

**FOOTPATH IMPROVEMENT WORKS, MARBLE HILL PARK.
RICHMOND ROAD, TWICKENHAM, TW1 2NL**

AN ARCHAEOLOGICAL WATCHING BRIEF REPORT



July 2017



FOOTPATH IMPROVEMENT WORKS, MARBLE HILL PARK.
RICHMOND ROAD, TWICKENHAM, TW1 2NL

AN ARCHAEOLOGICAL WATCHING BRIEF REPORT

Site code: MHP17
Site NGR (centre): TQ17223 73598

COMPASS ARCHAEOLOGY LIMITED
250 YORK ROAD
LONDON SW11 3SJ
Tel: 020 7801 9444
e-mail: mail@compassarchaeology.co.uk

July 2017

Author: Heidi Archer

©Compass Archaeology Ltd

Abstract

Between the 20th and 23rd June 2017 Compass Archaeology conducted an archaeological watching brief on the site of Marble Hill Park, Twickenham, TW1 2NL. The archaeological work was commissioned by Gary Rawlings, English Heritage, in response to localised subsidence noted in a footpath to the west of Marble Hill House. Due to the cavity being situated over the projected line of a former ha-ha an investigation was recommended. The groundworks were undertaken by Sykes & Son and Groundwise Construction Ltd.

The watching brief comprised the monitoring of a single oval trench situated within an N-S footpath located to the west of Marble Hill House, bounded by the children's play area to the west and ice house / woodland to the east. The trench measured 2.1m in length (N-S) x 1.4m in width x 1.0m in depth (7.11-7.17mOD).

The exposed stratigraphy comprised a series of made ground, levelling and dumped deposits, truncated by an E-W cut feature [13]. The cut is thought to be either part of a larger linear feature or a more isolated landscape feature, such as a tree bowl. The E-W direction is contrary to the ha-ha ditch which appears of a 1752 plan of the park, and is therefore thought not to be related.

The cut feature was subsequently backfilled and levelled off with a large homogenous deposit of mid brown soil (8) which contained the occasional fragment of glass. The cut feature was then sealed by a series of sand and gravel layers and reinstated with tarmac, forming the present footpath surface. Disturbed natural sand was encountered at a depth of 200mm (7.97mOD), commingling with other contexts at a lower level.

The observed subsidence appeared to be the result of multiple layers of tarmac compressing the soft stratigraphy below. Inadequate levelling of MOT Type 1 above these layers had then created several voids, exacerbating the situation. Once recorded, the pit was lined with terram and backfilled using compressed MOT Type 1 and cold lay macadam.

A quantity of Post-medieval and modern CBM, pottery and glass was recovered from the trench, all dating to the 19th - 20th century and is likely to be domestic waste.

No further environmental investigation works are proposed at Marble Hill House, therefore further archaeological mitigation is not required at this stage. If this changes, particularly in relation to proposed landscaping and planting works, an updated/new proposal, produced in consultation with the relevant parties shall be produced.

Contents

	Page
1 Introduction	1
2 Acknowledgments	2
3 Site location, geology and topography	2
4 Archaeological and historic background	3
5 Planning and Objectives	5
6 Methodology	8
7 Results	10
8 Discussion	13
9 Conclusion	13
10 Sources	15
Appendix I – Context List	16
Appendix II – Archaeological drawings	17
Appendix III – The finds	18
Appendix IV – OASIS recording form	21

List of figures

Front cover – Extract from a plan of Marble Hill Park, 1752

	Page
Fig.1 Site location, marked in red.	1
Fig.2 Twickenham Riverside Conservation Area, with site centre marked in red.	2
Fig.3 Extract from the 1752 plan of the estate, with approximate trench location marked in red.	5
Fig.4 Completed trench, at a depth of 1.0m. Facing ESE. Scale 1m.	10
Fig.5 North and east facing sections, showing the bands of stratigraphy to the right of the scale in contrast to the single backfill event (8) of cut [13] to the left. Facing S. Scale 1m.	11
Fig.6 Completed trench. The linear feature [13] can be seen cutting into the sand (14) sloping towards the bottom right of frame, and backfilled by (8). Facing NNE. Scale 1m.	12
Fig.7 South facing section of the trench, showing the levelling and dumping layers truncated by [13]. Original drawn at 1:10.	17

1 INTRODUCTION

- 1.1 This document forms a summary of the results of an archaeological watching brief conducted between the 20th and 23rd June 2017 during monitoring of ground investigations at Marble Hill House, Richmond Road, Twickenham, TW1 2NL.

