was revealed during the excavation in both Trench 1 in the form of a metalled surface and a large ditch, and in Trench 2 in the form of a worked horizon.

8.3.2 It has long been hypothesized that the paddock area in the north-west corner of the moated grounds was enclosed by a series of banks and ditches and that this was the site of the early medieval manor from at least the 12th to 14th centuries. This interpretation is based upon an unreported excavation by FARG in 1976 and a resistivity

survey conducted by the North-East London Polytechnic in the same year (Emery & Souden 2016, 1). Thurley reported in 1987 that the backfilling of a series of ditches in the thirteenth century represented a possible abandonment of the Paddock area and a relocation to the current Palace position around what is now the eastern courtyard (Thurley 1987, 15). The earliest written evidence for a Bishop's residence on the site dates to 1141 at the time of the Civil War between King Stephen and Matilda. During this conflict the Bishop of London, Robert de Sigillo, was seized at Fulham by Geoffrey de Mandeville, Constable of the Tower of London (Whitehouse 1974, 212).

8.3.3 To date, the only structural evidence observed within the Paddock area concerns a chalk and flint rubble wall which was recorded to the rear of the Coachman's Lodge during a watching brief. The date of this wall is unclear, yet it was cut into a ploughsoil horizon which contained pottery dated to between 1050 and 1200 (Bright 2014, 77). It is quite possible that this ploughsoil was the same deposit as the worked horizon observed in Trench 2 which contained medieval material as well as some later intrusive pottery and tile.

8.3.4 The situation in Trench 1 was somewhat different. Here the metalled surface is likely to have functioned as a yard or at least as an area of hard standing, yet again no structural evidence was revealed. This does little to add to the interpretation of the Paddock functioning as the zone of the early medieval Manor, yet it does suggest that the area was at least being utilised.

8.3.5 The ditch is certainly a significant landscape feature and has previously been observed during archaeological investigations, although not on the scale to which it was exposed during the recent excavation. The earlier works revealed two ditches in this location with evidence of at least one re-cut and led to the interpretation that these features represented the enclosure ditches of the early medieval Palace complex. This perception remains a strong possibility, yet it should be noted that the geophysical survey of 2013 appears to indicate that the ditch (or ditches) terminate to the north-east (Young 2013, 11). This would infer that there was an entrance into the interpreted complex at this time, or that alternatively the ditch had a different function. An association between the ditch and the moat and / or River Thames is clear and similar yet obsolete linear arrangements continue to be depicted in this area on maps of the Palace right up until the late 19th century (OS maps 1869 & 1896). This could suggest that the ditch was used as a small dock or wharf, which may well correlate with the associated gravel yard surface.

8.4 Discussion of Phase 4 – Post-medieval (1480 – 1550)

8.4.1 The next phase of archaeological activity on the site concerned the backfilling of the medieval ditch. The initial fills of this feature suggested a natural episode of silting, yet at some point between 1480 and 1550 it was decided to completely infill what was now a redundant feature. Much of the material backfilled into the ditch took the form of refuse

and domestic waste, with large quantities of animal bone indicating that much of this material was likely to have derived from the proximate kitchens and slaughterhouse. These are later described in the Parliamentary Survey of 1647 (Dickes 1647) and are unlikely to have changed much following the establishment of the Tudor Courtyard in the very late 15th century.

8.4.2 It was perhaps the construction of the new Courtyard which led to the ditch going out of use. Dendrochronological analysis of the timbers in the gate and Great Hall roof have provided a felling and hence earliest construction date of between 1493 and 1495 (Bridge & Miles 2004, 18). This suggests that the likely builder was Bishop Thomas Savage at some point between 1496 and 1501. The recovery of a jetton dated to between 1500 and 1600 within the ditch backfill would perhaps put the infilling episode into the early 16th century, the time at which the new Courtyard would have been established. This interpretation would appear to be supported by the presence of turkey bone within the ditch backfill.

8.4.3 The earliest reference to turkey in Europe dates to 1520 when Alessandro Geraldini, the Bishop of Hispanola, saint a pair of birds to Lorenzo Pucci, the Florentine Cardinal in Rome (Eiche 2004, 21-22). There is some discrepancy as to when turkey first arrived within England, yet the general consensus is that a number of birds were imported into Bristol by William Strickland either in 1524 (Dohner 2001, 445; Roberts 2009, 335); or at least at some point between 1525 and 1532 (Campbell & Lack 2010, 153). The event is even commemorated in a rhyme first referenced in 1643, which recalls the arrival and introduction of turkeys, Lutheranism and hopped beer into England, supposedly all in the single year of 1524:

'Turkey, heresy, hops and beer came into England all in one year' – (Speake 2015, 328).

8.4.4 By 1541 turkeys were being raised in England (Smith 2006, 24), but at this point they were still a relatively rare species (Fothergill 2012, 43). Initially they may have been introduced for decorative reasons rather than simply as livestock, and would have complemented peacocks in regards of their tail-spreading behaviour (Fothergill 2012, 43). They are certainly less common in the archaeological record prior to the 17th century and generally appear on 'wealthy' sites (Fothergill 2012, 213).

8.4.5 Archaeologically the earliest discovery of turkey remains within England concerns bones recovered during excavations at Paul Street in Exeter during the construction of the Harlequin Centre in 1983 <https://www.rammuseum.org.uk/tudors-put-turkey-menu/>. These have been dated to between 1520 and 1550, whilst at St Albans Abbey in Hertfordshire further turkey remains have been dated to between 1534 and 1550 (Fothergill 2014, 211). In London, the earliest turkey remains so far reported comprise bones recovered from the former Royal Naval Victualling Yard opposite the Tower of London. This yard stood on what was Eastminster Abbey and which later became the Royal Mint. The earliest turkey recovered from this site dates to between 1560 and 1635

(West 1995, 24), meaning that the Fulham Palace turkey may well represent the earliest evidence of this bird in London. This is an important discovery and reflects the high status of the Fulham Palace site.

8.4.6 Diagnostically, if turkey does not arrive within England until 1524 at the earliest, then the backfill of our ditch can potentially be dated to between 1524 and 1550. Gradual infilling of the ditch from the early 16th century should not be completely discounted however, and kitchen and slaughterhouse waste may have been regularly deposited into what must have fast become a midden. The finds recovered from the ditch certainly provide a thorough insight into the diet and material culture of the palace during the early 16th century and reflect that of a Renaissance high status household, with a wide range of meat and fish being consumed on site.

8.5 Discussion of Phase 5 – Post-medieval (1630 - 1680)

8.5.1 The only archaeological evidence associated with this phase of activity concerned further infilling within the large medieval ditch. This related to an episode of landscaping as a visible depression within the earlier feature was finally levelled off. Finds recovered included pottery and clay tobacco pipe which post-dated 1550 and hence the earlier fills of the ditch. The presence of further animal bone may infer more dumping of kitchen waste, or alternatively that an element of disturbance or exposure had occurred as the ditch was permanently closed with earlier material being redeposited.

8.6 Discussion of Phase 6 – Post-medieval (1680 - 1750)

8.6.1 During this phase of activity a final fill was deposited within the Phase 3 ditch as this feature was completely levelled off. A dump layer recorded across Trench 1 suggests that this area of the Paddock was open and was not being utilised at this point in time. Fragments of tile and brick within this deposit perhaps indicate that this layer related to an episode of construction, and it is widely considered that Bishop Compton (1675-1713) was responsible for re-configuring the windows within the Tudor Court (de Quincey 2016, 42).

8.6.2 Alternatively, Bishop Robinson undertook renovation work in July of 1715 and claimed the Palace to be in an old and ruinous condition. These works are however understood to have been conducted to the north-east and south-east sides of the Palace (de Quincey 2016, 42-43). The subsequent Bishop, Edmund Gibson, does not seem to have contributed to any redevelopment whatsoever. The presence of animal bone within the dump may alternatively suggest that the Paddock area was simply being used as a midden with multiple forms of waste being cast across this open zone.

8.6.3 The remaining features associated with Phase 6 comprised a large pit in Trench 1 and two further pits in Trench 2. All of these features contained demolition material, which

again suggests an episode of development on the site. The presence of window pane fragments in Trench 2 pit [16] may well correlate with the interpretation of Compton redeveloping the Tudor Court windows, and the ivory comb would certainly appear to indicate an earlier deposition date within the Phase 6 date range. This is corroborated by the diagnostic material from pit [26] which indicates a tight deposition period of between 1680 and 1700. Dating to Compton's tenure this pit contained a chicken feeder and a number of flower pots.

8.7 Discussion of Phase 7 – Post-medieval (1750 - 1760)

- 8.7.1 During Phase 7 further dumping took place across the Paddock area. This episode was however clearly associated with a program of redevelopment as the dumped horizon in Trench 1 mostly comprised demolition debris including, brick, tile, stone and plaster. Much of this material was of high status and included marble as well as Reigate stone. Of most significance however was the decorative plasterwork which derived from this layer.
- 8.7.2 In total three plaster schemes were identified during the post-excavation process, with the vast majority of the material belonging to 'Scheme I'. From the deposition date of this material it can be determined that it was dumped during the tenure of Bishop Sherlock (1748-61). Sherlock's development of the Palace involved considerable alterations within the Great Hall, the removal of the old solar block and the construction of a great dining hall in its place. It seems highly likely therefore that the material dumped during Phase 7 derived from either the Great Hall itself, or the old solar block (Fèret 1900, 107).
- 8.7.3 Dating the origin of the plasterwork is however problematic. Scheme I certainly follows the influence of Inigo Jones who was appointed Surveyor to the Royal Works in 1615. The plaster must therefore post-date this event. It is unlikely to date to the Commonwealth (1649-1660), and as the Restoration (1660-1685/8) was a period of austerity it is unlikely to have been introduced during this period either. It is possible that the plasterwork was commissioned by Compton (1673-1713), yet he appears to have been more interested in the gardens than the Palace buildings. This interpretation is supported by Robinson's complaints about the state of the Palace when he succeeded Compton in 1713 (de Quincey 2016, 42).
- 8.7.4 It is therefore possible that the plaster was commissioned by Robinson, yet as far as can be discerned he did not undertake any works in the Great Hall itself, instead concentrating on the long gallery on the north side of the chapel (de Quincey 2016, 43). By this point in time the identified scheme was also becoming unfashionable and had the

Great Hall been in good condition it seems unlikely that Sherlock would have spent a considerable sum of money improving it.

8.7.5 Perhaps the closest comparable design to Scheme I concerns the Dining Room ceiling at Ham House close to Richmond in London. This plaster ceiling comprises a fruit and foliage garland and was commissioned by William Murray in 1638. The plasterwork was undertaken by Joseph Kinsman at the cost of 7s 6d a yard http://clairegapper.info/vii-the-impact-of-inigo-jones-british-renaissance-plasterwork.html#_edn40. If the Fulham Palace plasterwork is contemporary with the Ham House ceiling, then that would mean it was probably introduced during the tenure of Bishop Juxon between 1633 and 1649. Juxon's coat of arms was notably discovered in the Palace grounds during the 19th century and now resides in the Palace museum after briefly being attached to the Great Hall entrance during the early 20th century. Unfortunately the precise location for the discovery of this heraldic symbol is not recorded. Its survival does however suggest that Juxon undertook a phase of redevelopment on the site and he was certainly undertook work within his palaces when Archbishop of Canterbury (de Quincey 2016, 38). It should also be noted that the cartouche recovered during the excavation bears a resemblance to the design of the mitre on Juxon's coat of arms, and thus an early 17th century date for the plasterwork remains a distinct possibility.

8.8 Discussion of Phase 8 – Post-medieval (19th century)

8.8.1 The only feature belonging to this phase of activity concerned the dog burial in Trench 1. The animal bone report comments that this was a large male dog of advanced age at the time of death, with evidence of joint disease present within the skeletal remains. It was clear that the dog had been buried with a degree of care and respect and that it was most probably a pet. Recorded as 'Mastiff sized' it is interesting to note that Bishop Tait's (1856-1868) daughter Agnes (born 1860) recalls a 'grand old Mastiff' named 'Captain' at the Palace. The age and size of such a dog would certainly seem to correlate with the remains discovered in Trench 1.

8.9 Discussion of Phase 9 – Post-medieval (20th century)

8.9.1 In Trench 1 the area was overlain by a deposit of made ground which contained a significant quantity of redeposited material. This suggested that the area had been subject to a degree of horizontal truncation, most likely during a phase of redevelopment. This interpretation was supported by the presence of subsoil in Trench 2, with this deposit noticeably absent in Trench 1. Modern topsoil sealed both of the trenches.

8.9.2 Worthy of mention however are a number of screw pickets which were recovered from Trench 1 during the machining process. These fence posts, designed to screw into the ground and potentially hold barbed wire in place, may well derive from the warren area

which was used for training during World War One. Another possibility however concerns the barrage balloon placement which was established at Fulham Palace during World War Two. Early mooring wire arrangements for bedding down balloons comprised a number of screw pickets which were used rip lines and handling guys (Richards 1954, 68).

9 RESEARCH OBJECTIVES

9.1 Original Aims and Objectives of the Investigation

9.1.1 The investigation's aims and objectives, as defined prior to the fieldwork (Mayo 2017) are presented here along with responses based upon the data and analysis provided and undertaken as part of the project.

9.2 To produce a more coherent overview allowing us to place the previous observations from the previous investigations into context.

9.2.1 There have been several archaeological investigations within the Paddock area to the north-west of the Palace. The earliest of these relates to an archaeological excavation undertaken by the Fulham Archaeological Rescue Group in 1975. Sadly neither a grey literature report nor a publication for this investigation have ever been produced, with the London Archaeologist round-up of Spring 1976 simply stating that this area probably represented a moated off and separate area of the current Palace grounds during the medieval period. Evidence for medieval activity comprised gravel surfaces, ditches and pits. Roman coins and worked flints were also recovered (Bloice 1976, 371). The pottery from this excavation was analysed by Robert G. Lancaster in 1981 as part of his BA and the information gleaned from this document suggests the presence of pits and 3 ditches, with the majority of the pottery deriving from one ditch (Lancaster 1981, 6). Pottery dating to the Saxon period and to between the 11th and 12th centuries was recovered, although the vast majority of sherds dated to between 1225 and 1325 (Lancaster 1981, 10-20). It should be noted however that this report was presented as part of an undergraduate degree and pottery dating techniques are likely to have altered somewhat since 1981. The pottery has not been re-analysed since.

9.2.2 More recent investigations were variously undertaken in the Paddock area between 2005 and 2013 by Pre-Construct Archaeology, with the earliest evidence comprising an ephemeral chalk and flint rubble wall. Revealed to the rear of the Coachman's Lodge, this wall was cut into a ploughsoil horizon dated to between 1050 and 1200 (Bright 2014, 77). Works between 2010 and 2013 revealed a Victorian garden path in the area to the immediate south-east of the day nursery (Bright 2014, 149), although the trenches in this area did not reach a substantial depth. The archaeological watching brief undertaken to the immediate north-west of the palace between 2005 and 2006 did however produce significant results. Here a large south-west north-east aligned ditch was revealed measuring 6.2m in width and 1.8m in depth (Bright 2014, 47). Although limited quantities of pottery were recovered from this feature, the material retrieved indicated that the ditch was filled in at some point between 1480 and 1580. To the immediate south-east of this ditch and running parallel with it was another ditch which contained a substantial quantity of pottery dating to between 1240 and 1350. At some point this ditch was re-cut and fills from the later arrangement dated to between 1240 and 1400 (Bright 2014, 47). It is

however possible that these sherds were redeposited and that the re-cut was actually filled in much later.

9.2.3 Both linears were interpreted as possibly representing enclosure ditches which once surrounded the earlier medieval Palace located in the Paddock area. The ditch filled in between 1480 and 1580 clearly relates to the ditch discovered during the recent excavation. The geophysical survey undertaken in 2013 indicates however that this linear terminates to the north-east and does not continue on to the north-eastern corner of the Palace (Young 2013, 11). As such, the function of this feature is unclear, although it had evidently gone out of use by the mid 16th century. The gravel yard surface revealed during the recent excavations certainly suggests that this area of the Paddock was occupied, yet no structural evidence relating to the medieval period was revealed. During the 17th to 18th centuries building and demolition waste appears to have been dumped in the area which by this point comprised open ground.

9.3 **To explore if possible the double ditched enclosure and improve our understanding of its origins**

9.3.1 Unfortunately the excavation area did not extend across both of the ditches revealed during the 2005 – 2006 watching brief. The northernmost of the two ditches was exposed however, and following excavation was interpreted as medieval in origin. It was deliberately infilled at some point between 1480 and 1550 and contained substantial quantities of animal bone. This material is likely to have derived from either the kitchens (once located in the area of the current chapel), or the slaughterhouse which was situated to the south of the kitchen garden on the moat (Dickes, 1647).

9.3.2 The precise function of the ditch also remains unclear, although in terminating to the north-east it may not have functioned as an enclosure. That is, unless a further continuation was situated to the north-east, effectively forming a southern entrance to the Paddock area. The Ordnance Survey maps of 1869 and 1896 are perhaps somewhat telling in that both depict an almost identically aligned ditch to the south of the old kitchen garden (by this point described as a drying ground). To the immediate northwest of this are the remnants of another parallel ditch. Both of these linears appear to have been linked to the moat, possibly as some form of channel. Based on the archaeological evidence, both ditches were excavated prior to 1480 and are likely to have been associated with an earlier incarnation of Fulham Palace.

9.4 **To investigate any features within the paddock which may illuminate the earliest origins and use of the homestead**

9.4.1 The earliest features encountered during the excavation comprised two pits excavated in Trench 2. One of these [37] contained a struck flint which has been dated to between the Late Mesolithic and the Early Neolithic. Also containing a horse cremation it seems unlikely that this pit dated to either the Late Mesolithic or Early Neolithic, and as such the flint is understood to have been redeposited. A Late Bronze Age to Early Iron Age date for the feature seems far more likely and correlates with a soil horizon previously recorded in the stable yard and a pit containing bone and struck flint which was excavated on the North Lawn (Bright 2014, 36). No other archaeological evidence was recorded until the deposition of the gravel yard surface and the excavation of the large ditch in Trench 1 during the medieval period.

9.5 To provide an enhanced prospect for interpreting a phased sequence and ascribing individual features to phases

9.5.1 This has been covered in both the Phased Archaeological Sequence (Chapter 7) and the Archaeological Phase Discussion (Chapter 8).

9.6 To provide an enhanced statistical basis for providing an absolute chronology of the sequence through dating of artefacts

9.6.1 All of the finds recovered have been subject to statistical analysis by specialists in their specific fields. This data has been analysed and, in corroboration with the Harris Matrix, been used to chronologically date and phase the archaeological sequence of the excavation.

9.7 To provide an insight into the types and character of features by phase

9.7.1 The very earliest archaeological evidence concerned the late Mesolithic to Early Neolithic flint blade. Most probably residual, this find derived from a horse cremation which has provisionally been dated to between the Late Bronze Age and the Early Iron Age. Associated with another sterile pit, very little could be stated about these two isolated features, although they certainly add to our growing evidence of prehistoric activity on the Fulham Palace site. Despite the considerable amount of residual prehistoric material recovered during the various archaeological investigations undertaken on the site, this period unfortunately continues to remain poorly understood.

9.7.2 The zone to the north-west of the Palace appears to have remained open until a metalled surface was introduced into the area of Trench 1 during the medieval period. This may well support the interpretation that the early medieval palace was established within what is now the Paddock area. There were few features associated with this surface however and there was certainly no structural evidence, although the introduction of the large ditch hints at either the establishment of an associated dock or channel, or possibly an enclosure.

9.7.3 At some point between 1480 and 1550 it was determined that the ditch was no longer required and it was backfilled, seemingly with kitchen waste. Interestingly this episode coincides with both the construction and early decades of the Tudor courtyard's occupation and may well represent the final and complete abandonment of the Paddock area.

9.7.4 Little occurred within the area until further backfilling of the ditch took place during the late 17th century. This was presumably as part of a landscaping and levelling episode. Between 1680 and 1750 the Paddock area appears to have been used for dumping rubble and waste and associated pitting was observed in both Trenches 1 and 2. The final episode of dumping appears to have taken place between 1750 and 1760, suggesting an association with Bishop Sherlock's renovation work. This layer contained substantial quantities of both moulded and sculpted plaster potentially dating to the early 17th century. This material almost certainly once adorned rooms within the Palace prior to its removal.

9.7.5 The final phases of activity included a 19th century dog burial in Trench 1 and the overlying subsoil and topsoil.

9.8 To recover all diagnostic artefacts – potentially shedding light on techniques and spatial organisation

9.8.1 All diagnostic artefacts were recovered throughout the excavation as far as was reasonably practicable. One of the most successful elements of the excavation was the recovery of the small animal and fish bone from the large ditch. The uniform and school groups proved to be particularly adept at recovering these artefacts as they sifted through the spoil in the wheelbarrows.

9.9 To educate the volunteering public about professional archaeological techniques and practices.

9.9.1 In total 31 volunteers took part in the archaeological excavation and the subsequent finds processing. Prior to the dig they underwent training in archaeological excavation, recording, site formation processes and stratigraphic analysis. These training sessions were put into practice during the excavation itself and the volunteers were assisted by professional archaeologists from Pre-Construct Archaeology. Following the excavation, training was also provided in regards of finds processing and archiving by Pre-Construct Archaeology's finds manager.

9.10 To provide a beneficial and enjoyable archaeological experience for the volunteers.

9.10.1A dig 'Debrief and Thank You' coffee and tea afternoon was undertaken with the volunteers on the 14th of November 2017; both the author and Rachel Bray, Fulham Palace's Volunteer Development Officer, were present. The feedback from this meeting was very positive, with the only complaints registered concerning a lack of consistent space available for breaks and the storage of finds. A keen interest was shown in the BAJR archaeological skills passport and many volunteers were happy to author blogs about their experiences of the dig and the subsequent finds processing.

9.11 To operate entirely within a methodology which ensures the safety of all staff and volunteers participating in the project

9.11.1 Both a Written Scheme of Investigation (Mayo 2017) and a Risk Assessment and Method Statement (Haslam 2017) were prepared prior to the excavation. No injuries or accidents occurred throughout the project.

9.12 To inform long term conservation management of the site through development of a rudimentary three dimensional model of buried archaeological deposits.

9.12.1 All archaeological deposits and features were recorded in plan and section (where relevant) with associated levels above Ordnance Datum. This ensures that a three dimensional model of the buried archaeology can be developed, should it be required.

9.13 To define further the site's natural topography and hydrology

9.13.1 The underlying natural Kempton Park river terrace gravels were revealed in both trenches, with a highest level of 2.3m OD recorded in Trench 1 and 2.31m OD in Trench 2. This indicates a broadly level natural horizon in this area of the site. No evidence of hydrology concerning the close proximity of the River Thames was revealed during the excavation process.

9.14 To establish the presence, nature, location, extent and date of any archaeological deposits from the prehistoric to post-medieval periods and interpret their relationship with the layout of the site as it evolved through these periods

9.14.1 In regards of the prehistoric activity on the site, the plethora of residual evidence gives a secure interpretation of sustained activity during the Late Mesolithic to early Neolithic period. Much of this material has been recovered towards the Putney Bridge end of the site. A distinct lack of securely dated archaeological features does however make solid interpretation problematic. The discovery of the horse cremation provides further evidence of occupation or at least visitation, and provisional interpretation suggests a Late Bronze Age to Early Iron Age date. With so few features revealed across the monument however, the picture of prehistoric activity is still somewhat obscure.

9.14.2 The medieval ditch has previously been observed within the monument (Bright 2014, 47), but not to the extent that it was revealed during the recent archaeological excavation. Initial interpretation has concluded that this ditch formed part of an enclosure of the early medieval manor once situated within the Paddock. As yet, no concrete structural evidence of this early manor has been revealed however, although the area of metalled gravel in Trench 1 certainly suggests that this portion of the site was being used for hard standing. It is quite possible that the ditch actually formed part of a channel or dock associated with either the moat or the Thames as it almost certainly terminates at its north-eastern end. It is interesting to note that the westernmost wall of the Tudor Court appears to align with the ditch, which would still have been extant at the time of the Tudor construction. The ditch was backfilled shortly after the courtyard was erected however, suggesting that whatever function it formerly fulfilled was no longer required.

9.14.3 The ditch was primarily backfilled with animal and food waste between 1480 and 1550, and this material is almost certain to have derived from the proximate kitchens (where the chapel now stands) and the slaughterhouse (to the south of what is now the Chaplain's Garden). Following the closure of the ditch the Paddock seems to have been little used other than for dumping and maddening throughout the late 17th and 18th centuries. The most significant material concerns the mid 18th century demolition horizon which almost certainly relates to Bishop Sherlock's renovations within the Great Hall and the demolition of the solar block. Initial analysis suggests that the dumped plaster may well date to the early 17th century indicating that it may well have been commissioned by Bishop Juxon.

9.14.4 There is very little archaeological evidence recorded in this area of the site after the mid 18th century. Of interest however was the recovery of a number of screw pickets which may well relate to the establishment of a barrage balloon position in this area of the site during the Second World War.

9.15 To characterise the nature of occupation of the site from prehistoric times

9.15.1 Although the discovery of the horse cremation has added to our knowledge of prehistoric activity on the site, with so few prehistoric features revealed the excavation did little to enhance our understanding of Fulham Palace's prehistoric occupation.

9.16 To examine prehistoric riverside enclosures in the region such as Uphall Camp, Ilford, that may be parallels for the complex of earthworks believed to exist in and around the moated enclosure, to investigate the possibility of prehistoric (Iron Age) origins

9.16.1 As far as could be discerned, the only earthwork revealed during the current excavation was medieval in origin.

9.17 To explore the potential of Roman-period deposits at the site, in particular investigating any evidence for settlement and roads associated with the putative crossing of the Thames

9.17.1 No deposits or features dating to the Roman period were discovered during the excavation.

9.18 To determine the origin of the Moat and associated earthworks and to understand its construction, development and maintenance over time

9.18.1 The only earthwork revealed was the medieval ditch and this was closed between 1480 and 1550. This ditch almost certainly connected to either the moat or the River Thames, yet no evidence of the moat itself was revealed during the excavation.

9.19 To seek archaeological evidence which corroborates the putative occupation of the site by a Danish army in AD 879 – 880 attested by the Anglo Saxon Chronicle

9.19.1 No evidence of occupation relating to a Danish Army between the years of AD 879 and AD 880 was revealed during the excavation.

9.20 To establish the economic status of the site's inhabitants over time

9.20.1 Of the discernible archaeological evidence relating to status only a small number of features and deposits were revealed that can assist in interpretation. The backfill of the ditch between 1480 and 1550 is indicative of a high status renaissance household. The plasterwork deposited during the mid 18th century is again indicative of a wealthy and high status site.

9.21 To establish the trading links of the site's inhabitants with special note of the immediate access to the River Thames

9.21.1 Much of the material recovered from the excavation comprises local items deriving from south-east England. The most significant imported wares begin to occur in Phase 4. Much of the pottery in this phase derives from Germany whilst imported Flemish floor tiles were also recovered. In regards of the animal bone, ling inhabits more northerly waters, whilst turkey is native to the Americas and was a very new introduction to British shores at this time. The later post medieval phases (6 & 7) contained Dutch tin glazed wall tile, marble from Belgium and the Mediterranean and pottery from the Lowlands, Spain, France and China.

9.22 To evaluate artefact distribution, density, residuality and contamination in the topsoil across the ancient monument thereby maximising the information value of redeposited material to the understanding of early occupation.

9.22.1 An extensive process of metal detecting of the topsoil took place throughout the machining process. The vast majority of the material recovered dated to between the early 20th century up to the present, although a Roman nummus of Gratian, a cloth seal and a 16th century clasp were also retrieved.

9.23 To chart the development of Fulham Palace and its grounds through the medieval, Tudor and post-medieval periods

9.23.1 The earliest archaeological evidence recorded on the site concerned the prehistoric cremation in Trench 2. During the medieval period a metal surface and a large ditch were established in the area of Trench 1, whilst a worked horizon was revealed in Trench 2. During the Tudor period the large ditch in Trench 1 was backfilled. The Paddock area then appears to have remained open, with the ditch levelled off and waste and demolition material dumped across the open zone. This culminated in the deposition of a large demolition dump during the mid 18th century. Both trenches were sealed by modern topsoil. The dovecote was not revealed.

10 IMPORTANCE OF THE RESULTS, FURTHER WORK AND PUBLICATION PROPOSAL

10.1 The most important periods recorded during the 2017 excavations at Fulham Palace are:
1) Prehistoric; 2) medieval; 3) post-medieval (1480-1550); 4) post-medieval (1630 1680);
5) post-medieval (1680-1750); 6) post-medieval (1750-1760); 7) post-medieval (19th century); 8) post-medieval (20th century).

10.2 Prehistoric

10.2.1 Only two features associated with this phase of activity were recorded during the excavation and both were observed in Trench 2. Whilst one of these pits was sterile, the other was found to contain a prismatic blade dating to between the Late Mesolithic and Early Neolithic along with a horse cremation. The damaged nature of the flint suggested that this find was residual and that cremation was likely to be somewhat later. For this reason both pits have been tentatively dated to between the Late Bronze Age and Early Iron Age.

10.3 Medieval

10.3.1 Medieval activity was recorded within both trenches. In Trench 2 this took the form of a worked horizon, yet the situation in Trench 1 was somewhat different. Here a metalled surface was established and was likely to have been utilised as a yard or area of hard standing. It has long been postulated that this portion of the Fulham Palace grounds encompassed the early medieval manor and that this shifted to the Palace's current location in the 13th century. As no structural evidence was recorded this interpretation could not be confirmed, yet it was clear that the area was being used during the medieval period. This was supported by the presence of an associated large north-east south-west aligned ditch. Previous interpretation has suggested that the early manor was enclosed by a series of linears, and as such the ditch may represent one of these. Geophysical survey does however indicate that the ditch terminates to the north-east and it is therefore possible that it served a different function. It was almost certainly connected to the moat and / or Thames and thus may alternatively have been used as a channel, dock or wharf.

10.4 Post-medieval (1480-1550)

10.4.1 During this period the ditch went of use and was comprehensively backfilled. Notably this is at around the same time as, or at least very soon after, the construction of the Tudor courtyard. The ditch was closed with domestic refuse and waste, mostly in the form of animal remains. This is likely to have derived from the proximate kitchens and slaughterhouse and the material retrieved provides a significant insight into both the diet and material culture at the Palace during this phase of activity.

10.5 **Post-medieval (1630-1680)**

- 10.5.1 This period was represented by further deposition within the upper levels of the ditch. This infilling episode is likely to have taken place in order to level the ditch and flatten off extant depressions within the former linear.

10.6 **Post-medieval (1680-1750)**

- 10.6.1 The very final infilling of the medieval ditch took place during this phase of activity as the Paddock area reverted to open ground. Material began to be dumped over the former zone of hard standing in Trench 1 and mostly comprised kitchen waste along with demolition debris. It is possible that the brick and tile related to renovations undertaken within the Palace at this time, although the presence of further animal bone may also indicate that the area was simply being used as a midden. In Trench 2 two pits were recorded in association with this period, and both also contained demolition debris and domestic waste.

10.7 **Post-medieval (1750-1760)**

- 10.7.1 The archaeological activity associated with this phase of occupation concerned a large dump layer which was revealed in Trench 1. This layer comprised demolition rubble and contained significant quantities of moulded plaster. The material is likely to have derived from the Great Hall and / or solar block which were respectively altered and demolished during the tenure of Bishop Sherlock. Dating the plaster itself has been complex, but it seems likely that it was introduced during the time of either Bishop Robinson (1714 – 1723), or Bishop Juxon (1633 – 1649). A comparable plaster scheme at Ham House dating to 1638 may well indicate that Juxon is a more likely candidate for the original works.

10.8 **Post-medieval (19th century)**

- 10.8.1 The only archaeological activity associated with this phase concerned a dog burial. Large in size, male and suffering from joint disease this dog was old when it died. A large Mastiff named 'Captain' is known to have resided in the Palace during the tenure of Bishop Tait (1856 – 1868) and it is possible that the remains discovered during the excavation belong to this very dog.

10.9 **Post-medieval (20th century)**

- 10.9.1 Although the archaeological horizons dating to this period concerned made ground, subsoil and topsoil, of significance were a number of screw pickets recovered during the machining process in Trench 1. These may have derived from the Warren which was used for training during World War I, yet it is equally possible that they formed the base for the barrage balloon that was established at Fulham Palace during World War 2.

