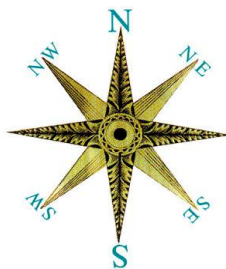


4 ABBEY GARDENS, CHERTSEY, KT16 8RQ

AN ARCHAEOLOGICAL EVALUATION ASSESSMENT REPORT

FEBRUARY 2021

COMPASS



ARCHAEOLOGY

4 ABBEY GARDENS, CHERTSEY, KT16 8RQ

AN ARCHAEOLOGICAL EVALUATION ASSESSMENT REPORT

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Abstract

Between the 4th and 12th January 2021 Compass Archaeology undertook an archaeological evaluation at 4 Abbey Gardens, Chertsey in the county of Surrey. The evaluation was commissioned to accompany an application for Scheduled Monument Consent to extend the present property. The site was subject to Scheduled Monument Consent due to its location within the wider site of Chertsey Abbey, a medieval monastic site. The evaluation comprised the hand excavation of four trial trenches sited to provide a representational sample of the footprint of the proposed extension.

Trench 1 was aligned NW-SE, situated towards the southern edge of the proposed extension footprint. The trench was rectangular in plan and measured 3.17m in length by 0.94m in width and reached a depth of 1.19m (13.29mOD). This trench was abandoned due to the collapse of the northern section, making it unsafe to continue with its excavation. The stratigraphy of Trench 1 comprised the current patio paving slabs and underlying concrete, a brick wall likely to be the retaining wall of the original raised patio before the rear house extension c.1984. A buried soil horizon / made ground deposit with frequent inclusions and finds including a mosaic floor tile flake decorated with 'Chertsey' design which was found within lower level of the deposit. An underlying land surface was observed, which was more compact. However, the extent of this deposit is unknown due to the collapse of the trench section.

Trench 2 was located towards the eastern part of the proposed extension. This trench measured 1.5m² and 1.12m in depth (13.28mOD), with two slots excavated into the north-west and south-east corners which measured 1.54m (13.01mOD) and 1.78m (12.70mOD) in depth, respectively. The stratigraphy of Trench 2 consisted of the current brick paving over bedding layers and rubble. A made ground layer with abundant bone and frequent tile, with a spread of tile and charnel material was present within the deposit, which included several long bones. At the base of the north-west slot a single in-situ inhumation was recorded, with no clear grave cut or difference in fill.

Trench 3 was moved slightly out of the proposed extension footprint due to the presence of a service pipe running to the west. The trench was aligned NE-SW and rectangular in plan. This trench measured 2m in length by 1m in width and 0.52m in depth (14.05mOD). Trench 3 was not excavated further due to the presence of a reinforced concrete slab 0.52m below the garage floor level, which was not fully excavated due to concerns of the structural integrity of the garage given the past subsidence.

Trench 4 was an additional trench which was added due to the cessation of Trenches 1 and 3. Trench 4 falls outside the proposed extension footprint, however, it was sited south of the raised patio area. The trench was aligned NW-SE and measured 1.5m in length by 0.8m in width. Trench 4 was taken down to 1m (13.11mOD), with several steps excavated deeper due to the narrowness of the trench, which ranged from 1.31m to 1.87m in depths (12.81mOD to 12.25mOD). The stratigraphy of Trench 4 comprised the current ground surface over a topsoil deposit. A made ground deposit with bone and gravel throughout, which appeared to have been an infill of a cut feature over a probable buried land surface.

No evidence of a battery of kilns was recorded, which could indicate the site was not the location of the tile kiln site found in 1922 or that subsequent interventions have significantly disturbed the site. Evidence of the monastic cemetery was recorded in the form of 794 fragments of human bone, the majority of which were disarticulated, re-deposited bone, with a single in-situ inhumation recorded. Consistent with a monastic complex, some of the remains represent a number of adult males, ranging in age from early twenties to mid to late fifties. The differences in preservation and fragmentary nature of the individual remains indicate they have been moved on a number of occasions, from a number of different locations. Also, the prevalence of larger elements is consistent with an economical and wholesale clearance event. It is unclear whether they were deposited at one time or on several separate occasions. It is suggested, based on the number of previous archaeological interventions which have occurred on the site, some of the remains may have been deposited (redeposited) in the mid-20th century.

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1 INTRODUCTION

- 1.1 This document forms an archaeological assessment report of observations made during, and following an archaeological evaluation at 4 Abbey Gardens, Chertsey, KT16 8RQ (fig. 1).
- 1.2 This document has been produced in accordance with an approved Written Scheme of Investigation (WSI) (Compass Archaeology 2020) which accompanied an application for Scheduled Ancient Monument consent, as the study site lies within the area of the former Benedictine Chertsey Abbey (National Monument No. 23002) (fig.2). As such a pre-determination archaeological evaluation was required; the results of this evaluation will determine Historic England’s position on the proposed development.

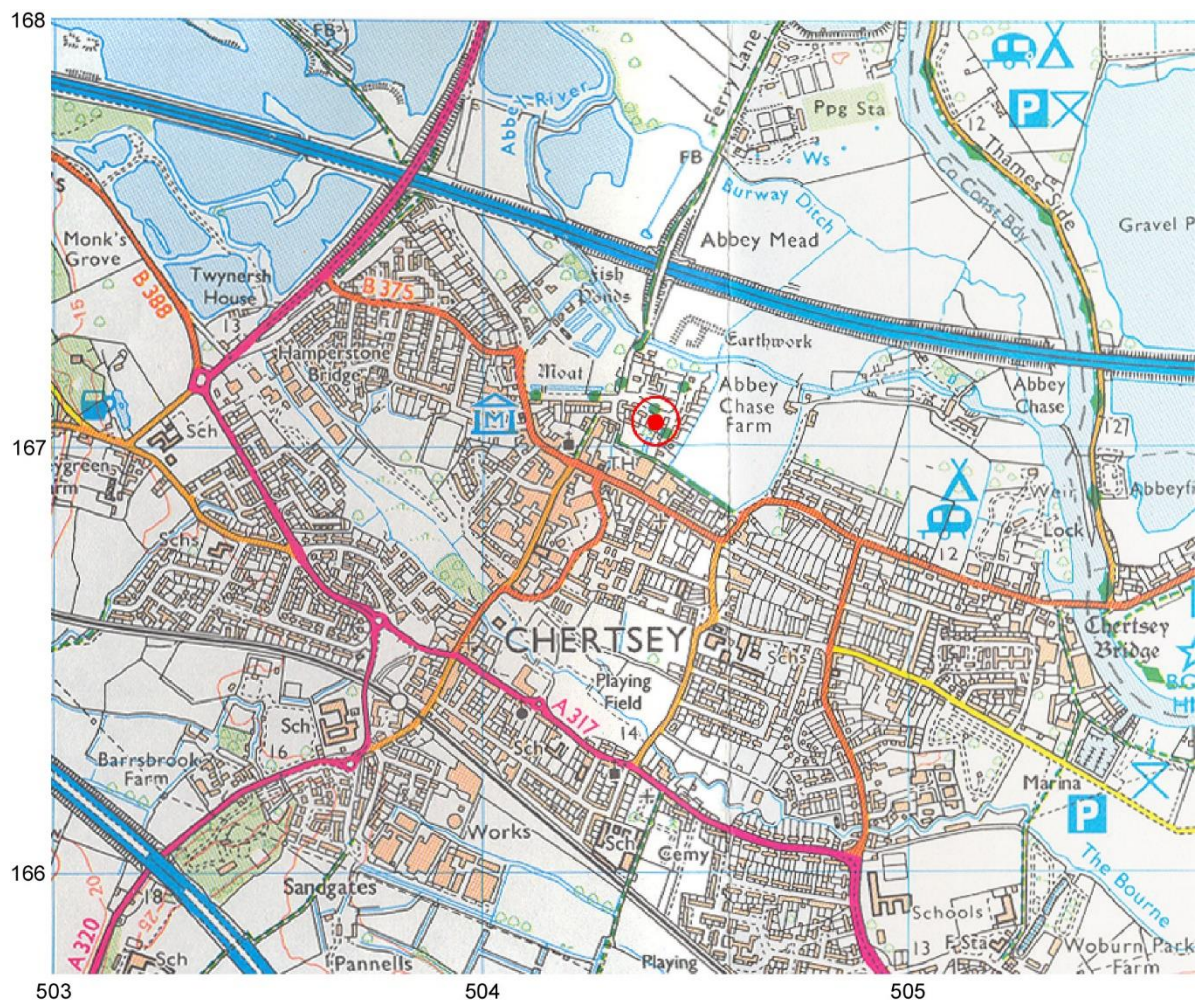


Figure 1: Site location marked in red.

- 1.3 The assessment report has been commissioned by householder Shahram Rezapour, after consultation with Alex Bellisario, Assistant Inspector of Ancient Monuments for Historic England in the South-Central area of England.



Figure 2: The Chertsey Abbey Scheduled Monument (SAM No.23003) (green) in relation to the site outline (red).

2 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

2.1 The evaluation site is located on the southern side of Abbey Gardens, Chertsey. The property is a detached house, bounded on both sides by the gardens of other detached properties and to the rear of the garden by an area of open field. The site is centred at NGR TQ 04403 67065. The proposed development entails an extension to the existing property to the side (east) and rear (south) (fig.3).

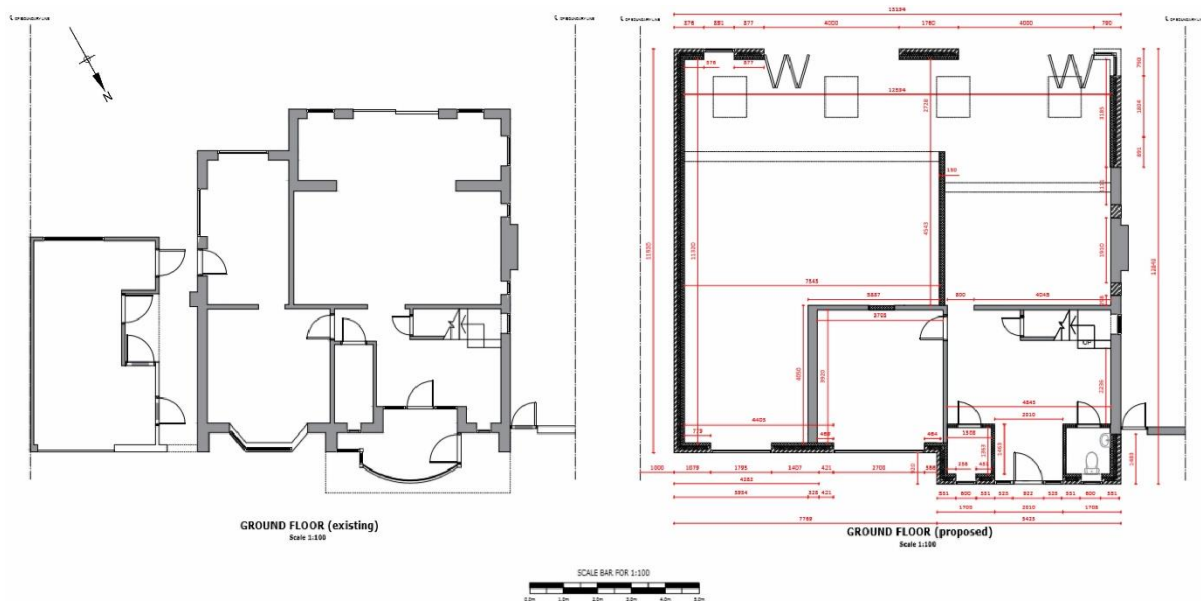


Figure 3: Existing and proposed ground floor plans. Adapted from drawing No.A01 by Inspired Plans Ltd.

2.2 According to the British Geological Survey (Sheet 269: *Windsor*), the site overlies Bagshot Bed formation, with sandy-gravel deposits overlying it which historically formed a gravel island within the floodplains of the River Thames (fig.4).

2.4 The current site is broadly level at c.15.00mOD

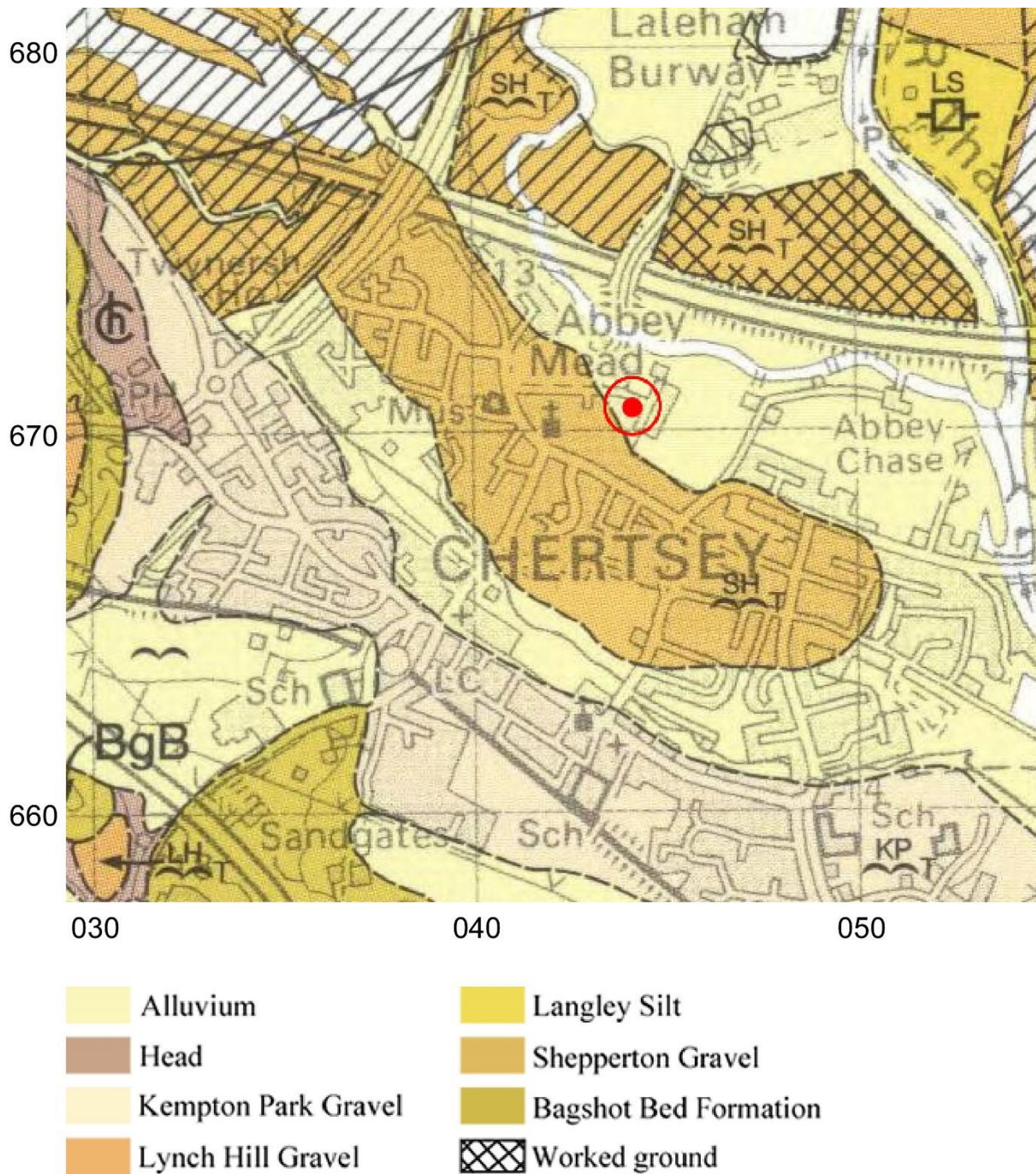


Figure 4: Extract from the British Geological Survey Sheet 269: Windsor, with the site location marked in red.

3 HISTORICAL BACKGROUND

3.1 The historical background of the area has been thoroughly covered in the preceding WSI for the evaluation (Compass Archaeology 2020), a desk-based assessment for a site just west of the study site along Abbey Gardens, Burford (Compass Archaeology 2019) and by several monographs regarding the development and history of Chertsey Abbey, therefore only a general summary of the archaeological potential for each period will be discussed below.

3.2 Prehistoric

3.2.1 There is an abundance of evidence for prehistoric activity in the wider Chertsey area as the area immediately surrounding the Abbey is located on a gravel island within the lower floodplain of the River Thames, which would have made it an ideal place for prehistoric settlers. However, there is a lack of significant prehistoric evidence from the vicinity of the study site. Chertsey itself means ‘Isle of Cerotus’, likely indicating the owner of the land was Cerotus, and confirming the land around the Abbey was slightly raised out of the marshy floodplains.

3.3 Roman

3.3.1 Limited amounts of Roman pottery and tile have been found during excavations of the Abbey, though these are most likely residual finds. Nevertheless, their mere presence likely indicates some form of Roman occupation within the area and the existence of a tiled building nearby (Poulton 1988). A Roman road has also been postulated to run from the southwest towards the Abbey Gardens before turning north, though this has never been confirmed. A single fragment of Roman tegula was discovered during trial trenching works at Abbey Lodge, c.80m to the north-west. No other significant Roman finds have been recovered, indicating that it is unlikely any will be encountered during the groundworks on this site.

3.4 Saxon

3.4.1 The Abbey was founded in AD666, traditionally by Erkenwald, though a different charter suggests it was first constructed by King Egbert (ruler of Kent 664-673). It was founded as a Benedictine monastery, dedicated to St Peter. There has been little archaeological evidence recovered for the earliest phase of the Abbey, aside from fragments of wall in the south-east cloister and the north transept. In the 10th century, a new church was built of wood and rebuilt in stone in 1110. Tufa/shell-tempered ware was found during the 1954 excavations of the Abbey, indicating occupation of the site pre-dating this rebuilding.