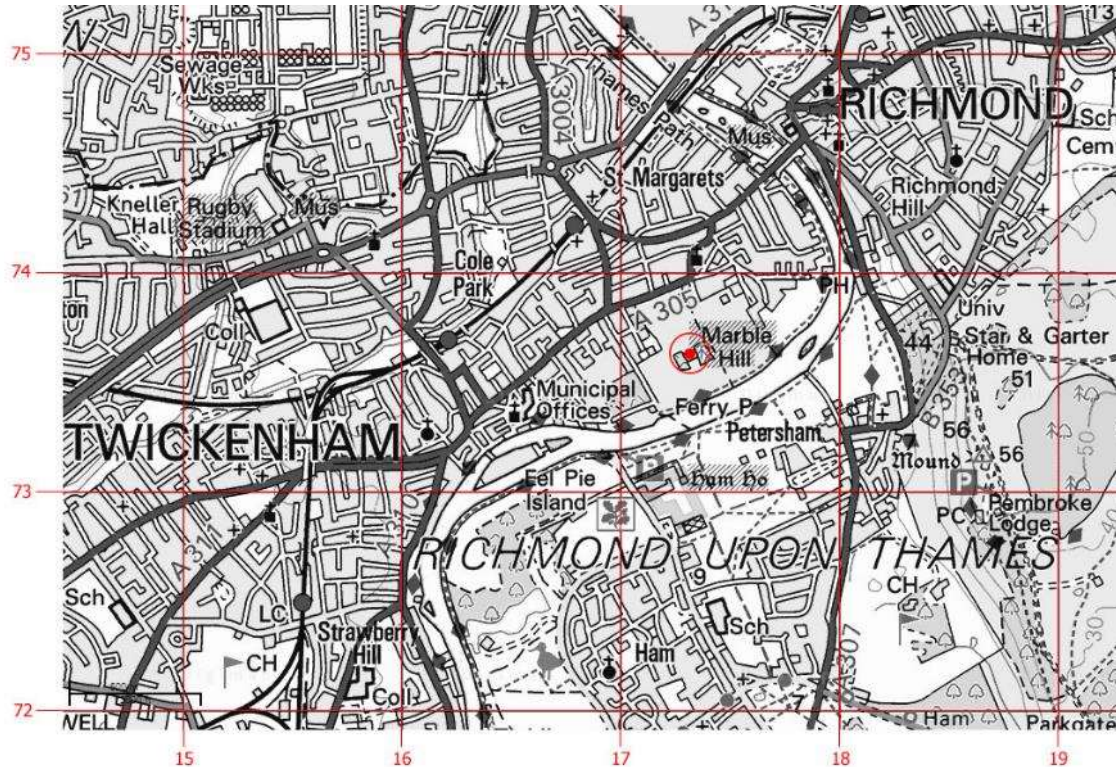


Figure 1: Site location, marked in red.

- 1.2 The watching brief was commissioned by Gary Rawlings, English Heritage, in response to localised subsidence noted in a footpath to the west of Marble Hill House. Due to the cavity being situated over the projected line of a former ha-ha an investigation was recommended.
- 1.3 The programme of archaeological works comprised the monitoring of a single trench situated within a footpath running NW-SE, bounded by the children's' play area to the west and wooded area to the east. The work was initially undertaken by Sykes & Son Ltd and completed by Groundwise Construction.
- 1.4 The site lies within the *Twickenham Riverside* Conservation Area (no.8) as designated by the London Borough of Richmond Council (fig.2)

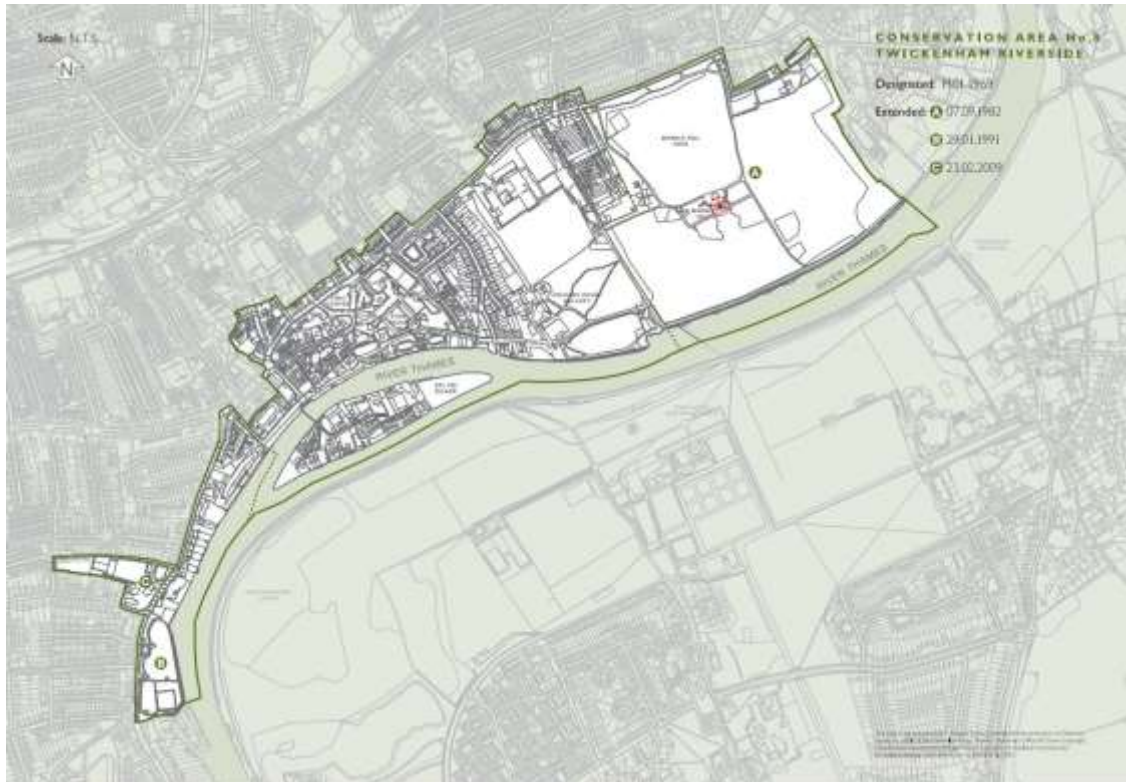


Figure 2: Twickenham Riverside Conservation Area, with site centre marked in red. Taken from Richmond Council Conservation Area Maps.

