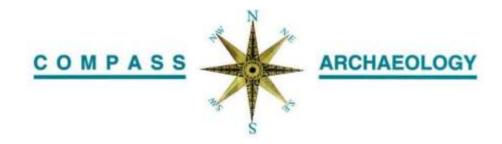
# THE CHILDREN'S GARDEN

## ROYAL BOTANIC GARDENS KEW, RICHMOND TW9 3AB

AN ARCHAEOLOGICAL WATCHING BRIEF REPORT



**APRIL 2019** 

# THE CHILDREN'S GARDEN ROYAL BOTANIC GARDENS KEW, RICHMOND TW9 3AB

### AN ARCHAEOLOGICAL WATCHING BRIEF REPORT

NGR: TQ 18380 77260 (APPROX. CENTRE)

PLANNING REF: 16/3353/FUL

Site Code: BOC18

COMPASS ARCHAEOLOGY LIMITED 250 YORK ROAD LONDON SW11 3SJ

Tel: 020 7801 9444

e-mail: mail@compassarchaeology.co.uk

Author: Heidi Archer

April 2019

#### **Abstract**

Between December 2017 and January 2019 Compass Archaeology undertook a watching brief during the development of a new Children's Garden within the Royal Botanic Gardens Kew, replacing the former Treetop Towers Children's Play Area and incorporating a larger area to the south/southwest.

The new Children's Garden is located within and in close proximity to a number of heritage assets: The Royal Botanic Gardens are themselves a World Heritage Site and a Grade I Registered Historic Park & Garden. The site is also within an Archaeological Priority Area as defined within the Richmond Local Plan, and in close proximity to several Listed Buildings and one Scheduled Ancient Monument.

Previous investigations within the northeastern corner of the development site had revealed two significant 17<sup>th</sup> to 19<sup>th</sup> century features on the site. A brick wall base aligned east-west and measuring over 24m in length was dated to c.1620-1700 (probably the earlier part of the period). This feature was identifiable as a garden boundary on several 18<sup>th</sup> century surveys. The same surveys also showed some associated features, including a possible walled garden immediately to the south, although nothing further was found. The second archaeologically-recorded feature was a sunken fence or ha-ha: this feature was dug in 1834 and backfilled in 1895, and is known to have crossed almost the entire length of the site from west to east. The estimated width is c.11m and depth at least 1.5m, with a broad flat base. The sunken fence line can reliably be established from contemporary maps alongside the archaeological record.

The 17<sup>th</sup> century garden wall feature was indeed exposed in several trenches, encountered at a depth of c0.3m (6.3-6.2mOD). It comprised an unfrogged red brick structure measuring up to 0.6m in width and up to 0.5m in height (varying between two and eight courses), topped in places with white stone slabs. A possible buttress or gate post was also exposed. Approximately 8.10m of its length was recorded across six trenches.

The ha-ha ditch or 'sunken fence' feature was also exposed during the watching brief, following the prescribed alignment as noted on the historic surveys. A partial profile of the feature was recorded, measuring 7.26m in width with gently sloping sides terminating at an unknown base. An angled edge was also observed in one trench, taken to be a narrowing in the ditch, shown on cartographic sources.

In general, the stratigraphy of the site comprised the existing topsoil over a mid-brown subsoil, directly overlying the natural sand and gravel – part of the Kempton Park Gravels group, encountered at a depth of 0.3m (6.3-6.2mOD).

A small number of finds were recovered from the watching brief, including post-medieval ceramic building material (CBM) and pottery, the majority of which were excavated from the fill of the ha-ha ditch.

Contents			Page
1	Introduction		1
2	Acknowledgements		2
3	Site Location,	2	
4	Archaeological and Historical Background		3
5	The Historical Environment, Planning & Objectives		8
6	Methodology		11
7	Results		12
8	Conclusions		32
9	Sources		34
Appendix I		Context List	35
Appendix II		Archaeological Drawings	37
Appendix III		Ceramic Building Material by Sue Pringle	42
Appendix IV		Pottery by Paul Blinkhorn	47
Appendix V		OASIS Recording Form	51

## **List of Figures**

Figure	Page
Figure 1: Site location, marked in red	1
Figure 2: Extract from the BGS Sheet 270: South London, with site marked in purple	3
Figure 3: Extract from Rocque's Plan (1746) showing the site (red) in relation to the walled gardens and Love Lane, running parallel. Part of the wall observed in 2009 is also marked (blue)	5
Figure 4: View of the 17th century wall encountered in trench 4. Facing NE, scale 0.5m	
Figure 5: Part of the 'sunken fence' feature or ha-ha and infill exposed by excavation at the southern limit of the Quarantine House evaluation (trench F). Facing SE, scale 1m	
Figure 6: Extract from the OS five-feet-to-the-mile map (1895) showing the Children's Garden (red) in relation to the ha-ha	
Figure 7: Location of groundworks monitored during the watching brief (red) in relation to the 17th century wall feature (blue) and ha-ha (light blue).	13
Figure 8: Wall [17] recorded in Trench 9. Facing WNW. Scale 0.2m	14
Figure 9: Wall [17], crossing Trench 25. Facing E. Scale 0.5m.	
Figure 10: Wall [17], as seen in Trench 54. Facing NW. Scale 0.5m	
Figure 11: SE end of wall [17], exposed in Trench 9. The wall cuts into natural clay (57). The wider part of the structure seen towards the centre of frame is thought to be a buttress or gate post	
rather than a return. Facing NW. Scale 0.5m.	16
Figure 12: NW end of Trench 9, showing red brick wall topped with white stone slabs [17] just below the existing topsoil (1). Facing NNE. Scale 0.2m.	17
Figure 13: Plan of Wall [17] recorded in Trench 9. Original drawn at 1:20.	18
Figure 14: Wall [17] observed at the northern end of Trench 51. Facing approximately N. Scale	
0.6m	19
Figure 15: South-west face of wall [17] showing the irregular brickwork. Facing NNE. Scale 0.6m	20
Figure 16: Top and north-east face of wall [17]. Facing approximately SW. Scale 0.4m	
Figure 17: Wall [17] as seen in Trench 55. Facing NE. Scale 0.5m	21
partial rebuild. The tile course can be seen beneath the scale. Facing SW. Scale 0.5m	22
Figure 19: Extract from Thomas Richardson's 'Plan of the Royal Manor of Richmond otherwise West Sheen in the County of Surrey, Taken under the Direction of Peter Burrell Esqin the year 1771', showing the walls identified during the watching brief and previous investigations. Site outline marked in red. The top is orientated approximately NNE. See also Rocque's Map, fig.3 above	
Figure 20: Trench 8, showing what is taken to be a section of the ha-ha, infilled with a dark brown soil containing occasional fragments of CBM (22). Facing SE. Scale 1m	24
Figure 21: Trench 19, showing the sloping edge of the ha-ha cutting into natural sand. Facing NW.  Scale 0.8m	24
Figure 22: Trench 10, showing the southern edge of the ha-ha, filled with a dark brown silty soil.  Facing NE. Scale 0.5m	25
Figure 23: Backfilled ha-ha recorded in Trench 44. The edge in the foreground (south) is at a 45° angle to the northern side of the feature seen towards the top of frame. Facing approximately N. Scale 0.6m.	26
JUIC 0.0111	∠U

Figure 24: Location of Trench 44 (red) in relation to the ha-ha or sunken fence feature as shown on the OS five-feet-to-the-mile map (1895)	26
Figure 25: Pit [25] recorded in Trench 24, showing the three distinct dark fills. Facing N. Scale 0.5m	
Figure 26: Section of service ducting along the southern perimeter (Trench 13) showing topsoil (1) and subsoil (2) over natural clay (57). Facing SW. Scale 1m	
Figure 27: Section of service ducting (Trench 35) excavated along the southern perimeter of the site. Facing E. Scale 1m	29
Figure 28: Section of service ducting observed during the completion of Trenches 38-40. Facing W. Scale 1m	29
Figure 29: Example of a tree pit undertaken towards the southeast corner of the site. Facing N. Scale 0.5m	30
Figure 30: Trenches dug for pollen spheres, situated between the Oak Tree Circle and Amphitheatre in the southeast corner of the site. Facing SW. Scale 1m	30
Figure 31: Completed post holes undertaken prior to the erection of the Boardwalk, located in the northeast corner of the site. Facing NE. Scale 1m	31
Figure 32: Section 1, showing the cut of the HA-HA in Trench 10	37
Figure 33: Section 2, showing the slab of stone masonry and brickwork overlying it in Trench 10	
Figure 34: Section 3, taken from Trench 12	37
Figure 35: Section 4, showing a pit cut and overlying contexts in Trench 37	
Figure 36: Section 6, showing the stratigraphic sequence in Trench 14	
Figure 37: Section 8, showing the southern edge of the HA-HA in Trench 10	
Figure 38: Plan of Trench 10, aligned N-S, showing a slab of stone masonry and the brickwork	
overlying it	39
Figure 39: Plan of Trench 9 aligned NW-SE, showing a brick wall [17] also aligned NW-SE	
Figure 40: Plan of Trench 54 WSW-ENE aligned. Showing a NW-SE aligned brick wall [17]	. 41
Figure 41: Plan of Trench 55 WSW-ENE aligned. Showing a NW-SE aligned brick wall [17]	. 41
Figure 42: Brick fragment recovered from structure [17], dated from 1450 – 1666	43
Figure 43: Black pantile fragment from context (16), dated from 1680-1700	43
Figure 44: Fragments of Post-Medieval Redware dating from 1580-1900 and Horticulture	
Earthenware dating from the $19^{th}$ – $20^{th}$ century, recovered from context (2)	48
Figure 45: Horticultural earthenware dated from the $19^{th}$ – $20^{th}$ century, recovered from	
context (12)	48
Figure 46: Refined Whiteware dated from 1800-1900, recovered from context (10)	
Figure 47: Green-Glazed Border Ware dated from 1550-1700, recovered from context (14)	
Figure 48: Yellow-Glazed Border Ware dated from 1550-1700, recovered from context (15)	
Figure 49: Staffordshire Slipware dated from 1650-1800, recovered from structure (17)	