3.5 Medieval

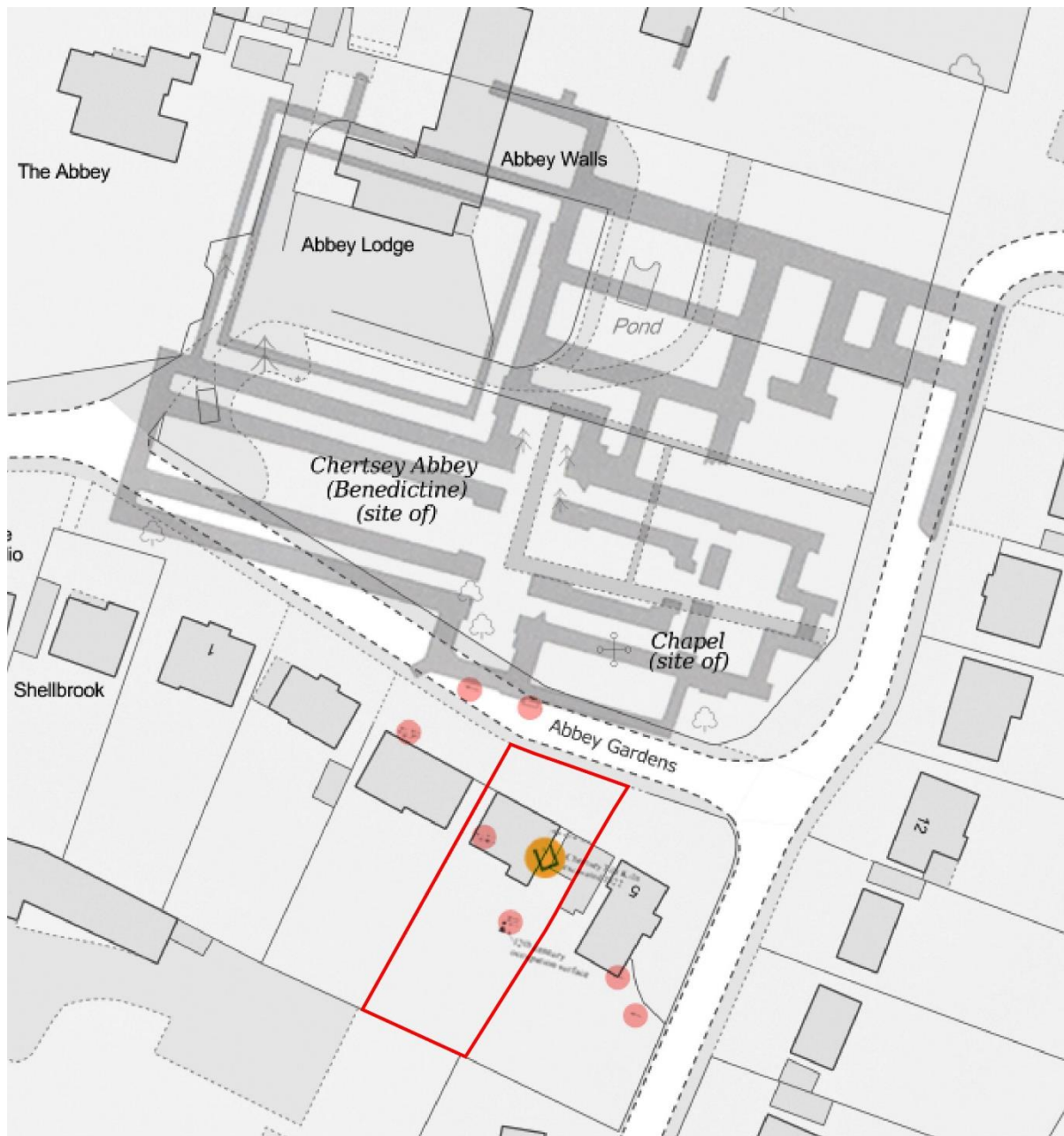
3.5.1 After the re-founding of the Abbey in AD1110, the site was contained inside several moats, defining the inner and outer precincts. The monastic establishment was reorganised and rebuilt during the 13th and 14th centuries, with Abbot Rutherwyk, (1307-46), undertaking works on the abbey precinct. The Church was significantly rebuilt in the 13th century; and the monastery was reorganised in the 14th century such that there was a clearer division between the religious and non-religious parts of the precinct. The overall layout of this abbey is depicted in Figure 5, and archaeological work to date has mainly unearthed remains relating to this abbey.

3.5.2 The evaluation site lies to the south of the main Abbey complex, in the southeast corner of the wider moated site, north of the so-called ‘Black-Ditch’ (MSE 15280). The site also lies adjacent to the former site of Chertsey Bemonds Manor, which also formed part of the original endowment in the late-7th century (MSE 14246).

3.5.3 Evidence of a tile kiln in the form of numerous pieces of inlaid pictorial Chertsey tiles was found during an excavation in 1922 (Gardner 1923) (MSE594). The kiln itself is

thought to have been found on the south side of the Abbey Church, c.70ft south of the chapel to the east of the south transept (Gardner and Eames 1954). The recorded kiln was a two-tunnel type and stood in a rectangular pit with the base of the kiln sloping upward to the south (*ibid*). The exposed walls were constructed from broken roof tile 20inches in height, with the rear wall packed out by chalk set in clay (*ibid*). Additionally, a former homeowner is thought to have found several pieces of decorated tile in the garden of 4 Abbey Gardens (Shahram Rezapour 2021 *pers. Comm.*).

3.5.4 A subsequent excavation in 1954 aimed to accurately plan the Abbey and establish whether the tile kiln discovered in 1922 was part of a battery of such kilns (Poulton 1988: 11). A number of trenches were excavated to the south and west of the tile kiln previously recorded, and no evidence for further tile kilns was recovered. Several burials were found, which indicated the area was formerly part of the monastic cemetery at one time (*ibid*). Pottery dating to the 12th century was found within a probable occupation layer. It is thought that the presence of the tile kiln, 12th century occupation and a cemetery in the same area is that until c.1300 or later this was the site of the outer court of the monastery, which was subsequently moved to the area west of Colonel's Lane. The location of the tile kiln is an estimate due to the lack of sufficient planning during the 1922 excavation and the burials are an approximate location (fig.5).



- Burial
- Tile kiln

Figure 5: The site outline (red) in relation to the reconstruction of the main Abbey Layout (grey) and the approximate locations of burials and the tile kiln (adapted from Poulton 1988).

3.6 Post-medieval

3.6.1 In 1537 the Abbey was dissolved, and the monks dispersed. Although it is believed that the Church itself was thoroughly demolished this is not proven (Poulton 1988: 5), and recent work casts further doubt on this (*cf.* Compass Archaeology 2018: 26). It is also quite likely that parts of the cloistral complex and other ancillary structures were retained and continued in use.

3.6.2 By c.1700 the precinct was apparently in the possession of Sir Nicholas Wayte, who built Abbey House fronting onto the east side of Colonel's Lane. The extensive gardens associated with this house would have necessitated the removal of any upstanding remains of the Abbey, and any such may also have been used in the construction of the house (VCH 1911, 408). The recent evaluation revealed substantial later 16th to 17th century levelling layers over the west end of the Church, which may well represent part of this process (Compass Archaeology 2018: 26).

3.6.3 The site is depicted in 18th and 19th century sources as being situated within extensive formal gardens of Abbey House (fig.6). The southern part of the site boundary lies over a barn structure, which extends further west. Part of this structure is extant in the form of a wall across the southern end of the garden. To the south-east of the study site was a channel surrounding the Abbey and three ponds, which resemble what would normally be interpreted as fishponds. The presence of larger fishponds in the northwest of the Abbey precinct does not preclude this interpretation. The fact that the ponds near the study site are linked to the canal may indicate that they were meant to catch / trap wild freshwater species.

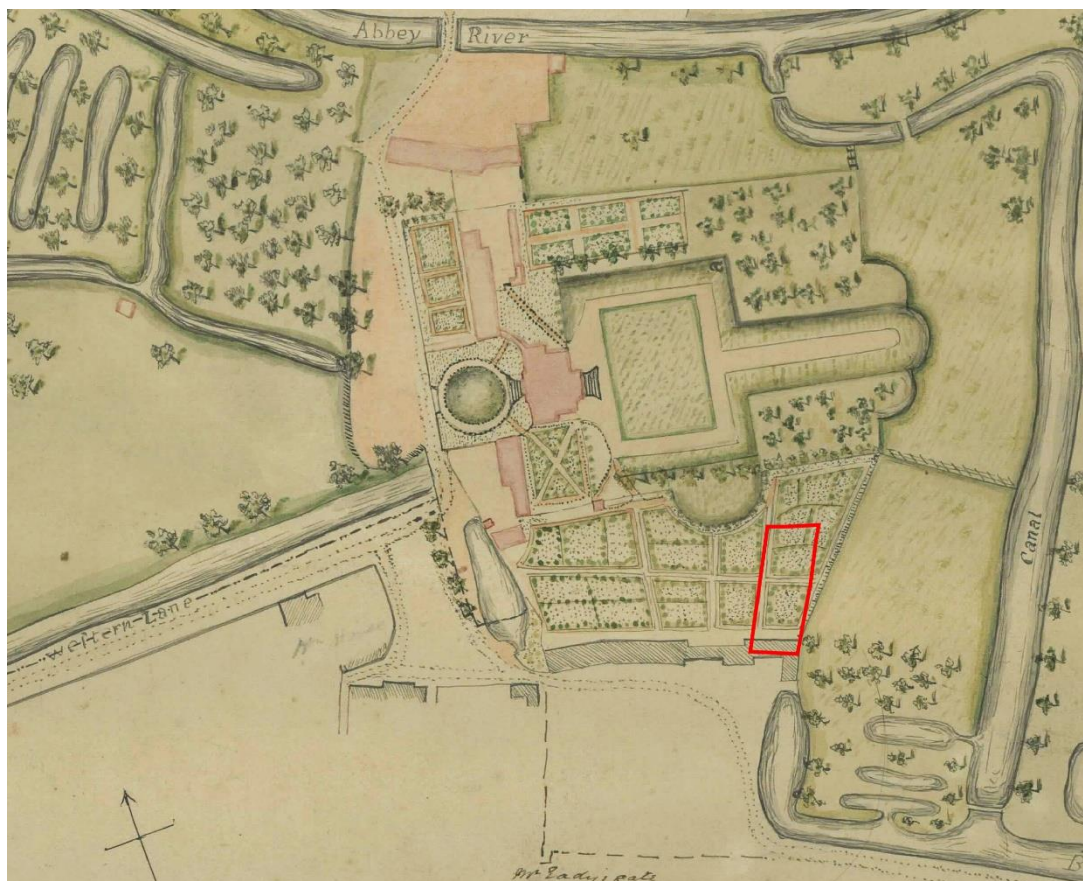


Figure 6: Extract from the Estate Plan, 1806, with the study site outline marked in red.

3.6.4 Abbey House was demolished in 1810, and the original of the Chertsey Abbey Estate plan appears to have been executed very shortly after this event – the separate north and south wings (& small ancillary building to the southwest) evidently still standing (fig.7). The study site occupied a kitchen garden and part of a barn structure to the south, with the southern corner of the site overlapping part of an orchard.

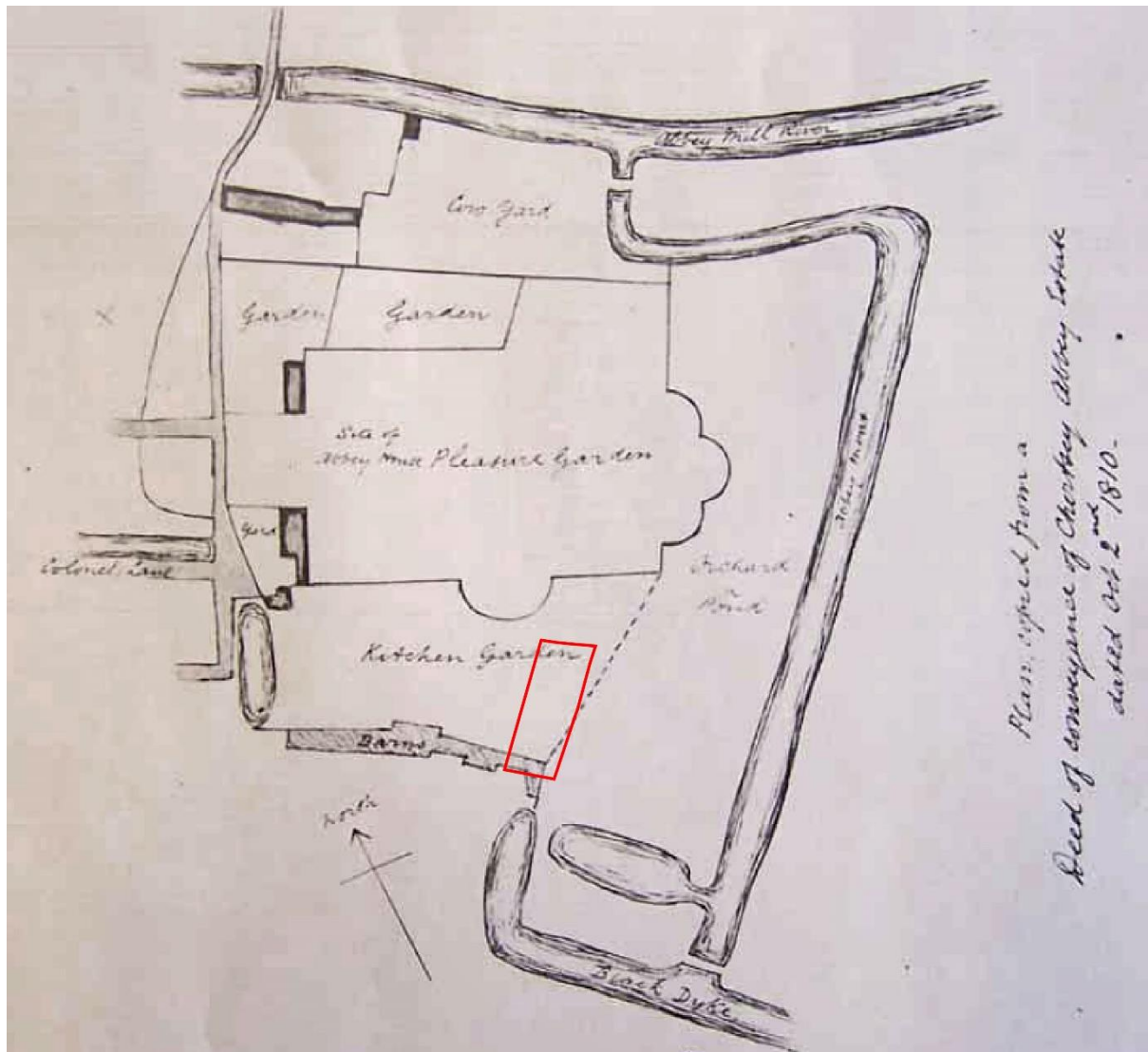


Figure 7: Plan of the Chertsey Abbey Estate, c.1810, with the site outline marked in red.

3.6.5 By the mid-19th century the study site was situated in an expanse of meadowland (fig.8). The Chertsey Tithe map of 1844 indicates that at this time the meadowland was owned by Maria Blincoe and occupied by Henry Roake (plot No. 22, not illustrated). By 1861 the barn occupying the southern part of the study site had been reduced to the eastern site, however, the structure was not completely demolished as a wall is extant across the southern part of the garden.

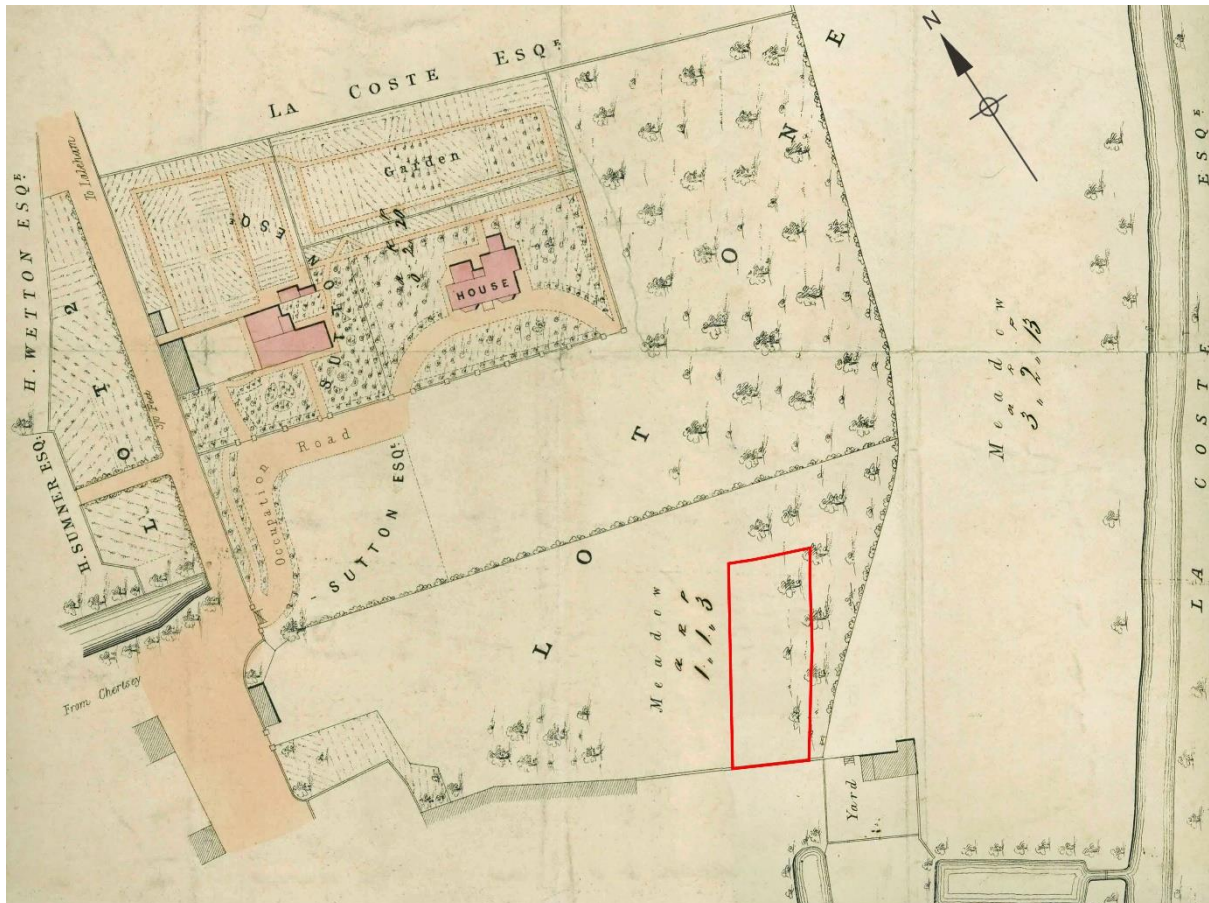


Figure 8: Extract from the Plan of Freehold Property, Chertsey, Surrey. For Sale by Auction by Messrs Waterer & Sons at the Town Hall May 23rd, 1861, with the site outline in red.

3.6.6 Later-19th century maps show the study site was relatively empty, presumably still situated within meadowland (fig.9). To the south-east the two southern ponds linked to the Black Ditch had been backfilled and with only the northern surviving by 1896. North of the study site is labelled with 'Stone Coffin', which may relate to the five stone coffins found below the chapter house during excavations of Chertsey Abbey in 1855 (Pocock 1858).