2 ACKNOWLEDGEMENTS

2.1 Compass Archaeology would like to thank Gary Rawlings for commissioning the company to undertake the monitoring works and to Alex Moroca, Sykes & Son, and Adam Rowlinson and Al Osborne, Groundwise Construction, for their assistance and support during the groundworks.

3 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

3.1 Marble Hill Park is located within the East Twickenham area of the London Borough of Richmond upon Thames. Marble Hill House lies at the centre of the site, bounded by Richmond Road to the north, Meadowside to the east, Orleans Road to the west and the River Thames to the south. The area of investigation is approximately centred at NGR TQ1729673627.

3.2 According to the British Geological Survey (sheet 270: *South London*) the northern part of the site is situated within a deposit of Langley Silt overlying Kempton Park Gravels. The southern part lies within a band of alluvium, charting the course of the River Thames, with a small intrusion heading northwards into the park.

3.3 Marble Hill House sits within 66 acres of parkland, on low ground to the north of the river. The site varies in height, with the house sitting on higher ground at approximately 8.2mOD, dropping down to c7.6mOD on the western side of the site, with a slope down to sports pitches in the south-west corner at about 4.5mOD.

4 ARCHAEOLOGICAL AND HISTORIC BACKGROUND

The archaeological and historic background of the site has been discussed at length in a Written Scheme of Investigation and accompanying report produced by Compass Archaeology (December 2016), so will not be reproduced at length here. Only the most pertinent points, particularly those relating to the house and ha-ha, shall be repeated below.

4.1 *Prehistoric*

During the prehistoric period much of the occupation recorded during archaeological investigations has been situated in close to the proximity of the River Thames, concentrated on gravel eyots which afforded higher and dryer ground. In 1994 MoLAS (APR94) recorded a series of probable Iron Age pits, post holes and ditches, thought to be the remains of a settlement, located near Amyand Park Road and Strafford Road. To the south-west, an excavation by the Twickenham Local History Society in 1966 revealed a large assemblage of pottery and flint tools in what was interpreted as a palaeochannel draining into the Thames, along Church Street. Mesolithic microliths and hand axes have also been found on Eel Pie Island – a possible stop over point for river traffic. Further, nine Iron Age coins were found on the island indicating that occupation of the area was prolonged.

4.2 *Roman*

Evidence of Roman occupation in the vicinity of the site is more limited, with the majority of the sites being located further east, closer to *Londinium*. Again, the Amyand Park Road excavation again providing the most promising results; providing features including an enclosure ditch, post holes and domestic rubbish pits. Pottery recovered from their fills was dated to between the mid-3rd to the early 5th century. Small fragments of iron slag and iron objects were also recovered from the enclosure ditch. It is thought the collective features may have formed part of a small farmstead – the inhabitants taking advantage of the fertile soils provided by favourable underlying geology.

4.3 *Saxon*

The first documented reference to the nearby settlement of Twickenham occurs in a charter dated to 704AD. It is between Swaefred, King of the East Saxons, grating a portion of land ‘in the place which is known as Tuican hom’. Later in the document the place is referred to as ‘Tuiccanham’; ‘ham’ having early English origins. The description of the area suggests it is a well-defined settlement, with references to fishponds, fields and enclosures.

Archaeological evidence of a Saxon presence is provided by a reported burial site over the river in Ham, and included shield bosses, spearheads, swords and other typical grave goods associated with Dark Age burial practises. Other physical evidence of settlement is, however, lacking. This may be due to the sometimes ephemeral nature of Saxon archaeology and limited number of excavations in the area.

4.4 *Medieval*

During the reign of Edward the Confessor the area was held by Earl Aelfgar and later by Richard Earl of Cornwall, brother of Henry III. In 1227 Richard established Twickenham Park, enclosing 200 acres of land and building a hunting lodge within the grounds. The area to the east, including the site and Richmond Road was essentially open fields and the only major feature during this period was the track extending from Church Road in the west to the point where the Richmond Ferry (first recorded in 1443) stood on the north bank of the Thames.

4.5 *Post-medieval*

Development began in earnest in the post-medieval period, with Marble Hill House emerging in 1724-29, built for Henrietta Howard, mistress of George II, to the designs of Lord Herbert and Roger Morris. The house was built as a classic example of a Palladian home, displaying a very symmetrical appearance, flanked by walls and woodland to either side and an avenue of trees leading down towards the river. The building was altered both externally and internally several times, but was restored to its original design in 1965-66. The main house is accompanied by a stable block to the west. The Stable Block was built by Jonathan Peel during his occupation of Marble Hill in c1827, although it does not appear to be shown on maps until 1867.

Since its construction, the western part of Marble Hill House has remained relatively unchanged. The east side however seems to have had an additional wing in the 19th century which was then removed in the 20th century to once again create a symmetrical appearance. Recent archaeological investigations undertaken on this site found traces of a stepped brick entrance and a number of post-medieval deposits.

A plan of the park from 1752 (fig.3) shows the house flanked by wooded avenues to either side, a greenhouse to the east and ice house to the west, with lawns to the south leading to the river. This complex appears to be flanked on four sides by a narrow ditch, indicated on the plan by a series of hachures), which is believed to be a ha-ha ditch. Ha-ha walls are a recessed landscape feature, comprising a wall and ditch, often seen encircling large estates. They serve to keep grazing livestock at a distance from the house, but provide an uninterrupted and seamless view of the land (Taylor 2008).

At present the site is owned and managed by English Heritage, listed as a Grade II* building in the Historic England Register of Historic Parks and Gardens, with the house itself being a Grade I Neo-Palladian villa. The stable block to the west is currently in use as welfare facilities and café, with a small wooden shed and bin storage to the rear.