10.10 FURTHER WORK

10.10.1 The archaeological results from this phase of works will be incorporated with those results of archaeological works that have previously been undertaken at Fulham Palace. All finds from this investigation will be considered together with artefacts recovered from other phases of work.

10.10.2 In relation to the archaeological data collected from this excavation; listed below are the recommendations for further work as identified in the specialist assessments (see appendices).

10.11 Animal Bone

The recovery of the animal bone on site was significant. The prehistoric horse cremation may well represent evidence of selective deposition, and for this reason further work should be undertaken in order to provide a more accurate date for the remains. Research should be undertaken in order to find comparable examples within the archaeological record and the possibilities of obtaining a C14 date should be investigated. The early post-medieval material recovered from the backfill of the medieval ditch is also of importance in that it provides an excellent source for the quality and diversity of food within a high status household during this period. Further identification of a number of the bones is still required. The animal bone excavated throughout the various phases of the excavation provides an opportunity to examine the changing tastes on high status sites throughout the medieval and post-medieval periods in regards of animal species, age and livestock breeding advancements. The assemblages across the various phases should be compared and contrasted both in regards of the site itself and in relation to similar material from local sites as well as from comparable high status assemblages.

10.12 Pottery

In regards of the pottery a report will be required for the publication. Two vessels require illustration whilst a further three will need to be photographed. Further research is required on the barrel shaped jug, the Prussian tin glazed blue jar and the sherd of experimental porcelain.

10.13 Clay Tobacco Pipe

A report will need to be produced on the clay tobacco pipe for the publication. Further research will need to be undertaken on the non local pipes in order to establish their sources of origin. Four items require illustration.

10.14 Glass

A short report will be required on the glass for the publication text. An illustration of the wine glass (SF 24) is required.

10.15 The Decorative Plasterwork

Schemes 1 and 2 of the identified plasterwork are highly significant. Up until the 1980's the architectural importance of Fulham Palace was vastly underestimated. Whilst renovation and restoration work continues to reveal new information in regards on the much altered fabric of the building, the fragments of plaster recovered during the recent excavation provide a further insight into the past décor and appearance of the Palace. This also offers an insight into the stylistic tastes of the Bishops of London and how fashions and aesthetics changed over time. Further research will need to be undertaken into any available records on the Palace and into stylistic parallels. A concise publication text will need to be produced along with illustrations and photographs.

10.16 Lithics

There are no recommendations for further work. If publication is required then the information should be taken from this report.

10.17 Shell

It is recommended that prior to publication additional analysis of the qualitative and quantitative data should be undertaken. This may assist with understanding the contemporary climate, habitat and farming / harvesting methods.

10.18 Small Finds

The small finds recovered throughout the excavation cover the entire period of occupation from the prehistoric right through to the modern era. They should be included in the final publication. A number require x-raying and further identification.

10.19 CBM

The CBM should be included in the publication. A number of items require further identification, illustration and photographing. As an assemblage the material should be compared and contrasted with other contemporary assemblages from similar high status sites.

10.20 Environmental

It is recommended that further charcoal analysis is undertaken on a number of samples. Further analysis of the charred stem material may also provide a further insight into potential flooring, fodder and roofing material.

10.21 **Publication Proposal**

10.21.1 The results of the Dovecote Community Project excavation will initially be presented as an entry in the London Archaeologist 'Round Up'. They will subsequently be published as part of a monograph which will seek to synthesize data from all of the archaeological excavations undertaken at the Fulham Palace Moated Site.

10.21.2 The site archive will be deposited at the London Archaeological Archive and Research Centre (LAARC) under site code FPL17, following approval of this report. Fulham Palace Trust will provide a copy of this report to the local studies library, to the Council for British Archaeology, to the Greater London Historic Environment Record (GLHER), to the archaeology advisor at the London Borough of Hammersmith and Fulham and to Pre-Construct Archaeology.

11 CONTENTS OF THE ARCHIVE

The archive comprises:

The Paper archive

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The Photographic Archive

Digital Format	158 Frames
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The Finds archive

Pottery	8 Boxes
Clay Tobacco Pipe	2 Boxes
Glass	4 Boxes
Animal Bone	30 Boxes
Flint	1 Box
Mortar & Plaster	8 Bread Crates
CBM	32 Boxes
Metal & Small Finds	6 Boxes
Shell	2 Boxes

The Environmental archive:

	No.	Buckets
Samples	4	10

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APPENDIX 1 – Context Index

Context No.	Phase	Interpretation	Trench No.	Plan No.	Sample No.	Small Finds No.	Section No.	MOD High	MOD Low
1	9	Topsoil	1	-	-	1, 2, 5, 6, 25, 27, 28, 48, 49, 57, 59	2, 4	3.63	3.38
2	9	Subsoil	1	-	-	22, 26	2, 4	3.45	3.24
3	7	Demolition Spread	1	3	-	3, 4, 7, 24, 60, 63, 65, 73, 86, 87, 88, 89	2, 4	3.28	2.71
4	6	Layer	1	Post-ex	-	117	2, 4	2.77	2.43
5	9	Topsoil	2	-	-	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 50, 51, 52, 54, 58, 77, 78, 79	5, 7	3.27	3.03
6	6	Fill of [29]	1	-	-	34, 71	1	2.79	2.77
7	9	Subsoil	2	-	-	-	5, 7	3.02	2.82
8	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
9	8	Grave cut	1	9	-	-	-	2.65	2.53
10	8	Dog burial	1	10	-	-	-	2.65	2.53

11	5	Fill of [44]	1	-	-	29, 30, 31, 32, 33, 35, 36, 37, 38, 80	3	2.72	2.69
12	7	Demolition Spread	1	12	-	47, 91	4	2.97	2.75
13	3	Layer	2	13, Pre-ex	-	43, 44, 45, 46, 62, 91	5, 7	2.8	2.63
14	6	Fill of [26]	2	Pre-ex	-	62	-	2.71	-
15	6	Fill of [16]	2	Pre-ex	-	39, 42	5	2.72	2.63
16	6	Large pit cut	2	16, Pre-ex	-	-	5	2.72	2.15
17	2	Fill of [18]	2	18, Pre-ex	-	-	5	2.32	-
18	2	Shallow depression / cut	2	18, Pre-ex	-	-	5	2.32	2.23
19	1	Dirty gravel	2	19, Pre-ex, Post- ex	-	-	5, 7	2.69	2.32
20	1	Natural gravel	2	Pre-ex, Post-ex	-	-	7	2.31	2.06
21	4	Fill of [44]	1	-	-	40, 53, 66, 67, 69, 75, 76, 90	3	2.7	2.37
22	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
23	4	Fill of [29]	1	-	2	41, 55, 56, 61	1	2.74	2.32
24	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
25	4	Fill of [29]	1	-	3	64	1	1.88	1.78
26	6	Small shallow pit	2	26, Pre-ex	-	-	-	2.71	2.51
27	4	Fill of [29]	1	-	-	-	1	2.16	1.81
28	4	Fill of [29]	1	-	-	-	1	1.79	1.65

29	3	Slot in [43]	1	Post-ex	-	-	1	2.79	1.29
30	4	Primary fill of [29]	1	-	-	-	1	1.62	1.49
31	6	Layer	1	-	-	70	6	2.43	2.42
32	4	Primary fill of [44]	1	-	-	68	3	2.37	1.53
33	3	Yard surface?	1	-	-	-	6	2.43	2.39
34	6	Fill of [42]	1	Post-ex	-	-	-	2.88	2.6
35	3	Yard surface?	1	Post-ex	-	-	4	2.85	2.65
36	1	Natural gravel	1	-	-	-	-	2.3	2.25
37	2	Fill of [38]	2	-	4	72	5	2.43	-
38	2	Small circular pit	2	38	-	-	5	2.43	2.21
39	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
40	3	Yard surface?	1	Post-ex	-	-	-	2.66	2.45
41	6	Burnt spread	1	Post-ex	-	-	-	2.69	2.64
42	6	Pit cut	1	Post-ex	-	-	-	2.88	2.34
43	3	Group no. for ditch	1	Post-ex	-	-	4	2.92	1.29
44	3	Slot in [43]	1	Post-ex	-	-	3	2.85	1.55
45	8	Fill of [9]	1	-	-	-	-	2.65	2.63

46	5	Generic fill of [43]	1	Post-ex	-	-	4	2.92	2.57
47	8	Layer	1	-	-	-	2	3.15	2.87

APPENDIX 2: POST-ROMAN POTTERY ASSESSMENT (FPL17)

Chris Jarrett

INTRODUCTION

A small sized assemblage of pottery was recovered from the site (seven boxes). The pottery dates from the medieval and post-medieval periods. Only a very small number of sherds (0.7%) show evidence for abrasion although a notable proportion of the pottery has vessels represented by a single sherd. This therefore may represent secondary deposition and with the archaeological work was located within an area of landscaped garden, some of the pottery has the appearance of being deposited under tertiary circumstances, possibly as a result of horticultural activity. However, seven post-medieval vessels have complete profiles, one of which is almost intact, indicating that some of the material was discarded soon after breakage or discard. The pottery was quantified by sherd count and estimated number of vessels (ENV), besides weight. Pottery was recovered from 21 contexts and individual deposits produced small (fewer than 30 sherds), besides three medium (less than 100 sherds) and two large over (100 sherds) sized groups of pottery.

All the pottery (543 sherds, 296 ENV, 15.350kg, of which seven sherds, 6 ENV, 241g are unstratified) was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS database, by fabric, form and decoration. The classification of the pottery types is according to the Museum of London Archaeology (2014). The pottery is discussed by types and its distribution.

THE POTTERY TYPES

The quantification of the pottery into its different chronological periods is as follows:

Medieval: 25 sherds, 23 ENV, 316g

Post-medieval: 519 sherds, 274 ENV, 15.040kg

Medieval

The range of pottery of medieval pottery types and the forms that occur in those wares is shown in Table 1. Except for two late medieval sherds found in deposits dated to the end of the 15th century, all of the medieval pottery is residual. The earliest ware recorded is a sherd of early south Hertfordshire-type coarseware (ESHER), dated 1050-1200 and was found in context [11]. The later, wheel-thrown coarse ware, South Hertfordshire-type greyware (SHER), dated 1170-1350 (Blackmore and Pearce 2010), is more frequent and includes a jar with applied thumbbed

strip decoration (context [3]). A handful of jug sherds are recorded in London-type ware (LOND), dated 1080–1350 (Pearce et al 1985) (contexts [3] and [11]) and the better quality Mill Green ware (MG), dated 1270–1350 (Pearce et al 1982) (context [12]). Late medieval wares are more numerous and occur as only Surrey whitewares (Pearce and Vince 1988). These include sherds of Coarse Surrey-Hampshire border ware (CBW), dated 1270–1500 and includes jug sherds (context [2], [6] and [21], while cooking pots are recorded with either flat topped rims (CBW FT), dated 1340-1500 (contexts [1] and [12] or bifid rims (CBW BIF), dated 1380–1500 (context [11]).

Pottery type	Code	Date range	SC	ENV	Wt (g)	Forms:
Coarse Surrey-Hampshire border ware	CBW	1270-1500	5	5	25	Jug and unidentified
Coarse Surrey-Hampshire border ware cooking pot with bifid rim	CBW BIF	1380-1500	1	1	30	
Coarse Surrey-Hampshire border ware cooking pot with flat-topped rim	CBW FT	1340-1500	2	2	45	
Cheam whiteware	CHEA	1350-1500	6	5	83	Jug and unidentified
Early south Hertfordshire-type coarseware	ESHER	1050-1200	1	1	18	Unidentified
London-type ware	LOND	1080-1350	2	2	8	Jug
Mill Green ware	MG	1270-1350	1	1	3	Jug
South Hertfordshire-type greyware	SHER	1170-1350	7	6	104	Jar, rounded and unidentified

Table 1. FPL17: medieval pottery types quantified by sherd count (SC), estimated number of vessels (ENV) and weight (Wt (g)) and the forms that occur in those wares

Post-medieval

Pottery type	Code	Date range	SC	ENV	Wt (g)	Forms:
Blackware	BLACK	1600-1900	1	1	62	Unidentified
Surrey-Hampshire border whiteware with green glaze	BORDG	1550-1700	17	12	252	Rounded drinking jug. Squat rounded jar, tripod pipkin (including type 2 examples: ribbed body/external lid-seated rim) and unidentified
Surrey-Hampshire border green-glazed whiteware flat-rimmed chamber pot	BORDG CHP2	1650-1750	5	1	20	
Surrey-Hampshire border whiteware with olive glaze	BORDO	1550-1700	7	4	195	Flared bowl and unidentified
Surrey-Hampshire border whiteware with clear (yellow) glaze	BORDY	1550-1700	19	17	447	Bowl or dish, flared bowl, rounded dish, chicken feeder, tripod pipkin, type 1, ribbed/internal lid-seated rim and unidentified
Chinese porcelain	CHPO	1580-1900	1	1	3	Rounded mug
Chinese blue and white porcelain	CHPO BW	1590-1900	13	9	120	Bowl: rounded, including a shallow example, plate and unidentified
Cistercian ware	CSTN	1480-1600	18	9	94	Cup, including necked examples, jug: rounded and unidentified
Dutch slipped red earthenware	DUTSL	1300-1650	3	2	42	Bowl or dish and unidentified

Pottery type	Code	Date range	SC	ENV	Wt (g)	Forms:
Early Surrey-Hampshire border whiteware	EBORD	1480-1550	9	5	32	Drinking jug, including rounded examples, straight-sided jar, and unidentified
Early Surrey-Hampshire border whiteware with clear (yellow) glaze	EBORDY	1480-1550	1	1	3	Unidentified
English stoneware with Bristol glaze	ENGS BRST	1830-1900	2	2	149	Bottle or jar
Frechen stoneware	FREC	1550-1700	41	27	1006	Rounded jugs, including Bartmannen
Un sourced French faience	FTGW	1600-1800	2	1	314	Jar: tall rounded
Un sourced German stoneware	GERST	1480-1900	1	1	3	Unidentified
German whiteware	GERW	1550-1630	1	1	5	Unidentified
Cologne stoneware	KOLS	1500-1580	1	1	40	Rounded drinking jug
London stoneware	LONS	1670-1926	5	5	154	Rounded jug, tankard and unidentified
Miscellaneous un sourced medieval/post-medieval pottery	MISC	900-1500	65	4	1807	Flared bowl, flower pot, barrel-shaped jug and unidentified
Midlands orange ware	MORAN	1400-1820	3	1	35	Butterpot
Midlands purple ware	MPUR	1400-1750	6	2	179	Butterpot
Essex-type post-medieval black-glazed redware	PMBL	1580-1700	8	5	82	Mug: cylindrical and rounded and unidentified
London-area post-medieval redware	PMR	1580-1900	12	57	6239	Bowl: flared; deep, two-handled, carinated; medium rounded; tall, bowl or dish, dishes: deep, flower pot, jar: two-handled rounded, pipkin and unidentified
London-area early post-medieval redware	PMRE	1480-1600	20	16	573	Bowl, bowl or dish, conical lid, jar: medium rounded, jug: rounded; tall and unidentified
London-area post-medieval slipped redware	PMSR	1480-1650	1	1	45	Bowl or dish
London-area post-medieval slipped redware with green glaze	PMSRG	1480-1650	2	2	25	Unidentified
London-area post-medieval slipped redware with clear (yellow) glaze	PMSRY	1480-1650	10	6	898	Bowl or dish, two-handled carinated bowl or dish: type 1 and unidentified
Raeren stoneware	RAER	1480-1610	15	10	780	Rounded drinking jug, jug: rounded; large,
Surrey-Hampshire border redware	RBOR	1550-1900	10	9	297	Bowl: rounded. Porringer, jar: squat rounded and unidentified
Surrey-Hampshire border redware with brown glaze	RBORB	1580-1800	4	2	29	Unidentified
Surrey-Hampshire border redware with green glaze	RBORG	1580-1800	6	1	64	Bowl
Spanish green-glazed ware	SPGR	1250-1650	1	1	29	Jar
Spanish un sourced amphora	SPOA	1200-1900	1	1	32	
White salt-glazed stoneware	SWSG	1720-1780	12	6	138	Bowl: rounded; medium, jug: rounded, teapot and unidentified
Dipped white salt-glazed stoneware	SWSL	1710-1760	3	3	35	Capuchine and unidentified
English tin-glazed ware	TGW	1570-1846	20	12	155	Albarello, bowl: medium rounded, plate: Britton type I and unidentified
London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style A)	TGW A	1570-1650	2	2	27	Albarello
London tin-glazed ware with plain pale blue glaze	TGW BLUE	1630-1846	23	7	369	Bowl: rounded; medium, chamber pot, ointment pot, storage jar and unidentified
London tin-glazed ware with plain white glaze (Orton style C)	TGW C	1630-1846	17	9	123	Bowl: rounded; shallow chamber pot, ointment pot, porringer: shape (c) convex profile with everted rim and unidentified
London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style D)	TGW D	1630-1680	12	7	78	Albarello, charger, Britton shape B-D and unidentified

Pottery type	Code	Date range	SC	ENV	Wt (g)	Forms:
London tin-glazed ware with pale blue glaze and dark blue decoration (Orton and Pearce style H)	TGW H	1680-1800	3	3	16	Cylindrical jar, plate and unidentified
London tin-glazed ware with 'Persian blue' decoration (Orton style M)	TGW M	1680-1710	1	1	6	Unidentified
Refined whiteware with under-glaze transfer-printed decoration	TPW	1780-1900	1	1	5	Unidentified
Westerwald stoneware	WEST	1590-1900	3	3	21	Jug: rounded and unidentified
Westerwald stoneware with purple and blue decoration	WEST PURP	1665-1750	1	1	6	Jug: rounded

Table 2. FPL17: post-medieval pottery types quantified by sherd count (SC), estimated number of vessels (ENV) and weight (Wt (g)) and the forms that occur in those wares

The range of post-medieval pottery types and the pottery forms that are found in these wares is shown in Table 2. The main origin of the pottery occurs as London area coarse red earthenwares (29.7% SC/29.9% ENV/51.7% weight), which were made at a number of locations, although South-East London (Deptford, Greenwich and Woolwich) were the main long-lived production centres (Nenk and Hughes 1999). The earliest of these wares occurs as London-area early post-medieval redware (PMRE), dated 1480–1600 and are present as mostly jar sherds, probably used for storage and were found in contexts [21], [22] and [23], while smaller numbers of other forms are recorded: bowls or dishes (contexts [4], with a thumb decorated rim edge and [12]), a conical lid (context [23]) and a rounded jug (context [2]). The contemporaneous slipwares (PMSR), or with a green or yellow glaze (PMSRG/Y), dated 1480–1650, occur only in the form of bowls or dishes and include carinated versions typical for the early to mid 16th century (contexts [21] and [23]). The later, better made and glazed London-area post-medieval redware (PMR), dated 1580–1600, is recorded in a fairly limited range of forms and occurs mostly as bowls, with flared profiled examples being more frequent, or in the form of rounded jars of different sizes (see Table 3 for which contexts they occur in). Twelve fragmentary flower pots, which date from c. 1640 onwards, are recorded and these would be expected on an archaeological excavation within the landscaped garden of Fulham Palace. The flower pots were found in deposits [4], [12], [13] and [14] and the largest quantity (six examples) were derived from deposit [3]. The only other form noted is a kitchen ware: pipkins, found in context [4] and as some five fragmentary examples in deposit [12].

English, or more precisely London tin-glazed earthen wares (TGW: Orton and Pearce 1984; Orton 1988), dated c. 1570–1846, are recorded as 15.2% SC/15.3% ENV/5.2% weight of the post-medieval wares and these are represented by a number of different decorative schemes. In style A (TGW A), dated c. 1612–50 there is only recorded the rim of an albarello decorated with blue bands, triangular dashes and a zigzag border containing a blue dash or in the lower

triangle an ochre 'A' motif (deposit [12]). Plain whitewares (TGW C) date from c. 1630, are noted as a small rounded bowl (context [3]), chamber pots (contexts [3] and [4]), ointment pots (contexts [3] and [14]) besides porringers (context [12] and as an 18th-century C shape found in context [3]). The mid 17th-century polychrome style on a bright white glaze (TGW D) was very fragmentary and could only be identified in the form of an albarello base (context [3]) and as two chargers (contexts [3] and [12]). The plain blue ware (TGW BLUE) is dated from c. 1630, although it appears to be much more frequent after c. 1680 and this style occurs in a similar range of forms to the plain whiteware: bowls (medium rounded: context [12] present as two examples), an ointment pot (context [12]) and a straight-sided jar base (context [6]). Style H (TGW H) consists of blue decoration on a pale blue background and it is dated c. 1680–1800 and could only be identified in the form of a cylindrical jar with a splayed base and a late 17th-early 18th century dated plate rim with, both of which have line decoration and occurred in context [3]. In the 'Persian blue' decoration style (TGW M), dated c. 1690–1720 there is only recorded a horizontal loop rod handle (context [3]). A relatively small number of vessels could not be assigned to a decorative style and were given a general TGW code and unless otherwise stated were mostly of an 18th century date and were blue and white wares. The identifiable forms were an albarello and a medium rounded bowl (context [4]), as well as three plate fragments, one of which occurred in context [12], while simple shaped examples occurred in deposits [3] (with a cable border on the rim and simple foliage decoration) and [4] (with scroll motifs).

The Surrey-Hampshire border wares (Pearce 1992; 1999) occur in the assemblage as 15.0% SC/19% ENV/8.9% weight and consist of mostly the whitewares. These include a small number of sherds of the fine early ware (EBORD), dated 1480–1550, which were all probably derived from drinking jugs (found in contexts [3], [4], [21] and [23]). However, there are base and wall fragments from an unglazed small flared jar found in context [21]. The later, sandier wares (BORDG/O and Y) are dated 1550–1700, except for the green-glazed, flat-rimmed chamber pots (BORDG CHP2), dated 1650–1700 (contexts [4]). The forms in these wares consist of mostly fragments of bowls or dishes (see Table 2 and for where they occur, Table 3), although flared examples are noted in BORDO (context [14]) and BORDY: flared (context [3]), while rounded profile dishes occur in BORDY (contexts [7] and [14]). Fragments of a drinking jug are noted (BORDG: context [6]) and tripod pipkins (BORDG: context [6]), while more specific types occur with an internal lid seated rim (type 1: BORDY; context [3]) and as the external lid-seated type (type 2: BORDG; context [34]). There are two forms that are rarer products in the repertoire of the Border ware industry and these consist of a small rounded jar (BORDG: context [6]) and large fragments of a BORDY chicken feeder (BORDY: context [14]). The latter is in a laminated state, possibly resulting from frost damage when it was in use.

Imported wares (Hurst *et al* 1986) are found as 16.2%SC/ 21.5% ENV/15.9% weight. These were mostly from a German source (12.1%SC/ 16.1% ENV/12.4% weight) and occur in a range of stonewares, except for a single non-diagnostic sherd of whiteware (GERW), dated c. 1550–

1630 (context [3]). The earliest of the stonewares is from Raeren (RAER), dated c. 1480–1610 and occur mainly as the c. 1480–1550 dated ‘type-fossil’ rounded drinking jug and found in contexts [6], [21], [23] (which included a largely complete example) and [32]. A rarer British find of a large rounded jug was noted in context [12] and survived as the thumbled base. The only item of Cologne stoneware (KOLS) recorded was the lower part of a rounded drinking jug with a splayed base and globular body and dated to the early to mid 16th century (context [23]). The ubiquitous Frechen stoneware (FREC), dated 1550–1700, occurred in the form of rounded jugs (contexts [3], [5], [6], [11], [15] and [34]) and occurred with or without more diagnostic sherds of Bartmannen, which were identified either by the applied face masks or medallions (contexts [3], [12] and [31]). Westerwald stoneware (WEST), dated 1590–1900 was found as fragments of rounded jugs in deposits [12] and [34] (or another drinking form: context [6]), as well as with blue and purple decoration (WEST PURP), dated 1665–1750 (context [12]). A sherd of non-diagnostic German stoneware (GERST) was noted in deposit [10].

Two vessels come from a Low Counties source and consist of only Dutch slipped red earthenware (DUTSL), dated c. 1300–1650 and were noted in contexts [2] (as a bowl or dish fragment) and [3]. From Spain there is a noted fragment of glazed amphora and probably from an Andalusian source as the fabric contains igneous inclusions (Context [34]) and a sherd of a jar made in the green-glazed ware (SPGR: context [3]).

The only French tin-glazed ware (FTGW) in the assemblage occurs as a shoulder sherd from a probable tall rounded jar with an applied inverted V-shaped lug-type handle, which additionally appears to have been moulded and has the appearance of a single ply rope. Between the arms of the V is an applied disc with a central depression. The vessel is has an internal and external Prussian blue glaze and seems most likely to be a product of Nevers. The item was recovered from context [3].

The Chinese porcelain imports are fairly well represented in the assemblage (2.7%SC/ 3.6% ENV/ 0.8% weight) and apart from a plain white (CHPO) rounded mug, all of the other vessels are in the blue and whiteware (CHPO BW) and are mostly of an 18th century date. The main form recorded are bowls, which includes an early 18th-century small type (context [12]) decorated with ‘precious things’ motifs, an internal central debased Artemisia leaf and a ‘line-shaded’ square mark on the underside of the base. Another small rounded bowl, besides two fragmentary rounded bowls of an indeterminate size were noted in context [3], which also produced a plate base decorated with a landscape, while a plate with a *cafe au lait* rim edge with a floral border occurred in deposit [12].

Miscellaneous wares (MISC) are recorded as 12.5% SC/1.5% ENV/12.0% weight. The high sherd count for this category is largely represented by a fragmentary a late 15th-early 16th century dated barrel-shaped jug with a complete profile found in deposit [12]. The vessel has an external thin white slip-coating and a clear glaze drip and the fabric is a calcareous red earthenware: the white slip coating and the fabric is dissimilar to the London area early post-

medieval calcareous redware (PMREC) fabric. It is possible that this is a product from the Huntingdon area or the South Midlands where calcareous clays were used.

Fragments of a flower pot recorded in deposit [4] were made in an oxidised soapy fabric with sparse calcareous inclusions. An unglazed bowl rim, made in a pale pink, slightly marbled, pasty/silty fabric with fine iron ores was noted in deposit [14], deposited in the mid to late 17th-century. From deposit [4] was recovered a sherd of pottery made in a grey porcellaneous fabric and the exterior has a plain panel with a sinuous border formed from a brown ferruginous slip background. The panel contains part of a leaf motif painted probably in cobalt, which has misfired to a black colour. This may represent an experimental product made by Dwight at the Fulham Pothouse in the late 17th/early 18th century (Green 1999). Six small sherds recovered from context [21], environmental sample <1> were too small to be identified to a pottery type.

The English stonewares (Oswald et al 1982) in the assemblage account for 5.4%SC/ 6.6% ENV/4.4% weight and come from a number of sources. Sherds of Midlands purple ware (MPUR) butter pots were noted in contexts [3], [4] and [12]. Butter pots, in this ware were appearing in the London area from c. 1580. The London stoneware occurs only as drinking related forms and includes fragments from two rounded jugs (deposits [3] and [12]) and tankards, found as a base (context [4]) and a body sherd (context [12]). A small quantity of dipped white salt-glazed stoneware (SWSL), dated 1710–60, is record and occurs as fragments of drinking forms: a splayed base (context [6]) and as a strap handle and a capuchine rim (context [3]). The most frequent British stoneware recorded is white salt-glazed stoneware (SWSG), dated 1720–80 and occurs in the form of rounded bowls (contexts [3]), rounded jugs (contexts [4] and [12]) and the spout of a teapot (context [3]). The latest ware in this category is English stoneware with Bristol glaze (ENGS BRST), dated from c. 1830 and occurs only as base sherds from bottles or jars (unstratified and context [3] as an example with a grey glaze dating to after c. 1850).

The non-local wares in the assemblage account for 4.3%SC/ 4.0% ENV/1.2% weight and this category consists almost entirely of the good quality Cistercian ware (CSTN), dated 1480–1600 and typically found as drinking forms. Fragments of a cup occurred in deposit [3], while more specifically sherds of necked cups were found in contexts [3], [21] and as two examples from [23]. Sherds of jugs were derived from contexts [21] and [23]. None of the Cistercian ware forms show evidence of white slip decoration which dates to the mid 16th century. A non-diagnostic sherd of blackware (BLACK), dated 1600–1900 was found in deposit [3]. Three sherds from a Midlands orange ware (MORAN) butterpot were noted in context [4].

A handful of Essex fine red earthenwares (Nenk and Hughes 1999) are recorded and only as the black-glazed redware (PMBL), dated 1580–1900: only fragments of mugs could be identified and a cylindrical example occurred in deposit [11] and a cylindrical shape was found in (context [10]).

Industrial/factory-made finewares, dated to after c. 1740 are almost entirely absent in the assemblage except for a sherd of refined whiteware with under-glaze transfer-printed decoration (TPW), dated from 1780. This ware is represented by the base of a plate decorated with the Asiatic pheasant design which is dated c. 1830–1910 and was found in context [5].

DISTRIBUTION

The Post-Roman pottery occurs in Phases 3- 9 and its distribution is shown in Table 11. Only the most meaningful deposits from each phase are discussed by trench. The quantitative component of the discussion is led by estimated number of vessels.

Phase 3: Medieval

The phase produced a total of two sherds/2ENV/43g of pottery. These were recovered from the yard surface [33] (Trench 1), which produced a sherd of a PMSRY bowl and layer [13] (Trench 2), which contained a sherd of a PMR flower pot. It would appear that both sherds are intrusive in this layer.