Figure 9: Extract from Ordnance Survey 25-inch, Second Edition Middlesex Sheet XXIV.11, 1896, with the site outline marked in red.

3.6.7 It was not until the mid-20th century that the moat and ponds were finally drained, and the existing estate roads (including Abbey Gardens) and houses were laid out. This includes No.4 Abbey Gardens, the northern part of which is shown on Figure 10. Within the site boundary, the site of the tile kiln is labelled.

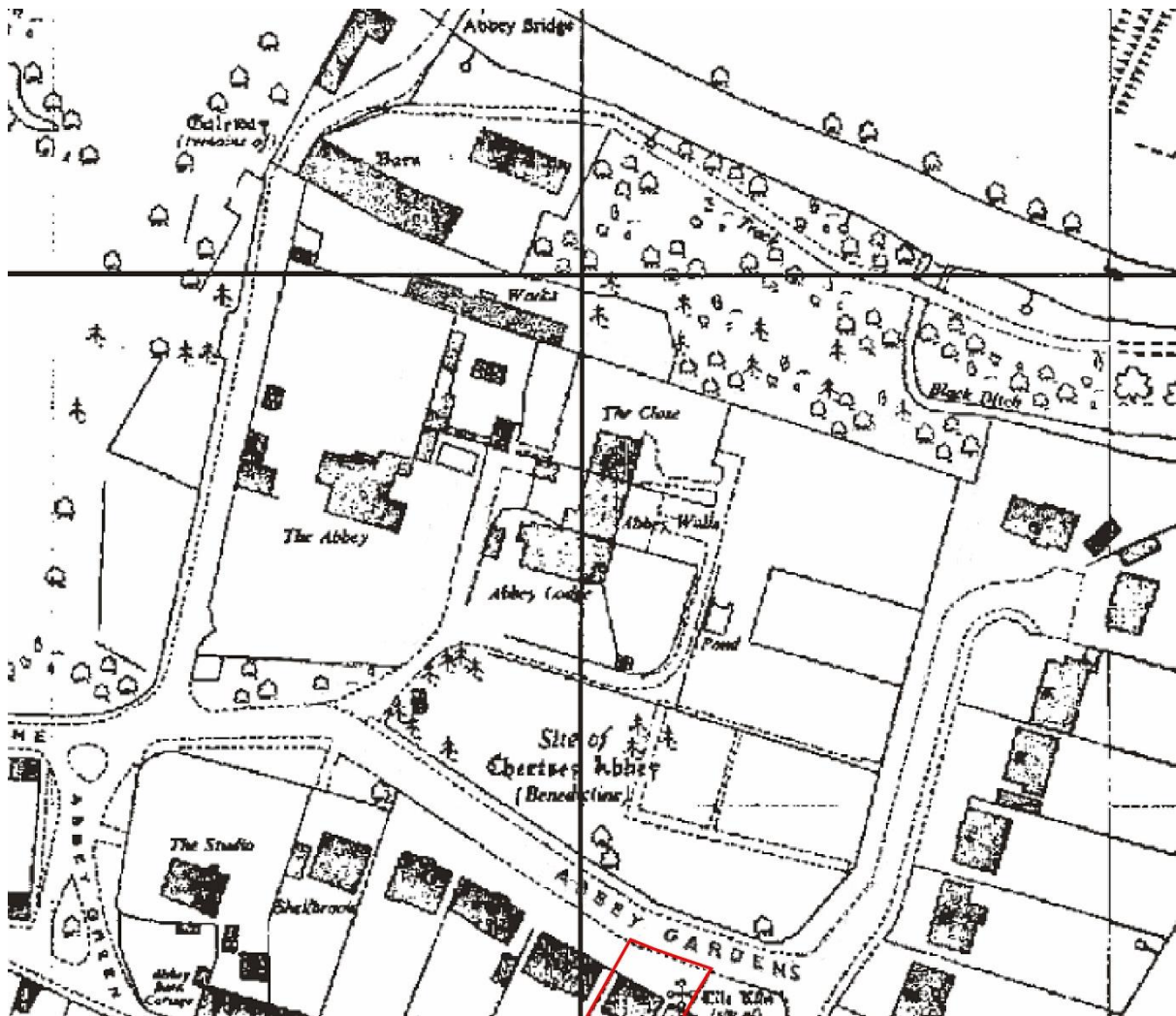


Figure 10: Extract from Ordnance Survey Plan TQ 0467 SW, 1965, with the site outline marked in red.

4 OBJECTIVES

4.1 The evaluation conformed to the requirements of the National Planning Policy Framework (NPPF) adopted in March 2012 and updated in 2019, which replaces PPS 5 'Planning for the Historic Environment' and policies HE6 and HE7.

The NPPF integrates planning strategy on 'heritage assets' - bringing together all aspects of the historic environment, below and above ground, including historic buildings and structures, landscapes, archaeological sites, and wrecks. The significance of heritage assets needs to be considered in the planning process, whether designated or not, and the settings of assets taken into account. NPPF requires using an integrated approach to establish the overall significance of the heritage asset using evidential, historical, aesthetic and communal values, to ensure that planning decisions are based on the nature, extent and level of significance.

4.2 This document has been produced in accordance with an approved WSI accompanying an application for Scheduled Ancient Monument consent.

The development is located within a Scheduled Ancient Monument that covers the site of the former Benedictine Chertsey Abbey (National Monument No. 23002), and as such

is protected by its own policies and legislation, most notably the Ancient Monuments and Archaeological Areas Act 1979 (as amended) ('the 1979 Act'), which is the legal framework for the protection of scheduled monuments. This can be accessed online as:

<http://www.legislation.gov.uk/ukpga/1979/46/contents>

4.3 The site also lies within the Chertsey Conservation Area and a County Site of High Archaeological Interest as designated by Runnymede Borough Council.

4.4 The Borough Council have policies which cover Ancient Monuments and Archaeology within their *2030 Local Plan*, adopted in July 2020, which replaces the *Core Strategy* 2001. In the new *Local Plan*, Policies BE14-BE17 are superseded by Policies EE3: Strategic Heritage Policy; EE7 Scheduled Monuments, County Sites of Archaeological importance and areas of High Archaeological Potential. This document is available as a download from:

<https://www.runnymede.gov.uk/localplan>

4.5 Archaeological research questions

4.5.1 The archaeological evaluation provided the opportunity to answer the following specific and more general research questions:

- Is there any further evidence of Roman occupation close-by? Can this be linked to any particular building or land-use?
- Is there any evidence relating to Chertsey Abbey – including remains relating to the pre-conquest abbey, the c. 1110 rebuild, the later-13th / 14th century abbey, or its dissolution?
- Is there any evidence relating to the medieval tile kiln found during the 1922 excavation? Is there any other evidence of tile production, possibly forming a battery of kilns?
- Is there any evidence for burials relating to the remains previously found in 1954? Can it be determined if this formed part of a monastic cemetery?
- Is there any evidence for earlier elements of structures on the site prior to the erection of No.4 Abbey Gardens?
- At what level does the natural geology survive and what form does it take?

5 METHODOLOGY

5.1 Standards

5.1.1 The fieldwork and off-site assessment was carried out in accordance with established professional guidelines. Works conformed to the standards of the Institute for Archaeologists (including the *Code of Conduct* and appropriate *Standards and Guidance*

papers). Overall management of the project was undertaken by a full Member of the Institute.

5.1.2 The evaluation was conducted in accordance with specific details outlined in the approved Scheduled Ancient Monument Consent.

5.1.3 Fieldwork was carried out in accordance with the Construction (Health, Safety & Welfare) Regulations. Members of the fieldwork team held valid CSCS Cards, (Construction Skills Certificate Scheme), and wore hi-visibility vests or jackets, hardhats, and steel-toe-capped boots during excavation.

5.2 Fieldwork

5.2.1 The evaluation involved the hand-digging of four archaeological trial trenches (fig.11). These have been sited to provide a representational sample of the footprint of the new extension.

The first was a NW-SE aligned trench which measured 3.17m long by 0.94m wide and 1.2m deep. This trench was abandoned due the collapse of the northern section, making it unsafe to continue with its excavation.

Trench 2 was located towards the east part of the proposed extension. This trench measured 1.5m² and 1.12m in depth, with two slots excavated into the north-west and south-east corners which measured 1.54m and 1.78m in depth, respectively.

Trench 3 was moved slightly out of the proposed extension footprint due to the presence of a service pipe running to the west. The trench was aligned NE-SW and measured 2m in length by 1m in width and 0.52m in depth. This trench was not excavated further due to the presence of a reinforced concrete slab 0.52m below the garage floor level, which was not fully excavated due to concerns of the structural integrity of the garage.

Trench 4 was an additional trench which was added due to the abandonment of Trench 1 and 3. Trench 4 falls outside the proposed extension footprint, however, it was sited south of the raised patio area. The trench was aligned NW-SE and measured 1.5m in length by 0.8m in width. Trench 4 was taken down to 1m, with several steps excavated deeper due to the narrowness of the trench, which ranged from 1.31m to 1.87m in depths.

5.2.2 The objective of the evaluation was to define the character, extent and significance of any observable remains, and to recover dating and environmental evidence. The evaluation sought to avoid damage to / removal of remains that might warrant preservation *in-situ*, particularly structural features. Archaeological remains which are not likely to be preserved *in-situ* but which the extension works would destroy were fully excavated within the limits of the trench.

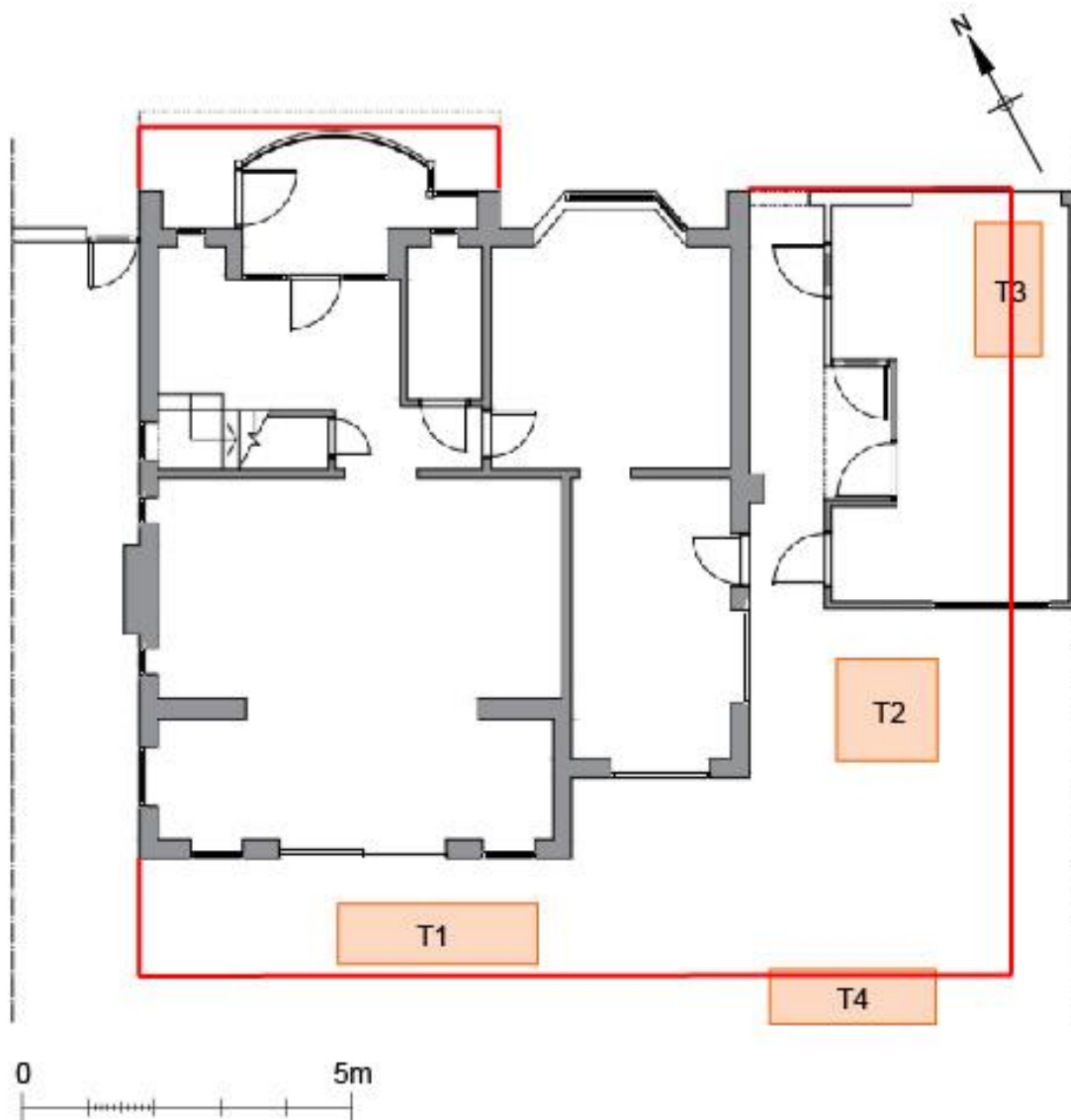


Figure 11: Site plan with planned extension outlined in red and archaeological trenches (orange). Adapted from drawing No. A01 and A02 by Inspired Plans Ltd.

5.3 Recording

5.3.1 Archaeological deposits and features were investigated and recorded in stratigraphic sequence, according to accepted professional standards. Archaeological contexts were recorded on pro-forma sheets by written and measured description and drawn in plan and section. The recording system followed the procedures set out in the Museum of London *Archaeological Field Manual* (1994), and by agreement the *pro forma* recording and drawing sheets used are directly compatible with those developed by the Museum.

5.3.2 Areas of investigation, discrete deposits and features were recorded on a general site plan, and this in turn related to the 1:1250 or 1:2500 Ordnance Survey grid.

5.3.3 Areas of archaeological investigation and observed deposits were drawn at an appropriate scale (1:20), and accurately located to the site plan and grid.

5.3.4 Sections of features and long sections of trenches were drawn at 1:10 or 1:20 as appropriate.

5.3.5 All plans and sections were drawn on polyester based drafting film and clearly labelled, and levelled with respect to Ordnance Datum, transferred from St Peters Church to a temporary benchmark, (TBM) on site, with a value of 14.71mOD.

5.3.6 The fieldwork record includes digital photography (.jpeg & raw images; minimum 14.2 MP). The general photography illustrates the principal features and finds both in detail and in a general context, to represent more generally the nature of the site.

5.3.7 Registers of contexts, drawings and photographs have been kept on standardised forms.

5.4 Finds and samples

5.4.1 All finds and samples will be treated on and off-site in accordance with the appropriate guidelines, including the *United Kingdom Institute for Conservation, Conservation Guidelines No 2*. All identified finds and artefacts will be retained and bagged with unique numbers related to the context record, although certain classes of building material may be discarded if an appropriate record has been made. Where necessary, sensitive artefacts will be properly treated, in line with the appropriate Standards.

5.5 Post-excavation work & report procedure

5.5.1 The fieldwork was followed by a programme of off-site processing and assessment; by compilation of a post-excavation report within a period of 3 months; and by ordering and deposition of the site archive.

Appropriately qualified staff have undertaken assessment (see Appendix I).

5.5.2 The report includes as a minimum:

5.5.2.1 An abstract summarising the scope and results of the archaeological work.

5.5.2.2 An introduction including:

- The location of the site including National Grid Reference and a drawing based on the OS plan;
- An account of the background and circumstances of the work, and a description of the potential impacts arising.
- The dates of the fieldwork, and the methodology employed.

5.5.2.3 A summary of the site background including:

- Geology, soils and topography;
- Any known existing disturbances;
- Archaeological potential, including any relevant previous investigation and reference to the aims and objectives specified in the Written Scheme.

5.5.2.4 The results of the archaeological evaluation have been described, including:

- The nature and depth of overburden soils;

- Description of archaeological features encountered, their dimensions, states of preservation and interpretation;
- A description of the geological subsoil (if encountered);
- A Harris Matrix for more complex remains/stratified deposits.
- Plans and/or sections of archaeological deposits and features, reproduced at an appropriate scale.

5.5.2.5 The report includes an assessment of finds and of any environmental material. Finds and samples will be described and quantified, and implications for conservation, storage or discard of material will be noted. Any potential for further analysis or research will also be described.

5.5.2.6 The report gives an interpretation of the archaeology of the site, including its extent, date, condition and significance. Even if no archaeology is identified this will include description of areas of disturbance, non-archaeological deposits and survival of geological subsoil.

5.5.2.7 A conclusion summarising the archaeological results and their contribution to knowledge of the area. Significant *in-situ* archaeological remains have been highlighted, including their depth below the present ground surface.

5.5.2.8 A short summary of the fieldwork has been appended using the OASIS Report Form, and in paragraph form suitable for publication within the 'excavation round-up' of the Surrey Archaeological Collections.

5.5.3 Copies of the report will be supplied to the Client, Historic England, the DCMS, the County Heritage Conservation Team, the Surrey History Centre and Surrey Archaeological Society Library.

5.5.4 At this stage there is no provision for the further analysis or publication of significant findings. Should these be made the requirements for on and off-site work would be discussed with the Client and respective authorities.

5.6 Archive

5.6.1 Following the issue of the report and any further work that may be agreed, an ordered, indexed and internally consistent site archive will be compiled in line with appropriate professional standards. Chertsey Museum has been contacted regarding the forthcoming fieldwork and it is understood would in principle be willing to accept the archaeological archive.

5.6.2 The integrity of the site archive should be maintained, and the landowner will be urged to donate any archaeological finds to the Museum.

6 RESULTS

6.1 The archaeological fieldwork took place between the 4th and 12th January 2021. What follows is a written description of observations made during the evaluation. The trenches are described in the order as numbered in Figure 11. All four trenches were excavated by hand in dry conditions and backfilled with the same upcast from their respective excavations.

6.2 Deposits are shown as (x), and cuts and structures as [x]. Contexts are prefixed with the trench number in which they were found *e.g.* (100)-(106) were found in Trench 1, (200)-(207) in Trench 2 and so on. The text is supplemented with illustrative photographs and site drawings. For a full context list refer to Appendix I, Appendix II for trench plan illustrations, sections, and levels, and for finds refer to Appendices III-VIII.

6.3 Trench 1

6.3.1 Trench 1 was aligned NW-SE, situated towards the southern edge of the proposed extension footprint. The trench was rectangular in plan and measured 3.17m in length by 0.94m in width and reached a depth of 1.19m (13.29mOD). This trench was abandoned due to the collapse of the northern section, making it unsafe to continue with its excavation (fig.12).