Figure 3: Extract from the 1752 plan of the estate, with approximate trench location marked in red.

5 PLANNING AND OBJECTIVES

5.1 The archaeological watching brief monitored the completion of a single trench located on the eastern side of a footpath running NW-SE to the west of the house. The trench was situated to the southwest of the ice house, adjacent to an enclosed wooded area (fig.4).

The trench was oval in plan, using a previous episode of groundworks of the same shape as the extent of excavation, measuring 2.1m in length (NW-SE) x 1.4m in width x 1.0m in depth.

5.2 The upper layer of tarmac was removed using a handheld mechanical breaker, with the remainder of the trench being excavated by hand.

5.3 The work followed the standards set out in the London Plan (*Chapter Seven: London's Living Spaces and Places*) which states that new developments are expected to align with the following procedures:

Historic Environment and Landscapes

Policy 7.8 *Heritage assets and archaeology*

Strategic

- A** *London's heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilising their positive role in place shaping can be taken into account.*

- B** *Development should incorporate measures that identify, record, interpret, protect and, where appropriate, present the site's archaeology.*

Planning decisions

- C** *Development should identify, value, conserve, restore, re-use and incorporate heritage assets, where appropriate.*

- D** *Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural design.*

- E** *New development should make provision for the protection of archaeological resources, landscapes, and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.*

LDF Preparation

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

- G** *Boroughs, in consultation with English Heritage, Natural England and other relevant statutory organisations, should include appropriate policies in their LDFs for identifying, protecting, enhancing and improving access to the historic environment and heritage assets and their settings where appropriate, and to archaeological assets, memorials and historic and natural landscape character within their area.*

- 5.4 In addition to the relevant policies outlined above, due to the site being located within a Conservation Area, the following should also be taken into consideration, selected points taken from the London Borough of Richmond Council *Local Plan* (under review, draft 2016):

Policy LP 3

Designated Heritage Assets

- A. *The Council will require development to conserve and protect and, where possible, take opportunities to make a positive contribution to, the historic environment of the borough. The special architectural, historic interest, the setting and heritage significance of the borough's designated heritage assets, including Conservation Areas, Listed Buildings, Scheduled Monuments as well as the Historic Parks, Gardens and Landscapes, will be conserved and protected by the following means:*
1. *Give great weight to the conservation of the heritage asset when considering the impact of a proposed development on the significance of the asset.*
 2. *Resist the demolition in whole, or in part, of Listed Buildings. Consent for demolition of Grade II Listed Buildings will only be granted in exceptional circumstances and for Grade II* and Grade I Listed Buildings in wholly exceptional circumstances following a thorough assessment of their significance.*
 3. *Resist the change of use of Listed Buildings where this would materially harm its character and distinctiveness, particularly where the current use contributes to the character of the surrounding area and to its sense of place.*
 4. *Require the retention and preservation of the original structure, layout, architectural features, materials as well as later features of interest, and resist the removal or modification of features that are both internally and externally of architectural importance or that contribute to the significance of the asset.*
 5. *Demolitions (in whole or in part), alterations, extensions and any other modifications should be based on an accurate understanding of the significance of the heritage asset.*
 6. *Encourage the reinstatement of internal and external features of special architectural or historic significance, and the removal of internal and external features that harm the significance of the asset, commensurate with the extent of proposed development.*
 7. *Require the use of appropriate materials and techniques and strongly encourage any works or repairs to a designated heritage asset to be carried out in a correct, scholarly manner by appropriate specialists.*

D. *Full planning applications are required in Conservation Areas. The Council's Conservation Area Statements, and where available Conservation Area Studies, and/or Management Plans, will be used as a basis for assessing development proposals within, or where it would affect the setting of, Conservation Areas, together with other policy guidance, such as Village Planning Guidance SPDs.*

5.5 The full version of the above policy can be found in the Council's *Local Plan*.

5.6 The fieldwork presented the opportunity to answer the following general and more specific research questions:

- Are there any features present which can be identified as the ha-ha ditch, as seen on the 1752 plan of Marble Hill?
- If so, what form do these features take? What can they add to our understanding of the construction of the ha-ha?
- What is the cause of the localised subsidence? Is this associated with the ha-ha?
- Are there any finds of archaeological interest which can be used to date the area?
- If encountered, what is the natural geology and at what level does it exist across the site?

6 METHODOLOGY

6.1 Standards

6.1.1 The field and post-excavation work was carried out in accordance with Historic England guidelines (*Greater London Archaeology Advisory Service: Standards for Archaeological Work, 2015*). Works also conformed to the standards of the Chartered Institute for Archaeologists (*Standard and guidance for archaeological field evaluation, 2014*). Overall management of the project was undertaken by a full member of the Chartered Institute.

6.1.2 Fieldwork was carried out in accordance with the Construction (Health, Safety & Welfare) Regulations. All members of the fieldwork team held valid CSCS (Construction Skills Certificate Scheme) cards, and wore hi-vis jackets, hard-hats, steel-toe-capped boots, etc., as required. All members of the fieldwork team also followed the contractors' health and safety guidelines.

6.1.3 English Heritage and Historic England were kept informed of the progress of fieldwork and any finds recovered.

6.2 Fieldwork

6.2.1 The archaeological watching brief took place during investigation works located on a NW-SE path bounded by the children's play area to the west and ice house / Marble Hill House to the west. The single trench was oval in plan, measuring 2.1m in length x 1.4m in width x 1.0m in depth.