Figs.1 & 2 reproduced with the permission of the Ordnance Survey on behalf of The Controller of HMSO ©Crown Copyright. All rights reserved. (Compass Archaeology Ltd, license no. AL100031317)

Fig 7 reproduced from original drawings by Suzie Jewell Landscape Architect provided by RBGK

#### 1 INTRODUCTION

- 1.1 This document describes the findings of an archaeological watching brief conducted during the development of the new Children's Garden within the north-western part of the grounds of The Royal Botanic Gardens Kew (RBGK), between December 2017 and January 2019 (fig.1).
- 1.2 The watching brief was commissioned to fulfil a condition of planning attached to the development of the Children's Garden by the London Borough of Richmond upon Thames (LBRuT), based on advice from Historic England (Planning ref: 16/3353/FUL).
- 1.3 The site is located within and in close proximity to a number of heritage assets. These include the Royal Botanic Gardens a World Heritage Site and Grade I Registered Historic Park. The Gardens are also an Archaeological Priority Area as defined by the Richmond Borough Council.

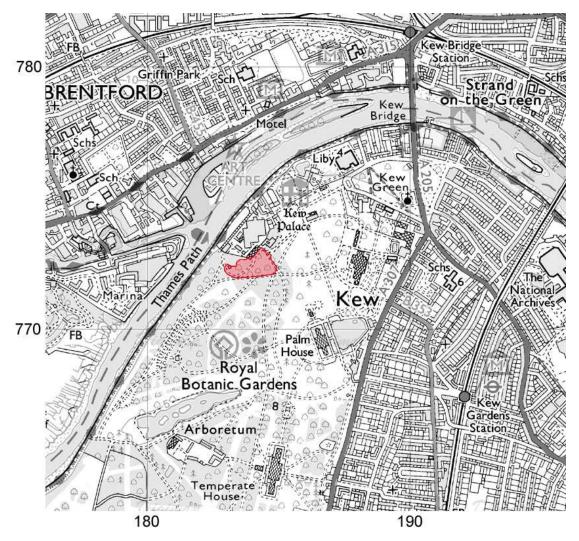


Figure 1: Site location, marked in red.

#### 2 ACKNOWLEDGEMENTS

2.1 Compass Archaeology would like to thank The Royal Botanic Gardens for commissioning and supporting the watching brief, especially to Patrick Wynniatt-Husey (Project Manager) and Richard Wilford (Garden Design and Collection Support) for their assistance during the project. Thanks also to the groundworkers and staff of Ground Control, particularly Mick Bunting and Tom Bruce, for their support and assistance whilst on site.

#### 3 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

- 3.1 The site was situated towards the northwestern corner of the Gardens on land which was mostly open ground, with a mixture of grass cover, trees/shrubbery and bedding and some paths. The site boundary incorporated the current Treetop Towers play area to the northeast and a modern toilet block at the western end. The area is bounded by the White Peaks cafeteria to the northeast and the Climbers and Creepers building to the northwest.
- 3.2 The site lies within the historic floodplain of the River Thames, close to the present bank at its western end and extending back some 250m to the east. According to the British Geological Survey (Sheet 270: *South London*), the site overlies a large expanse of River Terrace deposits (fig.2). Alluvial deposits were also encountered overlying the Terrace gravel during previous archaeological investigations to the northwest (Compass Archaeology 2009a).
- 3.3 The land in this area is relatively level, sitting between 6.9M and 6.2m OD. There is a general rise towards the southern boundary of the site, where the ground level sits at 7.0-6.9m OD.

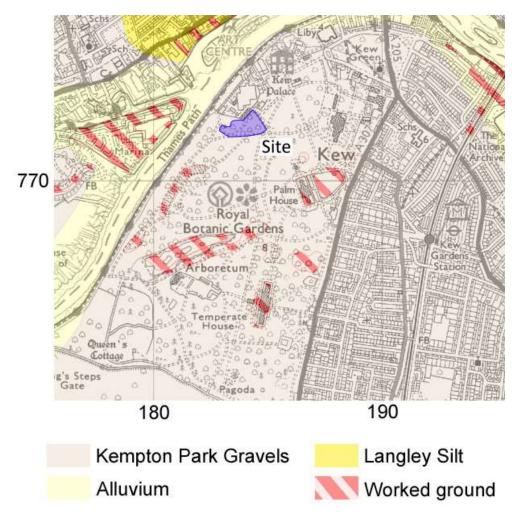


Figure 2: Extract from the BGS Sheet 270: South London, with site marked in purple.

#### 4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 The archaeological and historical background to the site has been discussed in the preceding Desk-Based Assessment (Compass Archaeology January 2017) so shall not be reproduced at length here. Instead, a summary of the major historical periods is given with particular reference to relevant archaeological investigations.

#### 4.2 Prehistoric

Early human occupation in the area is represented by occasional Palaeolithic flints found along the Thames foreshore. Beyond this, a number of finds dating from the Mesolithic and Neolithic periods suggest the floodplain was utilised by early huntergatherers on a transient or seasonal basis, however the more heavily concentrated activity appears to be on the north side of the river.

During an archaeological evaluation for the new Quarantine House in the Lower Nursey area a small assemblage of three residual worked flints of Neolithic date and some burnt flint of possible prehistoric date was recovered, adding to the picture of general prehistoric presence in the area.

#### 4.3 Roman – Saxon

During the Roman period the main settlement, *Londinium*, was located around the present day Barbican, shifting westwards to the Covent Garden area in the Saxon period – Lundenwic. As a result, must of the archaeological evidence of occupation is concentrated on the north side of the River Thames, with only a handful of residual Roman finds being recorded within the site vicinity.

The name 'Kew' is a Saxon derivative of 'quay', referring to a ford located close to the site which could regularly be crossed on foot, however little further documentary or archaeological evidence exists.

#### 4.4 Medieval

More reliable references appear from 1314, with Kew being mentioned several times in the Survey of the Manor of Shene (Blomfield 2000, p1). In 1358 Edward III converted the Manor at Shene into a palace, the first Royal residence in the area. By the fifteenth century a ferry service was installed at the ford and the hamlet of Kew flourished. Henry VII favoured Shene as a residence, and, Barons, quickly realised this was the place to be to earn the King's favour quickly established their own estates in the surrounding area. One of the closest sites, Kew Farm, was occupied by Thomas Byrkis and later by Henry Norris. The property was held by a number of notable families until the mid-17<sup>th</sup> century when it came into the hands of Sir Robert Ker, Earl of Ancram, who rebuilt the house on a much grander scale.

#### 4.5 Post-medieval

Kew Farm was probably demolished in the late 17<sup>th</sup> century, however Rocque's Plan of Richmond Gardens (published in 1748) shows in detail a rectangular structure cited as 'Gardens belong[ing] to [Lady Clinton]', bounded to the north by the now lost trackway of Love Lane (fig.3). Into the early 18<sup>th</sup> century this area seems to have remained relatively unchanged, comprising two rectangular walled gardens bounded to the north and south by woodland.

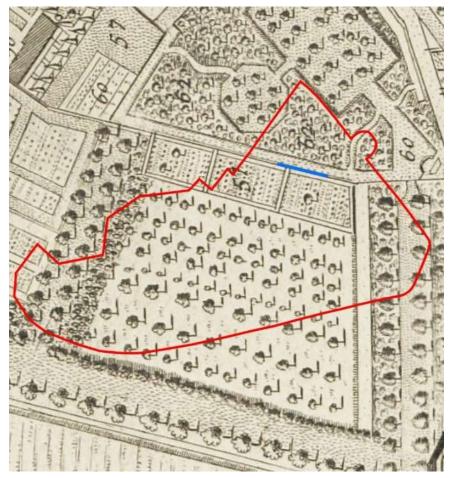


Figure 3: Extract from Rocque's Plan (1746) showing the site (red) in relation to the walled gardens and Love Lane, running parallel. Part of the wall observed in 2009 is also marked (blue).

It is from this period that the development of what ultimately would become the Botanic Gardens can be charted, from a number of significant landholdings to the establishment of two royal estates. In 1727 Richmond Lodge was bestowed on Queen Caroline and her lands extended to 400 acres from Richmond Green to Kew Green. Following the fashions of the day she employed professional landscapers to take responsibility for the Royal Gardens, which eventually opened as a botanic garden under her daughter in law Augusta.

The present eastern section formed the original Kew Gardens, a *Chinoiserie* style 18<sup>th</sup> century landscape designed in part by Sir William Chambers. The western part remained more naturalistic, with influences from 'Capability' Brown, Charles Bridgeman and William Kent.

Finally, into the 19<sup>th</sup> century, when George III held both Richmond and Kew Gardens the site became more unified. The Royal Botanic Gardens were formed in the mid-19<sup>th</sup> century and made more coherent and cohesive through the work of Sir William Hooker, William Andrews Nesfield and Decimus Burton.