6.3.2 The stratigraphy of Trench 1 comprised the current patio paving and underlying concrete slab (100), which were both removed prior to the evaluation start via a breaker. The combined thickness of the paving and concrete was *c.*150mm thick. A brick wall was present along the south side and east end of the trench [102] (fig.13). This wall had a slightly wider concrete foundation near its base. There was a rubble infill (101) behind the brick wall [102] and a foundation trench cut was observed [103]. Several fragments of human bone were recovered from context (101) (see Appendix V for more detail). Three fragments of Reigate stone were recovered from (101), two of which have evidence of roughly worked faces (see Appendix VI for more detail). Context [102] is a probable retaining wall to the original raised patio dating before the rear house extension *c.*1984.

6.3.3 Underlying the brick wall [102] and its associate trench cut [103] was a deposit of made ground (104). This deposit comprised a moderately well compacted, mid to dark brown sandy silt with moderate chalk and occasional gravel inclusions (fig. 14). The top of (104) presumably represented the land surface at the time of the house construction in the mid-1950s. Context (104) was present across the trench and measured *c.*540-650mm thick.

6.3.4 Several fragments of CBM were recovered from context (104), mainly comprising medieval peg tile, mostly likely to date to the 12th or early 13th century (see Appendix III for more detail). There were also two fragments of Roman brick found within (104), which is likely to have been reused in later construction. A mosaic floor tile flake with two-colour decorated with 'Chertsey' design was found within the lower level of context (104) (see Appendix III for more information and fig.31). The pottery recovered from (104) was mainly of late post-medieval / modern date, including sherds of Horticultural Earthenware, Post-medieval Redware, Refined Whiteware, Chinese Porcelain, London Area Slipped Redware as well as a couple of earlier sherds of Coarse Border Ware and

Early Medieval Shelly Wear (see Appendix IV for more detail). Human bone was recovered from context (104), of which two fragments have been determined to be juvenile individuals and one bone is thought to be from a male individual (see Appendix V for more detail). A fragment of bone also displayed signs of pathological anomalies in the form of osteophytic growth, which is indicative of an older individual with osteoarthritis. Several pieces of stone were also recovered from (104), including a moulded limestone fragment (see Appendix VI for more detail). Additionally, several pieces of ironstone-type material of geological origin were recovered from (104), some of which had mortar adhering to the surface, indicating they had been used in construction (see Appendix VII for more detail). Other finds included two small pieces of lead, three glass fragments, eight oyster shells and a fragment of clay tobacco pipe (see Appendix VIII for more detail).

6.3.5 The made ground deposit (104) came down onto a similar deposit, which was slightly more compacted and a clear break in the sequence (105). Context (104) was easily trowelled off compared to the underlying compacted top of (105). This underlying land surface was a dark silty soil, only the top of which was exposed due to the collapse of the northern section collapsed.

6.3.6 A firm yellowish sandy deposit with grey mottles and scattered stone fragments was observed on the south side of the trench, towards the eastern end (106). This deposit appeared to be an outcropping through (105), with an area exposed in plan c.0.5m x 1m. The top of (106) was recorded at 13.29mOD. Context (106) was not excavated due to the section collapse.



Figure 12: Trench 1 after further section collapse, looking north-east. No scale.



Figure 13: Trench 1 eastern end. Brick wall [102] with the underlying made ground deposit (104) and the surfaces of (105) and (106 at the trench base. Looking south-east, scale 1m.



Figure 14: Trench 1 east end section. Brick wall [102] and associated trench cut [103], made ground (104) and the surfaces of (105) and (106) at the base of the trench. Looking east, scale 1m.

6.4 Trench 2

- 6.4.1** Trench 2 was located towards the eastern part of the proposed extension. This trench measured 1.5m² and 1.12m in depth (13.28mOD), with two slots excavated into the north-west and south-east corners which measured 1.54m (13.01mOD) and 1.78m (12.70mOD) in depth, respectively.
- 6.4.2** The stratigraphy of Trench 2 comprised the current brick paving and the underlying sand bedding layers (200). Below this was a rubble layer consisting of light grey coarse sand with CBM and concrete fragments (201). The rubble layer measured 120-220mm thick and was observed across the trench. Underlying the rubble deposit across the western side of the trench was a darker grey silt with few inclusions which was moderately well compacted (202). This deposit was 140-170mm thick and a wood plank was visible directly below (202) in the east facing section.
- 6.4.3** Below the dark grey silt (202) in the western side of the trench and the rubble layer (201) elsewhere in the trench, was a mid to dark brown/grey silty soil (203). This made ground deposit was abundant in gravels, chalk nodules, flint, and human bone and had occasional Reigate Stone and tile inclusions. Of the human bone found within context (203), several complete and fragmentary bones displayed useful characteristics (see Appendix V for more detail). This included a partially erupting third molar, which indicates the individual was around 18 years of age and other bones indicating juvenal individuals. The CBM consisted mainly of peg tile fragments, some of which are likely to date from the 12th or early 13th century (see Appendix III for more detail). A couple of Roman brick and tile fragments were found, which were presumably brought to the site for construction purposes. Also, later fragments dating to the post-medieval period were also present within (203). Several pottery sherds were recovered from (203), including Coarse Border ware and Sandy-Shelly Ware which have a late 13th century date (see Appendix IV for more detail). Other finds included a roughly broken fragment of Reigate stone, four iron nails and a fragment of glass (see Appendices VI and VIII for more detail).
- 6.4.4** A layer of slightly more tile and charnel was visible (204), which was observed from a depth of c.600mm into (203) (fig.15). The spread was concentrated to the western side of the trench and comprised mostly long bones with several femurs present (see Appendix V for more detail). Some of the bones recovered from (204) displayed characteristics of juvenal individuals, with an average age of 12 to 14 years old, with at least one younger individual between the ages of four and eight. A number of teeth showed signs of wear, including an extreme case observed in a left maxilla from context (204). The tile within (204) comprised mainly medieval peg tile, probably dating to the 13th/13th century, with a couple of floor tile fragments and a Roman tegula tile (see Appendix III for more detail). Sherds of London-type Ware and Sandy-Shelly Ware were recovered from (204), which provide a mid-12th century date (see Appendix IV for more detail). Other finds included a fragment of Reigate stone with a finely worked face and several pieces of ironstone-type material (see Appendices VI and VII for more detail). Context (204) appeared to be a spread within (203), which continued below the spread of tile and charnel.



Figure 15: Trench 2 spread of tile and charnel material (204). Looking north, scale 1m

6.4.5 Context (203) was present across the trench and measured 1.22m in thickness from the slot excavated into the south-east corner and 1.02m in the north-west corner, appearing to continue below the base of this slot (fig.16). The excavation of the north-west corner revealed an articulated skeleton (SK205) which had good overall preservation (fig.17). The top of (SK205) was recorded at 13.05mOD. Due to the remains being positioned towards the edge of excavation only the lower thorax and vertebral column, pelvic girdle and upper legs, and lower arms were exposed. The individual was lying in a supine position with hands folded over their lap. The femurs appeared to be slightly turned inwards and tapering together, which with the position of the arms close to the torso, indicates the individual was likely wrapped in a shroud for burial. A single lead strip was found placed on the right femur, although it is unclear if this was deliberately positioned / associated with the burial shroud. The head was presumably at the western end of the grave; however, the head and upper torso as well as the lower legs and feet lay outside the area of excavation. The remains are thought to be of an adult and based on the limited observations of the ilium and the skeleton's context within a male monastic complex, the individual was likely to have been a male. The skeleton was left in-situ and reburied with terram and sand.



Figure 16: Trench 2 Skeleton (SK205) found during the excavation of the slot into the north-west corner. Looking north, scale 1m



Figure 17: Trench 2 (SK205) overhead view of the burial. North approx. to the top. Scale 0.2m

6.4.6 The slot excavated into the south-east corner revealed a darker silty soil (206) below (203) (fig.18). Context (206) measured 80-170mm in thickness and included a sherd of prehistoric pottery (possibly Late Bronze Age) as well as three sherds of Early Medieval Shelly Ware, which date to the mid-11th century (see Appendix IV for more detail). Context (206) came down onto a mid-brown silty soil (207). This deposit was relatively clean with very few inclusions and was moderately firm and well compacted. Context (207) may represent a natural deposit.



Figure 18: Trench 2 south-east corner excavation. Looking south, scale 1m

6.5 Trench 3

- 6.5.1** Trench 3 was moved slightly out of the proposed extension footprint due to the presence of a service pipe running to the west. The trench was aligned NE-SW and rectangular in plan. This trench measured 2m in length by 1m in width and 0.52m in depth (14.05mOD) (fig.19). Trench 3 was not excavated further due to the presence of a reinforced concrete slab 0.52m below the garage floor level, which was not fully excavated due to concerns of the structural integrity of the garage given the past subsidence.
- 6.5.2** The stratigraphy of Trench 3 comprised the reinforced concrete garage floor slab (300), which was excavated via a breaker prior to the start of the archaeological evaluation (fig.20). The concrete measured 150mm in thickness and was present across the trench with a plastic sheet directly below it. Underlying (300) was a moderately well compacted yellow sand with moderate brick rubble and stone inclusions (301). This deposit was present across the trench and measured 100mm thick. Context (301) overlay a deposit of moderately well compacted sandy soil with frequent brick and moderate concrete inclusions (302). This layer was present across the trench, with concrete protruding from the north-east corner which may be associated with the footings of the garage wall. Context (302) measured 300-350mm in thickness and included fragments of bone and shell.
- 6.5.3** Below (302) a reinforced concrete slab was revealed 0.52m below the garage floor slab level (303). The concrete (303) was not fully excavated due to concerns of the structural integrity of the garage given the past subsidence. A small hole, measuring c.350 x 400mm, was broken through using a sledgehammer. This revealed that the concrete slab measured c.100mm in thickness and overlay a mid-brown sandy soil with moderate stone inclusions (304). This deposit was not fully excavated as it was only observed through the hole of (303), and therefore, its full extent is unknown.



Figure 19: Trench 3 looking north. Scale 0.5m



Figure 20: Trench 3 detail of southern end section, looking south. Scale 0.5m

6.6 Trench 4

- 6.6.1** Trench 4 was an additional trench which was added due to the cessation of Trenches 1 and 3. Trench 4 falls outside the proposed extension footprint, however, it was sited south of the raised patio area. The trench was aligned NW-SE and measured 1.5m in length by 0.8m in width. Trench 4 was taken down to 1m (13.11mOD), with several steps excavated deeper due to the narrowness of the trench, which ranged from 1.31m to 1.87m in depths (12.81mOD to 12.25mOD).
- 6.6.2** The stratigraphy of Trench 4 comprised the current surface of a thin layer of loose stone chippings over a geotextile weed barrier (400) (fig.21). To the north of the trench was the raised patio area with a retaining wall and to the south were patio paving slabs. Below the patio paving on the north facing section, a layer of mortar was observed 70-110mm thick which was relatively loose with some CBM inclusions (401). The topsoil below (400) consisted of a dark greyish sandy silt with moderate pebble and occasional chalk flecks (402). The topsoil layer measured 200mm in thickness and was observed across the trench.
- 6.6.3** Below (402) was a cut feature [403] which was filled with a mid-brown sandy silt (404). The fill had moderate fine gravel, bone, and chalk flecks throughout as well as occasional charcoal flecks and roots. It was present across the trench and measured 700-1350mm in thickness. Of the human bone recovered from context (404), several had useful characteristics observed during the assessment (see Appendix V for more detail). A right ischium found within context (404) indicated it was from a juvenal individual and osteophytic growth on a fragment of acetabulum indicated it was an older individual with osteoarthritis. The CBM recovered from (404) included several medieval roof and floor tile as well as possibly bricks (see Appendix III for more detail). Roman brick was also found within context (404), most likely to have been reused in later construction. Several pottery sherds were recovered from (404), including a prehistoric sherd (possibly Late Bronze Age in date), Early Surrey Ware, London-type Ware, and a later sherd of Post-medieval Redware (see Appendix IV for more detail). Other finds included a coarse limestone fragment with a worked face, a piece of ironstone-type material and an oyster shell (see Appendices VI-VIII for more detail). Context (404) appeared to fill a cut feature which was observed towards the southern side of the trench [403], cutting into the underlying deposits (405) and (406). The cut had almost vertical sides with a slightly rounded corner at the base observed on the eastern side.
- 6.6.4** A probable buried land surface and underlying horizons was exposed at a similar depth to the east and west of cut [403]. This deposit consisted of a homogenous dark grey clayey silt with orangey mottled lenses throughout (405) (fig.22). The layer was relatively clean with very few inclusions. A Roman brick or possibly tegula flake was recovered within (405) (see Appendix III for more detail) as well as a piece of burnt flint (see Appendix VIII for more detail). The layer was exposed for 340mm to the east and west of cut [304] and continued below the base of the step excavation (fig.23). Context [403] also appeared to cut into (406), which was similar to (405) in appearance. Context (406) was a dark clayey silt with few inclusions. The deposit was exposed for 240mm below cut [403] and continued below the base of excavation.



Figure 21: Trench 4 after excavation, looking north-east. Scale 1m



Figure 22: Trench 4 after excavation, looking south. Scale 1m



Figure 23: Trench 4 west side of cut [403] and fill (404) with (405) to righthand side. Looking south, scale 0.5m

7 CONCLUSIONS

The following section refers to the original research questions set out in the preceding WSI (Compass Archaeology 2020) and compares them with the results of the evaluation.

7.1 Is there any further evidence of Roman occupation close-by? Can this be linked to any particular building or land-use?

No evidence of in-situ Roman occupation was observed during the course of the evaluation. Several sherds of residual Roman CBM were found including: two brick fragments from the buried soil horizon / made ground in Trench 1, a brick and a tegula fragment from the made ground in Trench 2, a tegula tile fragment from the tile and charnel spread in Trench 2, four brick fragments from the fill of the cut feature in Trench 4 and a brick / tegula fragment from the probable burial land surface in Trench 4. The Roman CBM was presumably brought to the site for reuse in later construction, possibly medieval. No other signs of Roman occupation were recovered.

7.2 Is there any evidence relating to Chertsey Abbey – including remains relating to the pre-conquest abbey, the c.1110 rebuild, the later-13th / 14th century abbey, or its dissolution?

No in-situ evidence relating to Chertsey Abbey or its associated features were observed during the evaluation. Evidence relating to the monastic cemetery was recovered (see below) as well as fragments of CBM and Reigate stone, likely to have derived from the demolition of the Abbey and its associated buildings. Several buried land surfaces were observed in Trenches 1 and 4, as well as a cut feature in Trench 4, however, the full extent of these contexts was unclear due to the limits of excavation of the trenches.

7.3 Is there any evidence relating to the medieval tile kiln found during the 1922 excavation? Is there any other evidence of tile production, possibly forming a battery of kilns?

No in-situ evidence of a medieval tile kiln was found during the evaluation. A single mosaic floor tile flake decorated with ‘Chertsey’ design was recovered from Trench 1. No structural evidence of a battery of kilns or tile wasters were recorded, which could indicate the site was not the location of the tile kiln site found in 1922 or that subsequent interventions have significantly disturbed the site.

7.4 Is there any evidence for burials relating to the remains previously found in 1954? Can it be determined if this formed part of a monastic cemetery?

During the evaluation, a total of 794 fragments of human bone were recovered from all four evaluation trenches, from a total of seven different contexts. The majority of the assemblage represents disarticulated, re-deposited bone, with a single in-situ inhumation exposed and recorded in Trench 2.

The minimum number of individuals including the single inhumation is twelve adults, plus a smaller number of juveniles. However, due to the fragmentary nature of the assemblage the actual number is taken to be considerably higher. As is to be expected with a monastic complex, the remains which were suitable for age and sex estimation

represent a number of adult males, ranging in age from early twenties to mid to late fifties.

The relationship between the in-situ inhumation and disarticulated remains is unclear. Both were recorded in the same context and there was no clear grave cut or difference in fill. At present it is not known if the disarticulated remains were deliberately placed close to the burial to retain their association, or if the cemetery was cleared and the charnel reburied, co-incidentally missing the inhumation.

The assemblage was in a variable state of preservation, with a number of elements displaying distinct weathering patterns. The differences in preservation and fragmentary nature of the individual remains indicate they have been moved on a number of occasions, from a number of different locations. Further, the prevalence of larger elements in relation to smaller is consistent with an economical and wholesale clearance event – often during a cemetery clearance larger bones, such as femurs etc. are easy to gather up and stack, whereas smaller bones are more likely to be missed, either deliberately or accidentally. It is likely that such an event occurred to result in the assemblage recovered during the evaluation. It is unclear whether they were deposited at one time or on several separate occasions. It is suggested, based on the number of previous archaeological interventions which have occurred on the site, some of the remains may have been deposited (redeposited) in the mid-20th century.

7.5 Is there any evidence for earlier elements of structures on the site prior to the erection of No.4 Abbey Gardens?

No in-situ evidence of previous structures survives on the site, either walls, beam-slots, post-holes or robbed out footings. Evidence of structures in the form of CBM was recovered from Trenches 1, 2 and 4, as well as Reigate stone from Trenches 1 and 2.

7.6 At what level does the natural geology survive and what form does it take?

Natural geology was not observed in most of the trench footprints. It was not reached in Trenches 1, 3 and 4. A natural deposit may have been observed at the base of the slot into the south-east corner of Trench 2. This deposit was a relatively clean, moderately firm, and well compacted silty soil. It was present from 12.70mOD.

8 SOURCES

8.1 Bibliography

Chartered Institute for Archaeologists. (2014). *Standard and Guidance for Archaeological Field Evaluation*.

Compass Archaeology. (2018). *6 Abbey Gardens, Chertsey, KT16 8RQ: An Archaeological Evaluation Assessment Report*. (unpublished report).

Compass Archaeology. (2019). *Burford, Abbey Gardens, Chertsey KT16 8RQ Borough of Runnymede: An Archaeological Desk-based Assessment & Written Scheme of Investigation for trial pit evaluation*. (unpublished report).

Compass Archaeology. (2020). *4 Abbey Gardens, Chertsey, KT16 8RQ: A Written Scheme of Investigation for an Archaeological Evaluation*. (unpublished report).

Gardner, E. (1923). 'A Medieval Tile Kiln, Chertsey Abbey', *The Antiquaries Journal*, 3 (1), pp. 71.

Historic England. (2015). *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second edition)*.

Gardner, J. S., and Eames, E. (1954). 'A Tile Kiln at Chertsey Abbey', *Journal of the British Archaeological Association*, 17 (1), pp. 24-42.