- 6.2.2** The trench was undertaken by hand and monitored by the archaeologist. Once appropriately recorded the trench was reinstated using compacted MOT Type 1 and cold lay macadam, undertaken by Groundwise Construction Limited.
- 6.2.3** Archaeological contexts were recorded as appropriate on *pro-forma* sheets by written and measured description, and drawn in plan or section, generally at scales of 1:10 or 1:20. The investigations were recorded on a general site plan and related to the Ordnance Survey grid. Levels were taken on archaeological features or deposits, transferred from the nearest Ordnance Datum Benchmark, *Montpelier Row* at 5.18mOD. The fieldwork record was supplemented by digital photography, in.jpeg and RAW formats.
- 6.2.4** The recording system followed the procedures set out in the Museum of London recording manual. By agreement the recording and drawing sheets used are directly compatible with those developed by the Museum.

6.3 Post-excavation

The fieldwork was followed by off-site assessment and compilation of a report, and by ordering and deposition of the site archive.

6.3.1 Finds and samples

Assessment of finds was undertaken by appropriately qualified staff, (see Appendix III). Finds and samples were treated in accordance with the appropriate guidelines, including the Museum of London's 'Standards for the Preparation of Finds to be permanently retained by the Museum of London'. All identified finds and artefacts have been retained and bagged with unique numbers related to the context record, although certain classes of building material and modern finds will be discarded once an appropriate record has been made.

6.4 Report procedure

- 6.4.1** This report contains a description of the fieldwork plus details of any archaeological remains or finds, and an interpretation of the associated deposits. Illustrations have been included as appropriate, including a site plan located to the OS grid. A short summary of the project has been appended using the OASIS Data Collection Form.
- 6.4.2** Copies of this report will be supplied to the Client and Historic England.
- 6.4.3** There is no provision for further analysis or publication of significant findings. Should these be made the requirements would need to be discussed and agreed with the Client.

6.5 The site archive

Assuming that no further work is required, an ordered indexed and internally consistent archive of the evaluation will be compiled in line with MoL Guidelines for the Preparation of Archaeological Archives, and will be deposited in the Museum of London Archaeological Archive under site code MHP17. The integrity of the site

archive should be maintained, and the landowner will be urged to donate any archaeological finds to the Museum.

7 RESULTS

7.1 The following forms a written description of observations made during the watching brief. Deposits are shown in as (x), cuts and structures as [x]. The text is supplemented with illustrative photographs. For a detailed trench section refer to Appendix II.

7.2 The single trench was oval in plan, measuring 2.1m in length x 1.4m in width x 1.0m in depth (7.11-7.17mOD), with the limit of excavation following the extent of a previous episode of groundworks (fig.4).



Figure 4: Completed trench, at a depth of 1.0m. Facing ESE. Scale 1m.

7.3 The stratigraphy comprised 25mm of compact but pliable tarmac (1) over 30mm of MOT Type 1 (2). This material was loosely piled towards the centre of the trench, creating voids around the perimeter. Beneath the Type 1 were 5 layers of compact black tarmac (3) measuring a total of 180mm in thickness, spread unevenly across the area of excavation. Once cleared, the remainder of the stratigraphy comprised a series of dumping and levelling layers, described below, from the earliest deposit to the most recent.

7.4 At the base of the trench the stratigraphy comprised 200 – 800mm of pale orange moderately loose natural sand (14), sloping from east to west, from c7.97 to 7.37mOD. This deposit was relatively homogenous with the exception of a narrow band of loosely

compact white chalky stone (9) following the same slope. This band measured 100mm in thickness and was observed at a depth of 350 – 750mm.

Based on the sloping profile of the sand and the mottled appearance due to commingling with other contexts it is likely this natural sand is redeposited.

A second chalk, or mortar, deposit (10) was observed in the east facing section at a depth of 550mm, measuring 600mm in length x 100-130mm in thickness, with no other inclusions observed.

- 7.5** This was overlain by a further 120mm of redeposited natural sand (14), however this band was stained grey due to leeching from a large band of grey-black to black soil layer (12) abundant with angular stones and what appeared to be the rotted remains of a tree root (fig.5). This band followed the east-west slope of the natural, measuring 120mm at the eastern end, widening to 300mm towards the centre of the section, then narrowing to a point at a depth of 320mm below ground level.



Figure 5: North and east facing sections, showing the bands of stratigraphy to the right of the scale in contrast to the single backfill event (8) of cut [13] to the left. Facing S. Scale 1m.

- 7.6** The most notable feature in the trench was a large cut observed in the east and west sections, sloping from north to south. The cut [13] was observed at a depth of 220m (c7.92mOD), with relatively steep sloping sides continuing below the level of excavation at 1m. In the west facing section the cut truncated the natural sand (14) and loose stone layer (9), and in the east facing section the cut truncated the natural and stained sand (14) and the grey-black stone and soil layer (12).

The cut was filled by a homogenous deposit of mid brown soil, containing frequent charcoal and mortar flecks, with occasional small fragments of red brick (8). A thin band of this material, <60mm extended across the entirety of the trench in a matter which suggests the cut feature had been backfilled and the excess material spread across the vicinity to create a level surface (fig.6).



Figure 6: Completed trench. The linear feature [13] can be seen cutting into the sand (14) sloping towards the bottom right of frame, and backfilled by (8). Facing NNE. Scale 1m.

- 7.7.** The cut and fill were then sealed by layers of fairly bright orange sand (7), loose black asphalt patches (11) and a thin band of angular orange gravel (5), in total measuring 140mm in thickness. This sequence is taken to be a series of made ground deposits levelling the area.

A small addition to this sequence was observed in the west facing section, comprising a 30mm band of very loose light brown soil containing frequent small roots (4), measuring 700mm in length with no definable edges.