#### 4.6 Previous archaeological investigations

#### 4.6.1 Replacement Children's Play Area. Site code: CLJ09

In August 2009 Compass Archaeology undertook an archaeological field evaluation on land adjacent to the Climbers and Creepers Building prior to the installation of new outdoor play equipment. The evaluation comprised 10 targeted trenches, overlying a series of boundaries and landscape features, seen in particular on the 1771 plan shown above. Trenches 4, 6, 7, 8, 9 and 10 revealed section of a wall constructed of Tudortype brick, provisionally dated to between 1620 and 1700 (fig.4).



Figure 4: View of the 17th century wall encountered in trench 4. Facing NE, scale 0.5m.

The wall was shown to cover a total distance of approximately 24 metres, surviving to a height of between of 2 and 8 courses. The structure appears to be of an early date and may belong to the house known as Kew Farm. Kew Farm was extended or rebuilt in c.1630, about the same date stylistically as the recorded wall. Some alterations to the construction were noted, suggesting it had been remodelled on at least one occasions, probably to aid its survival.

Across the six trenches in which the wall was recorded, the feature was encountered at a depth of between c.140 and c.350mm below ground (6.47mOD-6.20mOD), exposed within the topsoil or upper subsoil layers. As a result of the presence of known archaeological features within the development site and the limited depth at which they had previously been encountered the potential for exposing post-medieval remains during the groundworks was deemed to be high.

#### 4.6.2 The New Quarantine House site. Site code: LYK08

Archaeological evaluation of land adjacent to the Lower Nursery took place in two phases between December 2008 and June 2009, prior to development of a new Quarantine House. This was also followed by a watching brief during service trench construction. A total of 10 evaluation trenches and three test pits were excavated, of which the three southernmost trenches were located within the new Children's Garden site. Six of the trenches recorded stratigraphic sequences comprising topsoil or made ground over subsoil (which became increasingly alluvial towards the Thames) with the natural geology exposed below in most areas. Three trenches contained evidence of general post-medieval activity, in the form of a single brick wall base and a number of boundary ditches. The final trench was the most significant, in which a section of a very large backfilled ditch was recorded (fig.5).



Figure 5: Part of the 'sunken fence' feature or ha-ha and infill exposed by excavation at the southern limit of the Quarantine House evaluation (trench F). Facing SE, scale 1m.

The recorded feature's overall measurements were at least 1.4m in depth and 3.3m in width, with the stratigraphy suggesting the lower part had been naturally backfilled over a prolonged period of use. Finds from within some of the uppermost fills included domestic waste and building rubble, in particular a fragment of transfer printed marmalade jar, giving a *terminus post quem* of 1875 for the context. The ditch is identifiable on historic maps as a 'sunken fence feature' or ha-ha, dug in the mid-1830s to delineate the pleasure gardens from the lawns of Kew Palace, and was backfilled towards the end of the 19<sup>th</sup> century. Cartographic sources indicate this feature would have been approximately 11m in width, running through the proposed development site on an east-west alignment, curving northwards towards the river at the western end (fig.6).

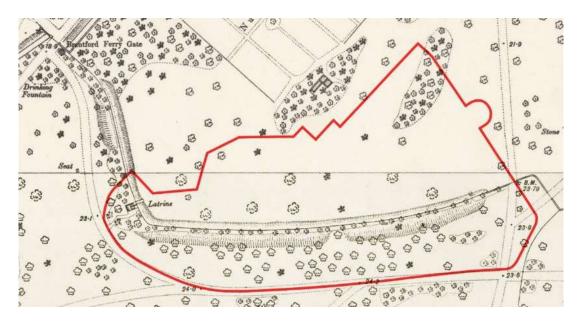


Figure 6: Extract from the OS five-feet-to-the-mile map (1895) showing the Children's Garden (red) in relation to the ha-ha.

#### 5 THE HISTORICAL ENVIRONMENT, PLANNING & OBJECTIVES

- 5.1 This archaeological watching brief report represents one element in the archaeological planning process. The report conforms to the requirements of the National Planning Policy Framework (NPPF), adopted in March 2012 and replacing PPS 5 'Planning for the Historic Environment' and policies HE6 and HE7.
- 5.2 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. The NPPF requires the use of an integrated approach in establishing 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.
- 5.3 Due to the site being located within an Archaeological Priority Area the following policy, taken from the current *London Plan* (March 2016) is deemed relevant:

#### Policy 7.8 HERITAGE ASSETS AND ARCHAEOLOGY

#### Strategic

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

#### Planning decisions

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

#### LDF preparation

- F Boroughs should, in Local Development Framework (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 [Historic England], 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 The current *London Plan* (2016) is under review, with a draft version produced in December 2017. The draft plan includes a chapter on Heritage and Culture, specifically in relation to development, with policy *HC1 Heritage conservation and growth* being particularly relevant.
- As well as national policy the LBRuT has his own policies covering the designated and non-designated heritage assets within the borough including archaeology. These policies are outlined in the LBRuT local Plan (adopted July 2018). These include:
  - LP 3: Designated Heritage Assets, LP 4: Non-Designated Heritage Assets. More specific to the study site however are LP 6: Royal Botanic Gardens, Kew World Heritage Site and LP 7: Archaeology.

#### Policy LP 6: Royal Botanic Gardens, Kew World Heritage Site

The Council will protect, conserve, promote and where appropriate enhance the Royal Botanic Gardens, Kew World Heritage Site, its buffer zone and its wider setting. In doing this, the Council will take into consideration that:

- The World Heritage Site inscription denotes the highest significance to the site as an internationally important heritage asset.
- The appreciation of the Outstanding Universal Value of the site, its integrity, authenticity and significance, including its setting (and the setting of individual heritage assets within it) should be protected from any harm.

• Appropriate weight should be given to the Royal Botanic Gardens, Kew World Heritage Site Management Plan and the Royal Botanic Gardens, Kew Landscape Master Plan.

#### Policy LP 7: Archaeology

The Council will seek to protect, enhance and promote its archaeological heritage (both above and below ground), and will encourage its interpretation and presentation to the public. It will take the necessary measures required to safeguard the archaeological remains found, and refuse planning permission where proposals would adversely affect archaeological remains or their setting. Desk based assessments and, where necessary, archaeological field evaluation will be required before development proposals are determined, where development is proposed on sites of archaeological significance or potential significance.

- The Archaeological Priority Areas (APAs), of London Borough of Richmond upon Thames are currently under review in consultation with Historic England. Nevertheless as of now the study site lies within the locally designated APA of Kew Gardens and the Old Deer Park which covers the historic location of the medieval Richmond Palace and other royal residences, the 17th century Royal Deer Park, the 18<sup>th</sup> century Capel Estate, and the subsequent development of RBGK.
- 5.7 The RBGK is also a Registered Historic Park and Garden for its special historic interest (Grade I; National Heritage List for England Entry No.1000830). The development site is adjacent to several Listed Buildings and one Scheduled site (Kew Palace). The Royal Botanic Gardens Kew was recognised as a World Heritage Site by UNESCO in 2003, conferring further obligations on both national and local authorities to protect and maintain heritage assets.
- 5.8 The site also lies within the locally designated Conservation Area (CA), of Royal Botanic Gardens. It is also surrounded to the north by the Kew Green CA, to the east by Kew Road CA, and to the south by Old Deer Park CA.
- 5.9 Alongside Local Government policies the Royal Botanic Gardens themselves have an overall 'Site Conservation Plan' (2002) 'World Heritage Site Management Plan' (Draft, 2011) and a Landscape Master Plan (adopted November 2010), as referenced in Local Plan Policy LP 6 (see 5.6 above).
- **5.10** The watching brief presented the opportunity to answer the following general and more specific questions:
  - Is there any further evidence of the 17<sup>th</sup> century walled garden feature identified during previous archaeological investigations? If so, what is its nature and extent?
  - Is there any evidence of alterations / additions to this structure?
  - Are there any surviving elements of the 'sunken fence' feature running through the site? What is its nature and extent and can it be compared to the LYK08 results?
  - At there any further finds or features of archaeological interest on the site? If so, can they be related to cartographic sources?

• 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, (in particular *GLAAS: Guidelines for Archaeological Projects in Greater London*). Works will also conform to the standards of the Chartered Institute for Archaeologists, (*Standards and guidance for an archaeological watching brief*). Overall management of the project was undertaken by a full Member of the Institute.
- **6.1.2** Fieldwork was carried out in accordance with the Construction (Health, Safety & Welfare) Regulations. All members of the fieldwork team will held valid CSCS Cards (Construction Skills Certificate Scheme), and wore hi-visibility jackets, hard-hats, and steel-toe-capped boots as required during the watching brief. All members of the fieldwork team also followed the contractors' health and safety guidelines.

#### 6.2 Fieldwork

- **6.2.1** The watching brief involved the monitoring of the groundworks and recording of any features of archaeological interest. Adequate time was allowed for investigation and recording, although every effort was made not to disrupt the development programme. During excavation, spoil from archaeological levels was, as requested, deposited separately, in such a way as to facilitate examination.
- **6.2.2** The main objective of the watching brief was to define the character, extent and significance of any observable remains, and to recover dating and environmental evidence. Where significant remains were encountered the archaeological contractor informed the Client and Historic England as soon as possible.
- **6.2.3** Archaeological deposits and features were investigated and recorded in stratigraphic sequence, and finds dating evidence recovered.
- **6.2.4** Archaeological contexts were recorded as appropriate on *pro-forma* sheets by written and measured description, and/or drawn in plan or section, generally at scales of 1:10 or 1:20. The investigations have been recorded on a general site plan and related to the Ordnance Survey grid. Levels were taken on the top and bottom of any archaeological features or deposits, transferred from the nearest Ordnance Datum benchmark. The fieldwork record will be supplemented by digital photography, in .jpeg and RAW formats.
- **6.2.5** The recording system used follows 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

- **6.3.1** Assessment of finds has been undertaken by appropriately qualified staff (see Appendices). Finds and samples will be 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'.
- **6.3.2** All identified finds and artefacts will be retained and bagged with unique numbers relating to the context record, although certain classes of building material will be discarded once an appropriate record has been made. Where necessary, sensitive artefacts will be properly treated, in line the appropriate Standards.