Context	Description	Size	Phase	Trench	SC	ENV	Wt Context Context			Pottery types and forms	Spot date
							(g)	ED	LD		
0										BORDY (-),CSTN (-),ENGS BRST (bottle or jar), PMR (rounded bowl, tall rounded jar, RBOR (-)	
1	Topsoil	S	9	1	3	2	325	1580	1900	CBW FT, PMR (tall rounded jar)	17th - mid 18th century
2	Subsoil	S	9	1	4	3	70	1480	1600	CBW (jug), DUTSL (bowl or dish), PMRE (rounded jug)	1480–1600
3	Demolition Spread	S	7	1	143	84	4171	1830	1900	BLACK (-), BORDG (-), BORDO (-), BORDY (flared bowl, bowl or dish, tripod pipkin, type 1, -), CHEA (-), CHPO BW (shallow/rounded bowl, plate), CSTN (cup), DUTSL (-), EBORD (-), ENGS BRST (bottle or jar), FREC (rounded jug/Bartmannen), FTGW (tall rounded jar), GERW (-), LOND (jug), LONS (rounded jug, -), MPUR (butterpot), PMR(bowl: flared, dish: deep, flower pot, -) , PMSRG (-), RBOR porringer, -), RBORB (-), SHER (rounded jar), SPGR (jar),	1850–1900

Wt Context Context											
Context	Description	Size	Phase	Trench	SC	ENV	(g)	ED	LD	Pottery types and forms	Spot date
										SWSG (bowl: rounded: medium, teapot), SWSL (capuchine, -), TGW (plate, -), TGW BLUE (bowl: rounded, medium), TGW C (bowl: rounded; shallow, chamber pot, ointment pot, porringer, type C), TGW D (albarello), TGW H (cylindrical jar, plate, -). TGW M (-)	
4	Layer	S	6	1	47	34	949	1720	1780	BORDG CHP2, BORDY (bowl or dish), CHEA (-), CHPO BW (-), LONS (tankard), MISC (flower pot, -), MORAN (butterpot), MPUR (butterpot), PMR (bowl: flared; deep, bowl or dish, cauldron or pipkin, flower pot, jar: rounded, -), PMRE (bowl), RBOR(bowl: rounded), SWSG (jug: rounded,), TGW (albarello, bowl: rounded: medium, plate, -),TGW BLUE (-), TGW C (chamber pot, -)	1720– 1780
5	Topsoil	S	9	2	3	3	49	1780	1900	FREC (jug: rounded), PMR (bowl or dish), TPW (-)	1830– 1910
6	Fill of [29]	S	6	1	29	26	384	1720	1780	BORDG (drinking jug: rounded, jar: rounded; squat, tripod pipkin), CBW (jug, -), CHPO (rounded mug), CHPO BW (-), CSTN (-), EBORD (drinking jug), FREC (rounded jug), PMBL (-), PMR (-), PMSRG (-), RAER (jug: rounded), SWSG (-), SWSL (-), TGW BLUE (storage jar, -), TGW C (-), WEST (-)	1720– 1760
7	Subsoil	S	9	2	1	1	50	1550	1700	BORDY (dish: rounded)	1550– 1700
10	Dog burial	S	8	1	2	2	7	1580	1700	GERST (-), PMBL (mug: rounded)	1580– 1700
11	Fill of [44]	S	5	1	26	13	295	1630	1690	CBW BIF, CHEA (-), ESHER (-), FREC (jug: rounded), LOND (jug), PMBL (mug: cylindrical), PMR (-), PMRE (-), TGW D (-)	1630– 1680
12	Demolition Spread	S	7	1	108	51	2374	1720	1780	BORDG (-), BORDO (-), BORDY, CBW FT, CHEA (jug), CHPO BW (bowl: rounded; shallow, plate), FREC (jug: rounded/Bartmannen), LONS (jug: rounded), MG (jug), MPUR (butterpot), PMR (bowl: flared; deep, two-handed, bowl or dish, flower pot, jar: rounded; tall,	Mid 18th c

Wt Context Context											
Context Description	Size	Phase	Trench	SC	ENV	(g)	ED	LD	Pottery types and forms	Spot date	
									pipkin), PMRE (bowl or dish), PMSR (bowl or dish), PMSRY (bowl or dish), RAER (jug: large rounded), RBOR (-), RBORB (-), SWSG (jug: rounded), TGW (plate), TGW A (albarello), TGW BLUE (bowl: rounded; medium, chamber pot, ointment pot), TGW C (porringer),, TGW D (charger, -), WEST (jug: rounded), WEST PURP (jug: rounded)		
13	Layer	S	3	2	1	1	23	1580	1900	PMR (flower pot)	C. 1640–1800
14	Fill of [26]	S	6	2	31	14	2022	1630	1846	BORDO (bowl: flared), BORDY (bowl or dish, chicken feeder, dish: rounded), MISC (bowl: flared), PMR (bowl: flared; deep, flower pot, jar: rounded; two-handled), RBORG (bowl), TGW C (ointment pot)	C. 1640–1700
15	Fill of [16]	S	6	2	5	3	171	0	0	FREC (jug: rounded), PMR (-)	1580–1700
21	Fill of [44]	S	4	1	89	20	2846	1480	1550	CBW (jug), CSTN (cup: necked, jug: rounded), EBORD (-), MISC (jug: barrel-shaped), PMRE (jar: rounded: medium, tall, -), PMSRY (bowl: carinated; two-handled, type 1), RAER (drinking jug: rounded), TGW (-)	1480–1550
22	VOID	S	VOID	VOID	2	2	30	1480	1600	PMRE (jar: rounded, medium)	1480–1600
23	Fill of [29]	S	4	1	24	17	867	1500	1580	CBW (-), CHEA (-), CSTN (cup: necked, jug), EBORD (drinking jug: rounded), EBORDY (-), KOLS (drinking jug: rounded), PMBL (-), PMRE (lid: conical), PMSRY (bowl or dish: carinated, two-handled), RAER (drinking jug: rounded), SHER (-)	1500–1550
25	Fill of [29]	S	4	1	3	1	4	1480	1600	CSTN (-)	1480–1600
31	Layer	S	6	1	5	4	226	1550	1700	FREC (Bartmannen), PMRE (jar), RBOR (jar: rounded; squat), TGW (-)	1550–1700
32	Primary fill of [44]	S	4	1	2	1	64	1480	1550	RAER (drinking jug: rounded)	1480–1550
33	Yard surface?	S	3	1	1	1	20	1480	1650	PMSRY (bowl or dish)	1480–1650

Context	Description	Size	Phase	Trench	SC	ENV	Wt Context Context			Pottery types and forms	Spot date
							(g)	ED	LD		
34	Fill of [42]	S	6	1	7	7	162	1590	1700	BORDG (tripod pipkin, type 2, -), BORDO (-) FREC (jug: rounded), PMR (bowl: medium; carinated), SPOA (amphora), WEST (jug)	1590– 1700

Table 3. FPL17: distribution of the pottery showing for each context what pottery occurs in it, a description of the deposit, the Trench location, phase, assemblage size, the number of sherds (SC: sherd count) and ENV, as well as the date range of the latest pottery type (Context ED; LD), the pottery types (and forms) and a suggested deposition date.

Phase 4: 1480–1550

Phase 4 produced a total of 118 sherds/39 ENV/ 3.781kg of pottery. The main period of activity according to the pottery spans the period c. 1480–1550. The main origin of the pottery is from the local coarse sandy redwares (17.8% SC/30.8% ENV/33.7% weight) and largely represented by PMRE (8 vessels), and a smaller quantity of the slipware PMSRY (4 ENV). The imported wares contribute the second largest quantity of pottery in this phase (9.3% SC/30.8% ENV/33.7% weight) and consist of mostly German stoneware and more specifically RAER drinking forms (7 ENV), besides a Cologne stoneware (KOLS) rounded drinking jug. A very small fragment of tin-glazed ware (context [21]) could not be assigned to a type, although if it is contemporaneous with the phase then it is likely to be from a Continental source. Non-local wares constitute 12.7% SC/15.4% ENV/2.6% weight of the pottery and this category consists entirely of Cistercian ware cups and jugs. The medieval and post-medieval Surrey-Hampshire border ware industry provided in total 8.4% SC/15.4% ENV/0.13% weight, although some of the medieval wares may be residual in this period. The post-medieval EBORD fabric provided sherds of drinking jugs.

It is interesting that, to a larger extent, the pottery in this phase fits the criteria for the material culture of Renaissance high-status households in this period (Gaimster 1999) in that German stonewares (RAER and KOLS), good quality redwares (CSTN) and to a lesser extent, whitewares (EBORD) are represented in the assemblage, while the presence of imported tin-glazed wares are hinted at, although the slipwares are only provided by the local coarse redware (PMSRY). This fits well with the site being the location of the residence of the Bishops of London.

The pottery was solely recovered from the fills of ditch [29/43/44] (see Table 3 for the specific pottery finds for each fill) and specifically in their stratigraphic sequence, fills [25] and [23] (ditch slot [29]), fills [32] and [31] (ditch slot [44]). The majority of these fills were given a deposition dated of c. 1480–1550 by the presence of EBORD and RAER, although fill [23] was dated c.

1500–50 by the presence of the KOLS rounded drinking jug and the almost intact example in RAER.

Phase 5: 1630–1680

This phase produced a total of 26 sherds/13 ENV, 295g of pottery and this was recovered from a single deposit: the tertiary fill [11] of ditch [43]. There is only a small quantity of contemporaneous pottery (21 sherds/9 ENV/227g), of which three vessels are from a coarse London area redware origin (PMR) and two vessels occur as imported Frechen stoneware. There is a single sherd of an Essex fine redware PMBL cylindrical mug and a sherd of a TGW D closed form dates the deposit to c. 1630–80.

Phase 6: 1680–1750

A total of 124 sherds/88 ENV, 3.914kg of pottery was recovered from this period, of which 11 sherds/11 ENV/133g are residual. The main source of the pottery continued to be the coarse London area redwares (i.e. PMR: 27.4% SC/31.6% ENV/57.9% weight), which occurred mostly in the form of bowls, jars and flower pots. The surrey-Hampshire border wares accounted for 26.5% SC/19.7% ENV/20.7% weight and mostly occurred as bowls or dishes, although the BORDG small rounded jar (context [6]) and the BORDY chicken feeder (context [14]) were more unusual finds. Imported wares (10.3% SC/19.7% ENV/9.4% weight) were the third most important source of the pottery and consisted of mostly German Frechen and Westerwald stoneware jugs, besides a small quantity of Chinese porcelain tea wares (3 ENV) and a sherd of a Spanish amphora. English/London delftware (14.2% SC/15.8% ENV/2.4% weight) were also another major origin of the pottery and occurred as pharmaceutical, sanitary and tableware forms.

Stratigraphically in sequence the pottery was mostly recovered in Trench 1 from layer [4/31], with a latest spot date of 1720–1780 for layer [4], as well as a final fill [6] of the Phase 3 ditch [33/35/40]: fill [6] has a spot date of c. 1720–1760. Truncating layer [4], pit [42] produced in its fill [34] pottery types that suggested a c.1590–1700 deposition date (see Table 3) and therefore indicates mostly residual pottery was present.

From Trench 2 there were two pits that produced pottery. The large pit [16] contained in its fill [15] only a small quantity of pottery (3 ENV) that suggested a c. 1580–1700 deposition date. The small pit [26] produced in its fill [14] pottery spot dated c. 1640–1700, dated by the presence of the flower pots with the other pottery types, which included the BORDY chicken feeder.

Phase 7: 1750–1760

There are a total of 251 sherds/135 ENV, 6.545kg of pottery noted in this phase, of which a sizeable quantity (78 sherds/61 ENV/1.233kg) was residual. Pottery was only recovered from a single deposit: a demolition spread [3/12] with deposition dates of 1850–1900 and the mid 18th century respectively for the different contexts. Intrusive late 19th-century pottery was probably present in layer [3] and when this is taken into account then a deposition date of c. 1720–60 seems more appropriate. The main origin of the pottery continued to be the local coarse red earthenware (PMR: 46.2% SC/33.8% ENV/66.6% weight), which occurred in the form of bowls and dishes, jars, pipkins and nine flower pots. Local tin-glazed wares account for 26.6% SC/24.3% ENV/10.8% weight and occur mostly as the plain blue and whitewares (TGW BLUE/C) and smaller quantities of decorative wares (TGW/H) and are found as similar quantities of pharmaceutical, sanitary and table wares. English stonewares are also an important part of the assemblage and occur as 11.6% SC/16.2% ENV/7.9% weight. These occur mostly as SWSG table and tea wares and sherds of LONS jugs and a tankard. Imported wares (8.7% SC/13.6% ENV/8.4% weight) are less frequent than previously and consist of mainly Chinese porcelain (CHPO BW) table and tea wares (7 ENV) and Westerwald stoneware (WEST/PURP) rounded jug sherds. These Chinese and German stonewares are typically the main imports recorded in 18th-century London assemblages, however the French Prussian blue tin-glazed ware jar (layer [3]) is an unusual find. The full range of fabrics and forms recovered from layer [3/12] is shown in Table 3).

Phase 8: 19th Century

Recovered from this phase were two sherds of pottery representing the same number of vessels and weighing 7g and was associated with the dog burial [10], grave cut [9]. The two sherds of pottery appear to be residual for this period and consist of a rim sherd of an Essex-type post-medieval black-glazed redware (PMBL) rounded mug and a sherd of generic German stone (GERST).

Phase 9: Modern

A small quantity of pottery was recovered from this phase and recorded as 11 sherds/9ENV/494g and this was found in four deposits: top soils [1] (Trench 1) and [5] (Trench 2) and sub soil layers [2] (Trench 1) and [7] (Trench 2). Conceivably all of the pottery in this phase was residual and the latest pottery type was a small sherd of Transfer-printed ware (TPW) with the Asiatic pheasant design, dated c. 1830–1910 and recovered from layer [5].

SIGNIFICANCE OF THE ASSEMBLAGE

The pottery has significance at a local level as it demonstrates activity associated with a high status site: The Bishop's Palace. The range of pottery-types in the assemblage is on the whole in keeping with the ceramic profile for the London area.

Medieval

The medieval pottery is of little significance as it is in a fragmentary state and consists of mostly residual finds. Better groups of medieval pottery have been recorded from previous archaeological excavations at Fulham Palace (e.g. Jarrett 2014).

Post-medieval

The fills of the Phase 4 ditch [29/43/44] are interesting for containing pottery demonstrating that the residents of the Palace were largely embracing the material culture for the types of ceramics associated with the Renaissance in North West Europe (Gaimster 1999), i.e. they were buying good quality drinking forms in the mediums of Continental stonewares and English red and white earthenwares. This evidence is further supported by the finds from earlier excavations at the Palace, which includes other high status ceramics of this date, such as late 15th-early 16th-century Central Italian tin-glazed ware (Jarrett 2014). The find of the non-local barrel-shaped jug (fill [21] of the ditch), possibly from a Huntingdon or Northamptonshire/South Midlands source and may represent an item transported during the early 16th century between estates to the north of London owned by the Bishop of London to the Palace. The later post-medieval pottery recovered from Phases 6 and 7 are important for demonstrating different activities within the Palace or its environs. These include kitchen wares, in the form of bowls and dishes and pipkins, made in both the coarse London area redware and Surrey-Hampshire border wares, as well as fashionable table wares made in 18th-century Chinese porcelain and white salt-glazed stoneware. Three items are of interest in their own right. First is the border ware chicken feeder (context [14]), which indicates that poultry was kept at the palace to provide the household with eggs and meat, Second, the French tin-glazed large jar, probably from Nevers (layer [3]), may have been a horticultural container used in the gardens at the palace. Third, there is a small sherd of pottery from context [4] that may represent an experimental porcelain made at the nearby Fulham Pottery and this item dates to the late 17th-early 18th century.

POTENTIAL

The pottery has the potential to demonstrate temporally the changes in both the ceramic profile and the activities on the site and relate this to the socio-economic status of its various end users, which include servants and the Bishops in residence and their families and guests. The

pottery is also a useful dating tool for the features and deposits in which it was found and to provide a sequence for them. A number of vessels merit illustration or photographing. Other comparable local medieval and post-medieval pottery assemblages exist, particularly from the walled garden area of Fulham Palace (Jarrett 2012), besides at 31-35 Fulham High Street (Blackmore 2003), 84–90b Fulham High Street (Sudds 2018) and Fulham Island (Jarrett in prep).

RECOMMENDATIONS FOR FURTHER WORK

A pottery report is required for the publication of the site. Two vessels require illustrating and three vessels need photographing to supplement the text. The unidentified fabrics (the barrel-shaped jug, the Prussian blue tin-glazed jar and the sherd of experimental porcelain) require further research in order to determine their sources.

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APPENDIX 3 - ASSESMENT OF THE CLAY TOBACCO PIPES (FPL17)

Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes was recovered from the site (one box). The material is generally not abraded, in a fairly good condition, although fragmentary material is present. However, there is a high level of residuality in the assemblage (66.6% of the bowls), which indicates that the clay tobacco pipes were deposited under secondary, but mostly tertiary conditions and this may be partially resultant from horticultural activities occurring in a landscaped area. Clay tobacco pipes occur in 14 contexts as mostly small (under 30 fragments) sized groups, except for one each of a medium (30–100 fragments) and a large (over 100 fragments) sized groups.

All the clay tobacco pipes (214 fragments, of which eleven were unstratified) were recorded in a database format and classified by Atkinson and Oswald's (1969) typology (AO) and 18th-century examples are according to Oswald's (1975) typology and prefixed OS. A small number of the bowls have been reclassified according to Higgins (2016). The Bristol-shaped bowl has been classified according to Jarrett (2013). The material was catalogued according to Higgins (2017) and the pipes were coded by decoration and quantified by fragment count. The quality of finish, including the level of burnishing and the degree of milling of the rims (recorded in quarters) has been noted on 17th-century types. The tobacco pipes are discussed by their types and distribution.

THE CLAY TOBACCO PIPE TYPES

The clay tobacco pipe assemblage from the site consists of 84 bowls, 302 stems and five mouth pieces. The clay tobacco pipe bowl types have a date range of c. 1610–1780. The index for the milling of the 17th-century bowl rims is shown in Table 1. Generally, these bowls have more incidences of no milling on the rim and only one example an AO10 bowl has full milling of the rim. However, many of the bowls have damaged rims, and show evidence of milling, although it was not possible to determine the extent of this procedure. The quality of the burnishing and finishing for the entire bowl types are shown in Table 2, which demonstrates that the bowls had mostly a good or fine/excellent level of finish and indicates that mostly good quality bowls were smoked on this high status site. All of the c. 1610–1710 dated bowls are moulded and have a bottered rim finish (made rounded and symmetrical with a circular groove on a flat face of a button-like tool) and the 18th-century bowls have cut rims and indicate that they were made in a gin press. All of the bowls have been smoked.

Bowl type	Date range	Damaged bowls	None	Quarter	Half	Three quarters	Full	Total
AO6	1610–1640	2						2

Bowl type	Date range	Damaged bowls	None	Quarter	Half	Three quarters	Full	Total
AO7	1610–1640	1						1
AO10	1640–1660	1					1	2
AO13	1660–1680	1						1
AO15	1660–1680	2						2
AO18T	1660–1680	1						1
AO20S	1660–1680		1					1
BRST8	c. 1650–1690	1						1
AO20	1680–1710	1	5					6
AO21	1680–1710	7	2					9
AO22	1680–1710	1	4					5
AO26	1700–1740	2						2
OS10	1730–1800	23						23
OS12	1730–1780	2						2
OS22	1730–1780	1						1

Table 1. FPL17: index of milling on 17th-century bowl types

Bowl form	Date range	Not		Fine/		Total
		determined	Average	Good	excellent	
AO6	1610–1640			2		2
AO7	1610–1640				1	1
AO10	1640–1660				2	2
AO13	1660–1680		1			1
AO15	1660–1680			1	1	2
AO18T	1660–1680			1		1
AO20S	1660–1680			1		1
BRST8	c. 1650–1690			1		1
AO20	1680–1710			6		6
AO21	1680–1710		2	7		9
AO22	1680–1710		1	4		5
OS10	1700–1740		4	18	1	23
AO26	1730–1800			2		2
OS12	1730–1780			2		2
OS22	1730–1780			1		1

Table 2. FPL17: index of burnishing and finish on the bowl types

1610–1640

AO6: two rounded, spurred bowls, both found in context [2]. One example survives mostly as the spur and the other example has a damaged rim, but probably was fully milled.

AO7: one heeled bowl with a rounded profile and the rim is missing (context [12]).

1640–1660

AO9: one rounded, spurred bowl, context [201].

AO10: two heeled rounded bowls. One example is a humped back variant and the rim is distorted and has a fine burnish (context [12]). The second bowl has an excellent burnish, although the rim is partially missing, although there is evidence for milling. On the underside of the heel is an *Angus Dei* stamp in relief (context [3], SF 86). The stamp (partially broken) has been recorded in London previously (1-19 Poultry, 2-38 Queen Victoria Street, 3-9, 35-40 Bucklersbury, Pancras Lane, Sise Lane, EC2, EC4, Site Code : ONE94) and has been given the Museum of London Archaeology clay tobacco pipe stamp die number 100116 (http://webarchive.nationalarchives.gov.uk/20090419222415/http://www.museumoflondon.org.uk/claypipes/pages/pipe.asp?sitecode=ONE94&context=16004&acc_no=6383&form=AO10). However, the stamp may represent a non-local pipe.

1650–1690

BRST8: one heeled bowl with a rounded back and the front has an overhang (chinned) profile. The bowl may be a more extreme AO13 shape and from a local source (Westminster area/West London production). The bowl was found in deposit [3].

1660–1680

AO13: one heeled bowl with a rounded profile. Most of the bowl and the entire rim are missing (context [12]).

AO15: two spurred bowls with rounded profiles and both were found in context [3]. Both of the bowls are damaged, although one shows evidence for being milled and can be considered as a variant shape as the spur is located more so on the stem rather than at the base of the bowl. The second bowl survives mostly as the stem and spur, although it is interesting for having reading across the stem an incuse stamp 'RICH/ARD.S/..EH' (SF 87). This represents a non-local pipe.

AO18T: one tall heeled bowl with an angled straight sided profile (context [3])

AO20S: one heeled bowl with a rounded front and humped back profile and a smaller version of the later AO20 shape. The stem is more angled than the norm and the heel occurs more so on the stem than at the base of the bowl, context [3].

1680–1710

AO20: six tall heeled bowls with rounded profiles. A single example is unstratified and five bowls were recovered from context [3].

AO21: nine tall heeled angled bowls with a straight back and rounded front. One example is each unstratified or found in contexts [14] and [265], while seven examples were found in deposit [3] and are in various states of completeness, of which three items have splayed heels and two of these have additionally a variant humped back profile.

AO22: four tall heeled bowls with straight sides. Single bowls occurred in contexts [5] and [34], while two bowls were noted in deposit [3], one of which has a noticeably angled stem.

1700–1740

OS10: eighteen heeled tall upright bowls with a straight back and rounded front and thick stems. The majority of the bowls are in a damaged state. Single examples occurred in deposits [1], [7] and [34], two examples were noted in context [31] and three bowls of this type were noted in contexts [4] and [12], while twelve examples came from context [3] and two of these have the appearance of being subjected to a high temperature. Unusually, only one of the OS10 bowls is maker marked:

?I R: the first initial is illegible and the bowl is in a fragmentary state (context [4], SF 117).

1730–1780

OS12: two heeled tall upright bowls with a straight back and rounded front and thin stems and both examples occurred in context [3].

OS22: one spurred bowl with a straight back and slightly angular front and the item was found in context [3] and it is maker marked on the sides of the spur:

? H: the first initial is either absent or totally illegible (SF 88)

1730–1800

AO26: two damaged spurred bowls which cannot be assigned to either the 18th-century OS22 or OS23 types. Both bowls were found in context [3] and show evidence for being in a high-temperature fire that resulted in the bowls developing a self glaze and were subsequently covered in a mortar type deposit.

Fragmentary bowls

There are 25 fragmentary bowls that could not be confidently assigned to a type, although some fragments are broadly datable. From context [3] there were 17 fragmentary bowls, which include a c. 1610–40 dated type with the heel or spur missing; four other 17th-century bowls are represented by heels or spurs. One of these appears to be a non-local pipe surviving as a heart-shaped heel and stem with a wide bore. The item was not made using ball clay (which

seems to be the usual clay used in London for tobacco pipe manufacture), but made from a dull yellow fabric containing very fine sands and fine white inclusions, besides very sparse grey linear inclusions. Singular fragmentary bowls of a c. 1680–1710 date were noted in contexts [4] and [5], while at least two examples were of an 18th century date that occurred in context [3].

Mouth parts and stems

Five mouth parts recorded in the assemblage all appear to be of a 17th century date as they have medium and wide bores. One example was cut at a slight angle (context [3]) and the rest have slightly bevelled finishes (unstratified, context [11] and from deposit [12] there are two examples). The stems were dated broadly according to their thickness and more appositely the size of the bores, which start off as wide in the 17th century and are fine from the start of the 18th century. A small number of stems found in context [3] showed evidence for being burnt. A decorated stem, with a medium sized bore, is of merit a stem and has incuse roller stamping around the circumference. The design survives as five lines of vertical notches and a thin band of diamonds and notches (context [3], SF 89). The item requires further research as to its source and could come from Bristol or Rainford, Lancashire.

DISTRIBUTION

Table 3 shows the distribution of the clay tobacco pipes and for each context these finds occur in is shown a description of the deposit type, the trench location, the size of the group, the number of fragments, the date range of the latest bowl type (context ED and LD), the types of bowls present, together with a spot date for each context. The clay tobacco pipes were recovered from Phase 5–7 and 9 dated contexts.

Context	Interpretation	Trench		Size	No. of frags	Context		Bowl types, etc	Spot date
		No.	Phase			ED	LD		
0					11			x2 bowls (x1 AO20, x1 AO21); x1 mouthpart; x8 stems	
1	Topsoil	1	9	S	2	1700	1740	x1 bowl (OS10); x1 stem	1700–1740
2	Subsoil	1	9	S	3	1610	1640	x2 bowls (AO6); x1 stem	1610–1640
3	Demolition Spread	1	7	L	259	1730	1780	x54 bowls (x1 AO10, SF86, x2 AO15, SF 87, x1 AO18T, x1 AO20S, x1 BRST8, x5 AO20, x7 AO 21, x2 AO22, x12 OS10, x2 OS12, x2 AO26, x1 OS22, H, SF 88, x17 unidentified); x1 mouthpart; x204 stems (SF 89)	1730–1780
4	Layer	1	6	M	43	1700	1740	x8 bowls (x3 OS10: x1 ?I R, SF117, x5 unidentified); x34 stems	1700–1740
5	Topsoil	2	9	S	6	1680	1710	x4 bowls (x2unidentified, x2 AO22); x2 stems	1680–1710
6	Fill of [29]	1	6	S	9	1580	1910	x9 stems	1580–1700

Context	Interpretation	Trench			No. of frags	Context		Context	Bowl types, etc	Spot date
		No.	Phase	Size		ED	LD			
7	Subsoil	2	9	S	2	1700	1740	x1 bowl (OS10), x1 stem	1700–1740	
11	Fill of [44]	1	5	S	6	1580	1910	x1 mouthpart, x5 stems	1580–1700	
12	Demolition Spread	1	7	M	32	1700	1740	x7 bowls (x1 AO7, x1 AO10, x1 AO13, x3 OS10, x1 unidentified); x2 mouthparts; x23 stems	1700–1740	
14	Fill of [26]	2	6	S	1	1680	1710	x1 bowl (AO21)	1680–1710	
15	Fill of [16]	2	6	S	5	1580	1910	x5 stems	1580–1700	
21	Fill of [44]	1	4	S	1	1580	1910	x1 stem	1730–1910	
31	Layer	1	6	S	5	1700	1740	x2 bowls (OS10); x3 stems	1700–1740	
34	Fill of [42]	1	6	S	6	1700	1740	x2 bowls (x1 AO22, x1 OS10); x4 stems	1700–1740	

Table 3. FPL17. Distribution of clay tobacco pipes

Phase 4: 1480–1550

Fill [21] of the ditch [44] produced an intrusive thin clay tobacco pipe stem with a fine bore dating to after c. 1730.

Phase 5: 1630–1680

Layer [11] produced only five stems and a mouth piece dated c. 1580–1700.

Phase 6: 1680–1750

The phase produced a total of 69 fragments of clay tobacco pipes (consisting of 13 bowls and 56 stems) and these were recovered from six contexts. In Trench [1], layer [4/31] produced only six 1700–1740 dated OS10 bowls, one of which was maker marked: ?I R, context [4], SF 117. Truncating that deposit, fill [34], pit [42], produced single examples of AO22 and OS10 bowls, the latter dating the context. Layer [6] produced only six stems, dated c. 1580–1700. In Trench 2, fill [14] of the small shallow pit [26], produced only an AO21 bowl, dated 1680–1710, while fill [15], large pit [16], only contained five stems which are broadly dated c. 1580–1700.

Phase 7: 1750–1760

A total of 291 fragments of clay tobacco pipes, consisting of 61 bowls, three mouth pieces and 227 stems were noted in this phase and these were recovered from a single deposit, the demolition spread [3/12], the majority of which came from context [3]. The demolition layer produced bowl shapes with a wide date range (see Table 3), of which the 17th- and early 18th-century bowl shapes are residual, although they include important finds such as the AO15 bowl with the *Angus Dei* stamp on the underside of the heel (SF 89), the non-local AO15 bowl stamped on the stem 'RICH/ARD.S/..EH' (SF 87) and the rouletted stem (SF 89). Only one of

the 18th-century bowls is maker marked, and the latest types are two heeled OS12 bowls, two spurred AO26 and one OS22 bowl (marked on the heel H: SF 88), all three types being dated c. 1730–80. A small number of the bowls (four examples, as well as three stems) from context [3] show evidence for being subjected to a high temperature, whilst two of these bowls additionally have a subsequent mortar deposit.

Phase 9: Modern

The deposits (top soil [1] and [5]) and sub-soils [5] and [7]) produced a total of thirteen fragments of clay tobacco pipes, consisting of eight bowls and five stems. All of the stems and the bowls are residual (see Table 3).

Significance of the collection

Despite the assemblage containing a large quantity of residual material, the assemblage is of significance. The bowl forms present on the whole are typical for the London area, although there are a small number of items from context [3] that indicate non-local products are represented in the assemblage: the heart-shaped heeled bowl made in a sandy yellow clay, the example stamped on the stem 'RICH/ARD.S/..EH' (SF 87) and the chinned bowl that has the appearance of being a Bristol or West Country shape, besides the stem with roller stamping (SF 89). The AO10 bowl stamped on the underside of the heel an *Angus Dei* mark (context [3], SF 86) may also represent another non-local bowl. These items may have been the property of visitors to the Palace and indicate where they travelled from.

On the whole the clay tobacco pipes are of a good quality, although it is unusual that for amongst the large quantity of 18th-century bowls recorded in the assemblage, very few are maker marked and those that are do not have a full complement of initials. This would allow for probable individual pipe makers to be identified and assigned to the pipes. Comparable assemblages from nearby archaeological excavations consist of those from Fulham Island (site code: VAC01; Jarrett 2003), Fulham Palace (e.g. FLB03: Jarrett 2014), Fulham Pottery (Pearcey 1999) and 84-90b Fulham High Street (FHS15: Jarrett 2018).

Potential

The clay tobacco pipes have the potential to date the contexts in which they were found. The non-local pipes are a good indication that visitors from outside of London or travellers were visiting Fulham Palace in the 17th and 18th century. A number of pipes would merit illustration, particularly those of non-local production and are a contrast to the normal London area products.

Recommendations for further work

It is recommended that a publication report is written on the clay tobacco pipe assemblage. Further research should be undertaken on the non-local finds in order to establish their source. It is recommended that four items are illustrated to supplement the text.

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APPENDIX 4 - GLASS ASSESSMENT (FPL17)

Chris Jarrett

Introduction

A small sized assemblage of glass was recovered from the site (two boxes). The glass dates to the medieval and post-medieval periods. None of the fragments show evidence for abrasion, while the material is generally fragmentary, although three, almost four items are intact. The assemblage was therefore subjected to both secondary and tertiary depositional processes. Natural weathering resulting from the burial conditions was noted upon several vessels. The glass was quantified by the number of fragments, estimated number of vessels (ENV) and weight. The assemblage was recovered from 12 contexts as only small sized (fewer than 30 fragments) groups, except for one medium (30–100 fragments) sized group.

All of the glass (150 fragments, 57 ENV, 5.334kg, of which one fragments/1 ENV/10g is unstratified) was recorded in a database format, by type, colour, form and manufacturing technique. The assemblage is discussed by functions, vessel shapes by period and its distribution.

The forms

The composition of the glass assemblage forms, by period, is as follows:

Medieval/early post-medieval

Vessel glass: 4 fragments, 4 ENV, 15g

Window pane: 5 fragments, 3 ENV, 5g

Window quarry: 1 fragment, 1 ENV, 2g

Total: 10 fragments, 8 ENV, 22g

Architecture

Heavily weathered fragments of window glass, often with a crystalline core were noted in deposit [21]. A window quarry, possibly originally octagonal in shape, occurs as a corner with nibbled edges and the surfaces are blackened (context [5]).

Unknown function (vessel glass)

The vessel glass contains the shoulder of a possible bottle in a heavily weathered state (context [21]), otherwise non-diagnostic small fragments of vessel glass, recorded in various states of decay, also occurred in contexts [4] and [21].

Post-medieval

Bottle: 1 fragment, 1 ENV, 2g

Bottle, cylindrical squat: 1 fragment, 1 ENV, 74g

?Bowl: 1 fragment, 1 ENV, 17g

?Cloche: 1 fragment, 1 ENV, 8g

English wine bottle: 81 fragments, 9 ENV, 1.733kg

English wine bottle, cylindrical-type: 2 fragments, 2 ENV, 625g

English wine bottle, mallet-type: 8 fragments, 3 ENV, 871g

English wine bottle, onion-type: 8 fragments, 3 ENV, 212kg

French wine bottle, cylindrical, late: 1 fragment, 1 ENV, 726g

Phial: 3 fragments, 3 ENV, 35g

Phial, cylindrical: 8 fragments, 8 ENV, 12g

Phial, globular: 1 fragment, 1 ENV, 12g

Unknown: 1 fragment, 1 ENV, 10g

Vessel glass: 8 fragments, 8 ENV, 17g

Window pane: 10 fragments, 9 ENV, 29g

Window quarry, diamond: 2 fragment, 1 ENV, 192g

Vessel glass: 1 fragment, 1 ENV, 3g

Total: 138 fragments, 47 ENV, 4582g

Alcohol consumption

Goblet/wine glass

The only wine glass in the assemblage was made in a clear lead glass with a high soda content. It survives as the base of a funnel-shaped bowl with a short cylindrical base attached to an inverted baluster type stem, with an inverted hollow tear drop within the knop, while the foot is folded under and hollow. The vessel is slightly weathered. The wine glass is dated c. 1740 (Bickerton 2000, 8, below right) and was found in context [3].