- 7.8** At a depth of 0.7m the rotted remains of a large tree stump and several large roots were removed, which although substantial appeared to have minimal disturbance on the orange sand (14) surrounding it.

- 7.9** The finds recovered, the majority of which were from the northern half of the trench, from context (12), with very few from the fill (8) at the southern end, include a significant quantity of clear vessel glass, pottery, a few fragments of ceramic building material (CBM) and the partial sole of a leather shoe. All of the finds date to the later 19th – early/mid-20th century date and are taken to be discarded domestic waste.

7.10 No further finds or features of archaeological interest were recorded in the trench.

8 DISCUSSION

8.1 The most significant feature in the trench, cut [13] appears to represent a feature running on an east-west alignment, contrary to the north-south alignment of the ha-ha shown on the 1752 plan above. This factor, in addition to the relatively shallow depth at which it was encountered, c220mm below the modern path, would suggest it is an isolated feature, such as a tree bowl or similar landscape feature, rather than part of a larger linear structure.

8.2 Comparative to the size of the trench, a significant quantity of finds, vessel glass is particular, was produced. The majority of the finds came from the northern half of the trench in the upper 500mm. Although this may be coincidental, it may suggest that the cut feature [13] was backfilled as one event using a single source of material, (8), rather than it filling up gradually over time and accumulating with domestic waste and detritus.

9 CONCLUSION

The following section provides a summary of the work undertaken with reference to the original research questions set out above.

9.1 *Are there are features present which can be identified as the ha-ha ditch, as seen on the 1752 plan of Marble Hill?*

No features which can conclusively be identified as the ha-ha ditch or associated elements were identified during the watching brief. A single, potentially linear feature was recorded, however it was aligned east-west, contrary to the supposed N-S route of the ha-ha. It is likely however that the cut feature is part of a tree bowl or similar landscape feature based on the quantity of rotten wood found within its fill.

9.2 *If so, what form do these features take? What can they add to our understanding of the construction of the ha-ha?*

The absence of a ha-ha wall or ditch in this instance, taking into consideration the relatively limited depth of excavation, that if such a feature is present, it either exists as a lower level, or has been truncated by later landscaping.

9.3 *What is the cause of the localised subsidence? Is this associated with the ha-ha?*

The subsidence appeared to be concentrated towards the centre of the area of the excavation. After removal of the uppermost layer of tarmac (1) several voids in the existing MOT Type 1 (2) were observed, taken to be caused by the material not being levelled off after being laid down. It is likely the subsidence was caused by the weight of 5 layers of tarmac (3) below context (2) compressing the soft natural sand (14). Each successive tarmac layer was taken to have been laid down to overcome some

subsidence, with the weight then having a cumulative effect until the small sinkhole became visible.

9.4 *Are there any finds of archaeological interest which can be used to date the area?*

The dating of the pottery and CBM assemblages suggest a later 19th to earlier 20th century deposition. This is consistent with much of the collection of glass fragments which are early 20th century in date. It is therefore suggested that the assemblage as a whole represents a late Post-medieval / early modern dump of discarded domestic material, rather than being associated with earlier events such as the construction or backfill of the ha-ha ditch.

9.5 *If encountered, what is the natural geology and at what level does it exist across the site?*

Natural geology, comprising a very soft and friable pale – mid orange sand, consistent with the sand and gravel strata recorded in the British Geological Survey, was encountered in the northern half of the trench. The material was encountered at a depth of 200mm (7.97mOD) but due to its mottled appearance, position within the stratigraphic matrix and sloping profile, it is likely to have been redeposited, and probably much disturbed from previous groundworks. The deposit was heavily truncated by linear feature [13] which continued below the level of excavation at 7.11-7.17mOD.

10 SOURCES

10.1 Digital Sources

Greater London Historic Environment Record. glher@HistoricEngland.org.uk

London Archaeological Archive & Resource Centre (LAARC) database. <http://archive.museumoflondon.org.uk/laarc/caralogue/>

10.2 Bibliography

AOC Archaeology (2005). *An Archaeological Watching Brief at Marble Hill House, Richmond Road, Twickenham, London Borough of Richmond-upon-Thames.*

Archer, H. & Healy, M. (2016). *The Stable Block, Marble Hill Park. Richmond Road, Twickenham, TW1 2NL. An Archaeological Watching Brief Report.*

Chartered Institute for Archaeologists. (2014a). *Standard and guidance for the collection, documentation, conservation and research of archaeological materials.*

Chartered Institute for Archaeologists (2014b). *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives.*

Chartered Institute for Archaeologists. (2015). *Standard and guidance for an archaeological watching brief.*

Communities and Local Government. (2012). *National Planning Policy Framework.*

Hibbert, B. & Weinreb, C. (1983). *The London Encyclopaedia.*

Historic England. (2015). *Greater London Archaeology Advisory Service: Guidelines for Archaeological Projects in Greater London.*

Historic England. (2015). *Greater London Archaeology Advisory Service: Standards for Archaeological Work.*

Mayor of London. (2015). *The London Plan.*

Richmond Council. (2016). *Local Plan.*

10.3 Cartographic Sources

Unknown (1752). *Plan of Marble Hill Park.*

APPENDIX I: LIST OF CONTEXTS

Number	Description
(1)	Tarmac
(2)	MOT Type 1
(3)	Sunken tarmac layers
(4)	Very light brown soil with small roots
(5)	Orange gravel
(6)	Mid brown sand with brick fragments
(7)	Paler orange sand
(8)	Mid brown sandy soil with charcoal and mortar flecks. Fill of [13]
(9)	Mortar/chalk/stone deposit
(10)	Chalky deposit on south side
(11)	Black 'tarmac' layer
(12)	Grey-black sand/stone layer
[13]	Cut of feature
(14)	Natural sand