#### 6.4 Report and Archive

- **6.4.1** Copies of the report will be supplied to the Client and Historic England.
- **6.4.2** The report will contain a description of the fieldwork plus details of any archaeological remains or finds, and an interpretation of the associated deposits. Illustrations will be included as appropriate, including at a minimum a site plan located to the OS grid. A short summary of the project will be appended using the OASIS Data Collection Form, and will be prepared in a form suitable for publication within the 'excavation round-up' of the London Archaeologist.
- **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.
- 6.4.4 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 BOC18. 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 What follows is a written description of the observations made during the watching brief. Deposits are shown in round brackets thus, (x), and cuts in square brackets thus, [x]. The text is supplemented with illustrative photographs, and accompanied where appropriate by trench plans and sample sections.
- 7.2 The watching brief monitored approximately 58 sets of groundworks associated with the construction of the new garden, from larger trenches for service ducts and trees, to clusters of small postholes for equipment (fig.7).

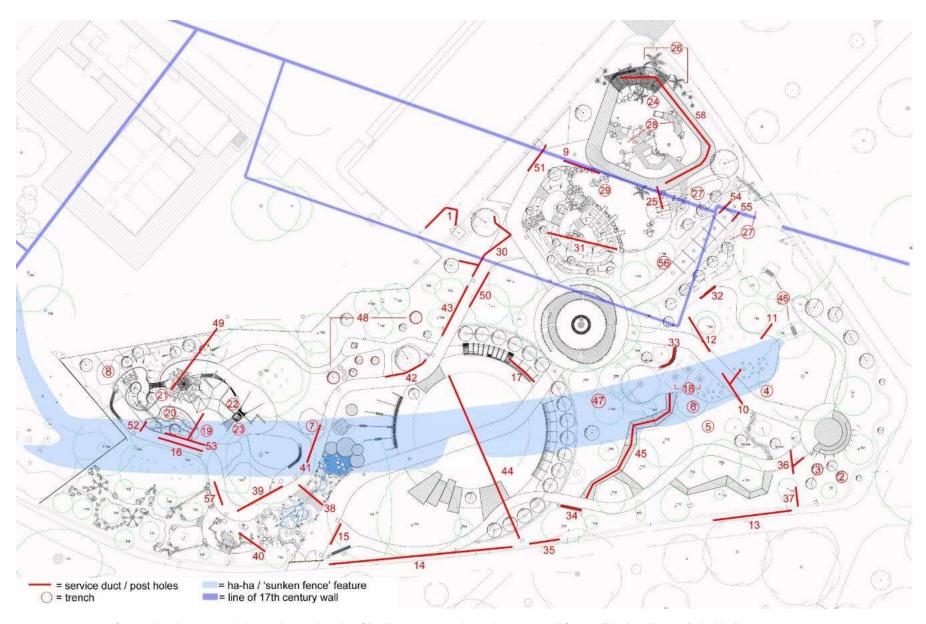


Figure 7: Location of groundworks monitored during the watching brief (red) in relation to the 17th century wall feature (blue) and ha-ha (light blue).

- 7.3 Of particular interest was a wall exposed during completion of several trenches towards the north-east corner of the trench. The wall, [17], was observed in trenches 9, 25, 27, 51, 54 and 55.
- 7.4 The structure, encountered at 0.3m below ground level (6.26mOD) was constructed from unfrogged red bricks, measuring 240 x 105 x 75mm, bonded with a whitish mortar. It measured between 350mm and 650mm in width, with approximately 8.10m of its length exposed across the six trenches (figs.8-10).



Figure 8: Wall [17] recorded in Trench 9. Facing WNW. Scale 0.2m.



Figure 9: Wall [17], crossing Trench 25. Facing E. Scale 0.5m.



Figure 10: Wall [17], as seen in Trench 54. Facing NW. Scale 0.5m.

7.5 The longest section was observed in Trench 9, measuring 5.1m in length x 0.35m in width x 03m in height (2-3 courses), running on a NW-SE alignment and cutting into firm clay (57) over gravels (the latter present from 0.9m below ground level). It consisted predominantly of a single red brick course, with stretchers laid side by side, topped by white stone slabs (figs.11-13).



Figure 11: SE end of wall [17], exposed in Trench 9. The wall cuts into natural clay (57). The wider part of the structure seen towards the centre of frame is thought to be a buttress or gate post rather than a return. Facing NW. Scale 0.5m.



Figure 12: NW end of Trench 9, showing red brick wall topped with white stone slabs [17] just below the existing topsoil (1). Facing NNE. Scale 0.2m.

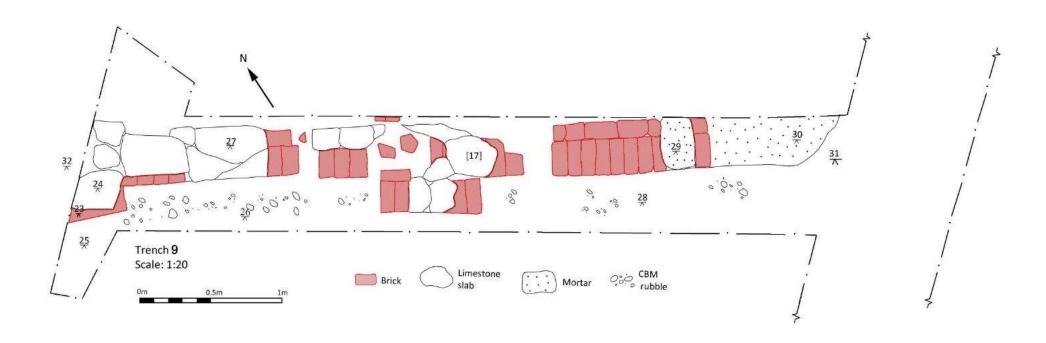


Figure 13: Plan of Wall [17] recorded in Trench 9. Original drawn at 1:20.

7.6 Two particularly intact sections of the wall were encountered at the northern end of Trench 51 and in Trench 55. In Trench 51, adjacent to the Climbers and Creepers Building the wall was encountered within the topsoil (1) at a depth of 0.26m (c6.3mOD), running in a NW-SE direction, at a right angle to the trench (fig.14). The observable section measured 0.63m in length x 0.48m in width x 0.5m in height, standing to 8 courses (figs.15-16). It was constructed predominantly of unfrogged red bricks, with headers facing outwards, and a chalk or rubble core. Several of the bricks were broken, and it is unclear if this is modern damage or an original feature.



Figure 14: Wall [17] observed at the northern end of Trench 51. Facing approximately N. Scale 0.6m.



Figure 15: South-west face of wall [17] showing the irregular brickwork. Facing NNE. Scale 0.6m.



Figure 16: Top and north-east face of wall [17]. Facing approximately SW. Scale 0.4m.

7.7 In Trench 55 the unfrogged red brick wall survived to a height of 5 courses (c0.36m) sitting within a construction cut [39] extending 0.5m to either side of the footing. In this instance the wall was bonded with a thickly laid lime mortar, more visible here than in other trenches. The wall also seemed to be topped with a tile course, not observed elsewhere along its length, although the reason for this is unclear. It may be that this section represents a different phase, as it runs in a slight dog-leg from the sections described above (see fig.7). The top of the masonry was exposed 0.33m below ground level (c6.23mOD) (figs.17-18).



Figure 17: Wall [17] as seen in Trench 55. Facing NE. Scale 0.5m.



Figure 18: Slightly neater north-east face of wall [17]. The messy patch of mortar may indicate a partial rebuild. The tile course can be seen beneath the scale. Facing SW. Scale 0.5m.

- **7.8** Elsewhere, much of the wall had been truncated by later activity, leaving only one or two foundation courses topped by a stone or tile course.
- **7.9** Analysis of brick samples taken from the wall have been dated 1630-1700.
- 7.10 Wall [17] is consistent with that exposed during previous archaeological investigations (Compass Archaeology 2009; CLJ09) and taken to be the remains of a garden boundary wall, provisionally dated to between 1620 and 1700. The structure appears to be of an early date and may belong to the house known as Kew Farm. The farm was extended or rebuilt in c1630, about the same date stylistically as the wall. The structure appears on cartographic evidence from the 18<sup>th</sup> century and is represented by a linear wall running NW-SE through the site (fig.19). A parallel boundary is present some 20-24m south, however this was not encountered during the watching brief.

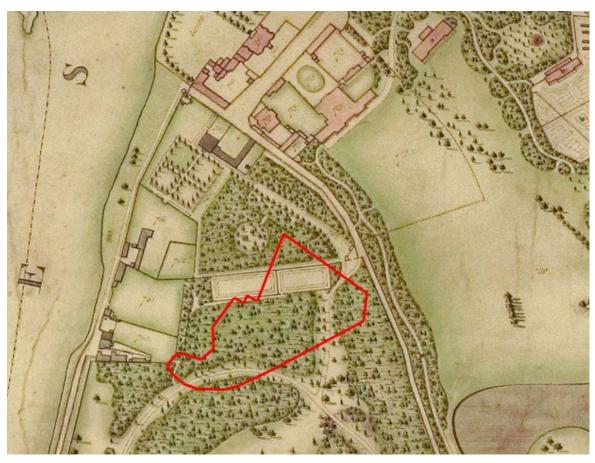


Figure 19: Extract from Thomas Richardson's 'Plan of the Royal Manor of Richmond otherwise West Sheen in the County of Surrey, Taken under the Direction of Peter Burrell Esq..in the year 1771', showing the walls identified during the watching brief and previous investigations. Site outline marked in red. The top is orientated approximately NNE. See also Rocque's Map, fig.3 above.