Alcohol storage

English wine bottles

All of the fragments of wine bottles that could not be confidently assigned to a specific type occurred in context [3]. These vessels were invariably made in olive green soda glass and where the rims survived (five examples), then the string finishes were all dated c. 1680–90 (Dumbrell 1993, 38). These rims probably belonged to onion-type wine bottles. There are three bases recorded and these may have belonged to the onion- type or possibly the earlier c. 1640–80 dated shaft and globe wine bottle type.

English wine bottle, onion-type, c. 1680–1730

Two amber coloured natural glass examples of this wine bottle type were recorded in deposit [12] and survive as wall sherds. Additionally, an olive green soda glass example was noted in deposit [14] and has a string-rim finish dated c. 1680–1700.

English wine bottle, mallet-type, c. 1725–60

The three vessels of this type were all made in olive green soda glass and survive as cylindrical wall and base fragments. Two examples were noted in context [3] and a single vessel was found in deposit [12].

English wine bottle, cylindrical, late type, c. 1810–1900

This moulded form occurs in dark green high-lime low alkali (HLLA) glass. A base with a deep rounded kick was noted in deposit [4], while an intact item was found in deposit [2] and has a squared rim with a bevelled collar below, a cigar-shaped neck, rounded shoulder and a slightly concave base, which is embossed with the glass makers initials and other letters and numbers: 'C B C/3/C25. The latter wine bottle almost certainly dates to the 20th century.

French wine bottle, cylindrical

The single vessel of this type was found in context [2] and is an intact, moulded item, made in dark olive green HLLA glass. It has a bevelled rim top with below this a narrow, flat, squared collar. The neck is cylindrical, the shoulder rounded and the base is deeply kicked on the underside. A degraded silver foiled paper label survives on the rim. The vessel is of a 20th century date.

Architecture

Window pane fragments

Much of the window glass appears to be thin walled and cylinder made in clear soda glass, dates to the 18th-19th century and occurred in contexts [3], [5] and [12]. A fragment of clear late 19th-20th century dated plate glass was found in deposit [5], while a fragment of machine made 20th-century glass with a moulded design, featuring geometrical, wavy line polygonal shapes, was noted in deposit [4]).

?Diamond window quarries

Nine thin walled fragments with possible apexes and weathered surfaces and in a very fragmentary state, were noted in context [4].

Horticulture

?Cloche

The rim or base of a possible cloche made in green-tinted soda glass was noted in deposit [5].

Liquid storage

Bottle

The neck and rounded shoulder of a free-blown bottle made in clear soda glass and with weathered surfaces was noted in deposit [22] and is probably of an early post-medieval date.

Bottle, cylindrical, squat

The single item (SF 25) of this bottle type was mould made in clear soda glass and is almost intact, except for a missing part of the rim and neck. The rim has a continuous external thread rim finish, a short conical neck, a rounded shoulder, a cylindrical body and a recessed base underside. The bottle dates from c. 1890-early 20th century and was found in context [1].

Multi-functional

?Bowl

A possible bowl survives as a rounded wall/base carination and a straight-sided wall and the vessel has white weathered surfaces. The vessel possibly dates to the 18th century and was noted in deposit [12].

Pharmaceutical

Phials

The bases of three, free-blown phials, made in blue-green soda glass, were noted in context [3]. Two of the bases have a rounded kick, while the third has a conical kick. The phial fragments are broadly dated to the mid 17th-18th century.

Globular phial

The only example of this phial type was made in blue-green soda glass and survives with a wide, everted prescription-type rim, a short cylindrical neck and a round shoulder and was dated to the mid 17th-18th century. It was recovered from context [14].

Unknown function

Vessel glass

This category consists of mostly small glass fragments, sometimes collected from environmental samples, which could not be confidently assigned to a vessel shape. Three fragments of natural glass are recorded and all are probably of an early post-medieval date. These consist of an amber coloured curving, thick walled (4mm) fragment with discoloured surfaces (context [5]), a clear glass fragment (deposit [15]) and a basal fragment with a concave underside (context [23]). The majority of the post-medieval vessel glass fragments occur in clear soda glass, unless otherwise stated. Free-blown shards occurred in deposits [3] (found as a blue-green tinted possible phial wall fragment), [5] and [25]. A 19th-20th century dated shoulder fragment from a possible bottle, has a mould seam (context [23]). Finally, the only example of HLLA vessel glass occurs as a small green-tinted fragment, which was possibly from a phial and was noted in deposit [5].

Undated

Vessel glass: 1 fragments, 1 ENV, 4g

A curved wall fragment made in clear soda glass and found in deposit [12] was undated.

Distribution

The distribution of the glass is shown in Table 1. Glass was only recovered from deposits dated to Phase 4, 6–7 and 9. For each context containing glass, then the number of fragments, estimated number of vessels, weight, the forms and a spot date is shown. A brief discussion of the more interesting groups of glassware by phase is provided.

Phase 4: 1480–1550

The phase produced 11 fragments of glass representing 9 vessels and weighed 24 grams and this was recovered from three of the fills of ditch [33/35/40]. The material was in a very fragmentary state, and owing to its age and the fact that it was made in mostly natural glass, was in a poor condition. Only vessel and window glass could be identified and included the neck and shoulder of a possible bottle (fill [21]).

Phase 6: 1680–1750

Sixteen fragments of glass, representing 9 vessels and weighing 201g was found in three deposits dated to this phase. The largest quantity of glass came from layer [4], Trench 1 and this consisted of mostly vessel glass and window glass (see Table 1), one of which was a fragment of machine made 20th century patterned glass. A moulded, late cylindrical wine bottle was also present that dated to after c. 1810.

Context	Interpretation	Phase no	Trench	No. of frags	ENV (g)	Weight	Forms	Date
0				1	1	10	Post-medieval: unidentified	
1	Topsoil	9	1	1	1	74	Post-medieval: bottle (squat cylindrical; SF 25)	C. 1890-early 20th century
2	Subsoil	9	1	2	2	1293	post-medieval: English wine bottle (late cylindrical), French wine bottle (late cylindrical)	Late 19th-20th century
3	Demolition Spread	7	1	95	17	2835	Post-medieval: English wine bottle (mallet-type), phial, vessel glass, window pane, wine glass (SF 24)	Mid 18th century

Context	Interpretation	Trench	No. of	Weight		Forms	Date	
		Phase no	frags	ENV	(g)			
4	Layer	6	1	12	5	85	Medieval/post-medieval: vessel glass, post-medieval: English wine bottle (late cylindrical), window pane, diamond window quarry	1810+
5	Topsoil	9	2	10	9	31	Medieval/post-medieval: window quarry, Post-medieval: cloche, English wine bottle, vessel glass, window pane	Late 19th-20th century
12	Demolition Spread	7	1	12	7	138	Post-medieval: ?bowl, English wine bottle (mallet-type and onion types), window pane undated: vessel glass	c. 1725–1760
14	Fill of [26]	6	2	2	2	110	Post-medieval: English wine bottle (onion-type), phial (globular)	C. 1680–1700
15	Fill of [16]	6	2	2	2	6	Post-medieval: vessel glass, window pane	Late medieval to early post-medieval
21	Fill of [44]	4	1	5	4	16	medieval/post-medieval: vessel glass, window pane	Medieval to early post-medieval
22	Void	-	-	1	1	2	Post-medieval: bottle	Late medieval to early post-medieval
23	Fill of [29]	4	1	2	2	6	Post-medieval, vessel glass	Mid 19th-20th century
25	Fill of [29]	4	1	4	3	2	Medieval/post-medieval: vessel glass, window pane post-medieval: vessel glass	Medieval to early post-medieval

Table 1. FPL17: Distribution of the glass showing for each context that it occurs in the feature (fill of cut), the phase, number of fragments (No. frags), estimated number of vessels (ENV), weight (Wt (g)), the forms and a spot date for the context based upon the dating of the glass

From Trench 2, fill [14] of the small shallow pit [26] produced fragments of an onion-type wine bottle, dated, c. 1680–1730 and the rim and shoulder of a mid 17th-18th century dated globular phial. The large pit [16] contained in its fill [15] only shards of vessel glass and window glass of a late medieval, possibly early post-medieval date.

Phase 7: 1750–1760

The phase produced the largest quantity of glass in the assemblage: 107 fragments, representing 24 vessels and weighing 2.973kg and this was recovered solely from the demolition layer [3/12]. The majority of the glass consists of fragmentary wine bottles, which include diagnostic fragments of two c. 1680–1730 dated onion-type and three c. 1725–60 dated mallet-type shapes. There are also present three phial bases and fragments of vessel and

widow glass. The latest datable item was a wine glass (SF 24) with an inverted baluster stem dated c. 1740.

Phase 9: Modern

Thirteen fragments of glass, representing 12 vessels and weighing 1.398kg were recorded for this phase and this was found in three contexts. In Trench 1, the sub-soil [2] contained only the intact English and French wine bottles, which are probably of a 20th century date. Sealing the latter, top soil [5] produced the small squat bottle with an external screw thread (SF 25) that dates to after c. 1890.

In Trench 2, the topsoil [5] produced small quantities of residual vessel and window glass, including a diamond quarry, besides the possible cloche and a wine bottle. The latest material was a fragment of plate glass dated to the late 19th-20th century.

SIGNIFICANCE, POTENTIAL AND RECOMMENDATIONS FOR FURTHER WORK

This glass assemblage dates to the late medieval, early and later post-medieval periods and is generally of little significance as the material is on the whole fragmentary and the intact items are 20th century in date. Window glass and a small quantity of vessel glass dates to the late medieval and early post-medieval periods, although it is in a very fragmentary state and difficult to relate to the architecture of the Palace and the activities associated with it. The occurrence of late medieval and early post-medieval dated glass Fulham Palace fits with what would be expected at a high-socio economic status site: glass of this date on low-status sites are extremely rare finds. The later post-medieval glass is also generally in a fragmentary state, although the vessel forms were more readily identifiable and were mainly concerned with alcohol consumption (particularly the Phase 7 dated deposits, which also produced the wine glass: SF 24). Other comparable and more informative assemblages of glass have been recovered from previous excavations at Fulham Palace (e.g. Jarrett 2014).

POTENTIAL

The potential of the glass is to broadly date the context it was recovered from. It also has the potential to inform upon the activities associated with the Palace and one item merits illustration.

RECCOMENDATIONS FOR FURTHER WORK

It is recommended that a short publication text is prepared on the glass and that this should be supplemented with one illustration (the wine glass, SF 24).

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APPENDIX 5 – ASSESSMENT OF THE ANIMAL BONE (FPL17)

Kevin Rielly

Introduction

The excavation was divided into two large open areas (Trenches 1 and 2) located in the south-east corner of the paddock area just west of the present Palace buildings. These trenches revealed evidence for Prehistoric (Phase 2) activity followed by a lengthy occupation sequence starting in the medieval era (Phase 3) and extending to the Present time (Phase 9). Animal bones were found in deposits traversing this entire sequence, these principally excavated by hand augmented by substantial collections retrieved by bulk sampling. Notably, there were a rather limited number of features but these tended to be bone rich with a single potentially Bronze Age cremation followed some centuries later by particularly large concentrations taken from a single ditch [43], with fills dating from the 16th through to the 18th centuries. This was followed by smaller though significant collections dating from the latter part of the 18th into the 19th century.

The post-medieval collections, both hand collected and sieved, provided notable quantities of fish bones. They were identified by Philip Armitage who also provided comments regarding the exploitation and ecology of this valuable food resource.

Methodology

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. The sample collections were washed through a modified Siraf tank using a 1mm mesh and the subsequent residues were air dried and sorted.

It would be worth mentioning the method used to retrieve bones and other finds during this excavation. While it is often the way that smaller bones are lost during hand collection, these represented principally amongst the sieved assemblages, the faunal material from this site included notable quantities of bird, fish and small mammal bones within both the hand collected and sieved assemblages. This was achieved within the former collections by shovelling all the spoil from particular deposits first into a barrow to be picked over by volunteers before being eventually dumped on the spoil tip. This method could be recommended for other sites, although it is more likely to be limited to other community digs which are not subject to the time and money constraints prevalent in commercial archaeology.

Description of faunal assemblage

The site provided a total of 3,736 bones by hand collection and 1007 from the 4 bulk samples. All of the bones recovered were in a good state of preservation with the various context collections demonstrating a moderate to low level of fragmentation. The quality of the dating evidence is good, allowing for the application of a series of phases (see Table 1), as will be described below. It should be noted that the sieved collections were limited to Phases 2 and 4. While there was undoubtedly an exemplary approach/procedure regarding hand recovery (see Methodology), the absence of sieved later deposits will nevertheless have a deleterious effect concerning the abundance of the smaller vertebrates and in particular fish.

A proportion of the bird bones are yet to be identified. These have not been included in the overall numbers or indeed in any of the tables. They clearly include a selection of raptors as well as a variety of undoubtedly game species (ducks, waders and small song birds), principally derived from the Phase 4 ditchfills.

Prehistoric (Phase 2)

This collection is entirely taken from pit [38] in Trench 2 (Table 1). The sieved contents of this feature comprise a concentration of cattle-sized fragments (Table 2), mainly limb bone pieces, the great majority calcined and the remainder burnt black. There was a single identifiable piece, part of the head (caput) of an equid femur, this also burnt (partially calcined). It can be conjectured that all of the bones are in fact equid, no doubt belonging to at least one limb bone from the same individual. The calcined nature of the bone fragments suggests they were burnt for some considerable duration at a high temperature, clearly indicative of a cremation and most probably 'ritual' in character.

Medieval (Phase 3)

Deposits dating to this period include the remains of an external yard (33) in Trench 1 and a relatively widespread deposit (13) covering the prehistoric pits in Trench 2. Neither of these two deposits provided many bones and it is notable that these appear to be less well preserved compared to the later collections. This evidence could coincide with the evidence for residuality shown by the pottery and clay pipe data. Most of the bones were identified as cattle, the dominance of this species also demonstrated by the good proportion of cattle-size fragments. Of interest is the presence of fallow deer, a tibia and metatarsus from (13) and another tibia from (33). These are clear high status indicators and no doubt derive from one or more deer parks set up and managed by the Fulham Palace estate.

Late medieval/early post-medieval, 1480 to 1550 (Phase 4)

A large quantity of animal bones was retrieved, both by hand recovery and sieving, from the earlier fills within ditch [43], this representing a large linear feature cutting across the south-

eastern part of Trench 1. The bone assemblage featured a wide variety of food species dominated by cattle (numerically and undoubtedly by meat weight), followed by sheep and then pig, with notable quantities of small mammal (rabbit), bird (mainly domesticates) and fish (largely gadids – cod family, and flatfish) bones. High status comestibles are in evidence, including fallow deer, pheasant and turkey. The first historical reference to turkey in Europe dates to 1520 and it is supposed that they were brought to Britain soon after. A notably early example has been found at St Albans Abbey, Hertfordshire, this dating between 1534 and 1550 (Fothergill 2014, 211). When first introduced it was undoubtedly a significant luxury item. The prices eventually diminished through time though it maintained a special status as a celebratory bird, following the successful attempts at turkey husbandry dating from the latter part of the 16th century (ibid 208 and 212). The two turkey bones found in this phase may well represent the earliest incidence of this species in London.

There is clearly a wide range of ages amongst the mammalian and bird species represented, indicative of the provision of succulent through to mature meats. This age range could also be an indication of domestication. Notably a large proportion of the doves are juvenile, these probably representing squabs taken from a dovecote. There is a similarly high count of young rabbits. While the breeding potential for this species is well known, the proportion of youngsters is perhaps too high to account for animals taken by hunting. These may therefore represent domestic/caged animals. Regarding the known domesticates, chicken is represented by several bones from young chicks, most probably indicative of local chicken keeping rather than food waste, although such birds could be food waste from a mews (see below). Several foetal/neonate pig bones were also found, again perhaps suggestive of local husbandry, however, these may equally represent suckling pigs used in fine dining (Albarella 2006, 83).

Each of the major domesticates, cattle, sheep/goat and pig, are represented by a wide variety of parts, indicating that these deposits contain mixed debris including both processing and food waste. It can be surmised that whole carcasses (or perhaps even livestock) were supplied to the Palace kitchens and that the Tudor Palace employees would deal with these food items accordingly. There is a considerable quantity of butchered bones, especially amongst the cattle and cattle-size components.

The fish bones, as mentioned, are mainly composed of cod family (gadids) and flatfish, essentially plaice and flounder. Gadids and especially cod had become a major part of the cities fish diet from the later medieval period coinciding with the greater exploitation of offshore fisheries (Barrett et al 2008). A major aspect of this change was the decline in herring in comparison to gadids, in part related to the collapse of the Yarmouth herring industry in the 14th century (after Locker 2001, 277). However, there is undoubtedly a rather smaller proportion of herring at this site compared to contemporary collections elsewhere from London. The other

major contributors, plaice and flounder, appear to be stalwarts of the cities fish diet following a similar pattern throughout the medieval and post-medieval eras (see Rielly in prep a).

Unlike the mammals and birds, there doesn't appear to be any obvious high status fish present, with perhaps the exception of salmon (Ayres et al 2003, 395). Of interest, however, is the presence of ling, a fish commonly found in more northerly waters. This could represent an imported and preserved (dried or salted) item (see Rielly 2006, 140).

Amongst the non-food waste there is an assortment of cat and dog bones, with concentrations within fills (21) and (32) – 19 and 10 cat bones; plus (23) and (25) - 10 and 7 dog bones, each representing the partial remains of single adult individuals. It may be useful to attempt a comparison of these bones with dogs of known 'types', here following medieval and post-medieval historical references for the various dogs kept for hunting and other purposes (as for example described by Foulsham 2001). Hunting was, and still is, a noted pastime of affluent society, with falconry demonstrating the ultimate juxtaposition of blood sports and wealth. The Phase 4 ditch deposits did provide numerous bones belonging to rather large raptors (not included in the tables). These bones have yet to be fully identified, however, they clearly belong to a number of individuals, strongly indicative of a mews located somewhere in the Palace grounds at this time.

Finally, these dumps also contain some incidental species as for example the mole, shrew, various small rodents (including rats) and the amphibians. These could represent the judicial deposition of culled vermin or, in the case of the amphibians, the possible use of the ditch, at some stage, as a breeding habitat.

Early to later post-medieval, 1630 to 1680 and 1680 to 1750 (Phase 5 and 6)

The Phase 5 collection and the great majority of those from Phase 6 were taken from successive fills within Ditch [43]. The remaining part of the later phase assemblage was derived from a thin layer (4) overlying the medieval yard surface (33) and also from three pits, 1 in Trench 1 [42] and two in Trench 2, [16] and [26]. There is a similarly wide range of food species from the upper levels of Ditch [43], although muted somewhat, no doubt related to the absence of sieving and perhaps the smaller quantities of bones. However, while the bone collections from the pits are clearly much smaller they nonetheless provided a wide range of species. This contrasts with the contents of layer (4), this entirely composed of bones belonging to the major domesticates. Of interest, concerning the individual features as well as the combined collection is the somewhat better representation compared to Phase 4 of sheep/goat relative to cattle. This change in domesticate abundance has been observed at several other medieval to post-medieval or post-medieval collections from London sites (see Conclusions). Another change is the clear absence of high status comestibles, again perhaps related to quantity and recovery, note for example that deer bones were found in the larger Phase 7 collection. Otherwise there

are broad similarities with the Phase 4 bones, concerning the mix of domesticated parts, the extensive butchery and the age range, here including further 'suckling pigs' (Phase 5) and young rabbits (Phase 6).

A small number of cattle bones from Phase 6 pit [16] are clearly from rather large individuals, perhaps representing 'improved' types. These were developed during the 18th century and tend to show in the archaeological record from the latter part of this century (Rielly in prep b). This may show that the fills of this pit, at the least, may date up to 1780/90. As with the previous phase, there is a selection of dog and cat bones (Phase 6 only), possibly representing partial articulations. These include a notably large individual from layer (4), clearly mastiff sized.

Late 18th century, 1750-1760 (Phase 7)

The animal bones dating to this phase were all recovered from an extensive deposit (3)/(12) largely composed of demolition debris. This overlay pit [42] in Trench 1. A large quantity of general food waste obviously accompanied this debris within this dumping horizon (at least partly related to a demolition episode), all tightly dated to the latter part of the 18th century. There is now a somewhat greater quantity of sheep/goat compared to cattle (Table 2), following the aforementioned abundance pattern observed at post-medieval London sites. An additional comparison, here acting as a confirmation of the approximate date of this demolition deposit, is the notably high proportion of both cattle and sheep/goat bones which clearly derive from large individuals. As before (Phase 6), these can be interpreted as 'improved' stock, their greater incidence testament to the noted late 18th century introduction of such stock to the London meat markets. The major domesticates are again represented by a wide range of parts signifying general processing and food waste; these also including a variety of ages, although with youngsters particularly amongst the cattle and pig collections. Other food animals now include a high status component (fallow deer) as well as the usual but less copious (compared to Phase 4) quantities of rabbit and poultry.

19th century and Modern (Phase 8 and 9)

All of the bones dated to Phase 8 were found in a 'grave' cut into the backfills of ditch [43] in Trench 1. This contained the near complete remains of a large dog accompanied by a small quantity of major domesticated and chicken processing/food waste. The dog was clearly male (presence of os penis) and possibly of advanced years as suggested by the incidence of joint disease (osteophytic lipping) on several vertebrae. One of the vertebra showed advanced symptoms, where a joint surface displayed pitting as well as some polishing (eburnation), which alongside the lipping or exostoses is strongly indicative of osteoarthritis. The act of burial and indeed its location would undoubtedly suggest this animal occupied a particular status, perhaps an old retainer of someone residing in the Palace. Of interest in this skeleton was the presence of a marked under bite, the mandibular tooththrow markedly longer than the corresponding upper tooththrow. Alongside the size of the skeleton, this attribute may provide an indication of

type/breed. The humerus provided a greatest length of 213.2mm which corresponds to an animal with a shoulder height of 704.7mm (after Harcourt 1974). Given this size and the relatively robust nature of the skull and other elements, it's possible that this animal was akin to a mastiff and therefore used for hunting or most likely perhaps as a guard dog.

Soil deposits sealing the grave and also overlying the earlier deposits in Trench 2 (Phase 9) provided two rather small collections (Table 1) featuring a few cattle, cattle-size and sheep/goat fragments. These again included bones from large individuals

Conclusion and recommendations for further work

The bone collections can effectively be divided into two parts, the prehistoric 'cremation' and the post-medieval deposits associated with the occupants of the adjacent Palace. The former deposit could be of great significance although to achieve this status further work will be required to ascertain a more accurate date. It appears to be the remains of burnt/cremated animal bones, suggestive perhaps of some sort of votive offering which was then deposited in a small pit. The ritual nature of this deposit is essentially shown by the calcined nature of the bones, thus indicative of prolonged high temperatures. In contrast, bones accidentally dropped or cast into an open fire, as for example a cooking hearth, tend to be blackened rather than white/calcined. A small proportion of these bones could be identified to species and it would undoubtedly be worthwhile to attempt a search through the literature for similar and contemporary deposits and/or the use of these species in a ritual manner, this again dependant on the re-analysis of the dating evidence.

There is a minor quantity of bones from medieval levels which are of interest in that they contain deer, a clear indication of high status. However, the more significant collections clearly date from the early post-medieval era and in particular those from the Trench 1 ditch fills. The earliest assemblage, dating to the 15th/16th centuries (Phase 4), is especially important, both in terms of quantity and the diversity of food species represented. As stated above, several bird bones taken from the ditch fills are yet to be identified. These certainly include a variety of ducks, waders and small song birds, thus potentially offering a substantial addition to the already broad list of food species. This quantity/concentration of food waste and the diversity of foods consumed may well be indicative of the collected detritus from one or more feasts/banquets. There are certainly a number of high status items as deer, turkey, pheasant and salmon, although with notable absences as swan, peacock and sturgeon. The concentration of food waste continues into Phases 5 to 7, though with perhaps a subtle decline in diversity. The aforementioned absences and in particular the large celebratory birds (swan and peacock) may be an indication of changing tastes as the medieval period gave way to the Tudor era and beyond. This undoubtedly affected the diet of the 'well-to-do', when 'farm animals gradually replaced much of the game, wildfowl and small birds' (Wilson 1973, 96). This clearly culminates in the rather diminished species list seen in Phase 8. It should be noted that these changes

may relate at least in part to the greater efficiency of recovery of the Phase 4 collection (related to hand retrieval and the use of bulk sampling). However, these attributes may not necessarily apply to the poorer representation amongst the later deposits of larger game such as deer.

Another change which could be demonstrated in the bone collection is the evidence related to a possible mews, as indicated by the raptor bones, dated to the 15th/16th centuries. An absence of such birds in later deposits may simply suggest their bodies were disposed of elsewhere. Yet, this period (from at least the mid 16th century) undoubtedly witnessed a decline in falconry coinciding with the availability of gunpowder with guns eventually replacing hawks (ibid, 126).

It is of interest that these intimations of change within the collections from Phase 4 do not affect the main part of the meat diet, cattle, sheep and pig, the former well and truly predominant clearly following the medieval pattern seen at the majority of London sites, as for example at Thameslink (Rielly in prep b). The change towards a greater proportion of sheep compared to cattle does occur by the 18th century, here again following a London pattern (ibid and see Rielly 2017, 162). Other changes as a move towards a greater usage of mutton following a decline in the woollen industry, occurring during the same period (Rielly in prep b), can be tested by an examination of the age evidence, here searching for a decline in age from older to young adults.

In conclusion, the earliest collection is clearly worthy of further analysis, comparing this prehistoric and potentially 'ritual' deposit to others in the vicinity or elsewhere in Britain. The post-medieval collection offers ample evidence to explore the diet of this affluent household through much of the post-medieval era although dated to the 15th to 17th centuries in particular. The inclusion of a number of high status comestibles is to be expected as is the evidence for affluent pastimes (falconry). However, of interest is the apparent change in diet and indeed in their pastimes as the post-medieval era progressed. It is recommended that the earlier and later collections deserve a detailed analysis, the earlier in a manner already stated, and the later with full studies of various aspects of the assemblages aiming to deduce similarities and/or changes in animal usage across the occupation period. The latter studies, as with the prehistoric collection, will require comparisons with similarly large and contemporary collections. The starting point for such comparisons should of course include the previous work at the Palace as well as at nearby sites in Fulham (Rielly 2013 and 2018) and then extend to other parts of London, with a choice of the secular as Thameslink (Rielly in prep b) and the ecclesiastical as Winchester Palace (Rielly 2006).

Finally, as also previously stated, there is further identification work to be carried out on a number of bird bones. This will require a visit to the bird bone reference collections at the Tring Natural History Museum.

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Period:	2	3	3	4	5	6	6	7	8	9	9	US	Total
Trench:	2	1	2	1	1	1	2	1	1	1	2	All	
Recovery/ Feature													
HC													
Ditch				2438	108	318							2864
Dem								484					484
Dog burial									197				197
Layer			49			57							106
Pit						8	28						36
Soil										1	8		9
Surface		11											11
Indet												29	29
Total		11	49	2438	108	383	28	484	197	1	8	29	3736
Sieved													
Ditch				553									553
Pit	454												454
Total	454			553									1007

Table 1. Distribution of bones by Period, Trench, recovery method and feature type where US is unstratified, HC is hand collected, Dem is demolition and Indet is indeterminate.

Recovery:	HC								S	
Phase:	3	4	5	6	7	8	9	2	4	
Species										
Cattle	34	301	16	87	83	7	5		5	
Equid		4		1				1		
Cattle-size	17	505	20	111	129	3	2	453	64	
Sheep/Goat	4	211	17	68	118	11	2		21	
Sheep		8				1				
Pig	1	63	3	14	21				4	
Sheep-size		819	28	76	99	2			186	
Fallow deer	3	9			1					
Dog	1	15		3	3	172			6	
Cat		29		3					1	
Rabbit		83	2	12	7				42	
Small mammal		5	1						38	
Mole		1								
Common shrew									1	
Rat sp		3	1		2				1	
Vole									1	
Small rodent									7	
Chicken		115	11	11	15	1			12	
Chicken-size		59	1	16					29	
Goose		25	1	5	3					
Goose-size		2		1	1				6	
Mallard		16		1	1				1	
Teal					1				4	
Dove		29	1	2						
Turkey		2								
Pheasant		1								
Small passer									8	

Uniden bird									1
Fish		131	6						105
Amphibian		2							6
Frog									4
Grand Total	60	2438	108	411	484	197	9	454	553

Table 2. Distribution of hand collected (HC) and sieved (S) animal bones by phase and species, where Uniden is unidentified and Rat sp refers to either Black or Brown rat.

Recovery:	HC		S
Phase:	4	5	4
Species			
Thornback ray			9
Eel	2		5
Conger eel	1		
Herring			11
Salmon	2		
Roach			4
Chub			2
Cyprinid	1		5
Cod	26	1	5
Ling	1		
Whiting	4		4
Small whiting			3
Small gadid	2		3
Gurnard	1		1
Flounder	1		11
Small Flounder			2
Plaice	45	5	36
Plaice/Flounder	5		4
Uniden fish	40		
Grand Total	131	6	105

Table 3. Distribution of hand collected (HC) and sieved (S) fish bones by phase and species, where Uniden is unidentified.

APPENDIX 6 – THE DECORATIVE PLASTERWORK

By Berni Sudds

A medium sized assemblage of decorative plasterwork was recovered during the excavation, amounting to 492 fragments, weighing just over 50kg. The majority was recovered from two Phase 7 demolition layers [3] and [12], with a smaller quantity recovered from the subsoil [2]. The assemblage includes the remains of at least three separate schemes (Table 1), the majority deriving from a related highly decorative composition (Scheme 1).

Scheme number	Contexts	Number of fragments	Weight (grams)	Area cm2
1	[2], [3] and [12]	465	39766	6697
2	[3] and [12]	4	218	-
3	[2], [3] and [12]	23	10038	861

Table 1: Distribution of the plaster

The assemblage of plaster has been counted, weighed and the surviving surface area measured. An analysis and quantification of the fabric and thickness of individual layers has also been undertaken. The fabric composition and grade were recorded using standardised descriptions and number codes. A copy of these codes and their expansions is included with the archive. The finish of the plaster and any evidence for paint was noted, and also the presence of any impressions to the reverse, potentially informing on the nature of the structure from which it originated. An Access database has been generated recording these attributes, held with the archive, but a summary illustrated catalogue is presented in Appendix 1 and a discussion of each scheme follows, including a consideration of dating, significance and recommendations for further analysis.

Decorative Scheme 1

Composition and moulding

The plaster attributed to Scheme 1 is comprised of up to three separate layers, typically increasing in fineness towards the surface. The thicker moulded elements most frequently have three coats with the thinner mouldings, or single moulded elements having just one or two. Each of the layers contain the same range of materials but in varying proportion. The plaster is comprised predominantly of lime with varying amounts of added clear, white and amber sand (generally up to 1mm in size but occasionally larger). There are also rare to moderate fine hair inclusions, sometimes poorly mixed and in denser clusters, and rare to occasional iron ore (black and red), beige/brown silt/ earthy pellets, charcoal, wood and tile. The uppermost layer, or individual moulded elements, in which the most detailed decoration is rendered, generally contains very little, or near absent sand and in some instances more frequent hair than observed in the sandier base layers.

Most decorative elements from Scheme 1 have been cast from moulds, with very little convincing evidence for hand-modelling or sculpting, except perhaps with some of the strapwork. There may also have been limited hand-finishing with incised detail to some of the foliate and garland(?) elements. Much of the scheme is moulded in high relief, with deep complex cornicing, although there are also a smaller number of elements with a lower profile. The back of the plaster bears a variety of impressions including laths and underlying plaster elements, although some is simply flat or has the remnants of 'lugs' used to apply single high relief moulded elements.

There are traces of limewash surviving to some fragments, in some cases two layers, the lower of which is a greyish white and the upper layer thicker and white in colour. Little evidence for surface paint was recorded, although whether the plaster was originally painted is difficult to prove. Small traces of a red pigment were identified on a few fragments.

