Archaeological Desk Based Assessment

LIGHT INTO LIFE PROJECT KEW

For Royal Botanic Gardens Kew

S. Barton, MSc

MOLA South

Archaeological Desk Based Assessment

LIGHT INTO LIFE PROJECT KEW

Client:	Royal Botanic Gardens Kew
Local Authority:	London Borough of Richmond upon Thames
NGR:	518563 176672
Planning App:	N/A
Author(s):	S. Cowell BA & S. Barton Msc
Doc Ref:	5014L-DBA-v1.3
Date:	January 24

MOLA South

Part of MOLA

TABLE OF CONTENTS

Table of Figures

Table of Plates				
Table of Tables				
Table of Appendices				
Abstract				
I. Introduction				
2. Planning Background				
3. Aims of the Assessment				
4. Methodology				
5. Site Background				
6. Archaeological and Historical Background				
7. Site Conditions and Proposed Development				
8. Conclusions				
Sources Consulted				
Figures				
Appendices				

TABLE OF FIGURES

- Figure 1 Site Location General
- Figure 2 Site Location Detail
- Figure 3 Archaeological Priority Areas
- Figure 4 World Heritage Site & Buffer Zone
- Figure 5 GLHER Data Prehistoric
- Figure 6 GLHER Data Roman
- Figure 7 GLHER Data Medieval
- Figure 8 GLHER Data Post-Medieval
- Figure 9 1762 Rocque Map
- Figure 10 1771 Burrell & Richardson Map
- Figure 11 1785 Plan of Kew Gardens and its Environs
- Figure 12 1873 OS Map
- Figure 13 1898 OS Map
- Figure 14 1911 Key Plan
- Figure 15 GLHER Data Previous Interventions

TABLE OF PLATES

Plate I - Site B
Plate 2 - Site C
Plate 3 - Site D
Plate 4 - Site E
Plate 5 - Site F
Plate 6 - Site G
Plate 7 - Site H
Plate 8 - Site I
Plate 9 - Site J
Plate 10 - Site N
Plate II - Sites superimposed on the 15th century landscape (adapted CBA 2002)
Plate 12 - Sites superimposed on the early 17th century landscape (adapted CBA 2002)
Plate 13 - Brick Stable estate in 1762
Plate 14 - Sites superimposed on the early 18th century landscape (adapted CBA 2002)
Plate 15 - William Chambers' design for the Theatre of Augusta
Plate 16 - Area of Site E in 1785
Plate 17 - Area of Site E in 1800
Plate 18 - Area of Site N in 1762
Plate 19 - Area of Site N in 1800
Plate 20 - The Mosque (1772 engraving)

- Plate 21 Service trench to the south of Site J from the south looking north-northeast (Aaronson 2018)
- Plate 22 Site B from west looking east
- Plate 23 Site B Previous Impact
- Plate 24 Site C from west looking east
- Plate 25 Site D (between circular planted areas) from Palm House looking southwest along Syon Vista
- Plate 26 Site D Previous impact
- Plate 27 Site E from north looking south
- Plate 28 Location of parch mark visible to southwest of Site E
- Plate 29 Site F from north looking south
- Plate 30 Site G from east looking west across Pagoda Vista
- Plate 31 Site G Previous impact
- Plate 32 Site H from south looking north
- Plate 33 Site I from east looking west across Pagoda Vista
- Plate 34 Site | looking east from west
- Plate 35 Site J Previous impact
- Plate 36 Site N from north looking south