7.11 The second feature of note recorded during the watching brief was an infilled ditch, running in an east-west direction through the centre of the site. The feature was observed in seven trenches located in the western part of works area – trenches 8, 10, 16, 19, 41, 44, 52 and 53 (figs.20-21).



Figure 20: Trench 8, showing what is taken to be a section of the ha-ha, infilled with a dark brown soil containing occasional fragments of CBM (22). Facing SE. Scale 1m.



Figure 21: Trench 19, showing the sloping edge of the ha-ha cutting into natural sand. Facing NW. Scale 0.8m.

**7.12** The cut, [21], was linear in plan, aligned east-west. Where visible, it had gently sloping sizes terminating at an unknown base. A partial profile was recorded in a number of trenches, at its widest, measuring 7.26m, although cartographic sources indicate that its full extent was closer to 10m. In Trench 10, the southern edge of the feature was recorded cutting into natural sand. It had a moderately sloping edge terminating at an unknown base (fig.22).



Figure 22: Trench 10, showing the southern edge of the ha-ha, filled with a dark brown silty soil. Facing NE. Scale 0.5m

- 7.13 The main fill of the cut feature (22), was relatively homogenous across all the trenches, comprising a dark brown silty soil containing frequent CBM inclusions. Some layering was visible in certain areas, suggesting that the backfilling was undertaken in several stages. In Trench 10, for example, the feature was filled by thin lenses of grey-brown gravel, sand and a mid-grey-brown subsoil containing frequent roots contexts (7) to (9).
- 7.14 Based on comparison with cartographic sources this large ditch is taken to be the remains of a 'sunken fence feature' or ha-ha, dug in the mid-1830s to delineate the pleasure gardens from the lawns of Kew Palace. The feature however appears to have been relatively short-lived and was backfilled in the 1890s 'a step welcomed by the Director who believed it had been used for "immoral purposes". Analysis of the CBM recovered, including mortar and brick fragments is dated to pre-1700. This feature was also identified during an archaeological evaluation on land adjacent to the Lower Nursery (Compass Archaeology LYK08).
- 7.15 In Trench 44 the full extent of the ditch was observed in plan. Its northern edge was aligned east-west whilst the southern edge was recorded at a 45° angle, running in a NW-SE direction (fig.23).



Figure 23: Backfilled ha-ha recorded in Trench 44. The edge in the foreground (south) is at a 45° angle to the northern side of the feature seen towards the top of frame. Facing approximately N. Scale 0.6m.

**7.16** The angle observed in Trench 44 aligns with an edge observed on the 1895 OS map (fig.24) demarcating a narrowing in the ditch. The reason for this narrow section is unclear, although it may have been the site of a bridge or crossing point.

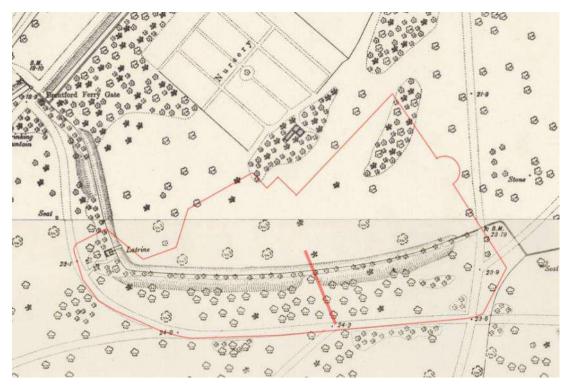


Figure 24: Location of Trench 44 (red) in relation to the ha-ha or sunken fence feature as shown on the OS five-feet-to-the-mile map (1895).

- **7.17** It is likely that this feature was also recorded in more groundworks undertaken on the eastern side of the site, in addition to Trench 10, however, as many of the trenches were discrete and small in size (such as post holes and stake holes) this could not clearly be demonstrated.
- 7.18 Away from the sunken fence feature, in the north-east corner of the site a pit was observed, to the south of the new boardwalk in Trench 24 (fig.25), cutting into natural clay (20). The feature, [35], was partially exposed in the south facing section and comprising a circular pit with a near vertical eastern edge and an unknown base, measuring 0.54m in depth. It was filled be a moderately compact dark grey-brown silty sand containing occasional small stones and fragments of CBM (36). This overlay a distinctive band of mid to dark blue sandy clay with occasional CBM fragments (37), and varied in thickness between 100 and 200mm. The lowest fill was similar to (36), consisting of a moderately compact dark grey-brown silt, measuring at least 240mm in thickness, continuing below the level of excavation.



Figure 25: Pit [25] recorded in Trench 24, showing the three distinct dark fills. Facing N. Scale 0.5m.

- **7.19** Finds recovered from the feature included CBM, pottery and slate. The pottery assemblage was small, comprising two sherds of Refined Whiteware (1800-1900) and one fragment of horticultural earthenware (19<sup>th</sup> 20<sup>th</sup> century) recovered from context (37). The feature is taken to be a discrete rubbish pit or similar and not thought to be associated with the wall and ha-ha described above.
- **7.20** In general, the stratigraphy observed across the rest of the site was relatively uniform, comprising up to 400mm of dark brown loosely compacted topsoil (1) over a moderately compacted orange-brown silty sand subsoil (2), measuring up to 300mm in thickness, above a soft dark orange sand (13), taken to be natural (figs.26-31). This sequence had been disturbed and truncated on many occasions by modern groundworks

and previous site investigations. In deeper areas of excavation, the sand overlay a yellow-brown sandy gravel (20), continuing below the level of excavation.



Figure 26: Section of service ducting along the southern perimeter (Trench 13) showing topsoil (1) and subsoil (2) over natural clay (57). Facing SW. Scale 1m.



Figure 27: Section of service ducting (Trench 35) excavated along the southern perimeter of the site. Facing E. Scale 1m.



Figure 28: Section of service ducting observed during the completion of Trenches 38-40. Facing W. Scale 1m.



Figure 29: Example of a tree pit undertaken towards the southeast corner of the site. Facing N. Scale 0.5m.



Figure 30: Trenches dug for pollen spheres, situated between the Oak Tree Circle and Amphitheatre in the southeast corner of the site. Facing SW. Scale 1m.



Figure 31: Completed post holes undertaken prior to the erection of the Boardwalk, located in the northeast corner of the site. Facing NE. Scale 1m.

7.21 The finds assemblage recovered from the watching brief was relatively small, comprising 53 sherds of post-medieval and modern pottery and 41 fragments of CBM. A single fragment of residual worked flint, possibly prehistoric in date was recovered from context (15) – a variation of the red-brown natural sand seen across the site. The pottery assemblage mostly consisted of fragments of flower pots, as to be expected, however a few residual post-medieval sherds were noted, most likely attributed to the general activity which occurred in the area and possibly associated with Kew Farm. The CBM was similarly dated to the post-medieval period, consisting of fragments of bricks, paving and tiles, thought to be associated with garden and landscape features. Of particular interest was a single fragment of black-glazed pantile as they were known to have been used in Dutch House, Kew in 1631.

#### 8 CONCLUSIONS

We can now look back at the original research questions set down in the WSI and compare them with the results of the watching brief.

# 8.1 Is there any further evidence of the 17<sup>th</sup> century walled garden feature identified during previous archaeological investigations? If so, what is its nature and extent?

An unfrogged red brick wall, taken to be consistent with the 17<sup>th</sup> century garden feature was observed in Trenches 9, 25, 27, 51, 54 and 55. Approximately 8.10m of its length was exposed across the six trenches, encountered at a depth of c0.3m below ground level (6.2-6.3mOD). The feature measured up to 0.6m in width and survived to a height of 0.5m – varying between two and eight courses.

#### 8.2 Is there any evidence of alterations / additions to this structure?

The structure was predominantly bonded with a white lime mortar and in places topped with a single white stone, as observed in Trench 8, or CBM tile course, as observed in Trench 55. This difference would suggest at least one alteration has occurred, although it is unclear which (if any) section is original. Given the slight dog-leg of the feature, it may be that the sections observed relate to different phases and were therefore constructed in different styles. A slightly thicker patch of mortar was recorded on a section of the wall in Trench 55 which may indicate an isolated repair.

# 8.3 Are there any surviving elements of the 'sunken fence' feature running through the site? What is its nature and extent and can it be compared to the LYK08 results?

Several sections of a large east-west aligned ditch were recorded in Trenches 8, 10, 16, 19, 41, 44, 52 and 53. Its size and position indicates it is likely to be the remains of the ha-ha ditch, or 'sunken fence' feature which appears on 19<sup>th</sup> century cartographic sources. A partial profile of the feature was recorded, measuring 7.26m in width, with relatively gently sloping sides terminating at an unknown base. It was predominantly filled by a deposit of dark brown soil containing fragments of CBM, although some variation was noted. An angled edge recorded in Trench 44 confirms the presence of a narrowing in the ditch, shown on the 1895 Ordnance Survey map, which may have been used as a crossing point.

The finds from within the ditch are similar to those recovered from the LYK08 investigation. However due to the limited scope of the groundworks, the depths reached during the previous work was not reached and thus a direct comparison of overall dimensions cannot be made.