Decorative elements

At least 35 different decorative elements were recorded in Scheme 1. The most frequently occurring are fragments of cornice, including at least six different designs. Amongst these, the majority derive from a deep composite cornice formed of cavetto and ogee elements with a large beaded moulding and finer bead and reel moulding (No.1, Appendix 1). Other types include a step-moulded example with bead and reel detail (No.3), three leaf or leaf and dart types (Nos.4, 5 and 7) and dart intervals from a deep relief cornice, possibly with egg or leaf mouldings (No.6). A small number of modillions were also recovered, ornamental brackets typically used to support a cornice. Just one type was identified in the well-paralleled form of a scrolled acanthus leaf mounted on a stepped-moulding (No.8).

Fruit, flowers and foliage comprise the next most frequently represented group, the majority of which derive from a high relief fruit and foliate garland (No.9). The fruit includes bunches of grapes and gourds (Nos. 11 and 12), amongst other less readily identifiable fruits (Nos. 10 and 13). The fruit and leaves were moulded separately and attached to a three faceted half-column/rib. Numbers 26 to 28 maybe the bases of foliate garland terminals, 'fastening' the ends of the fruit and foliate festoons, although could perhaps also be the bases of fluted vases or urns.

The curving three foiled leaves and pear-shaped droplets (Nos.14 and 17) both have the same adjacent, slightly angled lath impressions to the reverse, so probably originate from the same set-piece, separate from the garland. The possible flower or rosette (No.25) and scrolling and branching stems (No. 24) could also be related, although with some of the lower backing coats missing it is difficult to be certain. There are other fruit and foliate elements that are more difficult to place (Nos.15-16, 18-19 and 23). The curving and overlapping leaves of Numbers 20 and 21 may originate from a foliate wreath or oval frame and Number 22 has similar foliate tendrils but over a step-moulded corner.

Of particular note are two grotesques and a substantial strapwork cartouche (Nos.29 and 30). The former have bulging cheeks and eyes, two-fanged teeth and the face appears to be radiating outwards into leaves. The cartouche is oval in shape surrounded by a scrolled strapwork border threaded with rope moulding. The strapwork is ornamented with stamped and stabbed decoration. No trace of any painted decoration, for example an armorial, is evident to centre but there are traces of possible red pigmentation to the outer strapwork. There are other examples of scrolled and curved strapwork of varying type (Nos. 31-34) and finally a single small decorated boss (No.35).

Arrangement

Given the fragmentary and re-deposited nature of the plaster, it is very difficult to even attempt to suggest a likely arrangement for the various elements recovered, let alone a full reconstruction. The composition and finish of the plaster attributed to Scheme 1 is certainly homogenous, suggesting they are likely to be part of the same scheme of decoration, but this does not mean that they could not derive from different elements within the same room, or perhaps even different rooms. Indeed, the certain mouldings lend themselves more readily to particular features, and these are not all consistent.

The deep composite cornice, of which there are many fragments, has lath impressions to the reverse so is unlikely to have been attached to masonry, say as part of a chimneypiece or overmantle. The cornice returns to vertical above so is equally unlikely to have joined the wall directly to the ceiling at right angles, but may have acted as a floating cornice, breaking the wall up near the top, or at the junction of the of wall and a vaulted ceiling. It is also possible the fragments derive from a door or window pediment. Indeed, an apex fragment with a similar profile to the cornice was recovered, although this could be from another element.

The high relief fruit and foliate garland is more difficult to place as it could potentially originate from a rib enrichment, as seen at Ham House, Surrey (<http://clairegapper.info/vii-the-impact-of-inigo-jones-british-renaissance-plasterwork.html>), a frieze or even a vertical column/ three-dimensional margin on a chimney or other internal feature. Some of the other cornices and coving recovered could be part of a more detailed entablature or could frame an enriched rib (again as at Ham House) or come from an overmantle, particularly as some have oblique returns. As there are five different types they are unlikely to all originate from the same element, although four types were used in the same rib at Ham House. The three-foiled curving leaves and pear-shaped fruits(?) have lath impressions to the back, but could be from a frieze or ceiling. The grotesques could also come from several different places, although one has a 'lug' of plaster attached to the back, similar to some of the fruit mouldings from the garland. They are certainly likely to have originated from a high relief element.

The cartouche bears the impression of a decorated cornice to the reverse towards the top, possibly from being applied over Number 7, or something similar. Given the weight of the

cartouche and position in relation to the cornice, it is perhaps most likely to have been mounted vertically, possibly on an overmantle, or elaborate pediment or frieze. It would quite probably have been painted with the arms of the commissioning bishop, although this may never have been finished, or perhaps did not survive. The scrolled acanthus leaf modillions would almost certainly have supported a cornice but whether this surmounted a wall or overmantle is unclear. The single decorated boss is again difficult to place, although these are most frequently used to punctuate the intersection of ceiling ribs. Some of the finer scrolling and branching leaves may also originate from the ceiling, or perhaps a frieze.

Scheme 2

Four fragments of a charcoal rich plaster, weighing 218g, were recovered from deposits [3] and [12], although no finished surfaces or impressions were recorded.

Decorative Scheme 3

Fragments of a second decorative scheme were also recovered from the same demolition groups. They are distinct from Scheme 1, being moulded from near pure lime with virtually no inclusions. As a result, they are much softer and have not survived as well, demonstrating surface pitting and greater levels of erosion. The scheme is also more thickly rendered, with only one coat being identified. There are fragments of quarter bead in varying sizes, some with step-moulding to the edge (Nos. 1 and 2), and cavetto and composite cornices (Nos. 5 to 7). There is also a heavily abraded step-moulded cornice with possible diagonal dentil-type mouldings (No.4). Finally, a possible leaf and strapwork volute were also recovered (Nos. 8 and 9) that may relate to the same scheme, the impression to the reverse of the latter suggesting it was applied over a foliate element.

Dating

The dating of the demolition deposits suggest they may be contemporary with Bishop Sherlock's substantial programme of renovations (c.1748 to 1761), or possibly Bishop Terrick's (1761-1787). Indeed, Sherlock was responsible, amongst other things, for putting the present ceiling into the hall, in replacement of an earlier one (Thurley 1987, 30). He also constructed a new dining room with one of the finest surviving plasterwork ceilings in the Palace (Rodwell 1988, 30). With its egg and dart detailing, rope-moulding, scrolling vines and acanthus leaves the latter is fully Palladian, after William Kent, rather than rococo (Brown 2009; Rodwell 1988, 30; Thurley 1987, 30). This provides a *terminus ante quem*, for the schemes recovered but consideration needs to be given to their likely date and who may have commissioned them.

The various elements recorded in Scheme 1 can perhaps be best paralleled during the 17th century, although could be a little later. Strapwork does not appear in the surviving London

plasterwork until the 17th century and the fleshy, auricular feel of the examples from Scheme 1 are particularly suggestive of a 17th century date (clairegapper.info/the-london-evidence.html; Gapper pers comm). The ropework detailing also looks early, but continues later, and the Palladian influences, including the geometric feel and the waterleaf detailing, might suggest the work was undertaken once the influence of Inigo Jones was being felt more broadly, following his appointment as Surveyor to the Royal Works in 1615.

It is unlikely the plasterwork was commissioned during the Commonwealth Period, although establishing whether it pre or post-dates the Civil War is difficult. The high relief fruit and foliate element is similar to a garland enriching a ceiling rib from the Great Dining Room at Ham House in Surrey, bordered by leaf and dart and egg and dart mouldings (<http://clairegapper.info/vii-the-impact-of-inigo-jones-british-renaissance-plasterwork.html>). The latter dates to c.1637-8 and has foliate garland terminals, similar to the examples in the assemblage. There is also, however, a comparable high relief garland of fruit and flowers on a late 17th century ceiling from Havelock House in Cambridgeshire, with a deep acanthus cornicing, and a similar acanthus leaf cornice to No.7 on a salvaged ceiling from 6 Wheelergate, Nottingham dated to c.1680. Grotesques arrive in the London repertoire before strapwork but remain popular for a long time and are thus not particularly useful for dating. Bosses likewise have a long lifespan although were becoming less popular during the 17th century, and where they appear are daintier and less prominent, like the example from Scheme 1 (clairegapper.info/the-london-evidence.html).

It is equally difficult to establish who might have commissioned the work. There appear to be no direct references to any of the incumbent 17th century Bishops having contracted any plasterwork to be undertaken and the 1647 Parliamentary Survey, although thorough, appears not to have included any mention of ceilings or overmantles (Rodwell 1988). Furthermore, between 1604 and 1660 there was apparently little work carried out on the Palace and the austerity of the Restoration years (c.1660 to 1714) meant that the Bishops are accredited with little more than maintenance (Thurley 1987, 24 and 26). Indeed, on paper the most likely candidate would seem to be Bishop John Robinson, who undertook a substantial programme of re-building in 1715, following 50 years of neglect (ibid. 28-29). Certainly, one of the new state rooms he built, and the remodelled gallery, are recorded as having deeply coved ceilings (ibid. 30). A date this late for Scheme 1 is just possible, prior to the full-scale adoption of Palladianism under William Kent and the Hanoverian monarchs. Other candidates could however, include Bishop William Juxon (1633-1646), Bishop Gilbert Sheldon (1660-1663) or perhaps even Bishop Henry Compton (1675). Notably, the coat of arms of Bishop Juxon, found in the garden during the 19th century, bears some elements in common with Scheme 1, perhaps suggesting a degree of contemporaneity. The latter, dated 1636, was carved in stone and has fleshy strapwork, foliate terminals and an oval strapwork cartouche to the mitre. At the very least it suggests that he carried out alterations during his time at the palace.

Scheme 3, due to its abraded condition and fewer diagnostic elements, is more difficult to date stylistically. Although potentially contemporary with Scheme 1 it is not necessarily so, simply being removed as part of the same phase of renovation.

Recommendations

No further work is recommended for Scheme 2 but the other two, and in particular Scheme 1, are undoubtedly highly significant. The architectural significance of Fulham Palace had long been under-rated, in large part due to a lack of awareness and recording of the historic fabric, but also due to there being few historical photos and or drawings (Rodwell 1988, 14-15). Much of this had been redressed by a detailed archaeological appraisal carried out by Warwick Rodwell in 1988, as part of a broader management plan for the Palace and grounds. This revealed many significant features, with subsequent renovation and restoration work continuing to reveal new information on the much-altered fabric of the building. Fragments of past interior décor, recovered from controlled excavation, that can be firmly attributed to the Palace are thus of great significance, not only informing on the character of the building at a particular moment in history, but also on the aspiration of the commissioning clients and, taken together with other surviving evidence for interior décor, how tastes have changed over time.

If related to Bishop Sherlock's renovations, the most likely source for Scheme 1 may have been the hall as an earlier ceiling, and presumably any other decorative plasterwork, was removed to make way for his Palladian scheme. Further research into the documentary records and stylistic parallels may help to narrow down a date and potential commissioner. This should include access to the drawings of Bishop Robinson's modifications alluded to in Simon Thurley's survey of the historical documents relating to the Palace, to see if any of the plaster could have come from the deep cornicing in one of his new state rooms or the remodelled gallery. A concise publication text should be produced on Schemes 1 and 3, illustrated by a combination of line drawings and photographs.

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APPENDIX 7 – DECORATIVE PLASTERWORK: ILLUSTRATED CATALOGUE


Scheme 1


Cornicing		
Plate	Description and distribution	Quantification
	<p>1) Composite cavetto, ogee, bead and bead and reel mouldings: Pronounced composite cornice formed of cavetto and ogee elements with large beaded and finer bead and reel moulding. Possibly from a door or window pediment, overmantle or perhaps a protruding cornice at the join of the wall and a vaulted ceiling (as the plasterwork returns to vertical above). Back: Adjacent horizontal lath impressions (25-27mm wide). Squeezes of plaster into gaps in between laths and a near right angled impression (from underlying framing?).</p> <p>Contexts [2], [3] and [12]</p>	<p>Number of frags: 102</p> <p>Weight: 12,207grams</p> <p>Surface area: 2365 cm²</p>
	<p>2) Stepped moulding, raised linear flat-topped ribs tapering to a point: One slightly curved (concave) and the other straight. There is also an oblique corner. Both have cavetto sides and are very similar in profile to the protruding rib of the deep composite heavily moulded cornice above.</p>	<p>Number of frags: 3</p> <p>Weight: 291grams</p> <p>Surface area: 75 cm²</p>




	<p>Back: Cross-shaped squeezes of clay between flat areas. Not clear what from - underlying plaster/ structural wood/ framing?</p> <p>Context [3]</p>	
	<p>3) Double stepped moulding with bead and reel detail: One fragment is angled to form an oblique corner.</p> <p>Back: 45 degree angle and uneven.</p> <p>Contexts [2], [3] and [12]</p>	<p>Number of frags: 9</p> <p>Weight: 672grams</p> <p>Surface area: 151 cm²</p>
	<p>4) Composite cavetto and stepped cornice moulded with continuous simply rendered leaf-and dart motif: Double stepped protruding cornice. Possibly from a door or window pediment, overmantle or possibly a protruding cornice at the join of the wall and a vaulted ceiling (as the plasterwork returns back on itself below the cornice to form a rectangular protrusion. The stepped cornice was moulded separately to the cavetto leaf-and-dart section.</p>	<p>Number of frags: 15</p> <p>Weight: 536grams</p> <p>Surface area: 204 cm²</p>


	<p>Back: 45 degree angle and slightly uneven.</p> <p>Context [3] and [12]</p>	
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	<p>5) Composite cavetto and stepped cornice moulded with continuous leaf-and-dart-type motif: The leaves are moulded in relief with details of structure and the recessed fluted moulding between forms a simple dart. The leaves alternate between overlapping and underlying a linear bead/ bar. Single step to bottom onto fairly broad flat section. One fragment is angled to form an oblique corner.</p> <p>Back: Flat and 45 degree angle impressions, some wood grain? Other fragments with a more lumpy, uneven back.</p> <p>Contexts [3] and [12]</p>	<p>Number of frags: 19</p> <p>Weight: 1697grams</p> <p>Surface area: 417 cm²</p>
	<p>6) Dart mouldings: Deep relief. Possibly from an egg-and-dart moulding, or possibly leaf-and-dart.</p> <p>Back: Right-angled back from step-moulded cornice?</p> <p>Contexts [3] and [12]</p>	<p>Number of frags: 6</p> <p>Weight: 120grams</p> <p>Surface area: 45 cm²</p>
	<p>7) Composite ogee, beaded and step-moulded cornice: The ogee section is moulded with a repeated leaf? motif. Another form of acanthus leaf?</p>	<p>Number of frags: 1</p> <p>Weight: 354grams</p> <p>Surface area: 49 cm²</p>

	<p>Back: Impressions from a concave and right-angled moulding/ cornice to back.</p> <p>Context [3]</p>	
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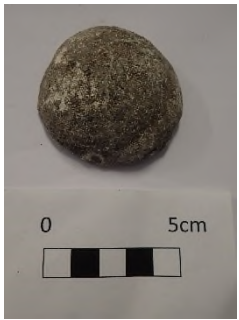

Modillion		
	<p>8) Scrolled acanthus leaf modillion: Double stepped deep moulded rib with single ogee (scrolled acanthus leaf) modillions on top with their own fine double stepped cavetto moulding/nt. Modillion separate mould to lower rib/ cornice. Same plaster used for both.</p> <p>Back: Flat and curving (into corner) towards the top of the bracket.</p> <p>Contexts [3] and [12]</p>	<p>Number of frags: 5</p> <p>Weight: 575grams</p> <p>Surface area: 151 cm²</p>
Fruit, foliage and flowers		
	<p>9) Fruit and foliate garland/ enriched margent or rib: Three(?) faceted half column or rib festooned with leaves and a single oval knobbly fruit. Other oval shaped fruits may have been attached to this feature also. Two layers forming the pilaster/ rib (possibly one applied in two parts?) with the fruit and</p>	<p>Number of frags: 2</p> <p>Weight: 530grams</p> <p>Surface area: 82 cm²</p>

	<p>leaves attached as separate moulded elements.</p> <p>Back: uneven</p> <p>Context [12]</p>	
	<p>10) Knobby fruit?: Oval fruit(?) with raised knobbles and a lemon-like nipple to end. Same fruit on enriched rib/ margent above.</p> <p>Back: uneven</p> <p>Context [3]</p>	<p>Number of frags: 2</p> <p>Weight: 318grams</p> <p>Surface area: 70 cm2</p>
	<p>11) Ribbed gourd/ melon?: Oval ribbed gourd or melon. Possibly part of enriched rib/ margent embellishment.</p> <p>Back: Flat v-shaped impression with raised area around it to edge of element. Sometimes plug of plaster attached for fixing to rib/column/ mount.</p> <p>Context [3]</p>	<p>Number of frags: 3</p> <p>Weight: 239grams</p> <p>Surface area: 100 cm2</p>
	<p>12) Bunch of grapes: Oval bunch of grapes. Possibly part of enriched rib/ margent embellishment.</p>	<p>Number of frags: 3</p> <p>Weight:</p>

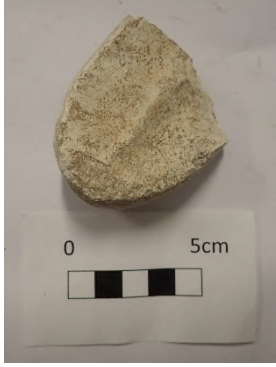

	<p>Back: Flat diamond shaped impression with raised area around it bordering edge of element. Part of rib/ column attached to back of one example.</p> <p>Contexts [3] and [12]</p>	<p>280grams</p> <p>Surface area: 105 cm²</p>
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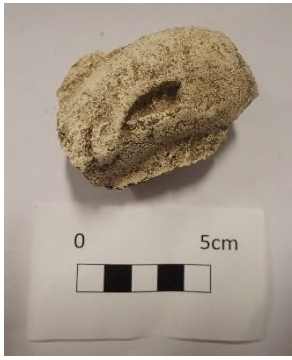



	<p>13) Gourd/ fruit?: Oval ?fruit/ gourd with recessed segment to middle and a lemon-like nipple to end. Possibly part of enriched rib/ margent embellishment. Two different moulds; one slightly larger and slightly different moulding. Also second layer not sandy but of same composition as the fruit/gourd is moulded from.</p> <p>Contexts [3] and [12]</p>	<p>Number of frags: 2</p> <p>Weight: 250grams</p> <p>Surface area: 72 cm²</p>
		

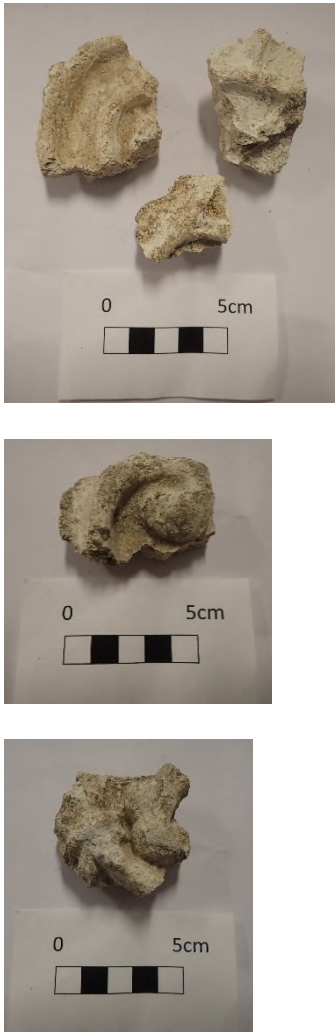

	<p>14) Fruit?: Pear-shaped droplet with horizontal incised line half to two thirds of the way up.</p> <p>Back: Adjacent angled lath impressions (not flat).</p>	<p>Number of frags: 4</p> <p>Weight: 630grams</p> <p>Surface area:</p>
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		<p>Contexts [3] and [12]</p>	<p>152 cm²</p>
		<p>15) Fruit?: Round ?fruit with raised segment to one side and dimple to bottom/top. Orange? Apple?</p> <p>Context [12]</p>	<p>Number of frags: 1</p> <p>Weight: 51grams</p> <p>Surface area: 23 cm²</p>
		<p>16) Curved segments: Wedges of plaster with a curved outer edge akin to orange segments. Slightly different sizes. Hand-moulded?</p> <p>Context [3]</p>	<p>Number of frags: 2</p> <p>Weight: 48grams</p> <p>Surface area: 22 cm²</p>
		<p>17) Curving leaf: Three foiled curving leaves. Two different types. Central ridge to two foils but not to third of larger leaf and short slashes/notches to outer curved edge.</p> <p>Back: Adjacent angled lath impressions x25-30mm in width</p> <p>Context [3] and [12]</p>	<p>Number of frags: 11</p> <p>Weight: 1077grams</p> <p>Surface area: 324 cm²</p>


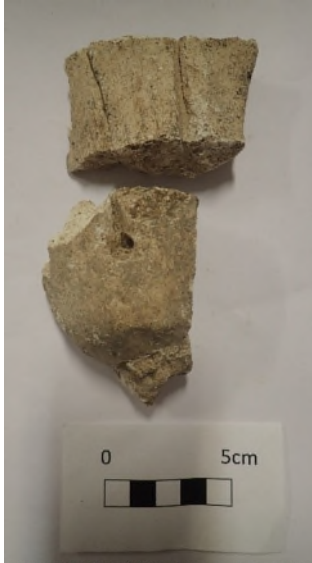

		
		
		
	<p>18) Leaf: Slightly concave round ended leaf with central ridge.</p> <p>Context [3] and [12]</p>	<p>Number of frags: 3</p> <p>Weight: 153grams</p>

			Surface area: 62 cm ²
	<p>19) Scrolled leaf: Convex profile with a ridge down the centre delineated by two grooves.</p> <p>Back: Flat, impressions of timber?</p> <p>Context [3]</p>	Number of frags: 2 Weight: 512grams Surface area: 132 cm ²	



	<p>20) Curving leaf: Apex of a curving foliate motif.</p> <p>Context [3]</p>	<p>Number of frags: 1</p> <p>Weight: 63grams</p> <p>Surface area: 22 cm²</p>
	<p>21) Foliate stems/ tendrils: Curving and overlapping foliate stems/ tendrils. Part of a wreath or oval foliate frame?</p> <p>Context [3]</p>	<p>Number of frags: 1</p> <p>Weight: 106grams</p> <p>Surface area: 24 cm²</p>
	<p>22) Step-moulded corner with foliate embellishment: Stepped moulding with tapering fronds/ foliate moulding?</p> <p>Context [12]</p>	<p>Number of frags: 1</p> <p>Weight: 53grams</p> <p>Surface area: 15 cm²</p>
	<p>23) Scrolled leaf?: Scrolled ?leaf with central ridge tapering to a tip.</p> <p>Context: [12]</p>	<p>Number of frags: 1</p> <p>Weight: 29grams</p> <p>Surface area: 6 cm²</p>

	<p>24) Scrolling floral/ foliate sprays: Scrolling and branching stems - associated with flower/ rosette?</p> <p>Back: flat.</p> <p>Context [3] and [12]</p>	<p>Number of frags: 9</p> <p>Weight: 151grams</p> <p>Surface area: 92 cm²</p>
	<p>25) Flower/ rosette?: Floral or rosette motif.</p> <p>Back: Adjacent lath impressions?</p> <p>Context [12]</p>	<p>Number of frags: 1</p> <p>Weight: 171grams</p> <p>Surface area: 32 cm²</p>

Vases/ urns/ garland terminals/ other		
	<p>26) Foliate garland terminal/ vase/ urn?: Rounded base with</p>	<p>Number of frags: 4</p>



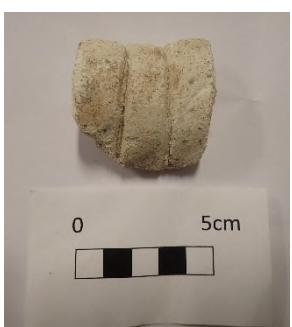

	<p>thickened pedestal or cordon below and flaring outwards above (in a half round). Vertical incisions spaced around the body, also flaring, each terminating above the base with circular stab mark.</p> <p>Back: Flat?</p> <p>Context [3] and [12]</p>	<p>Weight: 432grams</p> <p>Surface area: 122 cm²</p>
		
	<p>27) Vase/ urn/ garland terminal?: Rounded base with flaring sides. Vertical incisions spaced around the body to emulate fluting?</p> <p>Context [12]</p>	<p>Number of frags: 1</p> <p>Weight: 40grams</p> <p>Surface area: 15 cm²</p>


	<p>28) Part of a vase/ urn/ garland terminal?: Columnar band (in a half round) with horizontal row of dimples. ?Upward, slightly curving stubby protrusion to left-hand side. Incised vertical</p>	<p>Number of frags: 2</p> <p>Weight: 163grams</p> <p>Surface area: 45 cm²</p>
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	<p>(splaying?) lines protruding from the ?top. Fluting?</p> <p>Back: convex.</p> <p>Context [12]</p>	
<p>Grotesques</p>		
	<p>29) Grotesque: Grotesques with bulging cheeks and eyes and two-fanged teeth. Face and beard radiates out into leaves? The face was moulded in one element and has a flat back attached to a thin middle layer of plaster, also with a flat back (split or laid in two parts on one example). The lowest layer of plaster is an uneven blob attached to the back of one example.</p> <p>Context [3]</p>	<p>Number of frags: 2</p> <p>Weight: 716grams</p> <p>Surface area: 210 cm2</p>
<p>Cartouche</p>		
<p>30) Cartouche: Oval cartouche with an elaborate scrolled strapwork border, threaded with rope moulding. The strapwork is embellished with stabbed and stamped decoration. The stamp is an oblique cross; one to the top in the strapwork frame and two in a row to each side on the strapwork enclosing the rope moulding. The cartouche section was moulded as one element and has a flat back.</p> <p>Back: 45 degrees to upper part of cartouche with impression of detailed leaf? Cornice. Diagonal 45 degree slightly ogee impressions running down behind rope border. Lower back vertical but uneven.</p> <p>Context [3] and [12]</p>	<p>Number of frags: 1</p> <p>Weight: 1873grams</p> <p>Surface area: 278 cm2</p>	


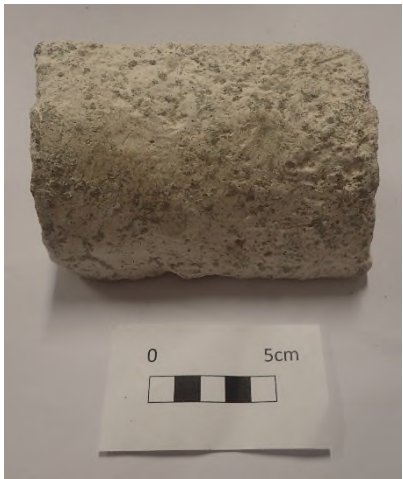


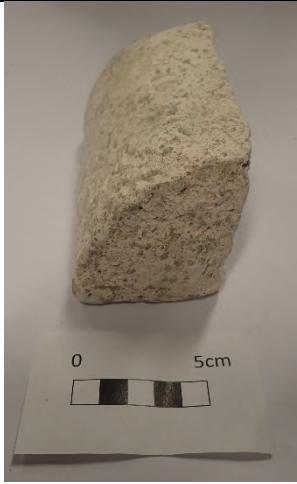

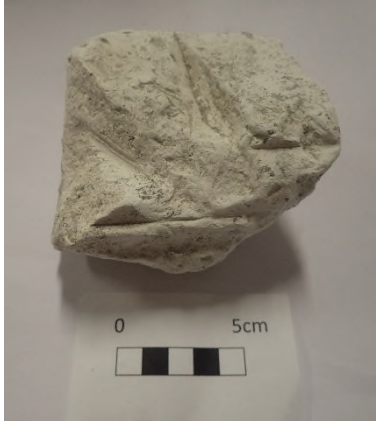
Strapwork and volutes		
	<p>31) Strapwork: Concave, tapering fragment of strapwork? Chamfered edges.</p> <p>Context [12]</p>	<p>Number of frags: 1</p> <p>Weight: 66grams</p>




		Surface area: 24 cm ²
	<p>32) Strapwork: Section of slightly curved strapwork. Chamfered to one edge, broken to other.</p> <p>Context [3]</p>	Number of frags: 2 Weight: 78grams Surface area: 30 cm ²
	<p>33) Strapwork: Curving strap with two incised lines running down length.</p> <p>Back: Concave back to strap, attached to lower coat with uneven back.</p> <p>Context [3]</p>	Number of frags: 1 Weight: 34grams Surface area: 18 cm ²
	<p>34) Studded strapwork volute: Conical strapwork volute with a line of circular ring stamps/ impressions.</p> <p>Back: flat</p> <p>Context [3]</p>	Number of frags: 1 Weight: 92grams Surface area: 30 cm ²
<p>Boss</p>		
	<p>35) Boss: Shallow conical boss. Slightly concave sides incised</p>	Number of frags: 1

		<p>with vertical spaced lines to achieve a fluted appearance. Topped with a mounted knob (fluted/ moulded detail to mount).</p> <p>Back: flat</p> <p>Context [3]</p>	<p>Weight: 83grams</p> <p>Surface area: 30 cm²</p>
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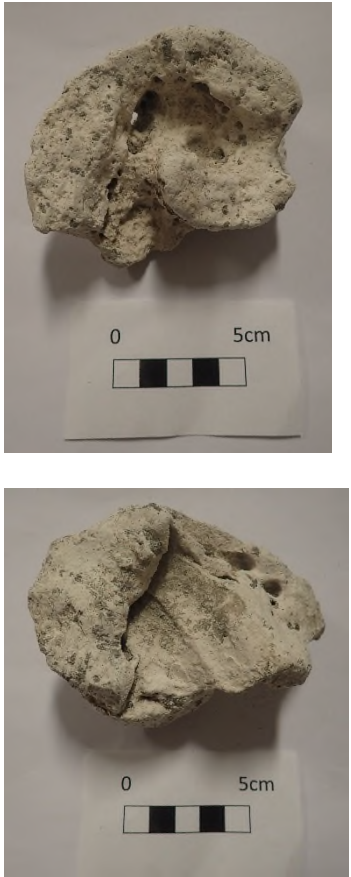
Scheme 3

Cornicing			
	<p>1) Cornice?: Quarter bead with one full small step to one edge and start of another step or flat section. Lightly pitted to back.</p> <p>Context [12]</p>	<p>Number of frags: 1</p> <p>Weight: 157grams</p> <p>Surface area: 50 cm²</p>	
	<p>2) Cornice?: Large quarter moulding.</p> <p>Context [3]</p>	<p>Number of frags: 1</p> <p>Weight: 499grams</p> <p>Surface area: 112 cm²</p>	

		
	<p>3) ?: Flat slab of plaster with diagonal incised keying to one face.</p> <p>Context [3]</p>	<p>Number of frags: 1</p> <p>Weight: 144grams</p>
	<p>4) Cornice?: Step-moulded cornice with diagonal dentil-type mouldings? Abraded.</p> <p>Context [3]</p>	<p>Number of frags: 1</p> <p>Weight: 247grams</p> <p>Surface area: 72 cm²</p>
	<p>5) Cornice?: Broad cavetto section. Perforation close to one edge.</p> <p>Context [2]</p>	<p>Number of frags: 1</p> <p>Weight: 332grams</p> <p>Surface area: 80 cm²</p>

		
 	<p>6) Cornice?: Cornice terminal? corroded iron-nail fixing still in place. Flat 45 degree slope to finished face.</p> <p>Context [2]</p>	<p>Number of frags: 1</p> <p>Weight: 550grams</p> <p>Surface area: 20 cm²</p>

	<p>Number of frags: 1</p> <p>Weight: 809grams</p> <p>Surface area: 176 cm²</p>
	<p>7) Cornice: Composite stepped and cavetto moulding. Moulded element over the top in one area, mostly broken away but in a 'v' shape tapering downwards.</p> <p>Back: Right-angled with impressions from an underlying scheme/ cornice (linear grooves and a row of irregular depressions) to one side and uneven/ pitted to other.</p> <p>Context [2]</p>
	<p>8) Leaf: High relief leaf/ foliate element? Abraded.</p> <p>Context [3]</p> <p>Number of frags: 1</p> <p>Weight: 166grams</p> <p>Surface area: 25 cm²</p>

	<p>9) Strapwork volute: Scrolled strapwork? Very abraded. Impression of a leaf to reverse. Appended over a foliate element?</p> <p>Context [2]</p>	<p>Number of frags: 1</p> <p>Weight: 161grams</p> <p>Surface area: 63 cm²</p>
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APPENDIX 8 - THE METAL AND SMALL FINDS

Märit Gaimster

In total, around 488 individual metal and small finds were recovered from the excavations; they are listed in the table below. Coins and jettons were identified and catalogued by Murray Andrews; shortened versions of this catalogue are included here. The vast majority of finds came from Trench 1, with just under one hundred objects originating from Trench 2. Metal and small finds were retrieved from all phases except phases 1 and 8. They are discussed by phase below, including where appropriate objects that are residual or intrusive in other phases.