Pocock, W. W. (1858). 'Some Account of the Encaustic Tiles and Stone Coffins excavated on the Site of Chertsey Abbey in 1855', *Surrey Archaeological Collections*, 1, pp. 115-121.

Poulton, R. (1988). 'Archaeological Investigations on the Site of Chertsey Abbey', *Surrey Archaeology Soc Research*, 11 (Microfiche).

Runnymede Borough Council. (2020). *Runnymede 2030: Local Plan*.

8.2 Cartographic sources (chronological)

Anon, *Chertsey Abbey Estate map*. (1806).

Anon, *Plan of the Chertsey Abbey Estate*. (c.1810).

Anon, *Plan of Freehold Property, Chertsey, Surrey. For Sale by Auction by Messrs Waterer & Sons at the Town Hall May 23rd, 1861*. (1861).

Ordnance Survey, *Middlesex Sheet XXIV.11*, (surveyed 1894, published 1896)

Ordnance Survey Plan, *TQ Plan 0467*, 1:1,250 scale, (surveyed 1964, published 1965)

British Geological Survey, *Sheet 269: Windsor*, 1:50,000 scale, (1998)

APPENDIX I

CONTEXT LIST

Context No.	Trench No.	Description
(100)	1	Current paving and underlying concrete slab
(101)		Rubble infill behind brick wall [102]
[102]		Brick wall on south side & east end of trench
[103]		Foundation trench for brick wall [102]
(104)		Buried soil horizon / made ground
(105)		Underlying land surface
(106)		Firm yellowish sandy deposit
(200)	2	Brick paving and sand bedding layers
(201)		Rubble
(202)		Darker-grey silt with few inclusions
(203)		Mid to dark brown / grey silty soil
(204)		Layer of slightly more tile and charnel spread out
(SK205)		Articulated skeleton
(206)		Darker silty soil
(207)		Mid-brown silty soil
(300)	3	Reinforced concrete slab
(301)		Sand and rubble bedding layer
(302)		Sandy soil with brick rubble
(303)		Reinforced concrete slab
(304)		Mid-brown sandy soil
(400)	4	Loose stone chippings over geotextile weed barrier and paving slabs to the south
(401)		Mortar
(402)		Dark sandy silt
[403]		Cut feature on the southern side of the trench
(404)		Mid-brown sandy silt
(405)		Probable buried land surface & underlying horizons
(406)		Possibly same as (405)