# 8.4 Are there any further finds or features of archaeological interest on the site? If so, can they be related to cartographic sources?

Away from the two main features discussed above there were very few other features of archaeological interest exposed. This is thought to be partly a result of the limited nature of some of the groundworks – small, shallow postholes and stakeholes, which were less likely to expose significant archaeological stratigraphy, and also the nature of

the site, which for much of its history has existed as open ground and therefore seen limited development or significant change.

The finds assemblage was also small, comprising predominantly post-medieval pottery (excluding fragments of flower pot) and CBM. Some finds can be attributed to waste, discarded into the 'sunken fence' feature, whilst others are likely the result of accidental loss and general discarding, rather than being associated with a particular feature.

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

Natural geology was observed in the majority of the groundworks monitored during the watching brief. The sequence consisted of a moderately compacted dark orange sand, encountered at an average depth of 0.3m below ground level (c6.2-6.3mOD), which in places overlay a similarly coloured sand abundant with gravels, reached at depths of c0.45-55m (6.15-6.05mOD), both taken to be part of the Kempton Park Gravels group. Some areas of a more compact orange silty clay were also observed below the subsoil and above the gravels, taken to be natural variation.

#### 9 SOURCES

#### 9.1 Bibliography

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

Communities and Local Government (2018). National Planning Policy Framework.

Compass Archaeology (2009). Replacement Children's Play Area. Land adjacent to the Climbers and Creepers Building, Royal Botanic Gardens Kew, TW9 3AB. An Archaeological Evaluation.

Compass Archaeology (2010). Replacement Outdoor Children's Play Area, land adjacent to the Climbers and Creepers Building, Royal Botanic Gardens Kew, TW9 3AB. An Archaeological Watching Brief and in-situ preservation of remains.

Compass Archaeology (2017a). Royal Botanic Gardens Kew, Richmond TQ9 3AB, London Borough of Richmond upon Thames. Proposed Children's Garden and Adjacent Land: An Archaeological Desk-Based Assessment.

Compass Archaeology (2017b). Royal Botanic Gardens Kew, London Borough of Richmond TW9 3AB. New Children's Garden: Written Scheme of Investigation for an Archaeological Watching Brief.

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

Mayor London (2018). The London Plan.

Richmond Council (2013). Local Development Framework.

Richmond Council (2017). Local Plan.

#### 9.2 Cartographic sources (in chronological order)

Rocque, J. (1748). A New Plan of Richmond Garden...Inscrib'd to Tho<sup>s</sup> & Rob<sup>t</sup> Greening Esq<sup>rs</sup>.

Richardson, T. (1771). Plan of the Royal Manor of Richmond otherwise West Sheen in the County of Surrey, Taken under the Direction of Peter Burrell Esq...in the year 1771.

Ordnance Survey (1895). Five-feet-to-the-mile.

British Geological Survey (1998). Sheet 270: South London.

### APPENDIX I Context List

Context	Description
(1)	Dark-mid-brown topsoil. Frequent rooting.
(2)	Orange-brown silty sandy subsoil
(3)	Yellow sand w. freq. flint gravel
(4)	Mid-red brown silty sand
(5)	Pale yellow brown silty sand
(6)	Dark brown silty sand
(7)	Orange-yellow sand
(8)	Orange-yellow silty sand
(9)	Grey-brown silt
(10)	Grey sandy silt
(11)	Pale grey silt w. mortar and slag
(12)	Dark brown silt w. freq. slag
(13)	Yellow sand w. freq. gravels NAT
(14)	Buried dark brown silty soil
(15)	Red-brown sand NAT
(16)	Dark brown silty backfill surrounding wall [17]
[17]	17 <sup>th</sup> century boundary wall
[18]	Cut in [17] for modern services
(19)	Mid-brown silt. Fill of [18]
(20)	Yellow brown sandy gravel NAT
[21]	Cut for ha-ha ditch
(22)	Dark brown silt w. CBM rubble. Fill of [21]
(23)	Yellow brown sandy gravel lens
[24]	Cut for [25]
[25]	Modern stone and brick (drain/soakaway?)
(26)	Dark brown silty backfill of [24]
(27)	Loose mid-grey orange sand
(28)	Loose pale brown-grey sand w. gravels
(29)	Loose pale green grey sand
(30)	Loose dark brown grey sand
[31]	Cut for modern pit
(32)	Fill of [31]
(33)	Dark brown grey sand
(34)	Orange sand
[35]	Cut of post-medieval pit
(36)	Lower fill of [35]
(37)	Middle fill of [35]
(38)	Upper fill of [35]
[39]	Cut for 17 <sup>th</sup> century wall [17]
(40)	Fill of [39]
(41)	Dark grey silty sand w. CBM
(42)	Orange brown sand NAT

(43)	Yellow brown silty sand NAT
(44)	Brown grey sandy natural w. orange lenses
(45)	Modern group hardcore surfacing: tarmac, gravel, concrete,
	aggregate etc.
(46)	Modern dump from nearby excavations
(47)	Pale-brown sandy topsoil
(48)	Mid-brown silt, no inclusions
(49)	Orange-grey clayey silt
[50]	Cut in trench 31
(51)	Dark brown sandy silt w. occ. CBM, fill of [50]
(52)	Pale grey silt w. CBM and charcoal flecks, fill of [53]
[53]	Cut (semi-circular) in trench 31
(54)	Grey-pink hardcore
(55)	VOID
(56)	Orange sand
(57)	Natural clay

#### APPENDIX II: ARCHAEOLOGICAL DRAWINGS

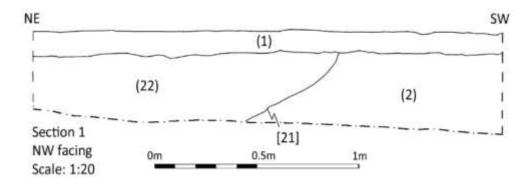


Figure 32: Section 1, showing the cut of the HA-HA in Trench 10

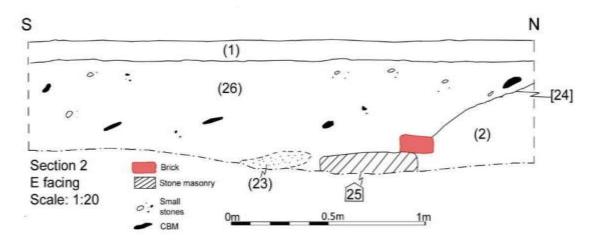


Figure 33: Section 2, showing the slab of stone masonry and brickwork overlying it in Trench 10

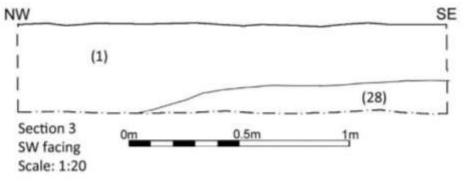


Figure 34: Section 3, taken from Trench 12

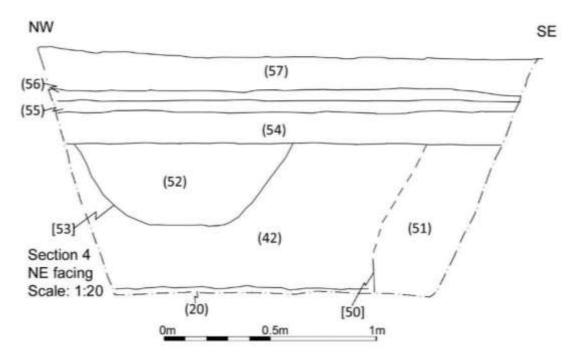


Figure 35: Section 4, showing a pit cut and overlying contexts in Trench 37.

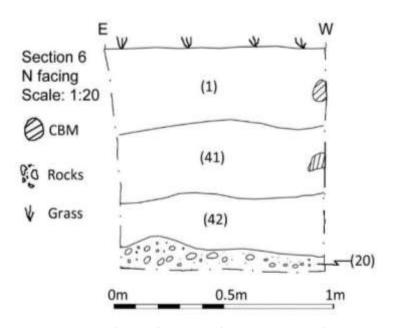


Figure 36: Section 6, showing the stratigraphic sequence in Trench 14  $\,$ 

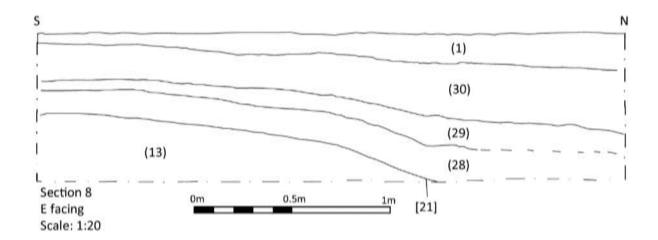


Figure 37: Section 8, showing the southern edge of the HA-HA in Trench

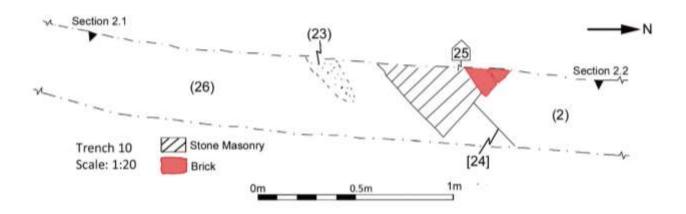


Figure 38: Plan of Trench 10, aligned N-S, showing a slab of stone masonry and the brickwork overlying it.