APPENDIX II: ARCHAEOLOGICAL SECTION

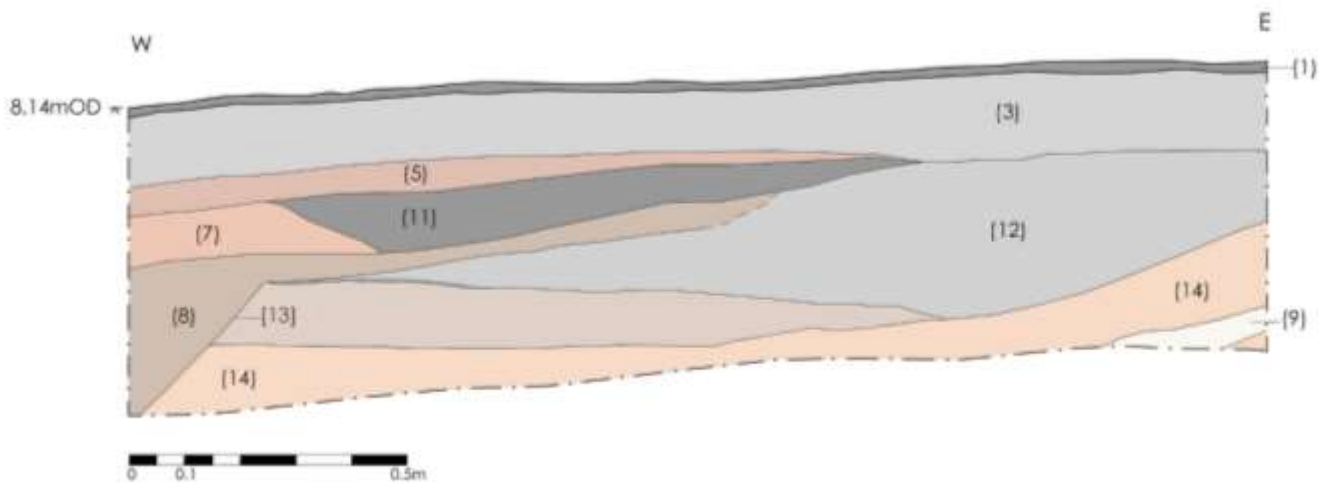


Figure 7: South facing section of the trench, showing the levelling and dumping layers truncated by [13]. Original drawn at 1:10.

APPENDIX III: THE FINDS

Post-medieval pottery by Paul Blinkhorn

The pottery assemblage comprised 40 sherds with a total weight of 604g. It all occurred in a single context (12), and is all of later 19th – early/mid 20th century date. It was recorded using the conventions of the Museum of London Type-Series (eg. Vince 1985), as follows:

DERBS:	Derby Stoneware , 1700-1900. 1 sherd, 26g.
ENPO:	English Porcelain , 1745-1900. 4 sherds, 15g.
HORT:	Horticultural Earthenwares , 19 th – 20 th century. 3 sherds, 124g
PMBL:	Post-medieval Black-glazed Redware , 1600 – 1900. 1 sherd, 12g.
PMR:	Post-medieval Redware , 1580 – 1900. 1 sherd, 30g.
REFW:	Refined Whiteware , 1800-1900. 25 sherds, 302g
TPW:	Transfer-printed Whiteware , 1830-1900. 5 sherds, 95g.

The wares are all typical finds in the region. One of the TPW plates bore the maker's mark of the Empire China Co. of Stoke on Trent, dateable to the period 1896 – 1912, while a small fragment of another had the mark of the Royal Vale China company which covers the period 1928-37. Some of the TPW and REFW has been heavily burnt, and was distorted and partly vitrified.

The assemblage is largely table-wares such as plates and cups, along with a few fragments of more utilitarian wares. A fragment of a tiny cup from a doll's house tea-set was also noted.

Bibliography

Vince, AG, 1985 The Saxon and Medieval Pottery of London: A review

Medieval Archaeology **29**, 25-93

Glass by Heidi Archer

A total of 50 fragments of glass were recovered from the trench with a combined weight of 1218g. The assemblage comprised 49 fragments of vessel glass and a single fragment of window glass, with the majority of material being recovered from context (12).

The high volume of vessel glass, particularly milk bottles, suggests the assemblage is dumped domestic waste, with some fragments dating from as recently as the mid to late 20th century. The small Art Deco style bottle and milk bottle with a phone number imply the material was deposited in the recent past, possibly sometime between 1920 and 1960.