Trench 1

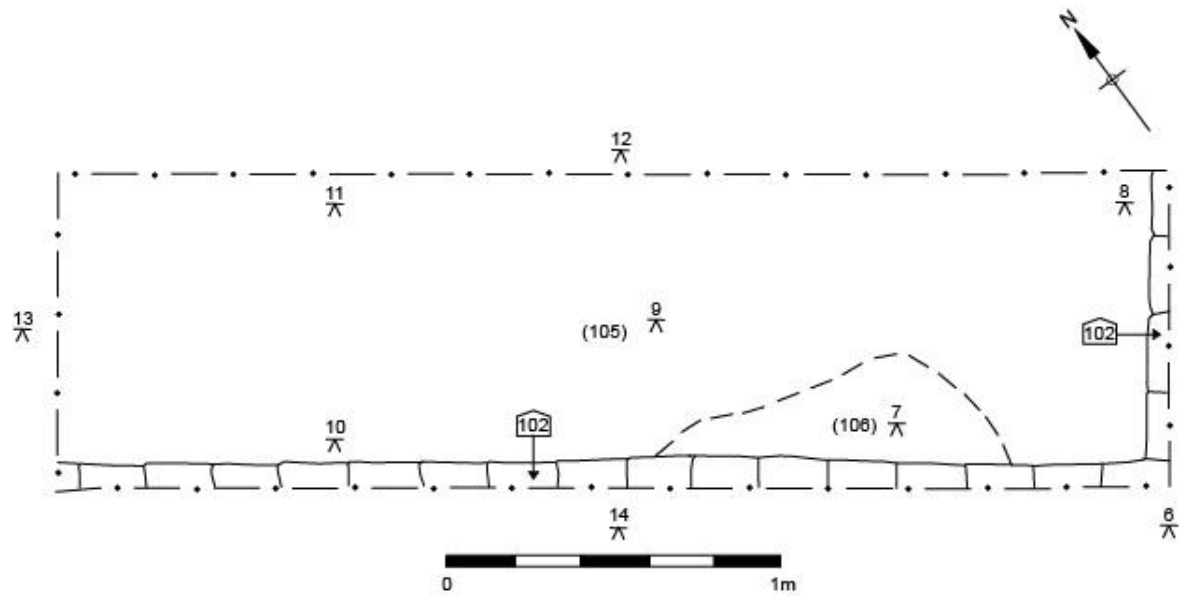


Figure 24: Plan of Trench 1

Trench 2

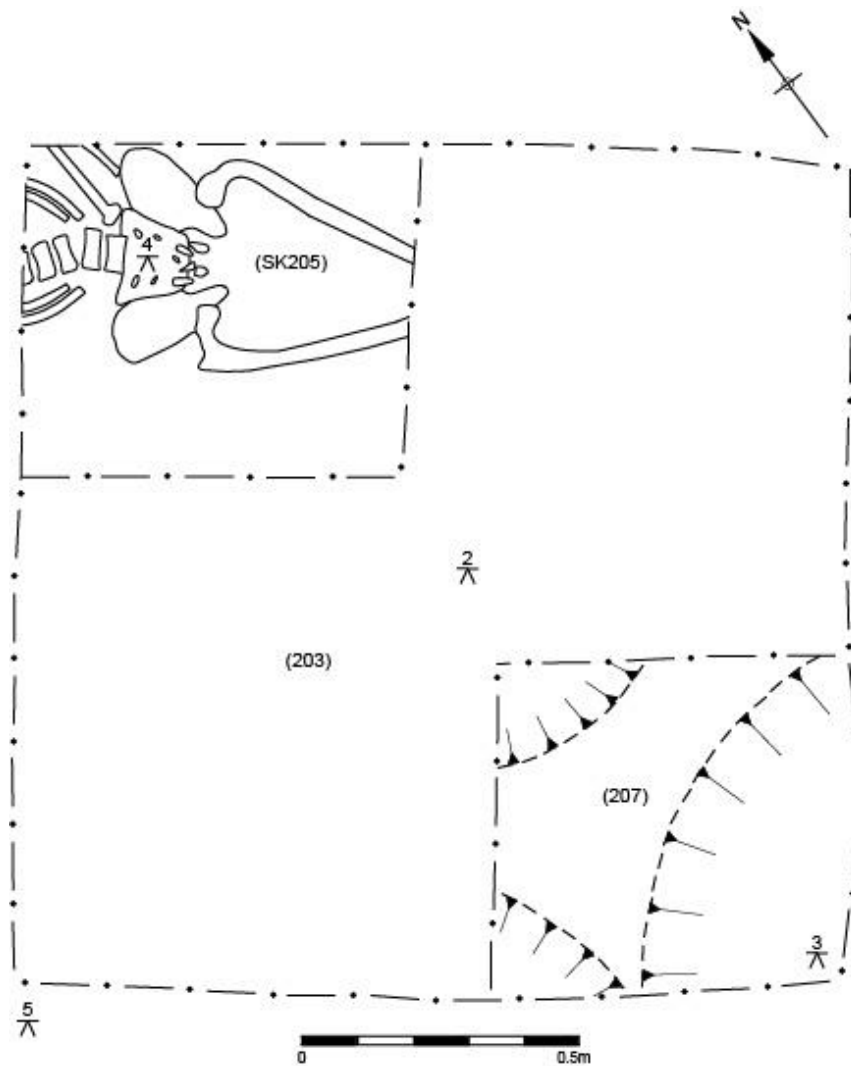


Figure 25: Plan of Trench 2

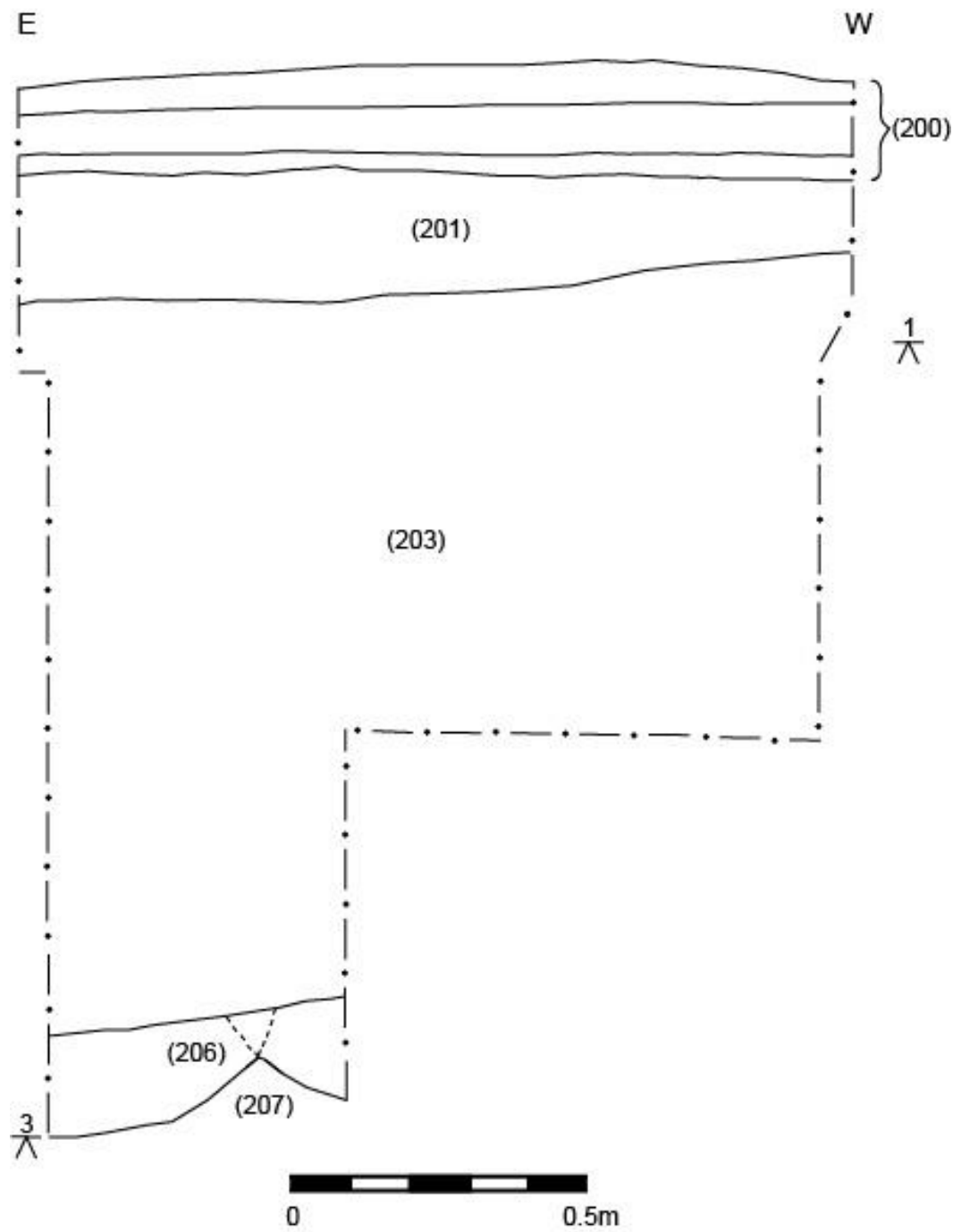


Figure 26: Trench 2 - north facing section

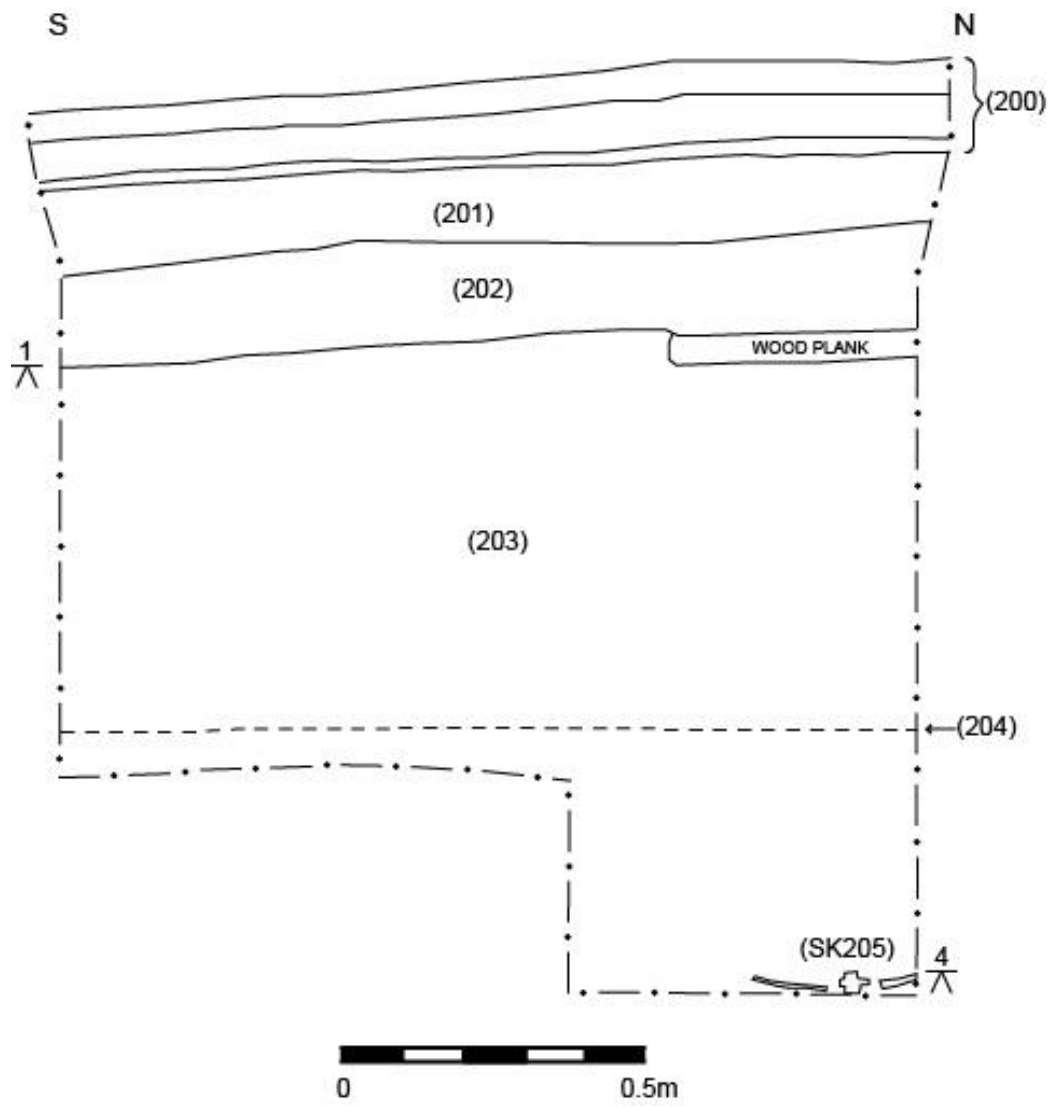


Figure 27: Trench 2 - east facing section

Trench 3

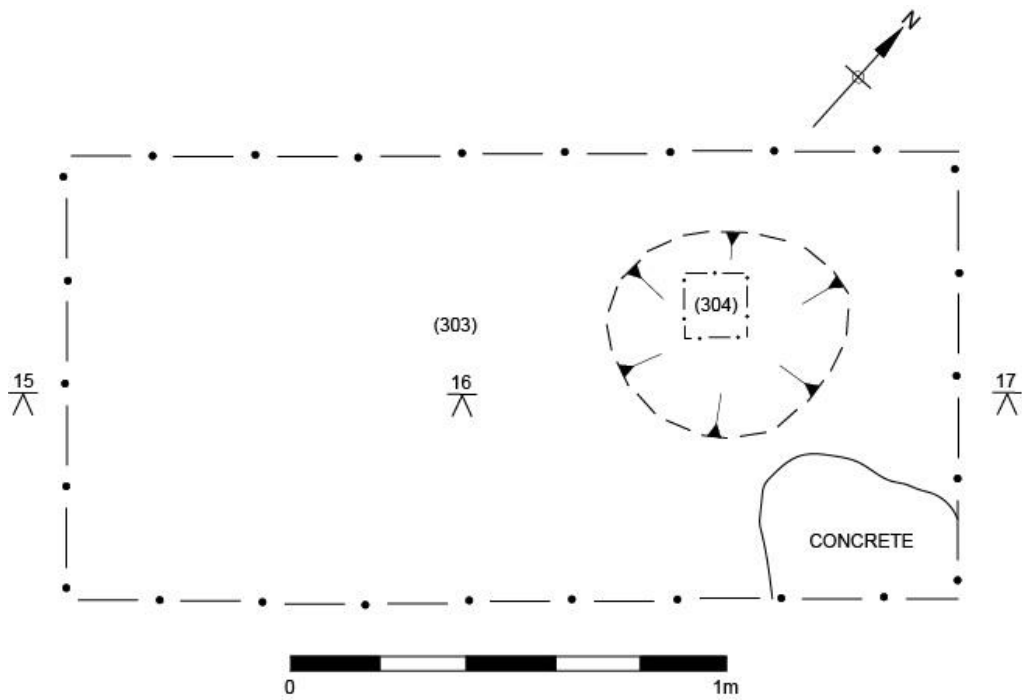


Figure 28: Plan of trench 3

Trench 4

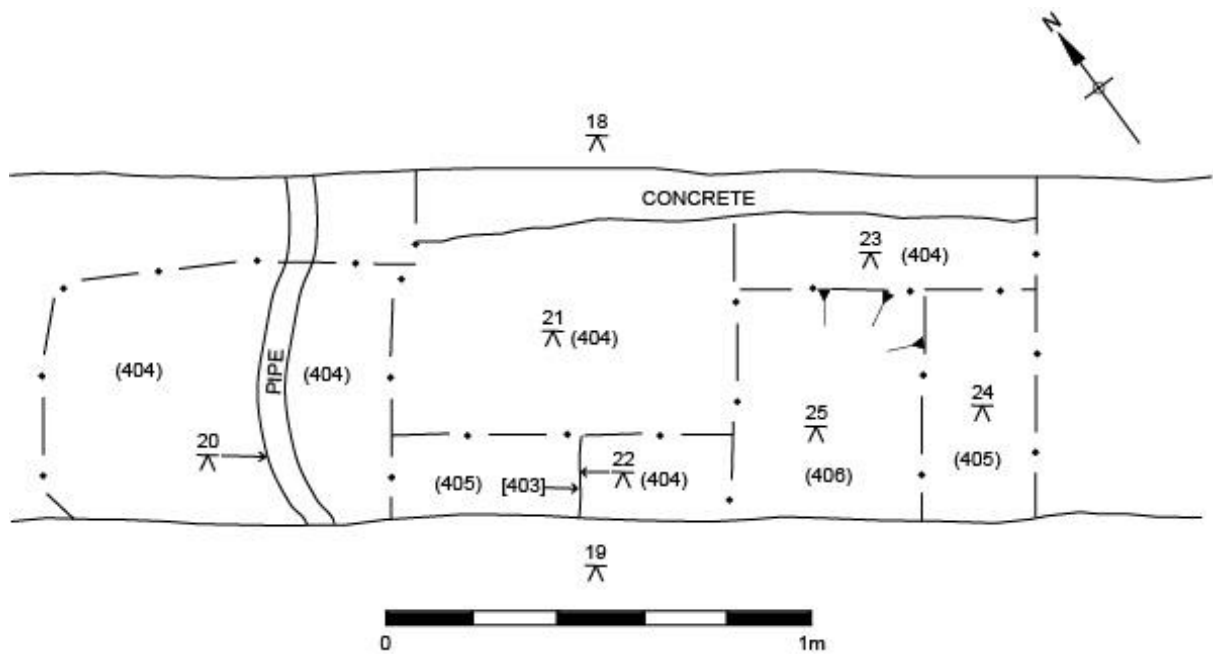


Figure 29: Plan of Trench 4

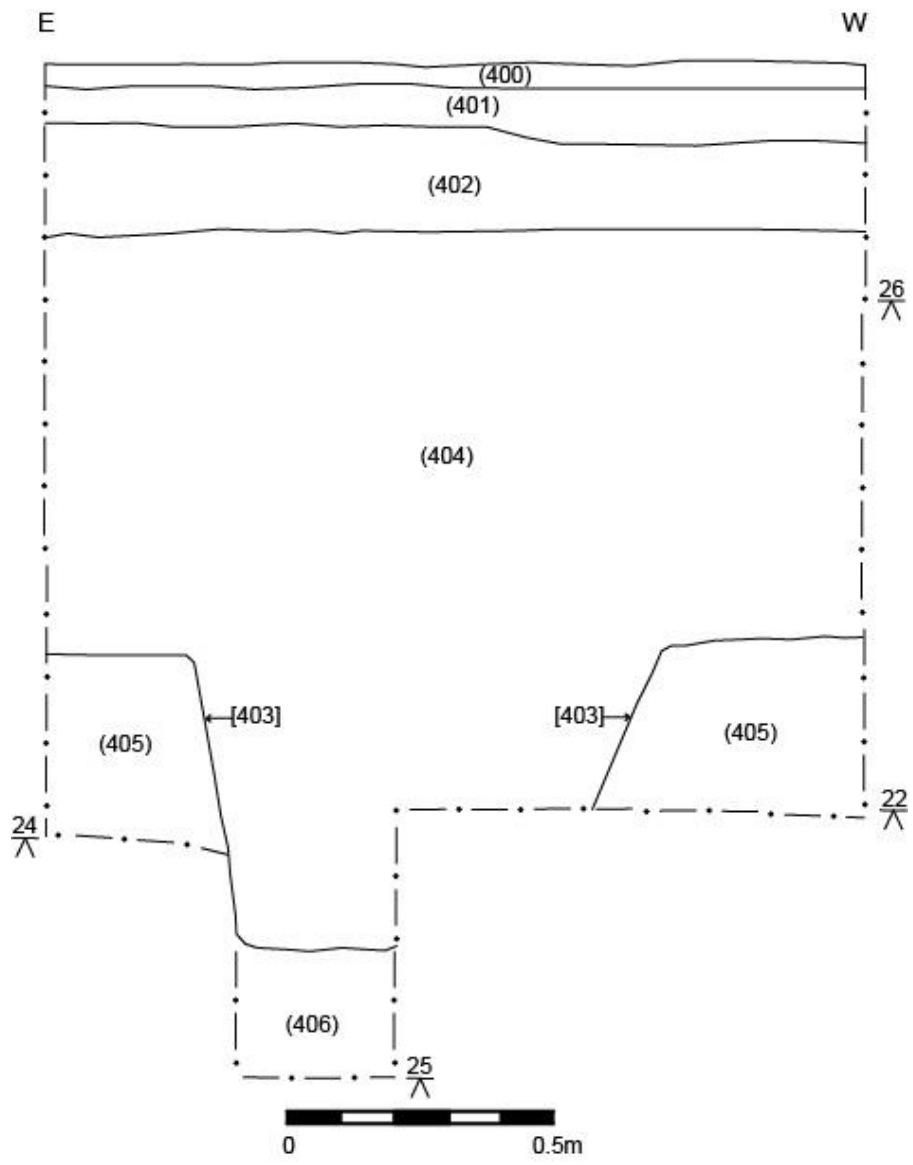


Figure 30: Trench 4 - north facing section

Levels

Trench	No.	Reduced Level (mOD)	Description
2	1	14.04	Section line
	2	13.28	Base of trench – centre
	3	12.70	Base of trench – south-east corner
	4	13.05	Top of (SK205)
	5	14.43	Top of trench – south-west corner
1	6	14.46	Top of trench – south-east corner
	7	13.29	Top of (106)
	8	13.29	Base of trench – north-east corner
	9	13.33	Base of trench – centre
	10	13.30	Base of trench – south side
	11	13.29	Base of trench – north side
	12	14.48	Top of trench – north side
	13	14.48	Top of trench – west end
	14	14.47	Top of trench – south side
	3	15	14.57
16		14.05	Base of trench – centre
17		14.57	Top of trench – north end
4	18	14.43	Top of trench – north side
	19	14.12	Top of trench – south side
	20	13.85	Top of pipe
	21	13.11	Top of higher ledge
	22	12.70	Edge of cut feature [403] – west side
	23	12.81	Top of middle ledge
	24	12.66	Top of lower ledge
	25	12.25	Base of trench
	26	13.69	Section line

APPENDIX III

CERAMIC BUILDING MATERIAL by *Susan Pringle*

The ceramic building material comprised 68 fragments of bricks and tiles with a total weight of 11.3kg, recovered from five different contexts across evaluation trenches 1, 2 and 4. A full catalogue is included below.

The assemblage comprises mainly of early roof-tile, probably mostly 12th or early 13th century in date based on the coarse sandy fabrics, the thickness, and the width of some of the peg tiles. The assemblage also included some Roman flat tiles, mostly brick, which was presumably brought to the site for construction purposes. A tile or thin brick from context (203) has a fine grog-tempered fabric and could possibly be from the later Saxon period, possibly kiln furniture. There are two fragments of small, glazed tiles, with holes probably from roof furniture, most likely crested ridge tiles which have mainly been used on stone-roofed buildings.

Key: **A** = Abraded; **H** = Heated; **M** = Mortar; **R** = Roman; **Med** = Medieval; **PM** = Post medieval; **Rd** = Reduced; **Ru** = Re-used; **S** = Sooted;

V = Vitrified

All measurements given in millimetres, (**L** = Length; **B** = Breadth; **T** = Thickness). Weight in grams.

Table 1: CBM by context, fabric and form

Context	CBM / Context date	Period	Fabric	Form	Count	Weight	L	B	T	Condition	Comments	Fabric comments
104	1100-1500	Med	A	Peg	1	94	0	0	17		Large polygonal nail-hole, c. 16mm diam. Neatly made.	Light orange-brown fabric, moderate to common, fine to very coarse, quartz; common coarse blocky inclusions of clay/siltstone; sparse flint
104	1100-1500	Med	B	Peg	1	316	0	0	14	Rd	Very reduced on back	Orange fabric, finer than A; similar geology. Abundant fine to medium quartz; moderate siltstone and iron-rich inclusions
104	1100-1500	Med	C	Peg	1	203	0	0	19	Rd	Greenish-brown glaze on top, side and areas of base; reduced core. Peg or flanged tile?	Abundant fine to coarse quartz, moderate medium flint (finer than fabric A); sparse to moderate dark red iron-rich material.
104	1100-1500	Med	A	Ridge	1	154	0	0	17-18		Unglazed apart from single streak of clear glaze. Ridge or curved tile?	

104	1100-1500	Med	B	Ridge?	1	37	0	0	25	A	Clear glaze on both sides; part one edge and two perforations. Small fragment of crested ridge tile? (Usually 13th c. on S coast)
104	1200-1500	Med	A	peg	1	114	0	0	17		Part large sub-circular nail-hole, c. 17mm diam.
104	1200-1500	Med	A	peg	1	177	0	0	16	M	
104	1200-1500	Med	A	peg	1	162	0	0	17	Rd	Reduced core
104	1200-1500	Med	A	peg	1	252	0	0	19	M	Circular nail-hole, c. 13mm diam.
104	1200-1500	Med	A	ridge?	1	285	0	0	16	M	Slightly curved, peg or ridge? Mortar on lower front face sol probably ridge tile
104	1200-1500	Med	vitrified	peg	1	194	0	0	17	Rd, V	Completely blackened
104	1200-1500	Med?	A	tile?	1	81	0	0	32	Rd, A	No edges; reduced core and surfaces. May once have been glazed.
104	1200-1500	Med	B	peg	1	245	0	0	17	Rd, M	Yellowish-green glaze on top face. Reduced core.
104	1200-1500	Med	B	peg	1	351	0	0	16		Circular nail-hole, c. 14mm diam.
104	1200-1500	Med	B	peg	1	174	0	0	17	Rd, A	Small part nail-hole; core and top surface very reduced
104	1200-1500	Med	B	brick/floortile?	1	123	0	0	39+	A	Flake, top missing; base sanded; side smooth,

											possibly with very thin glaze. Side not bevelled; brick or floor tile?	
104	1200-1500	Med	C	ridge?	1	77	0	0	19	A	Glazed yellowish-brown on both faces; angled edge, c. 140 degrees.	
104	1200-1500	Med	C	peg	1	44	0	0	15	M	part biconical curved perforation c. 44mm from edge, also glazed.	
104	1200-1500	Med	B	peg	1	250	0	0	20		Splashed with clear glaze on top, side and base	
104	1200-1500	Med	B	peg	1	187	0	0	16	M		
104	1200-1500	Med	B	peg	1	178	0	0	17			
104	1200-1500	Med	B	peg	1	190	0	0	18			
104	1200-1500	R	3054?	brick	1	132	0	0	36	A	No edges.	Silty, micaceous, orange fabric with very coarse chunks of clay/siltstone, organic 'chaff' impressions and sparse medium quartz. Brick variant of MoL fabric 3054?
104	1250-1300	Med	Chertsey	floor tile	1	125	94+	67+	20+	A	Mosaic floor tile flake; 2-colour decorated 'Chertsey' design. Part 1 edge present; glaze damaged, mainly on the areas of white clay. Part of larger panel; see Eames 1980 Vol 2, Catalogue of Medieval Lead-Glazed	

											Tiles in the Department of Medieval and Later Antiquities in the British Museum (pl 865)	
104	1250-1300	R	?	brick	1	66	0	0	37	A, Rd	Small fragment; reduced core.	Silty fabric with moderate inclusions of coarse quartz
104	1250-1300	Med	C	peg	1	28	0	0	20		brown glaze on top surface	
104	1250-1300	Med	B	peg	1	191	0	0	18		Part is cover-glazed in green	
104	1250-1300	Med	B	peg	1	206	0	0	19		Very thin glaze on back and top	
104	1250-1300	Med	A	peg	1	80	0	0	16		part circular nail-hole, c. 15mm diam.	
104	1250-1300	Med	A	peg	1	200	0	0	13	M		
203	1850-1950	PM	?	brick	1	86	0	0	62	V, Rd	Flake of late post-medieval brick; sharp arrises and flat faces	
203	1850-1950	Med	vitrified	floor tile	1	238	0	0	38	V, Rd	Knife-cut bevelled side; blackened glaze on top and part side face.	Sandy fabric, vitrified
203	1850-1950	Med	C	peg?	1	72	0	0	17		clear yellow-brown glaze. Very slightly curved - peg or ridge?	
203	1850-1950	Med	C	peg	1	156	0	0	18		2 spots of glaze on top	
203	1850-1950	Med	A	peg	1	109	0	0	15		Circular nail-hole, c. 15mm diam.	Fabric has coarse quartz
203	1850-1950	Med	A	peg	1	167	0	0	17	M		Finer version of fabric

203	1850-1950	Med/PM	2586	peg	1	152	0	0	14			Circular nail-hole, c. 12 mm diam.
203	1850-1950	R	?	brick	1	461	110+	145+	35	M	No edges, mortar on base, top and sides.	Nondescript orange-red fabric, very fine background quartz and sparse coarser grains
203	1850-1950	R	?	tegula	1	66	0	0	28	Rd	No edges; unglazed. Probably Roman tegula	Silty fabric with coarse quartz
203	1850-1950	Med	?	brick?	1	352	110+	100+	33	A, Rd, M	Part of one side remains, looks moulded. Mortar on base and on 2 broken faces. Very reduced, especially on top, which is damaged. Late Saxon?	Very fine light brown fabric, grog-tempered?
204	1250-1400	Med	?	floor tile	1	174	0	0	0	Rd, V, H, A	Knife-cut bevel. Surface worn and heat-cracked. Bubbles of glaze on side.	Fine quartz fabric, very reduced
204	1250-1400	Med	vittrified	peg	1	211	0	0	0	V, Rd		
204	1250-1400	R	vittrified	tegula	1	101	0	0	0	V, Rd	Thick reduced core; no edges	
204	1250-1400	Med	B	peg	1	101	0	0	0	Rd	Small part circular nail-hole; splashes of greenish glaze	
204	1250-1400	Med	B	peg	1	90	0	0	0		splashes and streaks of greenish glaze on both faces	
204	1250-1400	Med	D	peg	1	354	85+	193	18	Rd	Complete width; edges reduced	
204	1250-1400	Med	silty	peg	1	202	0	0	15	A	Very worn surface, soft fabric	Soft fabric
204	1250-1400	Med	D	peg	1	375	89+	190	16		Complete width; unglazed; reduced core	

204	1250-1400	Med	?	peg	1	487	131+	191	17	Rd	Complete width; unglazed. Reduced surfaces	
204	1250-1400	Med	?	peg	5	1220	0	0	0		2 circular nail-holes. C. 12mm and 13mm diam.	
204	1250-1400	Med	B?	nib tile	1	149	0	0	16	Rd	Corner fragment; part possible nib on top face. If so, may be 13th century type	
204	1250-1400	Med	?	floor tile?	1	56	63+	42+	24+	A	Flake, part base and side of floor tile. Traces of clear yellowish glaze on knife-trimmed edge of tile.	Silty orange fabric with moderate fine to medium quartz and red blocky siltstone inclusions.
404	1100-1400	R	vitified	brick	1	171	0	0	36	Rd, V	No edges, very reduced	
404	1100-1400	Med	vitified	peg	1	77	0	0	16	Rd, V	Very reduced	Abundant fine to medium quartz
404	1200-1400	R?	2454?	brick	1	161	0	0	40	M		Fabric looks like MoL 2454 from NW Kent (found in London), especially the rose quartz moulding sand
404	1200-1400	Med	?	peg	1	77	0	0	15	M		Silty streaked fabric with fine quartz
404	1200-1400	Med	?	nib tile	1	104	0	0	12	A	type with nib on front of tile, subsequently removed? Similar appearance and knife-trimming to that in (204), but fabric has more silty streaks. 13th c?	

404	1250-1450	Med	B	peg	1	61	0	0	17	M		
404	1250-1450	Med	A	peg	1	58	0	0	17	Rd, M	Reduced core	
404	1250-1450	R?	2815	brick?	1	67	0	0	37	Rd, A		
404	1250-1450	R?	2815	brick?	1	56	0	0	44+	Rd, A	Flake, base missing; top reduced	
404	1250-1450	Med	?	floor tile?	1	42	0	0	0	A	Corner fragment; thin yellow glaze on top and sides. Base missing. Glaze on some broken surfaces - misfired?	Light orange fabric with moderate fine quartz
404	1250-1450	Med	?	floor tile?	1	62	0	0	0	A	Flake; dull yellow surface, probably worn yellow glaze? Same fabric as other yellow-glazed flake.	Light orange fabric with moderate fine quartz
405	50-400	R	3004	brick/teg?	1	69	0	0	22+	A. Rd, S	Flake, reduced and sooted.	Orange-red fabric with common medium quartz



Figure 31: Fragment of decorated Chertsey mosaic floor tile from context (104). Scale 10cm

APPENDIX IV POTTERY by *Paul Blinkhorn*

The pottery assemblage comprised 27 sherds with a total weight of 298g. It was all medieval or later, other than two probably prehistoric sherds. The post-Roman material was recorded using the conventions of the Museum of London Type-Series (eg. Vince 1985), as follows:

CBW:	Coarse Border Ware , 1270 – 1500. 5 sherds, 44g.
EMSH:	Early Medieval Shelly Ware , 1050 - 1150. 4 sherds, 49g.
ESUR:	Early Surrey Ware , 1050 – 1150. 1 sherd, 11g.
HORT:	Horticultural Earthenwares , 19 th – 20 th century. 1 sherd, 7g.
LOND:	London-type Ware , 1080-1350. 2 sherds, 47g.
PMR:	Post-medieval Redware , 1580 – 1900. 3 sherds, 62g
PMR SLIP:	London Area Slipped Redware , 1800-1900. 1 sherd, 12g.
REFW:	Refined Whiteware , 1800-1900. 4 sherds, 12g
SSW:	Sandy-Shelly Ware , 1140 – 1200. 3 sherds, 42g

The two prehistoric sherds weighed 10g in total. They were in a fine sandy fabric with calcined flint inclusions up to 2mm. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 2. Each date should be regarded as a *terminus post quem*.

The medieval material consisted of a mixture of unglazed jars and bowls and glazed jugs. This is also typical of the period in the region. All the pottery is in fairly good condition and appears reliably stratified, but also appears to be the product of secondary deposition.

One of the bodysherds of SHEL from context 206 had a pre-firing hole in it with a tick or similar. From the curvature, it is from the body or base of a large vessel.