Phase 2: Prehistoric

Only one find came from this phase, in the form of the fragment of a blade-like flint flake (SF 72: Trench 2). A further struck or worked fragment was residual in Phase 7 (SF 4: Trench 1).

Phase 3: Medieval

Nine objects came from Phase 3, all from layer [13] in Trench 2. While the finds are associated with intrusive pottery from the late 17th and 18th centuries, the small assemblage includes a cut halfpenny of Henry III, minted 1251–72 (SF 44) and two further finds that may be of medieval date. One is a small copper-alloy lettering in the form of a capital 'D' (SF 45). Measuring only 15mm in height, and with three minute rivet holes for fixing, this is likely a mount from a belt or girdle. The prolific use of mounts for this purpose is a characteristic of late medieval fashion, with a variety of forms and designs employed, including lettering (cf. Egan and Pritchard 1991, fig. 127 nos 1095–97; Willemsen 2012, fig. 6). A further possible medieval object is presented by a copper-alloy implement with a pin-like body furnished with a rectangular openwork lug to the side of one end, and a flattened and trefoil finial at the other (SF 62). The finial is decorated with a simple foliate design with a bud-like centre flanked by folded-back leaves and has some parallels in other late medieval metalwork (cf. Egan and Pritchard 1991, figs 87 no. 619 and 92 no. 650; Goodall 2012, fig. 31 no. 206). The function of this object is not currently clear. It is faintly reminiscent of stapled hasps for chests or caskets, which have broad flat strap bodies and are normally made of iron (cf. Ottaway and Rogers 2002, fig. 1421). The Fulham Palace fitting, also, has no visible holes for fixing or fastening, and both ends appear intact. Besides these objects, the unused second disc of a lead cloth seal was also recovered (SF 72). With no stamps or other features, it is not possible to identify its date or origin. Similar-size seals are known from both late medieval and post-medieval finds (cf. Egan 1995; Luckenbach and Cox

2003). Besides these finds were also a fragment of lead waste, three incomplete nails and a possible heavily corroded iron fitting.

In addition, a likely residual medieval iron rowel spur was recovered from a Phase 4 context in Trench 1. The spur has deeply curved sides, to pass under the wearer's ankle, and a short neck (SF 122; cf. Ellis 1995, fig. 97 nos 330 and 333), a form that generally dates from the 13th and 14th centuries, before the fashion of the long-neck spur (*ibid.*, 129). The spur is heavily corroded, but it looks like it still has a spur-hook attachment in place; a further possible spur-hook attachment was recovered from the same context (SF 123; cf. *ibid.*, fig. 106 nos 369–71). Spurs of this type have however been recorded from other late 15th- to early 16th-century contexts, with two from recent work on the Thameslink Project around London Bridge (Gaimster *forthc*). This might just be a coincidence, or it may be possible that older spurs were still in use at this time.

Phase 4: Late medieval to Early modern (1480–1550)

This phase produced just over 200 metal and small finds, all retrieved from slots in Ditch [43] in Trench 1. Identifiable finds fit well with the date of this phase and provide some diagnostic artefact types of the late medieval to early modern periods. These include a double-oval buckle of copper alloy with extended strap bar, with a date falling in the 16th and early 17th centuries (SF 40; cf. Egan 2005, fig. 17 no. 89Whitehead 2003, 54), and copper-alloy lace-chapes with minute rivets for fixing (SF 55, 75–76, 118; Oakley Type 10). Lace-chapes of this type appear to be replaced in the course of the later 16th and 17th centuries with a form which gripped the lace by way of both edges folded along the seam (Oakley 1979, 263). This indicates that at least some finds of the former type recovered from later phases are residual (cf. SF 65; 119). These small dress accessories were increasingly used with the late medieval fashion for tighter and more fitted clothing that would require lacing (Egan and Pritchard 1991, 281–90); by the late 16th century they were used lavishly as purely decorative accessories (Margeson 1993, 22). An important feature of both the buckle and some of the lace-chapes (cf. SF 76) are the traces of a now-black coating. These are remains of a warm brownish varnish that was fashionable on dress accessories in the 15th and 16th centuries (Egan and Forsyth 1997, 217). Other frequent dress accessories of the time are represented by copper-alloy pins (SF 61, 90 and 120), used to fix and pin down head dresses and other clothing details. A characteristic find is also a small ring of copper-alloy wire with the ends twisted together, thought to a so-called purse ring. These are known from 15th- and 16th-century documentary sources and, sewn densely onto the fabric, may have worked as a reinforcement against cut-purse thieves (Egan 2005, 62 and fig. 52). In addition is a hooked clasp of copper alloy, residual in Phase 9. The clasp is shaped as a trefoil of hollow domed bosses, a form that appears to date from the 16th century (SF 34; Read 2008, 58–59). With a sharp hook at one end and a rectangular or trapezoid loop at the other, the function of these dress hooks can be glimpsed from

contemporary depictions suggesting pairs of clasps, their loops linked by a copper-alloy chain, were used to fasten capes or cloaks (Egan 2005, 42–43; Read 2008, 87–88). Another use was hooking up the skirt to prevent it from dragging in the dirt of the street, with a single fastener fixed by the loop to a strap of textile or leather (Gaimster *et al.* 2002, fig. 17).

Besides dress accessories, a Nuremberg jetton, dating from c. 1500–1600 was also recovered (SF53), with a further residual issue of the same type and date residual in Phase 7 (SF 91). Used for calculating sums on a chequer board or cloth, the employment of reckoning counters appears to have declined by the mid-17th century as gradually Arabic numerals were introduced (Egan 2005, 172). While jettons are frequent finds from the period, an unusual object is presented by a dice-like object of antler (SF 66). Carved into a hexagonal drum, the sides are incised with ring-and-dot values as on a dice, including the conventional pairing of numbers on opposite sides to make up seven. The object is drilled through the centre laterally and fitted with a fine pin of bone or antler; it would work well as a rolling dice with the pin perhaps to help weigh it and prevent it from standing up at end. However, no parallels are currently found for this form of dice.

Among numerous other finds from this phase, many comprising less and less diagnostic metal objects, are also objects relating to buildings, horse-related and military items. Finds from buildings include a long hasp (SF 67) and a substantial rotary key (SF 69), both of iron, as well as a fragment of reeded lead window came (SF 125). A slightly burnt fragment of daub with a single wattle impression was recovered from context [21]. Horse accessories include a probable horseshoe (SF 121) and an iron harness buckle (SF 68); an unused lead shot, for a musket or pistol, retains its casting sprue (SF 124; cf. Harding 2012, Plate 8). Finally, a further unusual object is formed of a substantial round-section iron object tapering to a point (SF 126). The upper, wider end has remains of a solid, more-narrow iron pin or shank; there is a narrow rectangular opening in the side below this end; a virtually identical item came from a Phase 7 context (SF 127), where it was associated with the residual jetton above. The function of these object is not known, but they were likely designed to be pushed into the ground, perhaps as the base of a sign or other marking.

Phase 5: Post medieval (1630–1680)

Thirty-seven finds came from Phase 5 contexts; all are from context [11], again the fill of a slot in Ditch [43]. While they include a 1730 farthing of George II (SF 29), there is also a residual silver three-halfpence Of Elizabeth I, minted 1569 and with only slight wear (SF 30). As before, there are copper-alloy pins and lace-chapes among the finds; they are not necessarily residual, as these small dress accessories are frequently found throughout the 17th century. Lace-chapes include three of Oakley's Type 1, with small rivets, including one with now-black coating (SF 32 and 38); however, there is also an example of the later form, held in place by way of

both edges folded along the seam (SF 31). Pins include both a fine version (SF 37), and a sturdier pin (SF 35), likely to have been used for head dresses and to pin up skirts and clothing, much like the contemporary dress hooks (Egan and Forsyth 1997, 224; cf. Gaimster *et al.* 2002). This phase produced few diagnostic finds beyond coins and dress accessories, but there is a copper-alloy flat-section ring for suspending drapes or curtains (SF 33). A flat and smooth flint pebble has clearly been worked and polished and may have been used as a gaming piece or keep-sake (SF 80).

Phase 6: Post medieval (1680–1750)

This phase produced forty-seven metal and small finds, with twenty-nine from Trench 1 and the remainder from Trench 2. Both groups included numerous corroded iron nails, but there is also a complete pair of iron shears from Trench 1 (SF 71). Among finds from Trench 2 are fragments of lead window came (SF 42) and a fragment of a characteristic ivory comb with one set of coarser and one set of finer teeth, used to remove head lice from the hair (SF 39). Combs of this simple type were frequently of ivory in the 16th- and 17th centuries (cf. Margeson 1993, 66–68), with bone more commonly found in later post-medieval contexts (cf. Fox and Barton 1986, fig 153 no. 13). A small toy marble of chalk represents a common plaything of the period, with toy marbles of stoneware widely imported from the Rhineland already in the early 16th century (Gaimster 1997, 89).

Phase 7: Post medieval (1750–1760)

Eighty-eight finds were retrieved from Phase 7 contexts, all from Trench 1. The assemblage includes objects that are certainly residual, like a struck flint blade or flake (SF 4) and a 16th-century jetton (SF 91); also likely residual is a copper-alloy lace-chape of Oakley's Type 1 (SF 65). A white-metal finger ring with very fine fake-twist body and a small bezel with purplish? glass inset is more likely to be intrusive here (SF 7). Like the majority of finds it came from context [3], a demolition spread that also included pottery from 1850–1900. There are nevertheless some finds that are likely to date from the mid-18th century, including an iron door T-hinge (SF 131) and lead window came (SF 42 and 128) mostly associated with pottery of that date. Other structural or building related finds include a near-complete iron staple (SF 129). Parts of a vertical flat-section iron ring with wavy edge and a flat circular tab for fixing to the sole are the remains of a patten (SF 130), an overshoe designed to keep shoes and the hems of skirts out of the muddy ground. The form with wavy edges appears to have been in fashion in the 17th and early 18th centuries (Thompson *et al.* 1984, 106).

Phase 9: Modern

Phase 9 produced ninety-five finds. These were mainly collected from Trench 2, with only twenty-two from Trench 1. The finds represent several functional categories, with some objects clearly or likely residual from Phase 8 (19th century) or earlier. A small group of finds relate to buildings and household furnishings, such as a long iron hasp (SF 133), a door grip handle (SF 50) and three pieces of cast-iron vessel (SF 132 and 134). A near-complete iron cockshead hinge (SF 19) is a form dating back to the 17th century, with dated examples from 1656 (cf. Alcock and Hall 1994, 25). It is likely to originate from an older door. Other household related finds include a lead cloth seal, incised with numerals and with textile impressions on the back (SF 48); the function of a substantial lead disc with embossed decoration on one side is unknown, although it may possibly be a seal (SF 54). A squashed metal tube of 'Kolynos' dental paste likely dates from the 1940s (SF 23).

Agricultural activities are reflected in a cast copper-alloy rumble bell (SF 2), of a form that may suggest a date in the 18th or 19th centuries; a further fragment is unstratified (SF 84). There is also a copper-alloy dog whistle with a small ring for suspension (SF 10). Three substantial cast-iron rectangular fittings with two pointed arms and a crossbar may be from fencing (28), as may three substantial and evenly twisted iron screw pickets (SF 5). It is possible that these relate to military activities during WW1, when so-called 'silent screws' were employed for fencing. Other objects with military associations include a copper-alloy bullet case (SF 27), a possible military badge (SF 9) and WW2 shell shrapnel (SF 74). A lead shot may be as late as the mid-19th century, when this form of ammunition was still in use (SF 51).

Besides these activities are also dress accessories accidentally lost by people visiting or inhabiting the Palace. The earliest appears to be a late 19th-century copper-alloy livery button. It features an eagle surmounting a tower or castle and is marked on the back 'FIRMIN & SONS L^d STRAND LONDON' (SF 57). There is however also an unstratified finger ring of copper-alloy, with faint traces of inscription on the inside, which is likely to be of 19th-century date (SF 82), as may be a domed pewter button (SF 78). More modern are certainly a chain necklace of copper alloy (SF 18) and a white-metal ear clip (SF77). Personal belongings are also reflected in the decayed remains of a pen-knife with ivory scales (SF 1), probably dating from the late 19th or early 20th centuries.

A total of twenty-one coins were recovered from Phase 9 contexts. The earliest is a late Roman copper-alloy *nummus* (SF 58), corresponding well to previously recovered Roman coins from the Palace grounds. Otherwise, the earliest coins are represented by a heavily worn penny of Victoria (1878–1879: SF 59) and a *centime* of Leopold II of Belgium (1869–1907: SF 8). A cluster of pre-decimal coins comprise pennies of Edward VII (SF 12 and 49) and George V (SF

13–16 and 59). The remaining eleven coins are all decimal (SF 11, 59 and 79), with two coins interestingly represented by two cut pieces.

Significance of the finds and recommendations for further work

The metal and small finds from Fulham Palace represent activities on the site from the prehistoric period and through to modern times. With the earliest material seen in two struck flint flakes and a stray late Roman coin, the finds also include a handful of medieval or possibly medieval objects. As a whole, however, the finds are strongly dominated by assemblages dating from the late 15th and through to the 17th centuries (Phase 5–6), a period that until relatively recently was weakly represented in archaeological publications (but see now Egan 2005; Mann 2008 and Pearce 2016). These finds include above all characteristic dress accessories like lace-chapes and a hooked clasp, but also jettons for calculating sums on a chequer board. A unique find from this group is an octagonal dice-like object of antler, possibly a rolling dice. Later post-medieval and modern finds are less coherent but include architectural and structural fittings in the form of door hinges and fencing implements, along with dress accessories and some element of militaria.

Metal and small finds potentially provide key elements of domestic material culture and activities and should, where relevant, be included in any further publication of the site. For this purpose, it is recommended that a number of corroded iron objects, including nails from earlier phases, are x-rayed. Several objects will need further identification to establish function and published parallels. These actions are all noted in the table below. Following publication, nails and undiagnostic metal objects may be discarded before archiving.

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FPL17 – Small Finds Table:

PHASE	CONTEXT	SF NO	DESCRIPTION	POT DATE	PERIOD	No. Objects
PH 2	37	72	Struck flint; fragment of a blade-like flake; W 10mm; L 20mm	n/a	prehistoric	1
PH 3	13	43	Lead cloth seal; unused second disc with opening for rivet and part of connecting strip; diam. 22mm	1640-1800	pmed	1
PH 3	13	44	Silver coin; cut halfpenny of Henry III, Long Cross Class 5g (North 997) 1251–1272; Obverse: [HENR]ICVS RE[X III], Facing bust with sceptre; Reverse: [HENRI O]N LVNDE, Voided long cross with three pellets in angles; mint of London, moneyer Henri; slight wear	1640-1800	1251–1272	1
PH 3	13	45	Copper-alloy lettering of capital 'D'; three small rivet holes for fixing, with one in-situ rivet remaining; W 15mm; ht. 15mm	1640-1800	?medieval	1
PH 3	13	46	Lead melting waste; small fragment only	1640-1800		1
PH 3	13	62	Copper-alloy fitting; rounded square-section arm with rectangular openwork lug at one end flat trefoil finial at the other; finial incised with foliate design; L 83mm; lug opening 15 x 25mm	1640-1800	?medieval	1
PH 3	13	bulk	Iron nails; three incomplete and heavily corroded	1640-1800		3
PH 3	13	bulk	Iron ?fitting; two heavily corroded pieces, joined together at at right-angles; L 65mm; W 55mm	1640-1800		1
PH 4	21	40	Copper-alloy buckle; double-oval with lobed knob at each end of strap bar; liberal traces of now-black coating; <i>in-situ</i> corroded iron pin; W 35mm; L 40mm	1480-1550	med/pmed	1

PH 4	21	53	Copper alloy jetton of Nuremberg, Rose/Orb type (c.f. Mitchiner 377-385) c.1500–1600; Obverse: VONIF[...]RVE[...] Imperial orb in tressure of three arches; Reverse: BVE[...]VEB[...], Three lis and crowns alternating around rose, annulets in field; moderate wear	1480-1550	med/pmed	1
PH 4	21	66	Antler dice-like hexagonal object; sides carved with ring-and-dot values as in dice, with conventional pairing of numbers on opposite sides to make up seven; drilled axially through the centre for fine bone or antler pin, some of which remains <i>in situ</i> ; W 13mm; ht. 13mm	1480-1550	c.1500–1600	1
PH 4	21	67	Iron ?hasp; flat-section body angled at one end; circular finial with small central perforation; L 75mm	1480-1550	med/pmed	1
PH 4	21	69	Iron rotary key; complete but heavily corroded with kidney-shaped bow; L 133mm	1480-1550	med/pmed	1
PH 4	21	75	Copper-alloy lace-chape; incomplete ?Oakley Type 1; L 18mm+	1480-1550	med/pmed	1
PH 4	21	76	Copper-alloy lace-chapes; Oakley Type 1 with minute copper-alloy rivet, one with now-black coating; L 23 and 27mm	1480-1550	med/pmed	2
PH 4	21	90	Copper-alloy pin; sturdy Caple Type C; gauge 1.2mm; L 36mm	1480-1550	med/pmed	1
PH 4	21	bulk	Iron nails; 102 mostly complete but heavily corroded; L 30–105mm	1480-1550	med/pmed	102
PH 4	21	bulk	Lead 15 x 20mm rectangular-section ?fitting; partly hollow and formed by substantial folded lead sheet; L 45mm; ?vessel foot	1480-1550	med/pmed	1
PH 4	21	124	Lead shot with casting sprue still attached; diam. 10mm	1480-1550	med/pmed	1
PH 4	21	120	Copper-alloy pins; five fine Caple Type C; gauge 0.7–0.9mm; L 21–27mm	1480-1550	med/pmed	5

PH 4	21	118	Copper-alloy lace-chapes; one Oakley Type 1 with single rivet penetrating through to other side; L 23mm; one incomplete Oakley Type 1 with double rivets penetrating through to other side; three further indeterminate fragments	1480-1550	med/pmed	3
PH 4	21	bulk	Iron ?knife blades or straps; three heavily corroded pieces; W 10–13 mm; L 85–90mm	1480-1550	med/pmed	3
PH 4	21	122	Iron rowel spur; near-complete but heavily corroded and in two pieces; deeply curved sides and short neck; remains of ?spur hook attachment on one side; full L 130 mm; neck L 35mm	1480-1550	med/pmed	1
PH 4	21	bulk	Iron ?swivel; two linked and heavily corroded oval 25 x 40mm iron rings; L 60mm; cf. similar from context [6]	1480-1550	med/pmed	1
PH 4	21	121	Iron ?horseshoe; heavily corroded curved fragment W30mm; L 105mm	1480-1550	med/pmed	1
PH 4	21	bulk	Iron ?sett/chisel; solid rectangular-section body tapering to rounded point; W 18mm; L 105mm	1480-1550	med/pmed	1
PH 4	21	123	Iron ?spur hook attachment; oval plate and flattened hook; diam. 20mm; L 45mm	1480-1550	med/pmed	1
PH 4	21	bulk	Iron /pins/nails; two heavily corroded; L 95 and 105mm	1480-1550	med/pmed	2
PH 4	21	bulk	Fragment of daub with single wattle impression; some signs of burning; W 30mm; L 65mm	1480-1550	med/pmed	1
PH 4	23	41	Iron ring; complete but heavily corroded; diam. 22mm	1500-1550		1
PH 4	23	55	Copper-alloy lace-chape; incomplete Oakely Type 1 with single rivet; L 20mm+	1500-1550	pmed	1
PH 4	23	56	Copper-alloy wire; gauge 1.6mm; L 55mm	1500-1550		1
PH 4	23	61	Copper-alloy pin; long and thin Caple Type B; gauge gauge 1.1mm; L 60mm; bent at right-angles	1500-1550	pmed	1
PH 4	23	bulk	Iron nails; 46 mostly complete but heavily corroded; L 50–70mm	1500-1550		46

PH 4	23	126	Iron implement; hollow round-section body tapering to a point; narrow rectangular opening at wide end with stump remains of solid 15-mm gauge pin/body; L 210mm; cf. similar object in in [12]	1500-1550		1
PH 4	23	bulk	Iron strap; sturdy and tapering with in-situ nail at one side; W 20–35mm; L 67mm+; likely a hinge strap	1500-1550		1
PH 4	23	125	Lead window came; thin and narrow reeded fragment only; W 4mm; L 30mm	1500-1550		1
PH 4	23	bulk	lead melting waste; two small pieces	1500-1550		2
PH 4	25	64	Copper-alloy twisted-loop 'purse ring'; diam. 9mm	1480-1600	med/pmed	1
PH 4	25	bulk	Iron nails; 11 mostly complete but heavily corroded; L 25–50mm	1480-1600	med/pmed	11
PH 4	25	bulk	Iron strap; fine fragment only; W 15mm; L 30mm; possibly buckle plate	1480-1600	med/pmed	1
PH 4	25	bulk	Copper-alloy wire; three small fragments; gauge 1.6mm	1480-1600	med/pmed	1
PH 4	25	bulk	Copper-alloy pin; fine Caple Type B; gauge 0.75mm; L 22mm	1480-1600	med/pmed	1
PH 4	32	68	Iron buckle; complete but heavily corroded; oval with iron buckle pin; W 40mm; L 30mm	1480-1550	med/pmed	1
PH 4	32	bulk	Iron nails; two heavily corroded; L 55–60mm	1480-1550	med/pmed	2
PH 5	11	29	Copper-alloy coin; farthing of George II, standard type 1730; heavy wear	1630-1680	1730	1
PH 5	11	30	Silver coin; three-halfpence of Elizabeth I, Second Issue (North 2000) 1569; Obverse: E D G ROSA SINE SPINA, Crowned bust left with rose to right; Reverse: CIVITAS LONDON / 1569, Shield and long cross fourchee; mint of London; coronet initial mark; slight wear	1630-1680	1569	1
PH 5	11	31	Copper-alloy lace-chape; long and tapering Oakley Type 2; L 48mm	1630-1680	pmed	1

PH 5	11	32	Copper-alloy lace-chapes; two Oakley Type 1; one incomplete with single minute copper-alloy rivet; one complete with two rivets, placed one above the other L 27mm	1630-1680	pmed	2
PH 5	11	33	Copper-alloy flat-section curtain ring; diam. 22mm	1630-1680	pmed	1
PH 5	11	35	Copper-alloy pin; sturdy Caple ?Type B; gauge 1.45mm; L 38mm	1630-1680	pmed	1
PH 5	11	37	Copper-alloy pin; fine Caple Type B; gauge 0.85mm; L 23mm	1630-1680	pmed	1
PH 5	11	38	Copper-alloy lace-chape; Oakley Type 1; complete but unravelled, with two sets of double holes for minute rivets, suggesting rivets penetrated all the way through; L 30mm; traces of now-black coating	1630-1680	pmed	1
PH 5	11	80	Smooth, flat pebble of flint; worked and polished; diam. 16mm; possibly used as gaming piece	1630-1680		1
PH 5	11	bulk	Iron nails; 25 mostly complete but heavily corroded; L 28–80mm; one more substantial nail/bolt; incomplete and heavily corroded with square head; L 100mm	1630-1680		26
PH 5	11	bulk	Lead strip with central ridge; W 4mm; L 25mm; ?possibly lead window came fragment	1630-1680		1
PH 6	4	bulk	Iron nails; nine mostly complete but heavily corroded; L 30–75mm	1720-1780		9
PH 6	6	71	Iron shears; complete but heavily corroded; L 175mm	1720-1760		1
PH 6	6	bulk	Iron nails; 16 mostly complete but heavily corroded; L 35–75mm	1720-1760		16
PH 6	6	119	Copper-alloy lace-chapes; two Oakley Type 1 with single minute copper-alloy rivet; L 23mm	1720-1760	pmed	2
PH 6	6	bulk	Iron ?swivel; two linked and heavily corroded iron rings; diam. 25mm; L 50mm; cf. similar from context [21]	1720-1760		1

PH 6	15	39	Ivory comb; fragment of double-sided single piece form with fine teeth on one side and coarse on the other; mid-rib tapering on side with surviving fine teeth; W 33mm+; L 20mm+	1580-1700	pmed	1
PH 6	15	42	Lead window came; three thin reeded fragments; W 7mm; L 65-75mm	1580-1700	pmed	1
PH 6	15	bulk	Iron nails; 15 mostly complete but heavily corroded; L 40-90mm	1580-1700		15
PH 6	31	70	Stone toy marble of chalk; diam. 16mm	1550-1700	pmed	1
PH 7	3	3	Copper-alloy flat-section curtain ring; diam. 24mm	1850-1900		1
PH 7	3	4	Struck flint; fragment of a blade-like flake; W 8mm; L 25mm	1850-1900	prehistoric	1
PH 7	3	7	White-metal finger ring; very fine twisted body; with small external round bezel with purplish ?glass inset; diam. 17mm	1850-1900	?modern intrusive	1
PH 7	3	60	Lead mount; rectangular strap with in-situ iron nail at one end; now bent double; W 28mm; L 60mm	1850-1900	pmed	1
PH 7	3	63	Copper-alloy pin; Caple Type C; gauge 0.95mm; L 24mm	1850-1900	pmed	1
PH 7	3	65	Copper-alloy lace-chape; ?Oakley Type 1 with minute copper-alloy rivet; L 28mm	1850-1900	If Oakley Type 1, likely residual	1
PH 7	3	73	Copper-alloy mount/frame with open back; straight arms on either side of curved tongue-shaped end with four fine holes for fixing along inner edge; W 55mm; L 35mm	1850-1900	pmed	1
PH 7	3	bulk	iron nails; 37 mostly complete but heavily corroded; L 65-125mm	1850-1900		37
PH 7	3	bulk	Iron rove; rectangular and slightly curved with off-centre circular perforation; 50 x 60mm; hole diam. 70mm	1850-1900		1
PH 7	3	bulk	Iron ?clamp/bracket; rectangular-section body tapering to a point and top bent into simple angled head; L 105mm	1850-1900		1

PH 7	3	128	Lead window came; thin and wide reeded fragment only; W 9mm; L 67mm	1850-1900	pmed	1
PH 7	3	129	Iron staple; near-complete U-shaped with broad flattened top; W 28mm; L 75mm	1850-1900		1
PH 7	3	130	Iron patten; fragment of ring with wavy edge and <i>in-situ</i> tab for fixing to sole; L 120mm+	1850-1900		1
PH 7	3	bulk	Iron ?nail; incomplete and heavily vorreded with flat shank; L 1235mm+; ?cut nail	1850-1900		1
PH 7	12	47	Lead window came; twisted reeded fragment only; W 7mm; L 75mm	mid-18th century	pmed	1
PH 7	12	91	Copper alloy jetton of Nuremberg, Rose/Orb type (c.f. Mitchiner 377–385) c.1500–1600; Obverse: NOIRCIENDBIEDNOIDE, Imperial orb in tressure of three arches; Reverse: NEDVONEDVONNEBVON, Three lis and crowns alternating around rose, annulets in field; slight wear	mid-18th century	c.1500–1600	1
PH 7	12	127	Iron implement; hollow round-section body tapering to a point; narrow rectangular opening at wide end with remains of solid 15-mm gauge pin/body; L 240mm; cf. similar object in in [23]	mid-18th century		1
PH 7	12	bulk	Iron nails; 34 mostly complete but heavily corroded; L 50–120mm	mid-18th century		34
PH 7	12	131	Iron T-hinge with near-complete tapering strap; L 220mm+; hinge plate 25 x 105mm	mid-18th century		1
PH 9	1	1	Composite pen-knife handle with narrow oval copper-alloy plates; remains of ivory scales fixed with copper-alloy rivets; some corroded iron from blade(s) retained at both ends; W 12mm; L 90mm	17th to mid-18th centuries	pmed	1

PH 9	1	2	Copper-alloy rumble bell; near complete, cast with rectangular lug; diam. 30mm	17th to mid-18th centuries	pmed	1
PH 9	1	5	Iron screw pickets; three substantial and evenly spiralled; two with tops finished in neat vertical pair of loops, diam. 65mm; L 800–850mm; possibly WW1 'silent screws' for fencing	17th to mid-18th centuries	modern	3
PH 9	1	6	Copper-alloy ring; substantial cast with oval section; W 10mm; diam. 90mm	17th to mid-18th centuries	pmed	1
PH 9	1	27	Copper-alloy bullet case; complete and slightly tapering; diam. 8–12mm; L 55mm; intrusive find	17th to mid-18th centuries	post-1883	1
PH 9	1	28	Iron fittings; three cast rectangular with flat section pointed arms and crossbar, all with one arm, worn thin and now-broken, extending above the crossbar; W 235mm; L 370mm+; for ?fencing	17th to mid-18th centuries		3
PH 9	1	48	lead cloth seal ; thin disc with incised ?numerals 66 or 99 on one side and textile impressions on the other diam. 20mm	17th to mid-18th centuries	pmed	1
PH 9	1	49	Copper-alloy coin; penny of Edward VII, standard type 1906; slight wear	17th to mid-18th centuries	1906	1
PH 9	1	57	Copper-alloy livery button; slightly domed with image of eagle surmounting a tower; back stamped 'FIRMIN & SONS L ^d STRAND LONDON'; diam. 25mm; possibly regimental	17th to mid-18th centuries	Late 19th century	1

PH 9	1	59	Coins; three complete; copper-alloy penny of Victoria, 'Bun Head' issue 1878–1879, heavy wear; copper-alloy penny of George V standard type 1921, slight wear; copper-plated steel penny of Elizabeth II, standard type 1993, slight wear	17th to mid-18th centuries	1878–1879; 1921; 1993	3
PH 9	1	bulk	Iron grill; cast fragment only with two intact flat-section bars; W 165mm	17th to mid-18th centuries		1
PH 9	1	bulk	Iron binding; complete but squashed of thin overlap band fixed with four iron rivets; band W 39mm; diam. c 200mm	17th to mid-18th centuries		1
PH 9	1	132	Substantial straight-walled body piece of thin-cast iron vessel with flat folded-out edge; diam. c 425mm	17th to mid-18th centuries		1
PH 9	2	26	Copper-alloy cast oval plate with in-situ iron nails at either end; transverse curved copper-alloy hook/plate at centre; W W 20mm; L 60mm	1480-1600		1
PH 9	2	133	Iron ?hasp; near-complete with long and slightly domed body with hook in plane; W 22mm; L 280mm	1480-1600		1
PH 9	2	bulk	Copper-alloy mount; incomplete cast strap with two small circular holes along one edge; W W 19mm; L 80mm+; also also a bunch of curled-up and twisted copper-alloy wire	1480-1600		1
PH 9	5	8	Copper-alloy coin; centime of Leopold II of Belgium, 'French' type (KM 33) 1869–1907, moderate wear	1830-1910	1869–1907	1
PH 9	5	9	?Gilded white-metal badge; embossed centre with triad of 'F J C' inside shield, flanked by five oak leaves at each side; edges tightly folded and crumpled at back; diam. 20mm+	1830-1910	pmed	1

PH 9	5	10	Copper-alloy dog whistle; cast with parallel longitudinal ribs; small ring for suspension towards one end; diam. 9mm; L 71mm	1830-1910	pmed	1
PH 9	5	11	Cupro-nickel shilling of Elizabeth II, 'English' type (Spink 4147) 1961, unworn	1830-1910	1961	1
PH 9	5	12	Copper-alloy coin; penny of Edward VII, standard type 1908, moderate wear	1830-1910	1908	1
PH 9	5	13	Copper-alloy coin; penny of George V, standard type 1917, moderate wear	1830-1910	1917	1
PH 9	5	14	Copper-alloy coin; penny of George V, Small head type (Spink 4055) 1929, moderate wear	1830-1910	1929	1
PH 9	5	15	Copper-alloy coin; penny of George V, standard type 1921, slight wear	1830-1910	1921	1
PH 9	5	16	Copper-alloy coin; penny of George V, standard type 1921, moderate wear	1830-1910	1921	1
PH 9	5	17	Copper-alloy fitting; short tubular with threaded inside and internal cap; diam. 21mm; L 23mm	1830-1910	pmed	1
PH 9	5	18	Copper-alloy chain necklace; very fine of oval links forming a pattern of three short and one long; oval catchplate and ?modern circular moving tab lock; L 460mm	1830-1910	modern	1
PH 9	5	19	Iron cockshead hinge; largely complete but heavily corroded; LW 85mm; L 165mm	1830-1910	style known from 17th-century buildings	1
PH 9	5	20	Steel dividers; near-complete with one round-section pointed arm and remains of corresponding arm with two round-section parallel shanks; L 80mm	1830-1910		1