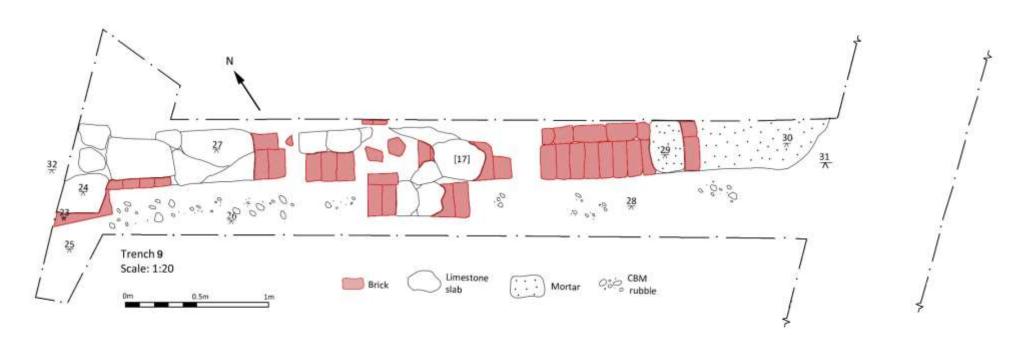


Figure 39: Plan of Trench 9, aligned NW-SE, showing a brick wall [17] also aligned NW-SE

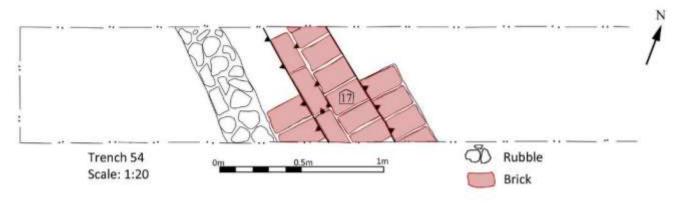


Figure 40: Plan of Trench 54 WSW-ENE aligned. Showing a NW-SE aligned brick wall [17].

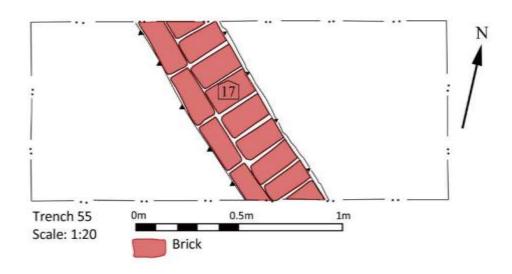


Figure 41: Plan of Trench 55 WSW-ENE aligned. Showing a NW-SE aligned brick wall [17]

#### APPENDIX III: CERAMIC BUILDING MATERIAL by Sue Pringle

#### Introduction

The following report catalogues and discusses the ceramic building material (CBM) recovered from the archaeological watching brief undertaken at the New Playground, Kew Gardens (BOC18). The assemblage comprises of a total of 30 fragments from four contexts with a total weight of 16,418kg. The assemblage was composed predominantly of post-medieval material, with some medieval fragments. It included bricks, roof tile, floor tile as well as three pieces of stone paving.

#### **Assessment methodology**

All the CBM was recorded on a standard recording form, weighed and measured and brief fabric descriptions were noted. Any further comments regarding the state or any features of the fragments were also recorded. The information was collated onto an Excel database.

#### **Discussion**

The assemblage comprised of brick fragments, roof tile, floor tile, pantile, valley tile, mortar, roof slate and stone paving/ flooring, in addition to brick samples taken from [17]. Two bricks in the assemblage are possibly medieval in date. Post-medieval finds were predominantly bricks, with smaller amounts of stone paving.

Five fragments of stone were recovered from two contexts, including stone paving/flooring, the majority of which were derived from shelly limestone, and one fragment made from a dark-reddish stone. Two of the stone paving slabs show a possible bevelled edge, and one stone flooring fragment has a worn/decayed but possible worked edge. The stone recovered is taken to be from the 17<sup>th</sup> century wall [17], as it is found both on the wall itself and in the backfill (16) surrounding the wall.

The medieval period is represented by two possible medieval bricks, one of which made from a fabric similar to early Flemish imports, but seems to be thicker and smoother, possibly indicating that it is a later import. The second brick is unfrogged, also possibly an import or an earlier brick type of fabric 3032. Both were found in the backfill of the HA-HA. The tiles are dated from 1450-1700, indicating that they may be post-medieval in date as opposed to medieval.

Two brick samples were taken from structure [17]. The bricks measured 230-230mm x 116-102mm x 55-61 mm in size, both were unfrogged. They were bonded using lime mortar, one had two mortars; an off-white mortar over a sandy light brown mortar. A date of 1450-1666 is given. With a likely 17<sup>th</sup> century construction date. It is suggested that the wall is a 17<sup>th</sup> century garden boundary wall. A corner of black-glazed pantile was recovered from (16), which had likely been used in Dutch House, Kew in c.1631. In the same rubble backfill, a green roofing slate, with possible origins in the Lake District, was also found. These were used by Wren in the Royal Hospital Chelsea in 1682-92 and Kensington Palace in 1689, which has been used to date the slate found at Kew.

The remaining post-medieval material was typical of a semi-urban site, with many of the individual finds being little more than fragments with a few larger diagnostic examples. The material broadly dates from 1450-1930, with peaks of material between *c* 1690-1700.

#### **Bibliography**

Lucas, R. (1998) Dutch pantiles in the county of Norfolk: architecture and international trade in the 17th and 18th centuries. *Post-Medieval Archaeology* 32: 75-94

Clifton-Taylor, A. & Simmons, J. (1987) *The Pattern of English Building*. Faber & Faber; 4th Edition: 169

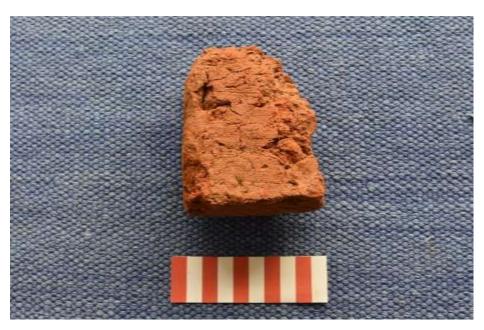


Figure 42: Brick fragment recovered from structure [17], dated from 1450 – 1666. 100mm scale.

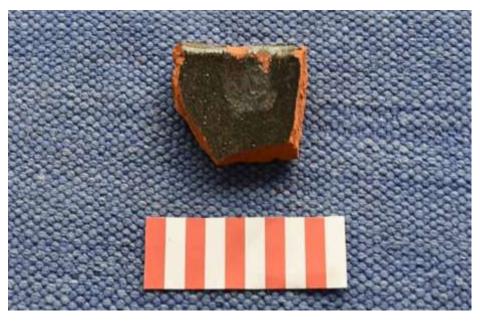


Figure 43: Black pantile fragment from context (16), dated from 1680-1700.

Context	Context cbm date	Period	Form	Count	Weight	L	В	Т	Condition	Comments	Fabric notes
9	1450- 1700	M/PM	Brick	1	261	0	0	64		Flake, Odd brick. Similar fabric to early Flemish imports but thicker and with smooth, flat, faces. Later import?	Fine quartz in calcareous yellow matrix
9	1450- 1700	M/PM	Brick	1	283	84+	74+	64	A	Unfrogged. Early version of 3032 or import?	Soft orange-red fabric near 3033 with inclusions of shell, quartz, bone(?) and calcium carbonate.
9	1450- 1700	PM	Brick	1	364	60+	103	61- 64	Rd	Probably unfrogged.Sides creased but fairly flat.	Dark red fabric with common calcium carbonate or Gault clay inclusions/marbling.
9	1450- 1700	PM	Brick	1	263	0	0	0	A	Flake. I flat smooth surface	
9	1450- 1700	PM	Mortar	1	192	108+	94+	27		1 face has a slightly inset band c. 58mm wide with traces of hard dark brown substance. One side of band has strip of lighter brown sandy mortar. Possibly late 18th/early 19th experimental mortars/concretes	Abundant medium to coarse quartz in a light brown mortar.
16	1680?- 1700	PM	Pantile	1	51	50+	51+	14		Corner of black-glazed pantile <sup>1</sup>	
16	1680?- 1700	PM	Brick?	1	18	0	0	0	Rd, A	Reduced flake, no features. Fabric near 3033, so dated as such	

<sup>&</sup>lt;sup>1</sup> Lucas, 1998, 90

16	1680?- 1700	PM	peg	4	257	0	0	0	A	Part 1 large round nail-hole, c. 12mm diam.	
16	1680?- 1700	PM	valley tile?	1	154	0	0	0		Concave lateral curve - either valley tile or oddly distorted peg. No edges	
16	1680?- 1700	PM	brick	1	1413	165+	109	59	M	Unfrogged. Creased sides; most of top obscured by lime mortar	
16	1680?- 1700	PM	brick	5	769	0	0	61	A	Flakes	
16	1680?- 1700	PM	Roofing slate	3	178	0	0	6		Green roofing slate - Lake District? 1 possible cut edge. Late 17th c - used by Wren in Royal Hospital Chelsea 1682-92 and Kensington Palace 1689 <sup>2</sup>	
16	1680?- 1700	PM	stone paving?	1	994	195+	145+	24	M, Ru?	Dark reddish-brown stone with white mica. 1 cut and bevelled edge. Lime mortar on smooth top and on broken edges - re-used?	
16	1680?- 1700	PM	stone paving?	2	1053	185+	140+	<27	A, M	Abraded and decayed shelly limestone slabs. 1 possible bevelled edge on smaller slab. Mortared and re-used.	Purbeck Limestone or Quarr Limestone?
16	1680?- 1700	PM	stone paving?	0	0	90+	90+	18	A, M	Abraded and decayed shelly limestone slabs. 1 possible bevelled edge on smaller slab. Mortared and re-used.	
17	1450- 1666	PM	Brick	1	2192	230	116	55	M	Unfrogged; indented margin. Creased faces. Lime mortar on top and one header	