Bibliography

Vince, AG, 1985 The Saxon and Medieval Pottery of London: A review *Medieval Archaeology* **29**, 25-93

Table 2: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

Cntxt	PHIST		ESUR		EMSH		LOND		SSW		CBW		PMR		CHPO		PMR SLIP		HORT		REFW		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
104					1	8					2	33	2	36	1	2	1	12	1	7	4	12	MOD
203									2	34	3	11											L13thC
204							1	43	1	8													M12thC
206	1	5			3	41																	M11thC
404	1	5	1	11			1	4					1	26									L16thC
Total	2	10	1	11	4	49	2	47	3	42	5	44	3	62	1	2	1	12	1	7	4	12	



Figure 32: Sherd of Early Medieval Shelly Ware, 1050-1150, recovered from context (104). Scale 5cm



Figure 33: Sherds of Sandy-Shelly Ware (left), 1140-1200, and London-type Ware (right), 1080-1350, from context (204). Scale 5cm

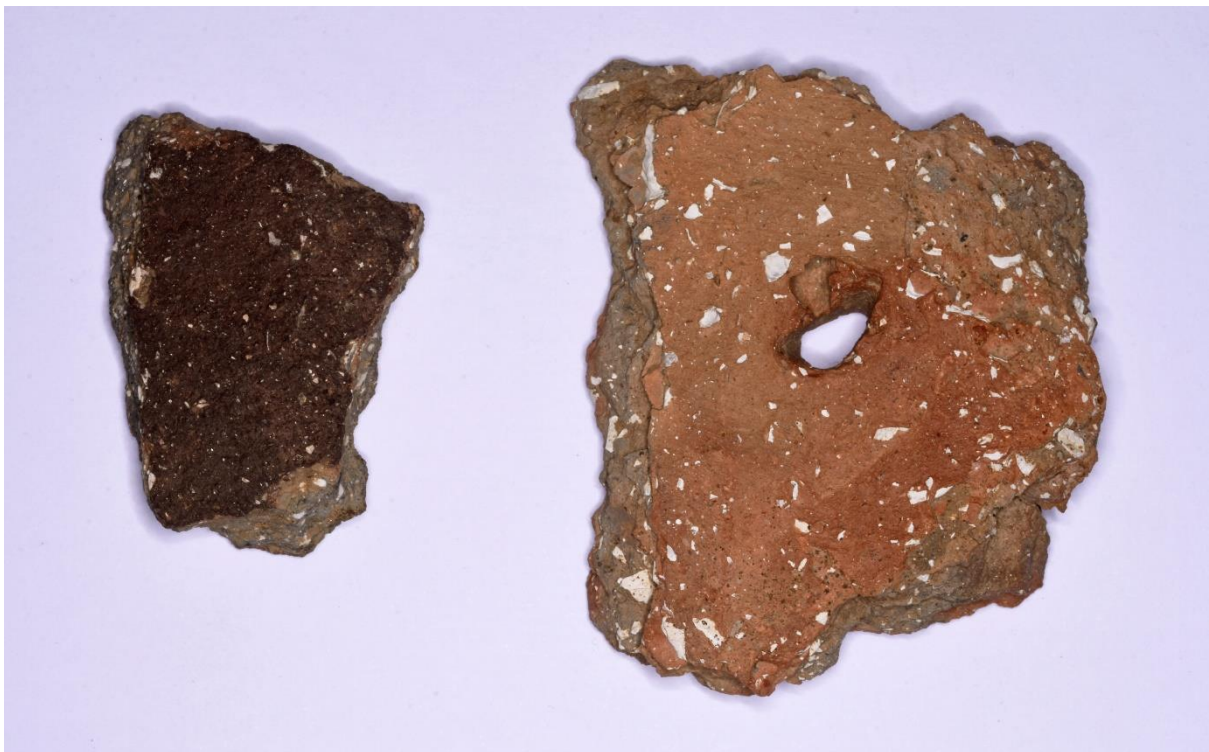


Figure 34: A prehistoric sherd (left), terminus post quem Late Bronze Age, and a sherd of Early Medieval Shelly Ware (right), 1050-1150, from context (206). Scale 5cm



Figure 35: Prehistoric sherd (left), terminus post quem Late Bronze Age, and a sherd of Early Surrey Ware (right), 1050-1150, both from context (404). Scale 5cm

Introduction

Archaeological evaluation works undertaken at 4 Abbey Gardens (ABB21) recovered 794 fragments of human bone, along with 47 further fragments of animal bone. Material was found in all four evaluation trenches from a total of seven different contexts.

A single in-situ inhumation, (SK205) was also exposed and recorded.

The majority of the assemblage represents disarticulated, re-deposited bone. Due to the fragmentary nature of the collection, sex and age estimation was not carried out unless the bone was wholly present or near complete.

Methodology

The skeleton and disarticulated remains were analysed in detail, assessing the preservation and completeness, calculating the minimum number of individuals present as well as determining the age, sex and stature of individuals, where applicable as noted above. Any pathological anomalies were also noted.

Sex estimation of adults was carried out from observations of cranial and pelvic morphology following the Walker scoring system in Buikstra and Ubelaker (1994). Age estimation, where possible, was determined from observations of pelvic morphology following the methods of Todd (1920), Suchy-Brooks (1990) and Lovejoy *et al* (1985). Where possible, dental attrition was noted (White & Folkens 2005).

Sub-adult age estimation was determined by observation of morphological changes of epiphyses, noting the rate of fusion, following Buikstra and Ubelaker (1994) and Schaeffer, Black & Scheuer (2009), and dental development, noting degree of eruption as described in Ubelaker (1989).

Osteological Analysis

Preservation

The assemblage was observed to be in an extremely mixed state of preservation, both as a whole and within each context. In general, the condition of the disarticulated remains was variable. Graded in five stages from 'very poor', 'poor', 'moderate', 'good' and 'very good' between 4 and 10% of the remains were observed to be 'very poor' or 'poor', with eleven examples displaying traces of vegetation marks, root etchings, green and black lichen, and other post-mortem nicks, scrapes and cuts (figs.36 and 37).

The majority of the remains were in a moderate state of preservation, though in an extensively fragmentary state. Out of 794 examples only three adult long bones were complete enough to be able to undertake stature estimations: a right humerus from context (203); and two left radii from context (204), representing 0.38% of the assemblage. Complete specimens were confined to smaller and more robust anatomical elements such as tarsals, metacarpals, metatarsals and phalanges. Long bones in particular were fragmentary, with the majority of examples

represented by only the proximal / distal end and / or shaft fragment, plus 103 small unassigned fragments, totalling approximately 13% of the remains.

Minimum Number of Individuals

A count of the minimum number of individuals (MNI) recovered from the former cemetery was undertaken in order to establish, hypothetically how many individuals are represented by the quantity of disarticulated human remains.

MNI is calculated by establishing the number of elements represented by anatomical side, with the highest number taken to be the MNI. Due to the fragmentary nature of many of the bones in this assemblage the actual number of individuals is taken to be considerably higher. Based on the number of distal right humeri the MNI for the site the disarticulated assemblage represents a minimum of eleven adults. Including the single in-situ inhumation this can be increased to twelve (Table 3).

A total of twenty-six juvenile bones were recovered from four contexts across three trenches, plus a further fourteen possible elements, representing between 3.27% and 5.04% of the total assemblage. Fusion rates suggest the remains can be broadly grouped into young juvenile aged c4-8, adolescent aged c12-16 and young adult aged c16-21. However, due to the absence of duplicated elements, fragmentary nature of the bones and consistent rates of fusion for each element an accurate MNI cannot be given beyond twenty-six.

Table 3: Number of adult long bone fragments suitable for MNI calculation by context.

	(101)	(104)	(203)	(204)	(404)	Total
L radius				2	1	3
R radius						0
L humerus			1			1
R humerus			1			1
L femur distal		1	1	6	2	10
L femur proximal	1	1	2	4	2	9
R femur distal				1	2	3
R femur proximal		1		5	1	7
L tibia distal				2	1	3
L tibia proximal			5	2		7
R tibia distal			1	1		2
R tibia proximal			1	2	1	4
L fibula distal			3			3
L fibula proximal			1			1
R fibula distal					2	2
R fibula proximal						0
L humerus distal	1	1	1	1	2	6
L humeral proximal			1			1
R humerus distal	1	1	5	1	3	11
R humerus proximal		1			2	3
L radius distal	1					1
L radius proximal		1				1
R radius distal					2	2
R radius proximal						0
L ulna distal					1	1

L ulna proximal			1		1	2
R ulna distal			2			2
R ulna proximal			2		1	3

Age

As a result of the fragmentary nature of the disarticulated remains only a small number of specimens displayed characteristics useful for determining age. Particularly in the case of the adults, age estimation relied on dental wear patterns, however these patterns can vary depending upon diet and activity (see below).

Dental development of mandibular and maxillary fragments represents nine to ten adults, at least one of whom was older based on a partially edentulous and worn maxilla and partially resorbed mandible. A right maxilla recovered from context (203) displayed a partially erupting third molar, indicating the individual was approximately 18 years old (c15-21), plus a left maxilla from (404) which was recovered with a third molar, though it is unclear if it fits in the corresponding socket. It is also possible these two fragments of maxilla are from the same individual.

Long bone length and degree of fusion in juvenile bones present in the assemblage indicate a number of adolescents and young adults were associated with the complex. The varying degrees of fusion noted among the remains indicates an average age of 12 to 14, based on analysis of a tibial fragment (104), left clavicle (204), right first rib (204) and right ischium (404). Two unfused hand phalanges are taken to be from an individual / individuals aged between 14 and 16. Notable outliers to this trend include two small fragments of frontal bone recovered from context (203), a small fragment of right scapula from (204) and a fragment of radius, also from (204), where the size and fusion would suggest at least one individual between the age of 4 and 8, and a fragment of right scapula (204) and left femur (104) which are more consistent with an 8 to 12 year old.

Sex

Due to the remains predominantly comprising long bone shaft fragments only a limited number of markers for sex identification were present. It is accepted that the population of the Abbey would be male, so it is likely that the majority of the human remains recovered during the evaluation are also from male individuals. Due to the disarticulated nature of the bones within each context and their reburial (on at least one occasion) there is potential for female remains to also be present, perhaps from the local community.

A right temporal bone recovered from context (104) was observed to have a large mastoid process, rating between 4 and 5, following Walker's method (1994), indicative of the individual being male (1 being typical female morphology, 5 being male).

Several fragments of os coxae were recovered from three of the evaluation trenches, in various states of preservation. Observation of the greater sciatic notch, where present, rated between 3 and 4 (points system as above), is indicative of male individuals though not conclusive.

Diagnostic traits are difficult to assess and identify before puberty, so juvenile remains have been left labelled as such.

Metric Traits: Stature

Three complete long bones were recovered from Trench 2, representing a minimum of two individuals. Height estimation was determined following Trotter's formulae (1970), giving a stature for both male and female, and black and white.

Analysis of a right humerus from context (203) suggests the individual stood approximately 176-178cm (black / white male, $\pm 4.43 / 4.05$ cm) or 172-177cm (black / white female, ($\pm 4.25 / 4.45$ cm) (c5'6" – 5'8").

Two left radii from context (204) suggest heights of 169-175cm (black / white male, $\pm 4.30 / 4.32$ cm) or 165-176cm (black / white female, ± 5.05 cm / 4.24cm) (c5'4" – 5'7") and 170-177cm (black / white male) or 166-178cm (black / white female) (c5'4" – 5'8").

Non-metric Traits:

Non-metric traits refer to additional anomalies, such as sutures, fissures and canals, bony spurs and bones. According to Saunders (1989) non-metric traits are believed to suggest heredity affiliation between skeletons.

A single inca bone was recovered from context (203) – a triangular shaped additional bone occasionally found in the rear of the crania.

A number of bones displayed prominent and lengthened foramina, though the fragmentation of such examples made identifying the differentiation between a non-metric trait and infection related trauma difficult.

Morphological variations in the number and form of articular facets of tali and calcanei were observed in the thirteen examples recovered, with one calcaneus displaying two anterior facets.

A fragment of frontal bone from context (404) was observed to have an additional bony growth within the frontal sinus.

A mandible, also from context (404) was observed to have a high bony spur separating the second and third molars.

SK205

A single in-situ inhumation was partially exposed in Trench 2. The remains were encountered at a depth of 1.5m within context (205), observed in a 0.7m x 0.6m sondage in the north-west corner of the trench. Due to the remains being positioned towards the edge of excavation only the lower thorax and vertebral column, pelvic girdle and upper legs, and lower arms were exposed. The remains are aligned east to west, with the head at the western end (outside of the area of excavation).

The individual was lying in a supine position with hands folded over their lap. There was a slight bend to the vertebral column, though this is a result of the position in which they were buried rather than any pathological condition. The closeness of the limbs and position of the arms close to the torso indicates the individual was likely wrapped in a shroud for burial. A single strip of lead was found placed on the right femur though it is unclear if this was deliberately positioned / associated with the burial shroud.

Complete union of the distal epiphyses of the radius and ulna, proximal epiphyses of the left and right femurs and pelvic girdle indicate the remains are those of an adult. The positioning of the metacarpals resulted in the greater sciatic notch, useful in sex determination, was not observed. Limited observations of the ilium and the skeleton's context within a male monastic complex would suggest the remains are those of a male, however this was not confirmed.

Pathological Analysis

Pathological conditions can manifest on bone, particularly when those conditions are chronic or traumatic. Approximately 4% of the remains displayed some clear evidence of disease / trauma / wear. A higher percentage of the remains may have also displayed some pathological traits, however due to the state of preservation and amount of post-mortem wear observed, the exact number is unclear.

Cranial

Three fragments of frontal bone recovered from context (203), two of which are juvenile, presented small lesions on the roof of the orbits consistent with cribra orbitalia. Cribra orbitalia can be seen as an indicator of childhood iron deficiency.

Context (203) also produced two fragments of left parietal showing extensive wear, pitting, spongy texture and thickening (fig.38). The characteristics are indicative of hyperostosis and / or porotic hyperostosis. The wear, also seen internally may be attributed to syphilitic lesions, however due to the general state of preservation this is difficult to confirm in regard to the exterior surface.

Post-cranial

The highest frequency of pathological anomalies was recorded on bones of the vertebral column and pelvic girdle, predominantly associated with degenerative joint disease. Six out of nineteen vertebrae (32%) presented extra bony growth, osteophytes, in the form of lipping on the vertebral body – a characteristic associated with osteoarthritis. This would suggest, though not confirm, that there were a number of older individuals at the Abbey site. Osteophytic growth was also observed two fragments of acetabulum from contexts (104) and (404), both displaying extensive lipping on the edge of the joint and within the acetabular fossa (fig.39).

A smaller number also displayed some pitting on the upper and lower sides of the vertebral bodies, consistent with a condition known as Schmorl's nodes (fig.40). Schmorl's nodes are

the result of an upward and downward pressure of the intervertebral disc protruding into the softer vertebral body, attributed most commonly to general ‘wear and tear’.

Two out of nine calcanei recovered displayed a prominent lipping on the posterior surface, taken to be an enlarged calcaneal tuberosity, which attaches to the calcaneal (Achilles) tendon running up the back of the calf and may have formed as a response to compensating for a large muscle.

Dental Health

Twelve fragments of mandible and maxilla were recovered from three trenches, plus eleven loose teeth, lost post-mortem.

In general, dental hygiene was relatively poor, particularly by modern standards – as a result of diet and lifestyle, with nine of the ten mandible/maxillae containing teeth showing signs of some degree of wear. These wear patterns varied from some small patches of dentine showing through, taken to be part of the normal aging process, to a number of teeth completely flattened and the dentine fully exposed. In the most extreme case observed, a left maxilla from context (204), the occlusal surface of the first molar had been worn down to a concave profile, through the dentine and almost to the pulp chamber.

Abscesses and caries were observed on seven specimens and one loose lower first pre-molar. One fragment of mandible showed a loss of bone in the location of an abscess, though the surrounding bone was lipped and worn smooth, suggesting this was a chronic issue. A mandible with the third molar partially erupted, indicating the individual was a young adult, displayed some wear and two small cavities on the first and second left molars, suggesting that the diet contained hard foodstuffs or perhaps some work was being undertaken which created wear on the back teeth in particular.

In the case of a fragment of left maxilla recovered from context (104) half of the first molar had been obliterated and the roots exposed through the bone on the buccal surface, creating a drainage channel (fig.41). It is likely that this would have been extremely painful, and the associated infection would have had a significant, if not fatal, effect on the individual.

Discussion and Summary

A significant quantity of disarticulated human remains was recovered during archaeological work at 4 Abbey Gardens. The material is consistent with the site’s location within the former cemetery of the monastic complex of Chertsey Abbey. The remains represent a minimum of eleven adults, plus a smaller number of juveniles. A single in-situ adult inhumation was also recorded.

The assemblage was fragmentary and in a variable state of preservation, with a number of elements displaying distinct weathering patterns. The remains were also commingled with a smaller quantity of animal bone. In general, the assemblage comprised larger anatomical elements, such as femurii, humerii, tibia, radii and os coxae, with lesser quantities of smaller elements such as metatarsals, metacarpals, and phalanges.

The differences in preservation and fragmentary nature of the individual remains indicate they have been moved on a number of occasions, from a number of different locations. The lichen and root marks observed on several bones strongly indicate they were kept outside for a prolonged period. Further, the prevalence of larger elements in relation to smaller is consistent with an economical and wholesale clearance event – often during a cemetery clearance larger bones, such as femurs etc. are easy to gather up and stack, whereas smaller bones are more likely to be missed, either deliberately or accidentally. It is likely that such an event occurred to result in the assemblage recovered during the evaluation.

An absence of other finds recovered from the contexts containing bone create difficulties with dating this event. It is unclear whether they were deposited at one time or on several separate occasions. It is suggested, based on the number of previous archaeological interventions which have occurred on the site, some of the remains may have been deposited (redeposited) in the mid-20th century.

As is to be expected with a monastic complex, the remains which were suitable for age and sex estimation represent a number of adult males, ranging in age from early twenties to mid to late fifties. A number of adolescent remains were also recovered, ranging in age from approximately twelve to twenty, indicating a number of novices were also likely living within the complex. A small number of juvenile bones were also recovered from contexts (203) and (204) which may represent at least one younger individual, between the ages of four and eight, possibly a local child buried in the church, rather than a member of the monastic order.

Dental hygiene in particular appeared to be relatively poor, as a result of diet, work and general medieval conditions of living.

The relationship between the in-situ inhumation and disarticulated remains is unclear. Both were recorded in the same context, (205) and there was no clear grave cut or difference in fill. The disarticulated remains sit 0.4m higher than the burial. At present it is not known if the disarticulated remains were deliberately placed close to the burial to retain their association, or if the cemetery was cleared and the charnel reburied, co-incidentally missing the inhumation.

Bibliography

Buikstra, J.E. & Ubelaker, D.H. (1994). *Standards for Data Collection from Human Skeletal Remains*. Fayetteville, Arkansas: Arkansas Archaeological Surgical Report Number 44.