TABLE OF TABLES

Table I - Significance criteria used in this report

Table 2- Timescales used in this report

TABLE OF APPENDICES

Appendix I - Registered Parks and Gardens and Scheduled Monument

Appendix 2 - Listed Building Locations

Appendix 3 - Digital Terrain Model and Borehole Locations

Appendix 4 - 2018 Utility Site Survey

Appendix 5 - Proposed Sculpture Locations

Appendix 6 - 2019 Sapphire Star Plan

Appendix 7 - Opium Poppy Plan

Appendix 8 - Gazetteer

Abstract

Ten sites located at the Royal Botanic Gardens, Kew (RBGK) are planned for redevelopment. The proposals are for the erection of ten sculptures by Marc Quinn, located at various points in the gardens (NGR 518563 176672 is used as a central point between the sculptures). The sculptures 'Red Orchid', 'Stainless Orchid' and 'Sobralia', as well as two sculptures called 'Sabal Palm' and five sculptures depicting medicinal plants will sit on base plates anchored into concrete foundation bases located below ground level ground. It is possible that there may be archaeological remains under the planned location of the sculptures. Thus, an Archaeological Desk Based Assessment (DBA) has been commissioned to understand the likelihood of there being archaeological remains at the various sites. This report contains results of cartographic, archaeological and documentary research into the site undertaken by Museum of London Archaeology (MOLA) on behalf of RBGK.

The site has low potential for deposits of low significance from the Prehistoric, Roman, Early Medieval and Medieval periods. Historically the sites have been located in the ancient estate of Kew and later in the APost Medieval period in Kew Gardens. The site areas have been extensively re-landscaped by Chambers and successive 19th century gardeners of the Royal Botanic Gardens under the direction of Aiton, Hooker, Nesfield and others.

Due to the negative impact that extensive re-landscaping has had on the majority of the sites, most of the sites have a low potential to produce deposits of high significance. The exception is at Site N, where a watching brief could mitigate against the potential harm caused by redevelopment to potential remains of an early folly known as 'The Chinese Arch'. Elsewhere at sites B, C, D, E, F, G, H, I and J the low potential of archaeological deposits means that the proposed redevelopment is unlikely to have an adverse archaeological impact and no further archaeological investigation is considered necessary.

1. Introduction

- 1.1. This archaeological desk based assessment has been researched and prepared by S. Cowell of L P: Archaeology and S. Barton of Museum of London Archaeology (MOLA) on behalf of the Royal Botanic Gardens, Kew (RBGK).
- 1.2. The report considers land at RBGK, centered on grid reference 518163, 176672 (a central location between the sculptures) (FIGURE 1).
- **1.3.**The sites proposed for redevelopment have been designated for the erection of ten sculptures. These sculptures will be on plinths anchored to the ground and will be located at various points within the gardens (FIGURE 2).
- 1.4. The local authority is London Borough of Richmond upon Thames (LBRUT), who take archaeological advice from the Greater London Archaeological Advisory Service (GLAAS).
- 1.5. The sites fall within an Archaeological Priority Area (APA) (FIGURE 3) and a Conservation Area as defined by LBRUT. The sites are also within a Registered Park & Garden (RPG) (Appendix 1) and World Heritage Site (WHS) (FIGURE 4). Some of the sites fall within the curtilage of Listed Buildings (Appendix 2).
- **1.6.**The assessment is based on the results of documentary and cartographic research as well as published and unpublished literature.

2. Planning Background

2.1.NATIONAL PLANNING POLICY

- 2.1.1. In 2023 the Department for Communities and Local Government updated the National Planning Policy Framework (NPPF) (DEPARTMENT FOR LEVELLING UP, HOUSING & COMMUNITIES 2023). Section 16 of this document sets out planning policies on conserving and enhancing the historic environment.
- **2.1.2.** The NPPF indicates planning decisions should be made based on the significance of heritage assets. These are defined as buildings, monuments, sites, places, areas or landscapes positively identified as having a degree of significance meriting consideration in planning decisions.
- 2.1.3. Additional guidance to help implement these policies is given in Historic England's Planning and Archaeology Historic England Advice Note 17 (HEAN 17) (HISTORIC ENGLAND 2022).
- **2.1.4.** In addition the following legislation is considered by this assessment:
 - Ancient Monuments and Archaeological Areas Act 1979

2.2. REGIONAL POLICY AND LEGISLATION

2.2.1. The London Borough of Richmond upon Thames (LBRUT) is the Local Planning Authority. LBRUT must consider The Mayor of London's London Plan 2021 (GREATER LONDON AUTHORITY 2021). Policy HC1 is concerned with heritage conservation and growth, with Section D referring to development proposals and assets of archaeological significance. Policy HC2 is concerned with development proposals in WHSs and with the potential to affect WHSs or their settings.