\_

<sup>&</sup>lt;sup>2</sup> Clifton-Taylor & Simmons, 1987, 169

17	1450- 1666	PM	Brick	1	2255	220	102	61	Rd, V, M, Ru?	Unfrogged; trace indented margin but brick overfired and misshapen. Creased base and stretchers; sharp arrises. 2 lime mortars: off-white over sandy light brown. Reused?
17	1450- 1666	?	stone	1	680	185+	180+	13	A, M	Flake of laminated shelly limestone - Purbeck Limestone? Lime mortar on both sides
17	1450- 1666	?	stone flooring	1	1130	160+	148+	32	M, A	Fragment of laminated shelly limestone - Purbeck Limestone? Worn and decayed but one probable worked edge, with quarter nosing, survives. Mortar on ?base.
25	1830- 1930	PM	brick	1	1304	131+	109	64	M	Part stamped frog in base, 60mm wide; shallow with U- profile; stamp illegible. Lime mortar on top surface.
25	1830- 1930	PM	brick	1	2607	235	107	66	V, Rd	Vitrified and distorted. Top mortared. Shallow frog in base, probably stamped, illegibly, though could be effect of vitrification

#### **APPENDIX IV: POTTERY** by Paul Blinkhorn

The pottery assemblage comprised 53 sherds with a total weight of 1221g. It mostly consisted of fragments of modern material in the form of flower-pots, although a few largely residual earlier post-medieval fragments were also noted. It was recorded using the conventions of the Museum of London Type-Series (eg. Vince 1985), as follows:

**BORDY:** Yellow-Glazed Border Ware, 1550-1700. 1 sherd, 6g. **BORDG:** Green-Glazed Border Ware, 1550-1700. 1 sherd, 6g.

**CREA:** Creamware, 1740-1830. 2 sherds, 10g.

**HORT:** Horticultural Earthenwares,  $19^{th} - 20^{th}$  century. 37 sherds, 1040g.

PMR: Post-Medieval Redware, 1580 – 1900. 2 sherds, 26g. REFW: Refined Whiteware, 1800-1900. 7 sherds, 110g. STSL: Staffordshire Slipware, 1650 – 1800. 1 sherd, 18g. TPW: Transfer-printed Whiteware, 1830-1900. 2 sherds, 5g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 1. Each date should be regarded as a *terminus post quem*. The range of fabric types is typical of sites in the region.

Table 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

	BOF	RDY	BOF	BORDG P		PMR STSL		CREA		REFW		HORT		TPW			
Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
1													8	382			MOD
2					1	5							3	98			MOD
6													4	21			MOD
9											4	22	3	65			MOD
10											1	40	3	160			MOD
11													1	42			MOD
12													9	148			MOD
14			1	6											2	5	MOD
15	1	6							2	10							M18thC
17							1	18									M17thC
18													3	21			MOD
30					1	21							2	74			MOD
37											2	48	1	29			MOD
Total	1	6	1	6	2	26	1	18	2	10	7	110	37	1040	2	5	

#### **Bibliography**

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



Figure 44: Fragments of Post-Medieval Redware dating from 1580-1900 and Horticulture Earthenware dating from the  $19^{th}$  –  $20^{th}$  century, recovered from context (2)



Figure 45: Horticultural earthenware dated from the 19<sup>th</sup> – 20<sup>th</sup> century, recovered from context (12)

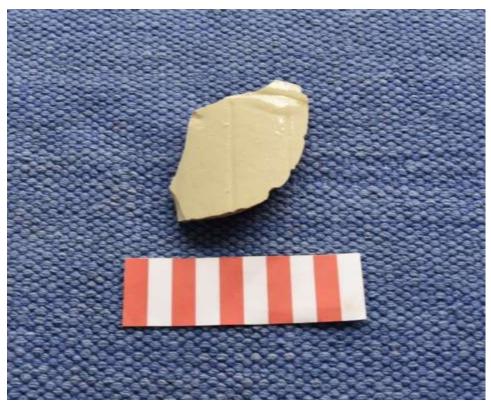


Figure 46: Refined Whiteware dated from 1800-1900, recovered from context (10)

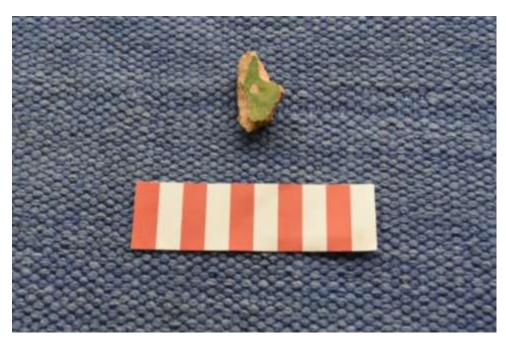


Figure 47: Green-Glazed Border Ware dated from 1550-1700, recovered from context (14)

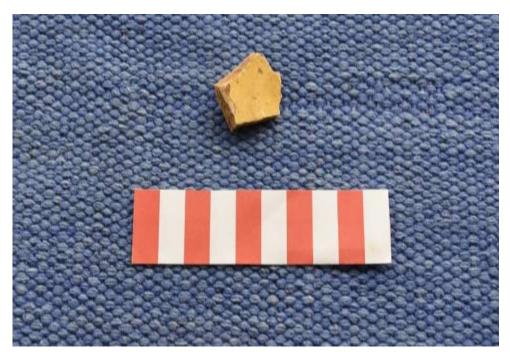


Figure 48: Yellow-Glazed Border Ware dated from 1550-1700, recovered from context (15)



Figure 49: Staffordshire Slipware dated from 1650-1800, recovered from structure (17)

#### APPENDIX VIII: OASIS RECORDING FORM

#### OASIS ID: compassa1-348858

**Project details** 

Project name The Children's Garden, Royal Botanic Gardens Kew, Richmond, TW9 3AB

Short description of Between December 2017 and January 2019, Compass Archaeology the project undertook a watching brief during the development of a new Children's

undertook a watching brief during the development of a new Children's Garden at the Royal Botanic Gardens Kew, Richmond, TW9 3AB. The work was commissioned by The Royal Botanic Gardens Kew, due to the site's location within an Archaeological Priority Area and the Royal Botanic Gardens are themselves a World Heritage Site and a Grade I Registered Historic Park and Garden. The watching brief monitored approximately 58 sets of groundworks associated with the construction of the new garden, including replacing the former Treetop Towers Children's Play Area and incorporating a larger area to the south/ southwest. The works exposed a 17th century garden wall feature comprised of unfrogged red brick which measured up to 0.6m in width and 0.5m in height. A possible buttress or gate was also exposed. Additionally, a 'ha-ha' or 'sunken feature' was exposed. The ha-ha was dug in 1834 and backfilled in 1895, and measured

to around 7.26m in width. The archaeological features were encountered at

a depth of c0.3m (6.3-6.2mOD

Project dates Start: 05-12-2017 End: 28-01-2019

Previous/future

work

Yes / Not known

Any associated project reference

codes

CLJ09 - Sitecode

Any associated project reference codes

es

LYK08 - Sitecode

Type of project Recording project

Site status Local Authority Designated Archaeological Area

Site status English Heritage List of Parks and Gardens of Special Historic Interest

Current Land use Other 14 - Recreational usage

Monument type WALL Post Medieval

Monument type HA-HA (SUNKEN FEATURE) Post Medieval

Significant Finds CBM Post Medieval

Significant Finds POTTERY Post Medieval

Investigation type "Watching Brief"
Prompt Planning condition

#### **Project location**

Country **England** 

GREATER LONDON RICHMOND UPON THAMES RICHMOND AND KEW Site location

The Children's Garden, Royal Botanic Gardens Kew

Postcode

Site coordinates TQ 518320 177221 50.938352738441 0.161238057912 50 56 18 N 000

09 40 E Line

Site coordinates TQ 518471 177244 50.938369421474 0.161453792775 50 56 18 N 000

09 41 E Line

Height OD / Depth Min: 6.2m Max: 6.3m

#### **Project creators**

Name of Organisation Compass Archaeology

Project brief originator

Historic England

Project design

Compass Archaeology

originator

Compass Archaeology

director/manager

Heidi Archer Project supervisor

Type of

sponsor/funding

body

Project

Royal Botanic Gardens, Kew.

Name of sponsor/funding

body

Royal Botanic Gardens Kew

#### **Project archives**

Physical Archive

recipient

Museum of London archaeological archive

"Ceramics", "other" **Physical Contents** 

Digital Archive recipient

Museum of London Archaeological Archive

"Ceramics", "Stratigraphic" **Digital Contents** 

Digital Media available

"Images raster / digital photography", "Spreadsheets", "Text"

Paper Archive recipient

Museum of London Archaeological Archive

"Ceramics", "Stratigraphic" **Paper Contents** 

Paper Media available

"Context sheet","Photograph","Plan","Section","Unpublished Text"

### Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title The Children's Garden, Royal Botanic Gardens Kew, Richmond, TW9 3AB.

An Archaeological Watching Brief Report.

Author(s)/Editor(s) Archer, H

Date 2019

Issuer or publisher Compass Archaeology

Place of issue or

publication

250 York Road, Battersea, SW11 3SJ

Description Comprehensive report outlining the archaeological investigation. First part

contains the background to the project including commission and scope of works, site location, historical and archaeological background, relevant planning policy and site methodology. The second part details the results of the watching brief, complemented by relevant photographs, and includes a separate discussion and inclusion. Archaeological drawings and specialist

reports included as appendices.