Schaefer, M., Black, S. & Scheuer, L. (2009). *Juvenile Osteology: A Laboratory and Field Manual*. London: Elsevier Academic Press.

Todd, T.W. (1920). Age changes in the pubic bone: I. The white male pubis. *American Journal of Physical Anthropology* 3:467-470.

Trotter, M. (1970). Estimation of stature from intact long bones. In: T.D. Stewart (ed.) *Personal Identification in Mass Disasters*. pp.71-83. Washington, DC: Smithsonian Institution Press.

Trotter, M. & Gleser, G.C. (1958). A re-evaluation of estimation of stature based on measurements of stature taken during life and of long bones after death. *American Journal of Physical Anthropology* 16:79-123.

White, T.D. & Folkens, P.A. (2005). *The Human Bone Manual*. London: Elsevier Academic Press.

York Osteoarchaeology Ltd. (2006). *Osteological Analysis*. St Andrew's Corbridge Northumberland.



Figure 36: Vegetation marks on a left femur from context (204).



Figure 37: Green lichen on a femoral shaft fragment from context (302).



Figure 38: Thickened and pitting skull from context (203).



Figure 39: Pitting and osteophytic lipping on a fragment of acetabulum from context (404).



Figure 40: Schmorl's nodes in the vertebral body. Context (204).

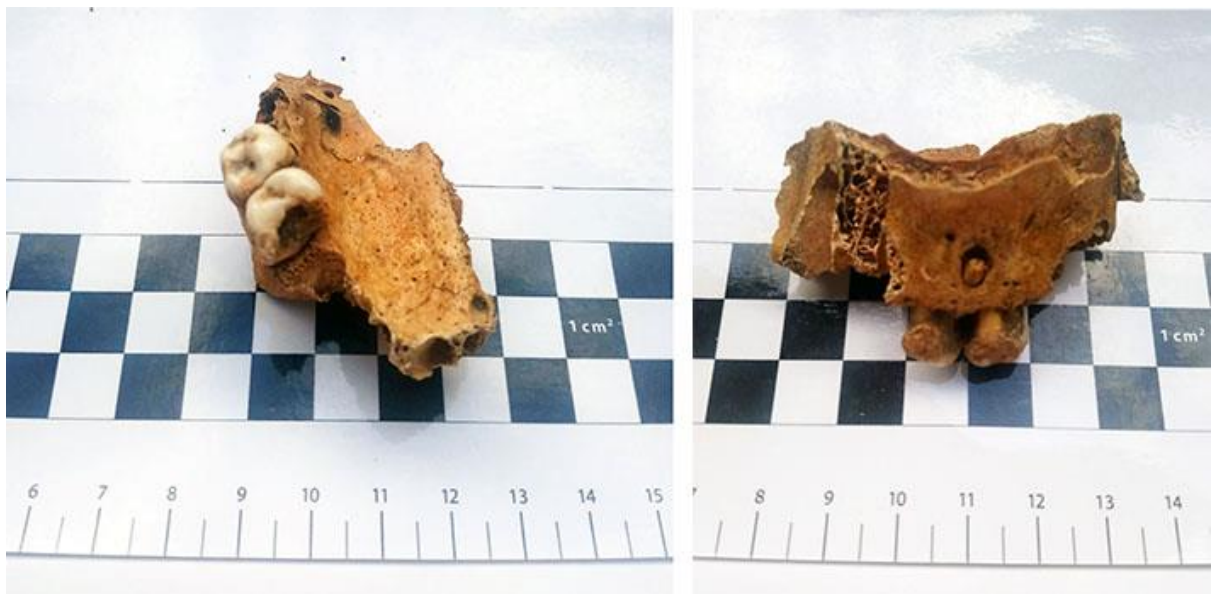


Figure 41: Inferior (left) and lateral (right) views of broken tooth and drainage channel. Context (104).

APPENDIX VI WORKED & OTHER STONE by *Geoff Potter*

Twelve pieces of stone were recovered during the evaluation, mostly from Trench 1. All are likely to be derived from the demolition of the Abbey and its associated buildings. Only one item – the moulded limestone fragment from (104) was of any note (fig.42), and no further work is required on the assemblage.

Table 4: Stone found during the evaluation by context

Context	Material	Description	Weight (gm)	Comments
101	Reigate stone	One roughly worked face with traces of mortar	886	–
	“ “	Roughly broken fragment	1,022	–
	“ “	Three very roughly worked faces	3,230	One corner of a larger block
104	Fairly fine fossiliferous limestone	Three worked surfaces, including one finer moulded & slightly concave face	317	Interior decorative stonework. See Fig.42
	Reigate stone	Two roughly tooled opposing faces (28-36mm apart), between these one smooth/worn surface	162	Appears to part of a thin slab of stone, one originally exposed face
	“ “	One worked face (basic chipped tooling), otherwise broken	138	–
	“ “	Three adjacent worked faces	145	One corner of larger block
	“ “	Roughly broken fragment	232	–
	Sandstone (?Horsham slate)	Slab c 23-15mm thick, broken on all sides. One face smoother (?worn) & slightly darker	375	Possibly part of a floor tile
203	Reigate stone	Roughly broken fragment	466	–
204	“ “	One finely worked face, otherwise broken	164	–
404	Coarse, very fossiliferous limestone	One worked but uneven face	298	–



Figure 42: Moulded limestone fragment from context (104). Scale 5cm

APPENDIX VII IRONSTONE by Geoff Potter

A number of pieces of a hard, dark brownish ferrous material were recovered, mainly from Trench 1. In total there were twenty-one items, with an overall weight of 8.068 kg.

The material was initially considered to be iron slag, but on closer examination (and by comparison with examples from previous investigations on the Abbey site) this is most likely an ironstone-type material of geological origin. It is noted that some examples formed a conglomerate with occasional small pebbles, but there was no evidence of heat-induced cracking or crazing in the latter.

Five pieces had mortar adhering to the surface, indicative of their having been used in construction. Indeed, similar material can be seen in several standing walls in the area, for example those to the rear s to both nos. 4 and 6 Abbey Gardens, as well as parts of the Abbey Farm Barn and the adjacent wall at the northern end of Ferry Lane.

Table 5: Ironstone occurrence by context and weight

Context	Weight (gm)
104	82
	96
	95
	111
	138
	212
	245
	276
	323
	360
	419
	432
	505
	557
583	
932	
204	204
	316
	858
	1,220
404	104

Significance of the assemblage

No further work is recommended. The assemblage is of local importance, and it is likely that much if not all derives from former construction material.

APPENDIX VIII MISCELLANEOUS FINDS by *Geoff Potter*

A few further miscellaneous finds were recovered, mainly from Trenches 1 and 2. The assemblage is unremarkable and of little value for dating purposes, and no further work is required:

1. Metal

Metal finds were limited to two small pieces of lead and four iron nails, as detailed below:

Table 6: Metal finds by context and form

Context	Form	Material	Dimensions (mm)	Weight (gm)	Comments
104	Strip	Pb	74 x 14 x 2 thick	26	Roughly cut fragment - ?offcut from sheet
	Sheet	Pb	61 x 48 x 1.3 to 2.0 thick	50	Small sheet or offcut, folded into two
203	Nail	Fe	88 x 14 (length/head width)	–	All heavily corroded
	“	Fe	81 x 10 “/ “	–	
	“	Fe	62 x 25 “/ “	–	
	“	Fe	55 x 14 “/ “	–	

2. Glass

Table 7: Glass occurrence by context and form

Context	Form	Thickness (mm)	Weight (gm)	Comments
104	Rounded body fragment	5.0	3	Blueish-green glass, probably from a bottle
	“ “ “	2.5	7	Clear bottle glass
	Body immediately above base	3.5-7.0	28	Olive-green, surface oxidised. From wine bottle or similar
203	Slightly curved body frag.	1.5	1	Olive-green colouration

3. Oyster shell

Table 8: Oyster shell occurrence by context and number

Context	Count	Weight (gm)
104	8	151
404	1	5

4. Clay tobacco pipe

One fragment of clay pipe stem was recovered, from context (104). Length 39mm; diameter 5.5 to 6.0mm.

5. Burnt flint

One piece of burnt flint was found in context (405). Size *c* 28 x 50mm; weight 92 gm.

OASIS ID: [compassa1-415406](#)

Project details

Project name	Archaeological Evaluation at 4 Abbey Gardens, Chertsey, KT16 8RQ
Short description of the project	<p>Between the 4th and 12th January 2021 Compass Archaeology undertook an archaeological evaluation at 4 Abbey Gardens, Chertsey. The site was subject to Scheduled Monument Consent due to its location within the wider site of Chertsey Abbey, a medieval monastic site. The evaluation comprised the hand excavation of four trial trenches sited to provide a representational sample of the footprint of the proposed extension. The stratigraphy of Trench 1 comprised a buried soil horizon / made ground deposit with finds including a flake of a mosaic floor tile decorated with 'Chertsey' design. An underlying compact land surface was observed. The stratigraphy of Trench 2 consisted of a made ground layer with abundant bone and frequent tile, with a spread of tile and charnel material present within the deposit, which included several long bones. At the base of the north-west slot a single in-situ inhumation was recorded, with no clear grave cut or difference in fill. At the base of the south-east slot a silty soil deposit was observed, which may be natural. Trench 3 was not excavated further due to the presence of a reinforced concrete slab. The stratigraphy of Trench 4 comprised a made ground deposit with bone and gravel throughout, which appeared to have been an infill of a cut feature over a probable buried land surface. The majority of human bone was disarticulated, re-deposited bone, with a single in-situ inhumation recorded. Consistent with a monastic complex, the remains represent a number of adult males, ranging in age from early twenties to mid to late fifties. Assessment of the assemblage suggests they have been moved on a number of occasions and the occurrence of a clearance event. It is unclear whether they were deposited at one time or on several separate occasions. It is suggested, based on the number of previous archaeological interventions which have occurred on the site, some of the remains may have been deposited (redeposited) in the mid-20th century.</p>
Project dates	Start: 04-01-2021 End: 12-01-2021
Previous/future work	No / Not known
Any associated project reference codes	ABB21 - Sitecode
Type of project	Field evaluation
Site status	Scheduled Monument (SM)
Current Land use	Residential 1 - General Residential
Monument type	MADE GROUND Medieval

Monument type	WALL Modern
Monument type	LAND SURFACE Uncertain
Monument type	INHUMATION Medieval
Monument type	CUT Uncertain
Significant Finds	HUMAN BONE Medieval
Significant Finds	PEG TILE Medieval
Significant Finds	RIDGE TILE Medieval
Significant Finds	FLOOR TILE Medieval
Significant Finds	BRICK Medieval
Significant Finds	BRICK Roman
Significant Finds	BRICK Post Medieval
Significant Finds	TEGULA Roman
Significant Finds	NIB TILE Medieval
Significant Finds	POTTERY Medieval
Significant Finds	POTTERY Post Medieval
Significant Finds	POTTERY Bronze Age
Significant Finds	ANIMAL BONE Uncertain
Significant Finds	WORKED STONE Medieval
Significant Finds	IRONSTONE Uncertain
Significant Finds	POTTERY Modern
Significant Finds	METAL WORK Uncertain
Significant Finds	GLASS Uncertain
Significant Finds	SHELL Uncertain
Significant Finds	CLAY TOBACCO PIPE Post Medieval
Significant Finds	BURNT FLINT Uncertain

Methods & techniques	"Test Pits"
Development type	Small-scale extensions (e.g. garages, porches, etc.)
Prompt	Scheduled Monument Consent
Position in the planning process	Between deposition of an application and determination

Project location

Country	England
Site location	SURREY RUNNYMEDE CHERTSEY 4 Abbey Gardens
Postcode	KT16 8RQ
Study area	0 Square metres
Site coordinates	TQ 04403 67065 51.392504721144 -0.499255214107 51 23 33 N 000 29 57 W Point
Height OD / Depth	Min: 12.7m Max: 12.7m

Project creators

Name of Organisation	Compass Archaeology
Project brief originator	Historic England
Project design originator	Compass Archaeology
Project director/manager	Geoff Potter
Project supervisor	Geoff Potter
Type of sponsor/funding body	Developer

Project archives

Physical Archive recipient	Chertsey Museum
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Physical Contents	"Ceramics", "Glass", "Human Bones", "Metal", "Worked stone/lithics", "Animal Bones"
Digital Archive recipient	Chertsey Museum
Digital Contents	"Ceramics", "Glass", "Human Bones", "Metal", "Worked stone/lithics"
Digital Media available	"Images raster / digital photography", "Spreadsheets", "Text"
Paper Archive recipient	Chertsey Museum
Paper Contents	"other"
Paper Media available	"Context sheet", "Drawing", "Plan", "Section", "Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	4 Abbey Gardens, Chertsey, KT16 8RQ. An Archaeological Evaluation Assessment Report
Author(s)/Editor(s)	Mansfield, R.
Date	2021
Issuer or publisher	Compass Archaeology Ltd
Place of issue or publication	250 York Road, Battersea SW11 3SJ
Description	A post-excavation report summarising the results of the archaeological evaluation. First part details the general information pertaining to the project including site background, planning policy and methodology, archaeological and historical background. Second part details the results of each trench undertaken, supplemented by relevant photographs, and finished with concluding remarks and sources consulted. Archaeological drawings, levels, finds reports, OASIS Data Collection Form and Surrey Historic Environment Record Report Form included as appendices.

SURREY HISTORIC ENVIRONMENT RECORD: REPORT FORM				
Your Details				
Your Name, and/or Name of archaeological unit/society/company	Compass Archaeology Ltd.			
Address	250 York Road London SW11 3SJ			
Director/Supervisor	Geoff Potter			
Project Manager	Geoff Potter			
Funded By	Householder			
Location of Site/Find				
District	Runnymede	Parish	Chertsey	
Site address (including site name)	Site Code: ABB21 4 Abbey Gardens, Chertsey, Surrey KT16 8RQ			
National Grid Reference	TQ 04403 76065			
The Fieldwork				
Type of Fieldwork (please tick box)	Excavation	Evaluation	<i>Watching Brief</i>	Other (specify below)
Dates of Fieldwork (start and finish)	4 th to 12 th January 2021			
Type of Soil				
(e.g. sand, clay etc. State if observed. Please do not leave blank)				
Type	A possible natural deposit observed – silty soil			

Height above OD	12.70mOD		
The Archaeology (tick where represented)			
Palaeolithic		Saxon (pre AD1066)	
Mesolithic		Medieval (AD 1066-1485)	Y
Neolithic		Post Medieval	Y
Bronze Age		Unknown Period	
Iron Age		Negative Evidence	
Roman	Y		
Location of Archive	Compass Archaeology Ltd.		
Location of Finds	Compass Archaeology Ltd.		

Bibliography/References

- Chartered Institute for Archaeologists. (2014). *Standard and Guidance for Archaeological Field Evaluation*.
- Compass Archaeology. (2018). *6 Abbey Gardens, Chertsey, KT16 8RQ: An Archaeological Evaluation Assessment Report*. (unpublished report).
- Compass Archaeology. (2019). *Burford, Abbey Gardens, Chertsey KT16 8RQ Borough of Runnymede: An Archaeological Desk-based Assessment & Written Scheme of Investigation for trial pit evaluation*. (unpublished report).
- Compass Archaeology. (2020). *4 Abbey Gardens, Chertsey, KT16 8RQ: A Written Scheme of Investigation for an Archaeological Evaluation*. (unpublished report).
- Gardner, E. (1923). 'A Medieval Tile Kiln, Chertsey Abbey', *The Antiquaries Journal*, 3 (1), pp. 71.
- Historic England. (2015). *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second edition)*.
- Gardner, J. S., and Eames, E. (1954). 'A Tile Kiln at Chertsey Abbey', *Journal of the British Archaeological Association*, 17 (1), pp. 24-42.
- Pocock, W. W. (1858). 'Some Account of the Encaustic Tiles and Stone Coffins excavated on the Site of Chertsey Abbey in 1855', *Surrey Archaeological Collections*, 1, pp. 115-121.
- Poulton, R. (1988). 'Archaeological Investigations on the Site of Chertsey Abbey', *Surrey Archaeology Soc Research*, 11 (Microfiche).
- Runnymede Borough Council. (2020). *Runnymede 2030: Local Plan*.

Details of Archaeology/Find

(use headings for each period and continue on additional sheet if necessary)

Between the 4th and 12th January 2021 Compass Archaeology undertook an archaeological evaluation at 4 Abbey Gardens, Chertsey, in the county of Surrey. The evaluation was commissioned to accompany an application for Scheduled Monument Consent to extend the present property. The site was subject to Scheduled Monument Consent due to its location within the wider site of Chertsey Abbey a medieval monastic site. The evaluation comprised the hand excavation of four trial trenches within the footprint of the proposed development.

The stratigraphy of Trench 1 comprised the current patio paving slabs and underlying concrete, a brick wall likely to be the retaining wall of the original raised patio before the rear house extension c.1984. A buried soil horizon / made ground deposit with frequent inclusions and finds including a flake of a mosaic floor tile decorated with 'Chertsey' design was found within lower level of the deposit. An underlying land surface was observed, which was more compact. However, the extent of this deposit is unknown due to the collapse of the trench section.

The stratigraphy of Trench 2 consisted of the current brick paving over bedding layers and rubble. A made ground layer with abundant bone and frequent tile, with a spread of tile and charnel material present within the deposit, which included several long bones. At the base of the north-west slot a single in-situ inhumation was recorded, with no clear grave cut or difference in fill.

Trench 3 was not excavated further due to the presence of a reinforced concrete slab 0.52m below the garage floor level, which was not fully excavated due to concerns of the structural integrity of the garage given the past subsidence.

The stratigraphy of Trench 4 comprised the current ground surface over a topsoil deposit. A made ground deposit with bone and gravel throughout, which appeared to have been an infill of a cut feature over a probable buried land surface.

No evidence of a battery of kilns was recorded, which could indicate the site was not the location of the tile kiln site found in 1922 or that subsequent interventions have significantly disturbed the site. Evidence of the monastic cemetery was recorded in the form of 794 fragments of human bone, the majority of which were disarticulated, re-deposited bone, with a single in-situ inhumation recorded. Consistent with a monastic complex, the remains represent a number of adult males, ranging in age from early twenties to mid to late fifties. The differences in preservation and fragmentary nature of the individual remains indicate they have been moved on a number of occasions, from a number of different locations. Also, the prevalence of larger elements is consistent with an economical and wholesale clearance event. It is unclear whether they were deposited at one time or on several separate occasions. It is suggested, based on the number of previous archaeological interventions which have occurred on the site, some of the remains may have been deposited (redeposited) in the mid-20th century.

Signed	Rebecca Mansfield	Dated	15.02.2021
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