PH 9	5	21	Iron fitting/implement; incomplete; short handle/leverset into drum-shape end of substantial strap or bar; ht. 120mm; L 80mm+	1830-1910		1
PH 9	5	23	Metal 'Kolynos' dental paste tube; incomplete and squashed; design suggests 1940s	1830-1910	?1940s	1
PH 9	5	50	Iron fittings; two substantial round-section bars, gauge 10mm; one slightly curved and with existing end hammered into rectangular section and bent at right-angle; L 340mm+; other with both ends hammered into flat rectangular and pointed ends, at a slight angle, both with two holes for fixing; L 360mm; Likely a door grip handle	1830-1910		2
PH 9	5	51	Lead shot; diam. 13mm	1830-1910	pmed	1
PH 9	5	52	Lead waste of substantial sheet; W 30 mm; L 45mm; 2mm thick	1830-1910		1
PH 9	5	54	Lead ?seal; substantial disc with embossed decoration on one side; heavily corroded; diam. 27mm; 2mm thick	1830-1910		1
PH 9	5	58	Copper-alloy coin; nummus of Gratian, Securitas Reipublicae type (LRBC II 341) 367–375; . Obverse: DN GRATIAN VS A[VGG AVG], Pearl-diademed and draped bust right; Reverse: [SECVRITAS REIPUBLICAE] / OF I / [Crescent and pellet]/ [L]VGP, Victory advancing left holding wreath and palm; mint of Lyons, moderate wear.	1830-1910	roman	1
PH 9	5	77	White-metal ear clip; plain globular against openwork triangular back plate; L 12mm	1830-1910	modern	1
PH 9	5	78	Pewter button; domed two-part body with single loop for fastening; diam. 21mm	1830-1910	pmed	1

PH 9	5	79	Coins; seven complete and three cut pieces; cupro-nickel 20 pence of Elizabeth II, standard type 1989, slight wear; copper-plated steel penny of Elizabeth II, standard type 1994, slight wear; copper-alloy penny of Elizabeth II, New type (Spink 4237) 1980, slight wear; copper-alloy penny of Elizabeth II, standard type 1989, slight wear; copper-plated steel penny of Elizabeth II 2001, slight wear; nickel-brass one pound of Elizabeth II, New type (Spink 4221) 1983, slight wear; nickel-brass one pound of Elizabeth II, Welsh type (Spink 4331) 1985, moderate wear; copper-alloy penny of Elizabeth II, New type (Spink 4237) 1975, slight wear; cupro-nickel 20 pence of Elizabeth II, standard type 1985–1997, slight wear; chopped into fragment; copper-alloy two pence of Elizabeth II, New type (Spink 4235) 1979, slight wear; chopped into two fragments	1830-1910	1975–1997	10
PH 9	5	bulk	Iron nails; 27 mostly complete but heavily corroded; L 65–135mm	1830-1910		27
PH 9	5	134	Iron vessel; two cast fragments; one 65 x 115mm piece of circular vessel base with remains of straight vessel side; one 60 x 60mm fragment of substantial vessel with faceted exterior, 10mm thick	1830-1910		2
PH 9	5	bulk	Lead waste; six pieces including sheet and melting waste, and section of flattened tube/pipe	1830-1910		6
PH 9	5	135	Copper-alloy ?hole reinforcement; one flat side and other with ridged opening; diam. 25mm	1830-1910		1

PH 9	6	34	Copper-alloy hooked clasp; Read Class D Type 6; complete with trefoil of plain copper-alloy hollow domed bosses; rectangular loop and wire hook at back; W 24mm; L 25mm; residual 16th-century object	1720-1760	likely 16th century	1
PH 9	7	bulk	Iron nails; three mostly complete but heavily corroded; L 45–90mm	1550-1700		3
	0	74	Machine-cast metal fragment; probably WW2 shell shrapnel		modern	1
	0	81	Copper-alloy fitting/implement; cast with oval bow and central tapering pin at one side; W 25mm; L 40mm			1
	0	82	Copper-alloy finger ring; fine D-section body with traces of inscription inside; W 3.5mm; diam. 20mm			1
	0	83	Copper-alloy flat-section curtain ring; diam. 23mm		pmed	1
	0	84	Copper-alloy rattle bell; fragment only		pmed	1
	0	85	Copper-alloy ?fitting; cast fragment only, tapering towards tongue-shaped end; two <i>in-situ</i> tubular rivets of copper alloy, formed by rolled sheet and hammered flat on one side; W 10–18mm; L 28mm+			1

APPENDIX 9 - ASSESSMENT OF THE BUILDING MATERIAL (FPL17)

Amparo Valcarcel

Introduction and Aims

30 boxes of ceramic building material, stone and mortar were retained from the excavations at Dovecote community project, from the paddock area to the west and north-west of Fulham Palace, London Borough of Hammersmith and Fulham, London.

Central NGR: TQ 23954 76153

The assemblage (545 examples; 131.51 kg) was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the medieval and post-medieval ceramic building material recovered from FPL17.
- Ascertain whether the type and form of the building material can tell us something about the function or even status of the site represented by the different occupation phases.
- Identify the fabric of the unworked and worked stone in order to determine what the material was made of and from where it was coming from.
- Identify any items of particular stylistic or fabric interest such as the floor tiles
- Make recommendations for further study.

Methodology

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). The appropriate Museum of London building material fabric code is then allocated to each item. In turn, brick, roofing tile, then floor tile and finally stone were assessed for their fabric and form.

Most of all of the building material were found in phases 6 and 7, related to fill of pits and demolition layers, however building material was also recovered from layers and dump deposits in other phases, mostly consisting of post medieval roof tile and brick fragments.

CERAMIC BUILDING MATERIAL 503 examples, 116.07 kg

More than 85% of the assemblage consists of post medieval ceramic building material, with much smaller quantities of late medieval (13.32%) fabrics. As expected most of the ceramic building material consisted of brick and peg tiles, all of which have a fabric and form consistent with the late 16th to late 18th century.

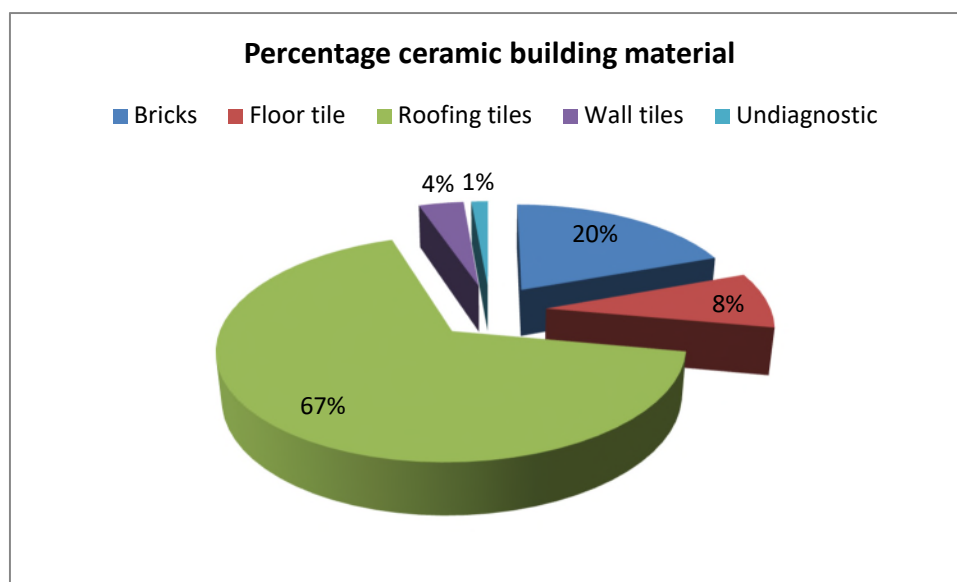


Fig.1. Percentage of forms by size of the ceramic building material recovered from FPL17

LATE MEDIEVAL/ EARLY POST MEDIEVAL 67 examples 9.37 kg

The construction of the Tudor Palace at Fulham is marked by the widespread use of local brickearths, both for the production of large red bricks and peg tile. These materials are also in continual reuse and remain important, together with fresh consignments of later post medieval brick.

Peg tile 53 examples 4.18 kg

Fine sandy fabrics 2271 (1180-1800), 39 examples 4.01 kg.

Distinct sandy fabric with abundant-frequent coarse quartz 2273 (1135-1220), 1 example, 37 g

Iron Oxide fabrics 2586 (1180-1850), 13 examples 764 g.

Fairly frequent quartz and prominent iron oxide and silty inclusions 3091(1200-1800), 1 example, 45 gr

A medium sized group of medieval roofing tile defined by fabric type, form, glazed and the presence of coarse moulding sand can be distinguished from the post medieval group on account of their coarse moulding sand, occasional splash glaze and fabric type. As some of

these fabrics were manufactured over a long period, it may well be that a proportion of these are in fact transitional or post medieval in date. Overlapping, flat rectangular peg tiles attached to roofing by two nails (as represented by two nail holes, with both round and square holes) form numerically the most common medieval roofing form. All of the medieval roof tile recovered was fragmentary, and most probably represents either dumped material, or residual demolition material. The very earliest medieval peg-tile fabric is the coarse sandy 2273 fabric with small quantities of shell. These tiles were manufactured between 1135 and 1240. Splash glaze fragment are numerous from [13].

Floor Tile, 14 examples, 4.56 kg.

Moderate fine quartz and calcium carbonate, 2191 (1300-1550), 1 example, 480 g.

Moderately sandy fabric with coarse quartz 2323, (1300-1550), 3 examples, 1.29 kg.

Abundant fine quartz and calcium carbonate 2497 (1300-1550), 8 examples, 2.26 kg.

A cluster of late medieval and early post medieval floor tiles was recovered from the site. All the items are plain glazed (yellow, green and brown). Given the medium quantity of early dumped medieval peg tile recovered from the site it was inevitable that some floor tile from this period would be recovered. It's interesting to note that all the floor tiles are imported.

POST MEDIEVAL 436 examples, 106.69 kg

A large assemblage of brick and roofing tile was recovered from post medieval phases. From these phases the amount of brick fragments recovered increases, especially from phases 6 and 7. The earliest bricks came from period 1450/1480 to 1700.

EARLY POSTMEDIEVAL, 322 examples 73.55 kg.

Late Medieval- Tudor Brick 60 examples, 34.50 kg

Local London sandy red fabrics type [1450-1700]

3033; moderate coarse quartz, occasional black iron oxide, 2 examples, 1.28 kg

3039; Moderate quartz, occasional black iron oxide, moderate yellowish white silty inclusions, 1 example, 332 g.

3046; Sandy fabric with frequent coarse quartz, 48 examples, 25.2 kg.

3065, Extremely sandy fabric with abundant coarse quartz, 9 examples, 7.67 kg

Four different sandy red brick fabrics were identified; the fine sandy 3033; the mottled sandy 3039; the very sandy red 3046 and fabric 3065 which contains burnt flint. The largest proportion of bricks are shallow (50-56mm), wide (104-106mm) and unfrogged. Although the production

of early-post medieval reds is characteristic of high status brick structures between 1450 and 1700 in the city of London, slightly further out, they continue to be produced into the 18th century. Therefore some caution needs to be made when dating these materials this far out.

Bricks from [3] [15] and [21] are glazed, probably a decorative pattern in the facade or from a fireplace. The Tudors further patterned their brickwork by inserting headers of over burnt or vitrified bricks into the walling, mainly in English bond or English cross-bond.

Peg tiles 255 examples 36.46 kg

2276, (1480-1900), *hard, well fired fine texture with few visible inclusions with fine moulding sand.*

Peg tiles belonging to the very common sandy red fabric 2276, dominate the post medieval roofing (50.69% by size) tile assemblage, with large accumulations from [6] [11] and [13]. The greater proportion of tile fragments is unglazed, with just one splash glazed fragment [6]. Their manufacture over a period of four hundred years, however, means it is only possible to distinguish early post medieval (1480-1700) from later post medieval (1700-1900) on the basis of a coarser moulding sand and narrow ridge marks that sometimes align along the full length of the peg tile.

Floor tile 25 examples 16.12 kg

2850 (1450-1800), 23 examples, 15.28 kg.

2318 (1450-1800), 3 examples, 2.31 g.

Early late medieval to early post medieval Flemish glazed floor tile fragments made from a variety of silty fabrics, were identified in small quantity. Some of the examples are plain glazed, especially in yellow. A group of these floor tiles are poorly made suggesting an early date (1450-1600). As seen in late period medieval fabrics, all the floor tiles are imported.

Tin glazed, 9 examples, 325 g.

Dutch tiles, 7 examples, 184 g.

Aldgate tile, 1 example, 116 g.

As with the floor tiles, most of the earlier wall tiles recovered from the excavation are imported. The examples are in a preserved blue design relating to Biblical or landscape scenes, although the majority of fragments are very small. These tiles were produced in Antwerp between 1620 and 1750. The earliest tile [2] came from Aldgate pothouse and is dated 1571-1620, and preserved a blue and purple medallion border (Betts, 2010).

LATE POST MEDIEVAL 62 examples 14.64 kg

A medium assemblage of late post medieval ceramic building material was recovered, mostly comprising post Great Fire materials. All these materials reflected the re-building of the palace. The introduction of pan tiles is also noted by the presence of fabric 2279. A smaller quantities of machine bricks, dated mid 19th and 20th centuries were collected. These were bonded with a hard mortar.

Bricks, 28 examples, 9.55 kg.

Intermediate Great Fire

Maroon 3032nr3033 (1664-1725), 2 examples, 735 g.

Two small fragments of a late 17th to early 18th century intermediate bricks in fabric 3032nr3033 combining facets of both early post medieval reds and post great fire purples were collected from [5].

Post Great Fire fabrics 26 examples, 8.82 kg

3032 (1666-1900) Post Great Fire purple clinker rich fabric, 19 examples, 7.49 kg.

3034 Local post-Fire red brick, 7 examples, 1.35 kg.

A small group of purple and yellow post great fire bricks were recovered from the site. Early hand-made purple post great fire bricks 3032 and 3034 are also wide and shallow, poorly made with a crinkly appearance. Later post great fire bricks, defined by their narrow width, in accordance with brick tax regulations of the later 18th and 19th century and harder cement mortars. All the brick examples are unfrogged. Some have sharp arises suggesting possible machine manufacture. Some of these bricks use Victorian mortar types. The presence of these bricks shows a phase of redevelopment at the beginning of 19th century and probably later.

Roofing tile

2279 Pan tile (1630-1850), 24 examples, 4.72 kg.

A medium assemblage of curved, nibbed roofing tile which came into force only during the mid 17th century was recorded, attesting to extensive later post medieval red roofing tile development in this area.

Wall tiles

Encaustic tiles, 10 examples, 368 g.

A group of Dunhill Craven factory modern tiles indicate a late 19th or early 20th century date. The fragments are plain glazed, were probably used as a tessellated floor or wall and are very

common in Victorian and art deco houses, imitating medieval tiles. This company was formed in 1872 in Shropshire.

Mortar/Concrete Type	Description	Use at FPL17
T4	White lime mortar with a glassy and charcoal base (1800-1950)	Used on post medieval peg tiles (2276) and bricks (3046, 3046nr3032, 3032nr3033) and tin glazed [4]
T3	Hard white lime mortar with flint and angular gravels inclusions; sometimes pinkish (1750-1850)	Used in fabrics 2276;2850;3046, FPL1 and especially in 3032 bricks [3]
T2	White or greyish hard lime mortar with occasional small iron black oxide and sometimes gravels (1650-1800)	Associated to fabrics 2850, 2276, 3046, and 3033 from [0] [7][15][31]
T1	White hard lime mortar (1500-1700)	Rare early post medieval mortar used in [21] and attached to 2497 floor tile and 3046 brick

Fig. 2 List of mortar types identified from the excavation FPL17

T3 and T4 mortars were used in the 19th and early 20th century, essentially associated with bricks. Most of the post medieval fabrics use the same hard white mortar (T2). Other mortar (T1) is very rare and is probably associated with late medieval - early post medieval structures.

STONE (42 examples 15.44 kg)

London has no indigenous stone; it was an expensive material that would have been transported from various locations and used principally on important structures. The main stones used in London were ragstone, chalk and flint. A review of the main rock types, their geological character, source and probable function/ form are summarised below (Fig 03). A more detailed consideration as to their origin and use of this small assemblage are reviewed below.

MoL fabric code	Description	Geological Type and source	Quantity	Use at FPL17
3105	Fine hard dark grey sandy limestone	Kent ragstone, Lower Cretaceous, Lower Greensand Maidstone District - Kent	9 examples 6.15 kg	Common – Construction Rubble from context; [5] [6] [7] [13] [14] [15] [25]
3106	Yellow-green glauconitic sandstone	Hassock stone Lower Cretaceous, Lower Greensand Maidstone District - Kent	3 examples 1.18 kg	Construction Rubble from contexts: [6], [13] and [13]
3107a	Fine grained lime low-density glauconitic limestone	Reigate stone – Upper Greensand, Lower Cretaceous Reigate-Mertsham Surrey	18 examples 6.7 kg	Used as a ashlar [3] [12], rubble [3] [6] [15][21] as a paver [3][15]
3109	Banded shelly oolitic limestone	Middle Jurassic (Bathonian). South Cotswolds	2 examples 566 g.	Used as a ashlar and as part of an architectural element, probably from a window [3]

3114	White fine crystalline marble	Various sources (Belgium, Mediterranean)	2 examples 497 g	Used as paving slab [12] [15]
3115	Blue-Green hard fissile slate	Cornish Slate – Devonian Cornwall	4 example 175 g.	Used as roofing or levelling [7][33]
3116	Fine powdery white foraminiferal limestone	Chalk Upper Chalk (Upper Cretaceous) Thames Valley	3 examples 134 g	Used as construction rubble from contexts [6] [13][31]
3120a	Natural clay earth pigment which is a mixture of ferric oxide and varying amounts of clay and sand	Ochre (Various sources)	1 examples 20 g	Used as a pigment? [12]

Fig. 3 Table summarising the character, source, quantity and probable function of the main stone types from FPL17.

With at least 8 different lithotypes identified from the late medieval and post medieval sequence, the excavations at FPL17 give some idea of the draw on resources that a prestigious building had in its construction, for the embellishment of the buildings like the use of imported marbles. Some pieces were moulded and faced, and appear to be architectural or furniture elements (such as window made of Bath stone) [3]. Most of this is rubble but there is also ashlar, paving and roofing, especially from phase 7. The River Thames remained the principal means of access for the transport of building stone up until the development of the railway network in the early 19th century. It seems likely that most of the stone types are post medieval.

Kentish ragstone and Hassock stone was probably used in the foundations and the in the walls, using a rubble core. Both stones, from the Maidstone area were transported by boat into London and were very common in medieval and post medieval masonry construction. Chalk is a material readily available in southern Britain. All of the stone walling material it seems is related to the demolition of the foundations and walling core rubble of buildings.

Reigate-type stone was also used less frequently as facing stone, though it is the dominant stone on the site, especially from context [3]. Reigate stone was not used for external architecture after the 15th century due to its poor weathering properties. The fact that most of the examples came from a demolition layer [3], probably suggest the demolition of a medieval part of the palace between 1750 and 1760.

A group of stones has been identified as paving or roofing stones. Belgian and Carrara marble pavers are the most interesting fragments from phases 6 and 7, indicating dump episodes from the Palace. Slate may have once been used as roofing stone or indeed as possible coursing levels in the wall core. In the absence of any definable nail holes however it is not possible to determine their function.

Freestone is a limestone with an open porous texture that enables the rock to be worked or carved in any direction. The two examples recovered are made of a type of banded shelly oolitic limestone from the Middle Jurassic (Bathonian) of the South Cotswold escarpment. This is the most common native sculptural and funerary material in London (Hayward 2009). From [3], one example is moulded and carved and is probably form an architectural element such as a window.

With at least 8 different lithotypes identified, the excavations at Fulham Palace give some idea of the draw on resources that a wealthy and prestigious building had in it is construction. This cannot only be attributed to the high status items (marble pavers) but perhaps the more mundane constructional elements (a number of different native roofing and paving elements and the variety of materials in the constructional rubble itself).

PHASE SUMMARY

The fabric and form of the worked stone, ceramic building material (peg tile; floor tile; brick) and mortar retained from the excavation (FPL17), forms the basis of a broad chronological subdivision. Most of the materials examined from layers or from fills consist of roofing elements (67% by size), locally produced bricks (20%) and floor tiles (8%).

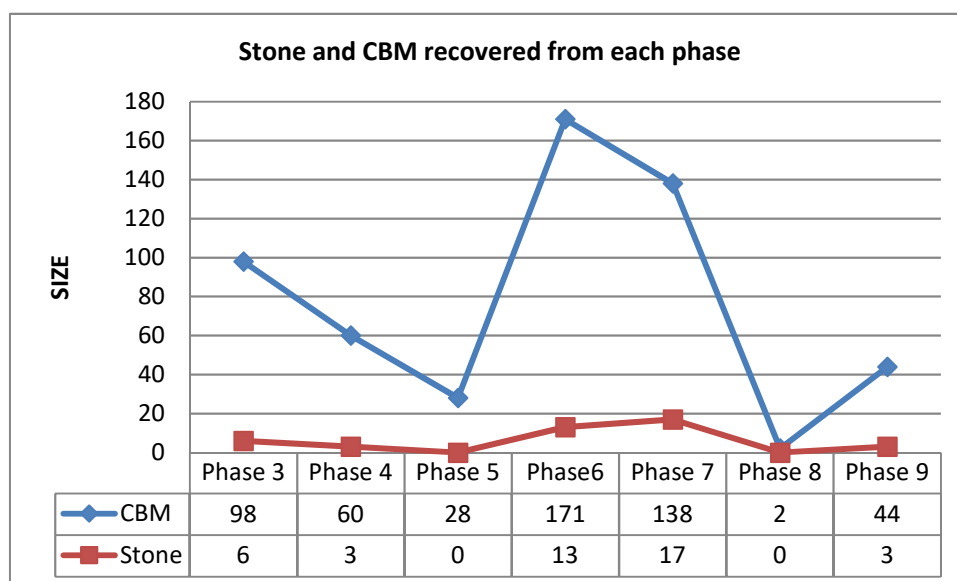


Fig.5 Comparative size ceramic material and stone by phases

Phase 5 (Medieval)

There was a small quantity of building material recovered from phase 5 (98 fragments, 13.51 kg). Because of the intermixing between medieval and post medieval ceramic building material, it has proven somewhat difficult to subdivide the medieval features and deposits assigned to

phase 3 from the more substantial post medieval levelling layers immediately above. Peg tiles represent 76.53% by size, made from different fabrics (2271; 2273; 2586; 2276; 3091), suggesting the existence of different roof coverings. These proportions far exceed what would normally be expected from a medieval peg tile assemblage and point to derivation from a substantial, probably 12-13th century structure.

Unglazed floor tiles made of Flemish fabric 2318 and 2850 were present, and their shape indicates an early post medieval date. Early post medieval sandy red bricks were recovered from layer [13], one of them highly vitrified. These were commonly used to decorate facades in the Tudor period. The presence of the bricks and the common peg tile 2276 suggest a late medieval or early post medieval date from this phase 3.

A small quantity of stone (16.32%) was recorded, mostly as rubble, including the common Kentish Ragstone, Hassock and chalk. Small fragments of slate were found in a possible yard surface [33], one of them contained a hole, indicating a roofing use.

Phase 4 (1480-1550)

The materials collected in this phase came from different fills (60 fragments, 5.51 kg). Medieval fabrics are present in low quantities (25% by size; 19 % by weight). Obviously the post medieval ceramic building is predominant (70% by size). By form, peg tiles are the most numerous (75% by size), made of three different fabrics 2271, 2586 and 2276. Flemish plain glazed floor tiles indicate the importance of importing high status items for the embellishment of the Palace. Bricks vaguely increase from the previous phase (10% by size). Two different sandy red brick fabrics were identified: the very sandy red 3046 and fabric 3065 which contains burnt flint. Tudor bricks were irregular in size and shape. The largest proportion of bricks are shallow, wide and unfroged, and they have sunken margins which are a common characteristic of such bricks. They were by far the most common fabric in London from the mid 15th century to 1666. All were manufactured for city use from local London brick clay. Vitrified bricks are usually associated with a decorative pattern in the facade or from a fireplace. The Tudors further patterned their brickwork by inserting headers of over burnt or vitrified bricks into the walling, mainly in English bond or English cross-bond. All the stone from this phase is rubble made of Reigate and Kentish ragstone.

Phase 5 1630-1680

The only context that provided materials from this phase is fill [11] from [44]. The fragments (28 fragments, 5.78 kg) decrease less than a half from the previous phase, but comparatively this context is rich in materials. The very common red sandy peg tiles fabric 2276 dominates the assemblage in this phase (82.14%), with a few examples of early post medieval sandy red local

bricks (3046;3039;3065), some of them highly vitrified. There is a complete absence of stone and flooring ceramic examples in this phase.

Phase 6 1680-1750

This phase had the largest quantities (299 examples, 36.36 kg) of material building. This may relate to an increase in rebuilding activity. The material was collected from different fills, pits and cuts and from layers or dumped/levelling deposits. Most of the material is in a good condition. A large quantity of building material came from fill [15] representing 63.09% by weight from phase 6.

The London sandy 2276 peg tile group is the predominant fabric (47.95% by size, 27.09 by weight), with less examples of 2271 and 2586, but roofing form represent the dominant forms in this phase (61.98% by size). Bricks and floor tiles (7.6%) vaguely increase in this phase. Early red post medieval bricks are predominant (15.78% by size, 41% by weight). Their importance relates to an increase in demand for bricks after the Great Fire. Some of them are clearly reused with later mortars. A range of measures was recorded, with 98-114 mm width and 50-56 mm of depth.

It's the first time that a cluster of tin glazed wall tile fragments, with different dies, were collected from the site. Most of the wall tiles were imported from Antwerp, and one example was manufactured in the Aldgate pothouses. The introduction of pan tiles is also noted by the presence of fabric 2279. There was a small quantity of stone rubble (6.43%) and paving / roofing material

Phase 7 (1750-1760)

A large quantity of building material was recovered from this phase (138 examples, 52.06 kg) from just two dump layers [3] and [12]. Roofing tiles represent 46.37% of the assemblage, bricks 23.18%, wall and floor tiles are represented in less quantity. There is not much difference between fabrics and forms from phase 6. The high quantities of bricks made of sandy red fabric 3046 suggest the demolition of a single or a group structure built at the same phase. The measures and the shape of these bricks indicate an early post medieval date, and probably point to a phase of rebuilding and demolition in the palace, especially if the materials came from just two contexts. The increase of the post Great fire bricks found is similar in several London sites, relating to the high demand of ceramic building material.

The types and uses of stone recovered from this phase are similar from previous phases. The fact that this phase has preserved the highest size of stone reflects the hypothesis of a reconstruction phase at the Palace. Reigate, in ashlar form, is a typical medieval and early post

medieval stone and is highly represented, and one of the items is an architectural element, probably from a window. Other high status fragments, including Belgian red and white marble, suggest this renovation phase. A small fragment of yellow ochre, a natural pigment, was recovered in this phase too. Homogeneity in brick shape, fabrics and stone selection, indicates that the material came one contemporary building, probably late medieval or early post medieval.

Phase 8 (19th century)

Two examples of ceramic building material were recovered from the fill [10] of a 19th century dog burial and consisted of two peg tiles fragments.

Phase 9 (Modern)

A medium sized quantity of building material was collected from the topsoil and the subsoil (44 fragments, 16.46 kg). Bricks are the predominant form (27.27%), followed by roofing (25%) and wall tiles (25%) and less quantity of floor tiles. Local red sandy bricks fabrics still remain high following less quantity of modern fabrics. Brick from [5] is extremely thick (83 mm), and probably is dumped material from the pottery kilns nearby. There is a reduction in the amount of stone, with only two fragments of Kenstish ragstone rubble and one fragment of roofing / levelling slate. Flat peg tiles, made of different fabrics are still the main roofing forms. It's interesting to note the high presence of encaustic floor /wall tiles, manufactured in Dunhill Craven factory. These small plain tiles, normally being part of tessellated floor, were popular at the end of the 19th and beginning of the 20th century with the revival of Gothic style. From this phase a small cluster of Flemish late medieval and early post medieval plain glazed floor tiles were found.

DISTRIBUTION

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
0	2850L;3064W;3101PM	Flemish yellow glazed floor tile; a cluster of Dutch wall tiles;	6	1600	1800	1600	1800	1660-1800	1660-1800
1	3064W	Modern wall tiles (Dunhill Craven factory)	3	1850	1950	1874	1950	1874-1925	No mortar
2	3064W	Aldgate pothouse wall tile	1	1571	1620	1571	1620	1571-1620	No mortar
3	3091;2497;2850;2271;2275;2276;2279;2815;3046;3036;3032;unk;3107;3109a;3101PM	Late medieval and post medieval floor tiles; medieval and post medieval peg and pan tiles; early post medieval sandy red bricks; Dutch bricks; post Great fire bricks; a cluster of Reigate stone examples (ashlar, moulded, paver, rubble); Bath ashlar	108	1200	1900	1666	1900	1750-1850	1750-1800

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
		and moulded item from a window?							
4	2271;2276;2279;3034;3064W;3101PM	Post medieval peg and pan tiles; post Great fire bricks; white tin glazed;	14	1180	1900	1480	1900	1800-1900	1800-1900
5	2271;2276;2318;2323;2497;2850;3046;3032nr3033;3032;3034;3064W;3105;3101PM	Medieval and post medieval peg tiles; late medieval and post medieval floor tiles; post medieval sandy red bricks; intermediate and post Great fire bricks; Encausted Victorian floor tiles; Kentish ragstone rubble	26	50	1950	1874	1950	1874-1925	1850-1950
6	2271;2276;2586;2279;3033;3046;3036;3105;3106;3107;3116	Medieval and post medieval peg and pan tiles; post medieval sandy red bricks; Dutch brick?; Kentish ragstone, Hassock stone, Reigate and chalk rubble	70	50	1900	1480	1900	1630-1800	No mortar
7	2323;2850;2276;3032;3105;3117;3101PM	Late medieval and post medieval floor tiles; post medieval peg tiles; post Great fire brick; Kentish ragstone rubble; Slate roofing or levelling	12	1300	1900	1666	1900	1700-1900	1666-1900
10	2276	Post medieval peg tiles	2	1480	1900	1480	1900	1480-1900	No mortar
11	3039;3046;3065;2276;3036	Post medieval sandy red bricks and peg tiles; Dutch brick	28	1450	1900	1480	1900	1600-1800	No mortar
12	2276;2279;UNK;3032;3106;3107;3114;3120;3101PM	Post medieval peg and pan tiles; unknown fabric paver; post Great fire bricks; Hassock stone rubble; Reigate ashlar; imported marble paver; yellow ochre; moulded concrete	31	50	1900	1666	1900	1800-1900	1800-1900
13	2271;2273;2586;3091;2276;2318E;2850E;3046;3105;3106;3116	Medieval and post medieval peg tiles; early post medieval floor tiles and sandy red bricks; Kentish ragstone, Hassock and chalk rubble	78	50	1900	1480	1900	1500-1700	No mortar
14	2271;2276;2850;3046;3105	Post medieval and floor tiles; early post medieval sandy red brick; Kentish ragstone rubble	32	1180	1900	1480	1900	1500-1700	No mortar
15	2323;2497;2850;2850L;2276;3033;3046;3065;3036;3064W;unk;3105;3107;3114;3101PM	Late medieval and early post medieval floor tiles; post medieval peg tiles; early post medieval sandy red bricks; Dutch Brick? and tin glazed; Kentish Ragstone rubble; Reigate rubble and paver; Carrara marble paver;	49	50	1900	1480	1900	1700-1800	1700-1800
17	2181;2276;2850;3032	Flemish floor tiles; post medieval peg tiles; Post Great fire brick	4	1300	1900	1666	1900	1666-1900	No mortar

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
21	2497;2271;2586;2276;3046;unk;3107;3101PM	Late medieval early post medieval Flemish floor tile; post medieval peg tiles; early post medieval bricks; unknown sandy fabric; Reigate rubble	33	1300	1900	1480	1900	1500-1700+	1500-1700
22	2276	Post medieval peg tile	1	1480	1900	1480	1900	1480-1900	No mortar
23	2271;2586;2276	Medieval and post medieval peg tiles	12	1180	1900	1480	1900	1480-1900	No mortar
24	2271;2276;3101 PM	Medieval and post medieval peg tiles;	3	1180	1900	1480	1900	1480-1900	1480-1900
25	2497;2276;3105;3101PM	Late medieval early post medieval Flemish floor tile; post medieval peg tiles; Kentish ragstone rubble	5	1300	1900	1480	1900	1480-1900	1480-1900
27	3046;3065;2276	Early post medieval sandy red bricks; post medieval peg tile	3	1450	1900	1480	1900	1500-1700	No mortar
31	2279;3034;3116;3101PM	Post medieval pan tile; post medieval brick; chalk rubble	5	1630	1900	1666	1900	1666-1900	1666-1900
32	2497;2586;2276	Late medieval early post medieval Flemish floor tile; post medieval peg tiles	7	1300	1900	1480	1900	1480-1900	No mortar
33	2271;2276;3115	Medieval and post medieval peg tiles; Slate (roofing)	10	1180	1900	1480	1900	1600-1900	No mortar
34	Unk	Small sandy fragment	1					Undateable	No mortar

RECOMMENDATIONS/POTENTIAL

The building material (131.51 kg) recovered from FPL17 very much reflects extensive post medieval phases associated with the continued rebuilding of Fulham Palace. Furthermore, all the stone and ceramic fabrics are very common for London. However, other than using building material as a dating tool, the value of the sizeable assemblage of ceramic building material and stone from FPL17 lies largely with individual items of high status housing (floor tiles) and the high-status stone materials (moulded, marble pavers).