Context	Form	Number of frags	Number of vessels	Comments	Date
(8)	Bottle	5	1	Base and body of a green glass bottle, 15cm in height. 'WHI[' on base, 'JHITE' on body. Taken to be Whites or similar	
(12)	Jar	1	1	Large fragment of rim. Aqua glass	
	Bottle	2	2	Body fragments. Aqua glass	
	Bottle	1	1	Basal fragment. '6 4'. Aqua glass	
	Bottle	1	1	Basal fragment. 'SW['. Aqua glass	
	Bottle	1	1	Rim, neck and body fragment. 'JARY'. Taken to be a milk bottle	
	Bottle	1	1	Base. 'JICOR['	
	Bottle	1	1	Body. 'J AUL JAMPS'	
	Bottle	15	15	Body fragments. Probably milk bottles	
	Vessel	1	1	Small chunky bottle with a hexagonal base and fluted sides. Raised cross hatched pattern on all sides, Art Deco in appearance.	Early to mid-20 th century
	Bottle	2	2	Base	
	Bottle	1	1	Body of a small rectangular vessel, tonic, medicine or similar	
	Vessel	2	2	Two angled wall/body junctions, probably both from bottles	
	Bottle	2	2	Rim and necks of two milk bottles	
	Bottle	1	1	Rim and neck of a milk or juice bottle. 'v' pattern capseat closure	
	Bottle	3	1	Neck of a screw lid vessel	
	Bottle	1	1	Neck. Smooth break	
	Bottle	2	2	Neck fragments	
	Vessel	1	1	Neck fragment from a wide necked bottle or jar	
	Vessel	1	1	Chunky neck fragment from a large screw lid jar	
	Bottle	1	1	Basal fragment 'F G C'	
	Bottle	1	1	Wall fragment with illegible blue writing. Possibly company name and telephone number – milk bottle.	Mid-20 th century
	Bottle	1	1	Large fragment of body 'R'	
	Bottle	1	1	Milk bottle 'United Dairies'.	1917-1959
	Bottle	1	1	Wall fragment. 'ROG[& SON Ltd' with a raised design	

Metal

A total of five fragments of metal weighing 82g were recovered from context (12). The assemblage comprised four pieces of bent and corroded iron and a single strip of lead measuring 10mm in width x 145mm in length. The small collection is taken to be discarded fragments of waste including nails and assorted fixtures and fittings from a fence or building.

Ceramic Building Material

Five fragments of ceramic building material (CBM) were recovered from context (12). The assemblage is likely to date from the Post-medieval period and represents demolition material, from at least two separate buildings (or areas), based on the presence of both pan and peg tiles.

Context	Form	Comments	Weight	Date
(12)	Pan tile	Gritty exterior, brush marks on edge	216g	1600-1900
	Peg tile	Whitish gritty mortar with stone inclusion in nail hole	240g	1600-1800
	Brick	Dark red-purple fabric. Overfired	58g	PM-modern
	Peg tile	Uneven surface with large oval depression which does not go all the way through	46g	1200-1800
	tile	Small fragment	16g	PM

Miscellaneous

Context (12) also produced a single fragment of animal bone comprising the distal end of a left femur from a medium sized mammal, most likely a sheep (*Ovis aries*).

The front half a large leather soled shoe was recovered from context (12).

APPENDIX IV: OASIS RECORDING FORM

OASIS ID: compassa1-288950

Project details

Project name	Archaeological Watching Brief at Marble Hill House TW1 2NL
Short description of the project	Watching brief conducted between the 20th and 23rd June 2017 in Marble Hill Park, Twickenham TW1 2NL. The work was commissioned By English Heritage in response to a small sinkhole situated in a N-S path to the west of the ice house. The watching brief monitored a single oval trench measuring 2.1m in length x 1.4m in width x 1m in depth. The stratigraphy exposed a series of 20th century dumping/levelling layers over redeposited natural sand, cut by an E-W feature, taken to a tree bowl or similar, which was subsequently sealed by gravel and modern macadam. Subsidence caused by weight of tarmac compressing the soft ground. Finds included a quantity of glass - particularly milk bottles, CBM and pottery. Undisturbed natural geology was not encountered. Trench base recorded at 7.11-7.17mOD.
Project dates	Start: 20-06-2017 End: 23-06-2017
Previous/future work	Yes / Not known
Any associated project reference codes	MHP17 - Sitecode
Type of project	Recording project
Site status	Conservation Area
Site status	English Heritage List of Parks and Gardens of Special Historic Interest
Current Land use	Woodland 6 - Parkland
Monument type	NONE None
Significant Finds	GLASS Modern
Investigation type	"Watching Brief"
Prompt	Conservation/ restoration
Prompt	Urgent response to localised subsidence of undetermined cause

Project location

Country	England
Site location	GREATER LONDON RICHMOND UPON THAMES TWICKENHAM Marble Hill Park
Postcode	TW1 2NL
Study area	3 Square metres
Site coordinates	TQ 517223 173598 50.935125717263 0.159526848144 50 56 06 N 000 09 34 E Point

Project creators

Name of Organisation	Compass Archaeology
Project brief originator	Gary Rawlings, Facilities Manager

Project design originator	Compass Archaeology
Project director/manager	Geoff Potter
Project supervisor	Heidi Archer
Type of sponsor/funding body	English Heritage

Project archives

Physical Archive recipient	Museum of London archaeological archive
Physical Contents	"Ceramics", "Glass"
Physical Archive notes	Modern finds discarded once analysed.
Digital Archive recipient	Museum of London Archaeological Archive
Digital Contents	"none"
Digital Media available	"Images raster / digital photography", "Text"
Paper Archive recipient	Museum of London Archaeological Archive
Paper Contents	"Ceramics", "Glass", "other"
Paper Media available	"Context sheet", "Plan", "Report", "Section", "Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Footpath Improvement Works, Marble Hill Park. Richmond Road, Twickenham TW1 2NL. An Archaeological Watching Brief Report.
Author(s)/Editor(s)	Archer, H.
Date	2017
Issuer or publisher	Compass Archaeology
Place of issue or publication	250 York Road, London, SW11 3SJ
Description	Short report summarising the results of the watching brief. Contains relevant background details including reason for commission, site location and Conservation Area details, historical and archaeological background, and site and post-excavation methodology. Results include plans, photographs and text of the monitored works with a short discussion and conclusion. Results are supported by relevant specialist analyses.