The low quantity of stone recovered probably relates to continued reuse. Reigate, a poor weathering stone, is found in high quantities and is probably associated with demolition phases. An interesting cluster of imported Flemish medieval and early post medieval floor tiles indicates the high status of the Fulham Palace. Fabric FLP1 is unmatched with fabrics in London, and probably is an imported material. Phase 6 is extremely interesting due to the large amount of high quality items, most of them late medieval or early post medieval, suggesting a demolition of a structure or building.

A majority of the building material sampled should be discarded following assessment. However, representative examples provide an idea of the materials used in the site. Plain glazed floor tiles, tin-glazed, and tessellated floor/wall tiles should be retained. Fabric FPL1

should be kept and be compared with material from previous excavations at the Palace. It would be worthwhile examining and comparing the stone types from these examples with retained high status stone and paving from earlier excavations.

Publication

Writing a section concentrating on the types of the floor tiles and high status stones.

The ceramic items may require further investigation, especially the floor tiles and the odd FPL17 fabric with possible input from a person familiar with the unidentifiable fabrics (e.g. Ian Betts). These high status ceramic materials require comparison with the materials from previous excavations in Fulham Palace.

Some of the more ornate items such floor tiles and moulded and paver stones, require photography and illustration at publication stage.

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APPENDIX 10 – LITHIC ASSESSMENT

Site Code: FPL17

Ella Egberts, September 2018

Summary

Context	Small find	Type	Date
3	4	Flake fragment	Likely Mesolithic/Neolithic
37	72	Blade fragment	Mesolithic/Neolithic

Description

Two flint small finds were recovered from Fulham Palace. One worked flint (sf4) was found in context [3] and concerns a small, thin, broken flint fragment of light grey translucent flint. A small patch of cortex at the distal end of the dorsal side indicates weathered nodular flint was used. The flake is in chipped condition. The flake is longitudinally broken, the left edge and distal end of the flake are therefore missing. The striking platform is snapped off. The flake is rather irregular in outline but thin and well struck. The dorsal side is characterised by some parallel negative flake scars.

The other worked flint small find (sf72) was recovered from context [37] and is a fragment of a prismatic blade. The blade is made of grey and light grey mottled flint. The blade fragment is in chipped condition and the distal end of the blade is snapped off and the striking platform and is missing, possibly slightly disintegrated by the blow or retouched/damaged. Some edge damage along the mesial part of the left and right edge may be the result of use.

Both worked flint fragments described here are not highly diagnostic. However, certain technological and typological characteristics such as the indication for a blade-based technology and skilled flintworking, suggests a Mesolithic/Early Neolithic date for the material. The fact that both pieces are in chipped condition indicates that the worked flint likely has moved to some extent after discard.

APPENDIX 11 - ENVIRONMENTAL ARCHAEOLOGICAL ASSESSMENT REPORT

Site: Fulham Palace Community Dig, Bishop's Avenue, London (FPL17)

By: Kate Turner

INTRODUCTION

This report summarises the findings of the rapid assessment of the environmental remains in four bulk samples taken during the excavation of land at Fulham Palace, Bishop's Avenue, London. These samples were taken from a post medieval ditch and a prehistoric pit, the context information for which is given in table 1.

The aim of this assessment is to:

1. Give an overview of the contents of the assessed samples;
2. Determine the environmental potential of these samples;
3. Establish whether any further analysis is necessary.

Table 1: Context information for environmental samples, FPL17

Context No.	Cut	Context type	Context category	Trench number	Phase	Period	Env. Sample number	Interpretation
21	44	Fill	Ditch	1	4	PM: 1480-1550	1	Fill of slot [44] in ditch [43]
23	29	Fill	Ditch	1	4	PM: 1480-1550	2	Fill of slot [29] in ditch [43]
25	29	Fill	Ditch	1	4	PM: 1480-1550	3	Fill of slot [29] in ditch [43]
37	38	Fill	Pit	2	2	Prehistoric	4	Fill of small circular pit [38]

METHODOLOGY

Four bulk samples, of between nine and twenty-seven litres in volume, were processed using the wet sieving method, which was utilised to ensure that any cremated bone was recovered undamaged; samples were gently washed between 10 mm and 2 mm metal sieves and the clean residue then dried. Flot samples for environmental analysis were additionally collected from these samples using a 300 µm mesh. The dry sieve residue was then sieved at 1, 2 and 4 mm and sorted to extract artefacts and ecofacts. The abundance of each category of material

was recorded using a non-linear scale where '1' indicates occasional occurrence (1-10 items), '2' indicates occurrence is fairly frequent (11-30 items), '3' indicates presence is frequent (31-100 items) and '4' indicates an abundance of material (>100 items).

The light residue (>300 µm), once dried, was scanned under a low-power binocular microscope to quantify the level of environmental material, such as seeds, chaff, charred grains, molluscs and charcoal. Abundance was recorded as above. A note was also made of any other significant inclusions, for example roots and modern plant material.

RESULTS AND DISCUSSION

Three of the bulk samples were taken from two slots across the same post medieval ditch, feature [43], the remaining sample was taken from the fill of a small circular prehistoric pit, [38]. Each bulk sample will be discussed individually, to establish environmental potential. Cultural material collected from the heavy residues has been catalogued and passed to the relevant specialists for further assessment. A full account of the sample contents is given in appendices 1 and 2.

A significant amount of marine shell was recorded in these deposits (appendix 1), which will be covered in a separate report. Animal and fish bone will also be discussed elsewhere.

Prehistoric

Sample <4>

A single environmental sample was taken from the fill of a small circular pit thought to date to the pre-historic occupation of the site, feature [38]. Preservation of environmental material was relatively limited in this context. With the exception of a large amount of wood charcoal, a moderate concentration of which was sizeable enough for species to be identified (>4 mm in length/width), few archaeobotanical remains were recovered. No waterlogged or carbonised seeds or cereals were recognised, only modern root material, which may be indicative of bioturbation. Molluscs were also absent.

Fish bone, small mammal bone, bone fragments and burnt bone were all reported in this deposit, in small to abundant amounts. CBM, slag and worked and burnt flint were also recovered from the heavy residue.

Post Medieval

Sample <1>

Sample <1> was taken from the fill of feature [44], a slot excavated through a post medieval ditch feature ([43]). Preservation of environmental remains in this sample was mixed; wood charcoal was abundant, across a variety of size classes, with a significant concentration of

material suitable for species identification. Weed seeds were scarce, with only a small amount of birch (*Betula* sp.), goosefoot (*Chenopodium* sp.), pine (*Pinus* sp.) and nettle (*Urtica* sp.) identified, all of which appear to be modern contaminants. Cereals were absent.

A substantially sized terrestrial mollusc assemblage was observed in this deposit; the greatest frequency of shells were from the species *Cecilioides acicula*, a non-native type that, when identified in archaeological deposits, is often interpreted as a sign of bioturbation. A moderate number of specimens from the genera *Vallonia* sp. were also recovered, along with small amounts of *Carychium* sp., *Discus Rotundatus*, and *Oxychilus* sp. Juvenile examples and snail eggs were frequent.

Large and small animal, and fish bone/scales were common in feature [44], in addition to a significant amount of fragmented bone, and a small concentration of burnt bone. In terms of archaeological artefacts, the heavy residue yielded CBM, mortar and tile, as well as a low frequency of pottery, iron and copper fragments, and glass.

As well as modern seeds and burrowing snails, signs of bioturbation were present in the form of fine to thick roots, and insect remains.

Sample <2>

Sample <2> was collected from a slot [29], in ditch [43]. Environmental recovery was generally good from this context; wood charcoal was frequent, including, again, a substantial assemblage of sizeable material. A moderate number of charred weed seeds were recognised, including specimens of pea (*Fabaceae* sp.), stitchwort (*Stellaria* sp.), dock (*Rumex* sp.), campion (*Silene* sp.) and goosefoot, along with a large concentration of charred culm fragments and culm nodes, likely to be from species of rush or grasses. No grains or cereals were recorded.

Molluscs were present, but in lesser concentrations than were found in sample <1>. The greatest abundance of material was seen in the juvenile assemblage, though adult specimens of *Vallonia*, *Vertigo*, *Trichia* and *Cecilioides acicula* were all observed, as well as snail eggs and some broken shells.

Fish bone, large and small mammal bone, fragmented bone and fish scales were all recorded in both the flot and heavy residue, in varying amounts. Material artefacts included CBM, mortar, tile, pottery, iron and lead. Fragments of fuel ash slag and vitrified material were observed in the flot material.

Modern rootlets, insect remains, and seeds were reported, all possible indicators of post-depositional disturbance.

Sample <3>

The final sample taken from feature [43], sample <3>, yielded a mixed assemblage of ecofacts. A large concentration of wood charcoal was found, though the bulk of the material was heavily fragmented, and less than one-hundred pieces of a suitable size for species identification were recorded. A small assemblage of charred seeds, including *Prunus* sp. (stone fruits), *Poaceae* sp. (grasses), *Solanum* sp. (nightshades), and *Asteraceae* sp. (daisies), was recovered, as well as a moderate amount of charred and broken culm material.

Terrestrial and freshwater molluscs were identified, though overall concentrations were low. Species represented included *Vallonia*, *Vertigo*, *Lymnaea* and *Planorbis*. A moderate density of fragmented marine shell, probably oyster, was also observed in the flot material, and egg-shell in the residue.

Bone was common in this deposit; large and small animal bone, fish bone and fragmented and/or cremated bone were present in moderate to abundant concentrations. Finds including CBM, pottery, iron and copper were also recovered.

As with the other samples from this feature, some evidence of bioturbation, including roots, modern seeds, leaf fragments and insect remains were identified.

Summary

To summarise, preservation of environmental material was variable across the assemblage, with the most diverse range of ecofacts being recorded in the samples taken from the post medieval ditch, feature [43].

In terms of the prehistoric, there is little diagnostic material available in this sample that could be used to develop an environmental reconstruction for the period, however further analysis of the wood charcoal assemblage may prove beneficial. This material is likely to constitute the waste from a small fire of unknown purpose, and identifying the species of any suitably sized charcoal fragments may provide an insight into local vegetation, as well as how prehistoric occupants may have utilised resources in the area.

The evidence from feature [43] is more promising. The frequent occurrences of wood charcoal may be the waste from domestic burning, as this material is associated with other domestic refuse, including animal and fish bone, and oyster shell (appendix 1), and may yield at least a partial picture of the types of wood that are being chosen for this purpose, and possibly the types of trees that may be growing in the vicinity. The small burnt seed assemblage includes specimens that are native to rough and/or open ground, though not in significant enough abundance to make any inferences as to what the landscape may have been like during this period. The charred culm (stems) fragments in these samples may signify roofing or bedding material which has been burnt.

The occurrence of modern seeds, rootlets, snails and/or modern plant material throughout the sample set suggests the potential of post-depositional disturbance in these deposits, though the impact of this is difficult to quantify. The possibility that some of the smaller remains may no longer be in situ should be considered when interpreting this dataset.

RECOMMENDATIONS FOR FURTHER WORK

Preservation of environmental remains in the Fulham Palace assemblage was poor to good. The recommendations for additional work are outlined below. A summary of this assessment should be included in any future publications.

Wood Charcoal

Moderate to abundant wood charcoal was present in all the assessed samples. It is suggested that viable material be sent to a charcoal specialist for analysis, as this may help to build a partial reconstruction of the local environment, as well as giving information on resource use during the prehistoric and post-medieval periods. This material may also be used for radiocarbon dating, in areas where suitable cultural material is lacking.

Plant Macrofossils

No further work is recommended on the seed assemblage; material concentrations are universally low for the charred archive, and the non-charred material is likely modern contamination. Additional specialist assessment of the charred stem material in samples <2> and <3> may provide useful information regarding materials used for fodder, flooring or possibly roofing, but the value of this information in terms of the overall research questions should be considered.

Molluscs

As the mollusc samples are unstratified, overall species diversity is limited, no further work is recommended on this archive.

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Appendix 1: Assessment of environmental residues, FPL17

Sample No.		1	2	3	4
Context No.		21	23	25	37
Feature No.		44	29	29	38
Volume of bulk (litres)		22	23	27	9
Volume of flot (millilitres)		300	46	39	48
Method of processing		WS	WS	WS	WS
HEAVY RESIDUE					
Charcoal					
Charcoal >4 mm		4	4	3	3
Charcoal 2-4 mm					2
Charcoal <2 mm					
Seeds					
<i>Pinus</i> sp.	Pines	1			
Charred seeds					
<i>Prunus</i> sp.	Stone-fruits			1	
Molluscs					
<i>Bithynia</i> sp.	Freshwater		1	1	
<i>Cochlicopa lubrica</i>	Terrestrial	1		1	
<i>Discus rotundatus</i>	Terrestrial	1			
<i>Lymnaea</i> sp.	Freshwater			1	
<i>Trichia</i> sp.	Terrestrial		2	2	
<i>Valvata</i> sp.	Freshwater	1			
Juveniles (undiff.)		3			
Marine Molluscs					
<i>Cerastoderma edule</i>	Cockle	1	1	1	
<i>Cerastoderma edule</i> (fragments)	Cockle	1	1		
<i>Ostrea edulis</i> (left valve)	Native Oyster	3	1		
<i>Ostrea edulis</i> (right valve)	Native Oyster	3	1	1	
<i>Ostrea edulis</i> (fragments)	Native Oyster	2	2	3	
<i>Mytilus edulis</i> (fragments)	Mussel	1	1	1	
Other environmental remains					
Eggshell				2	
Bone					
Large animal bone		2	2	3	
Small animal bone		3	3	3	1
Fish/amphibian bone		4	4	3	
Bone fragments		4	4	4	4
Building material					
Tile		1	2		
Mortar		3	2		
Slate (<2 mm)					2
CBM		3	4	3	1
Other artefacts					

Sample No.	1	2	3	4
Context No.	21	23	25	37
Feature No.	44	29	29	38
Pottery	1	1	1	
Iron	1	2	2	
Lead		1		
Copper	1		1	
Glass	1			
Burnt Flint				1
Worked flint				1
Slag				1

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Appendix 2: Assessment of environmental flots, FPL17

Sample No.	1	2	3	4
Context No.	21	23	25	37
Feature No.	44	29	29	38
Volume of bulk (litres)	22	23	27	9
Volume of flot (millilitres)	300	46	39	48
Method of processing	WS	WS	WS	WS
FLOT RESIDUE				
Charcoal				
Charcoal >4 mm				1
Charcoal 2 - 4 mm	3	4	3	3
Charcoal <2 mm	4	4	4	4
Fragms. of ID size	X	X	X	<5
Seeds				
<i>Betula</i> sp.	Birch	1	1	1
<i>Chenopodium</i> sp.	Goosefoots	1		
<i>Potentilla</i> sp.	Cinquefoils			1
<i>Sambucus</i> sp.	Elder			1
<i>Sonchus</i> sp.	Sow-thistles			1
<i>Urtica</i> sp.	Nettles	1	1	1
Burnt seeds				
<i>Apiaceae</i> sp. (undiff.)	Carrots		1	
<i>Asteraceae</i> sp. (undiff.)	Daisies			1
<i>Brassica/sinapis</i> sp.	Mustards		1	1
<i>Carex</i> sp.	Sedges			1
<i>Chenopodium</i> sp.	Goosefoots		1	
cf. <i>Daucus carota</i>	Wild carrot			1
<i>Fabaceae</i> sp. (undiff.)	Peas		1	
<i>Medicago/Melilotus</i> sp.	Medicks/Melilots		1	
<i>Persicaria</i> sp.	Knotweeds		1	
<i>Poaceae</i> sp. (undiff. Large)	Grasses		1	1
<i>Rumex</i> sp.	Docks		1	1
<i>Solanum</i> sp.	Nightshades			1
<i>Stellaria</i> sp.	Stitchworts		1	

Sample No.		1	2	3	4
Context No.		21	23	25	37
Feature No.		44	29	29	38
<i>Silene</i> sp.	Campions		1		
Broken (no ID.)			1		
Unknown			1	1	
Other plant macrofossils					
Charred culm internodes	Grasses/sedges		1		
Charred culm fragments	Grasses/sedges		4	3	
Roots/tubers		2	3	1	3
Leaf fragments (indet.)				2	
Molluscs					
<i>Bithynia</i> sp.	Freshwater		1		
<i>Carychium</i> sp.	Terrestrial	1	1		
<i>Cecilioides acicula</i>	Terrestrial	4	2	1	
<i>Cochlicopa lubrica</i>	Terrestrial		1		
<i>Discus rotundatus</i>	Terrestrial	1			
<i>Lymnaea</i> sp.	Freshwater		1	1	
<i>Oxychilus</i> sp.	Terrestrial	1			
<i>Planorbis</i> sp.	Freshwater		1	1	
<i>Vallonia</i> sp.	Terrestrial	3	2	1	
<i>Vertigo</i> sp.	Terrestrial		1	1	
Snail eggs		2	2		
Juveniles (no ID)		3	3	2	
Broken shell	Terrestrial/FW	2	2		
Broken shell	Marine	4	2	3	
Bone					
Fish bone		3	2	1	
Fish scales		3	3	1	1
Small animal bone		2	1		
Bone fragments		4	2	1	3
Cremated/burnt bone		2		1	3
Other remains					
Insect remains		1	2	1	
Insect eggs/worm cases				2	2
Eggshell		1			
Fuel ash slag			1		
Vitreous material		2	3		

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

APPENDIX 12 - MARINE MOLLUSCS ASSESSMENT (FPL17)

By Kate Turner and Duncan Field

Introduction

An assemblage of 1.30kg of whole and fragmented marine shells was recovered during the archaeological excavation of land at Fulham Palace, Bishop's Avenue, London. This material was collected from three contexts in the same feature, ditch [43], which dates to the post medieval period.

The aim of this rapid assessment was to: (1) determine the degree of fragmentation and preservation of the oyster shell assemblage; (2) quantify the number of oyster shells; (3) in the event of a sizeable assemblage being identified, record any diagnostic features that may aid in establishing provenance and other key factors such as harvesting or processing patterns (4) record any other marine shells that were present in this assemblage.

Methodology

The shells from Fulham Palace were collected from environmental bulk samples taken during the excavation of the site. Samples were processed by wet sieving to ensure that none of the external features of the shells were damaged or removed. Assessment was carried out using standard recording procedures, outlined in Winder (2011).

Preliminary recording of the Oyster shell involved separating left and right valves, to determine the minimum number of individuals (MNI) per sample, and in the assemblage as a whole. The minimum number of individuals is defined as whichever number is highest out of the total count of left and right valves. In the case of a statistically significant sample being identified (those containing >100 left and right valves), further recording was then carried out on any valves of a size suitable for measurement, this being defined as any specimen whereupon the umbo/ligament scar is present, alongside the internal adductor muscle scar and at least two thirds of the original shell, as per Winder 2011.

All viable individuals were measured to establish maximum width and length; graph paper was used to extrapolate the size of any broken specimens (signified by '>'). Infestation and other descriptive characteristics were noted, including thickness, weight, signs of chambering, chalky deposits, wear and flakiness, whether oysters are attached, irregularity of shape, evidence for notches/cuts, and traces of ligament. During sorting and counting, observations were made on the general condition of the shells, and evidence of epifauna or infestation was noted.

Results

Oysters

The oyster shell collected from the environmental bulk samples taken at Fulham Palace was in poor to good condition, with a moderate degree of fragmentation. A quantification of the material is provided in table 1.

Table 1: Quantification of mollusc remains, FPL17

Sample Number	Context Number	Feature Number	Feature Type	Bulk/Hand picked	Volume of bulk sample	Provisional phasing	Period	<i>Ostrea edulis</i> (LV)	<i>Ostrea edulis</i> (RV)	<i>Ostrea edulis</i> (UMLV)	<i>Ostrea edulis</i> (UMRV)	Fragments	Oyster MNI	<i>Mytilus edulis</i> (complete valve)	Fragments	<i>Cerastoderma edule</i>	Fragments
1	21	44	Ditch	Bulk	22	4	PM	54	55	9	13	++	56	1	+	2	+
2	23	29	Ditch	Bulk	23	4	PM	3	6			++	6		+	1	+
3	25	29	Ditch	Bulk	27	4	PM		7			+++			+	1	
Total								57	68	9	13	N/A	62	1	N/A	4	0

Absolute values. Key: RV = right valve. LV = left valve. UM = unmeasurable. MNI = maximum number of individuals. + = 1-10, ++ = 11-30, +++ = 30-100.

A total of 125 left and right valves, 22 unmeasurable valves and between thirty and one-hundred fragments were identified across the sample set, resulting in a MNI of 68 for the post medieval period. Sample <1>, recovered from context (21), contained an assemblage of over 100 combined left and right valves, thus being statistically viable, and therefore a full assessment was undertaken on this material (appendix 1). Samples <2> and <3> contained less than ten complete valves each, so were considered unsuitable for further analysis. All of the assessed specimens were of the species *Ostrea edulis*, or native oyster.

As shown in appendix 1, the majority of the oyster shells in sample <1> were of small to medium size, with the average maximum width of individual valves being 47 mm, and the average length 53 mm. The smallest shell was measured with a width of 23 mm, and the largest 73 mm. Macroscopic features were observed on the bulk of the material, the most common being the remains of sand tubes, found on 58 shells. The total MNI for this sample was 55, from a combined total of 109 complete valves.

If fully analysed and compared to a suitable background sample, as well as a range of comparable sites through the use of multivariate statistics, the qualitative and quantitative information that has been collected could be used to look at the local and regional environment in which these shells would have grown, as well as the origin of the material (likely to be the Thames, due to the location of the site).

Marine Shell

In addition to oyster, a small amount of complete and fragmented mussel (*Mytilus edulis*) and cockle (*Cerastoderma edule*) shells were recovered from sample <1>. Less than five shells were observed in each instance. Samples <2> and <3> also yielded a single cockle shell each.

Conclusions and Recommendations for Further Work

Of the bulk samples assessed for malacological remains only sample <1> yielded a statistically viable assemblage. It is suggested that, prior to publication, additional analysis of the qualitative and quantitative data recorded from this material be undertaken, as this may help to enhance our understanding of local climate during this period, as well as the habitat in which the shells developed and possible farming/harvesting methods. The size of the assemblage, though still relatively small indicates that oyster was likely to have been consumed as part of local diet by the inhabitants of the site during this period.

Bibliography

Winder, J.M. 2011. *Oyster Shells from Archaeological Sites: a brief illustrated guide to basic processing*
<http://oystersetcetera.files.wordpress.com/2011/03/oystershellmethodsmanualversion11.pdf>

Appendix 1: Detailed Quantitative and Qualitative Analysis of Oyster Shell from the Fulham Palace Community Dig (FPL17)

KEY CONTEXT 21, SAMPLE 1																										
Quantitative Data						Parasitic Infestations								Qualitative Observations												
Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Ciona celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament	
•		67	70			+	+					+		+							+					
•		64	65									+										+				
•		69	75			+					+	+	+									+	+			
•		52	61																							
•		44	58										+	+									+			
•		58	70										+													
•		50	59								+	+	+													
•		52	58								+	+	+										+			
•		55	64									+	+													
•		52	66									+	+	+												
•		61	68								+												+			
•		66	68											+												
•		52	58																							
•		>62	68										+										+			
•		62	>58				+						+										+			
•		>55	>54										+													

KEY CONTEXT 21, SAMPLE 1																									
Quantitative Data						Parasitic Infestations								Qualitative Observations											
Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Ciona celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament
•		>54	>61																		+				
•		>42	>52			+						+													
•		52	<59									+													
•		58	60																						
•		>62	>70									+													
•		>50	>48										+								+				
•		>51	56																						
•		56	>65									+													
•		57	>66																			+	+		
•		>73	76			+															+				
•		52	61										+										+		
•		>61	>64			+							+												
•		>55	>64																				+		
•		>52	>61											+											
•		>51	>64										+												
•		>45	>57																						
•		>44	62																			+			
•		>50	>60																			+	+		

KEY CONTEXT 21, SAMPLE 1																									
Quantitative Data						Parasitic Infestations								Qualitative Observations											
Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Cliona celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament
•		>56	>55										+												
•		>52	60								+	+													
•		>46	49																						
•		>44	>46				+																+		
•		>49	>52										+									+			
•		>42	40				+																+		
•		>58	>55										+												
•		46	56								+														
•		42	54				+																		
•		44	60											+											
•		45	51																			+			
•		52	59										+												
•		48	51										+												
•		44	>46										+												
•		>45	>54																						
•		43	>55								+											+			
•		>41	>42										+												
•		>40	50										+												

KEY CONTEXT 21, SAMPLE 1																									
Quantitative Data						Parasitic Infestations								Qualitative Observations											
Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Cliona celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament
•		>38	43										+												
•		>33	40										+												
	•	52	55										+												
	•	42	47										+												
	•	45	51										+												
	•	42	43										+												
	•	41	51										+												
	•	44	60										+												
	•	37	44										+												
	•	28	42										+												
	•	51	56									+	+												
	•	27	42										+												
	•	59	60										+												
	•	46	50										+												
	•	34	45										+												
	•	42	41										+												
	•	35	46										+												
	•	37	39										+												

KEY CONTEXT 21, SAMPLE 1																									
Quantitative Data						Parasitic Infestations								Qualitative Observations											
Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Ciona celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament
	•	39	44																						
	•	36	41										+												
	•	43	45																						
	•	39	49										+												
	•	59	61										+												
	•	38	42										+												
	•	36	46										+												
	•	51	54										+												
	•	48	61																						
	•	23	30																						
	•	40	57																						
	•	31	42																						
	•	37	52																						
	•	38	42									+													
	•	39	49									+													
	•	49	53									+													
	•	43	51										+												
	•	35	41										+												

KEY CONTEXT 21, SAMPLE 1																									
Quantitative Data						Parasitic Infestations								Qualitative Observations											
Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Cirion celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament
	•	35	43										+												
	•	36	47										+												
	•	40	42								+		+												
	•	38	41																						
	•	41	46										+												
	•	37	39																						
	•	38	40																						
	•	36	35																						
	•	50	55										+												
	•	50	60										+												
	•	58	56										+												
	•	47	53																						
	•	47	58																						
	•	45	50																						
	•	47	59									+	+												
	•	54	68																						
	•	44	51																						
	•	43	52																						

KEY CONTEXT 21, SAMPLE 1																											
	Quantitative Data						Parasitic Infestations								Qualitative Observations												
	Oyster Left valve	Oyster Right valve	Maximum width (mm)	Maximum length (mm)	Oyster (UMLV)	Oyster (UMRV)	<i>Polydora ciliata</i>	<i>Polydora hoplura</i>	<i>Ciona celata</i>	Calcareous tubes	Barnacles	Bryozoa	Bore holes	Sand tubes	Thin	Thick	Heavy	Chambered	Chalky deposit	Worn	Flakey	Colour stain	Oysters attached	Irregular shape	Notches and cuts	Ligament	
		•	44	43											+												
		•	42	48											+												
	•	41	52											+													
TOTALS	54	55					10	2	0	0	0	8	15	58	6	0	0	0	0	0	2	9	12	1	0	0	

APPENDIX 13 – OASIS FORM

OASIS ID: fulhampa1-330220

Project details

Project name Fulham Palace Dovecote Community Project

Short description of the project In October 2017 Fulham Palace undertook a community excavation in a search for the Palace's dovecote which was demolished in the late 18th century. Two trenches were excavated, one in the anticipated location of the dovecote, and one to investigate a linear feature which had been identified during a geophysical survey in 2013. The dovecote was not found, but a large medieval ditch was revealed along with an associated metalled surface. This was backfilled between 1480 and 1550 with a large quantity of animal bone which derived from the Palace kitchens. The later post-medieval period was represented by dump layers and pitting. One layer contained significant quantities of moulded plaster which is likely to have been removed from the Palace during 18th century renovations. A number of recovered screw pickets may relate to a WW2 air balloon emplacement.

Project dates Start: 09-10-2017 End: 03-11-2017

Previous/future work Yes / Not known

Any associated project reference codes FPL17 - Sitecode

Type of project Recording project

Site status Scheduled Monument (SM)

Current Land use Other 5 - Garden

Monument type LAYERS Post Medieval

Monument type	PITS Post Medieval
Monument type	SURFACE Medieval
Monument type	DITCH Medieval
Significant Finds	STRUCK FLINT Early Neolithic
Significant Finds	CREMATION Late Bronze Age
Significant Finds	POTTERY Medieval
Significant Finds	ANIMAL BONE Medieval
Significant Finds	DIE Medieval
Significant Finds	POTTERY Post Medieval
Significant Finds	ANIMAL BONE Post Medieval
Significant Finds	COINS Post Medieval
Significant Finds	JETTONS Post Medieval
Significant Finds	CLAY TOBACCO PIPE Post Medieval
Significant Finds	PLASTER Post Medieval
Investigation type	""Open-area excavation""
Prompt	Scheduled Monument Consent

Project location

Country England

Site location	GREATER LONDON HAMMERSMITH AND FULHAM FULHAM Fulham Palace
Postcode	SW6 6EA
Study area	350.71 Square metres
Site coordinates	TQ 23954 76153 51.470249153133 -0.215172180765 51 28 12 N 000 12 54 W Point
Height OD / Depth	Min: 2.06m Max: 2.31m

Project creators

Name of Organisation	Fulham Palace Trust
Project brief originator	Fulham Palace Trust
Project design originator	Chris Mayo
Project director/manager	Sian Harrington
Project supervisor	Alexis Haslam

Project archives

Physical Archive LAARC recipient

Physical Contents	"Animal Bones", "Ceramics", "Environmental", "Glass", "Metal", "Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Contents	"Animal Bones", "Ceramics", "Environmental", "Metal", "Stratigraphic", "Survey", "Worked stone/lithics"
Digital Media available	"Database", "Images raster / digital photography", "Spreadsheets", "Survey", "Text"
Paper Archive recipient	LAARC
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet", "Matrices", "Plan", "Report", "Section", "Survey", "Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	An Assessment of an Archaeological Excavation at the Fulham Palace Dovecote Community Project, Fulham Palace, Bishop's Avenue, Fulham, London SW6 6EA
Author(s)/Editor(s)	Haslam, A.
Date	2018

Issuer or Fulham Palace Trust
publisher

Place of issue or Fulham
publication

Entered by Alexis Haslam (alexis.haslam@virgin.net)

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