2.3.LOCAL POLICY AND LEGISLATION

2.3.1. The Local Plan (LONDON BOROUGH OF RICHMOND UPON THAMES 2018) was adopted by LBRUT in July 2018. The Plan sets out policies and guidance for the development of the borough until July 2033 or until it is superseded. LBRUT are currently preparing a new Local Plan for Richmond Borough which will replace the current Local Plan. The Draft Local Plan will be submitted to

the Secretary of State in January 2024.

2.3.2. Policy LP 3 'Designated Heritage Asset' of the Local Plan states:

'The Council will require development to conserve and, where possible, take opportunities to make a positive contribution to, the historic environment of the borough. Development proposals likely to adversely affect the significance of heritage assets will be assessed against the requirement to seek to avoid harm and the justification for the proposal. The significance (including the settings) of the borough's designated heritage assets, encompassing Conservation Areas, listed buildings, Scheduled Monuments as well as the Registered Historic Parks and Gardens, will be conserved and enhanced.'

2.3.3. Policy LP 7 'Archaeology' states:

'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.'

2.3.4. The sites are located with a Tier I APA (FIGURE 3), as defined by LBRUT. Tier 1 is a defined area which is known, or strongly suspected, to contain a heritage asset of national significance, or which is otherwise of very high archaeological sensitivity (GREATER LONDON AUTHORITY 2021). While this does not confer any special legal protection to the sites, it does indicate that some form of archaeological investigation is likely to be required by LBRUT.

2.4. SITE SPECIFIC POLICY

2.4.1. The LBRUT Local Plan has a specific policy relating to the Royal Botanic Gardens at Kew due to its WHS status (FIGURE 4). Policy LP 6 states:

'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.'
- 2.4.2. In accordance with the RBGK's WHS status, a World Heritage Site Management Plan (ROYAL BOTANIC GARDENS, KEW 2020) has been developed whose primary purpose is to set out the management framework for sustaining the 'Outstanding Universal Value' of the RBGK WHS. This outlines site-specific policies for the conservation of archaeological and heritage assets at the RBGK.
- **2.4.3.** Section 9.3.2 is concerned with preserving and enhancing the landscape heritage and refers to RBGK's policy regarding development projects and archaeology:
 - 'All development projects, events and general site works undertaking excavation require consultation with the Greater London Archaeological Advisory Service (GLAAS), which provides archaeological advice to the London Borough of Richmond and a desk-based assessment and watching brief undertaken as necessary.'
- 2.4.4. The RGBK Site Conservation Plan (CBA 2002) was produced in 2002 as a key document to enable a fuller understanding of the WHS's significance and heritage and how to conserve it. This document identifies eight 'themes' as part of its statement of significance. Theme 7: 'Archaeology' (CBA 2002: 20-21) states that the RBGK has potential for significant archaeological deposits relating to the Prehistoric (particularly Palaeolithic) period, the Medieval occupation and landscape of the area, the Post Medieval royalty occupation of the area, and garden archaeology (particularly the garden designs of a series of highly influential designers such as Charles Bridgeman, William Kent, Lancelot 'Capability' Brown and William Chambers).

2.5.STATUTORY AND NATIONAL DESIGNATIONS

2.5.1. The sites are part of the RBGK WHS (List Entry Number: 1000102) (FIGURE 4), a historic landscape garden which features elements that illustrate significant periods of the art of gardens from the 18th to the 20th centuries. The gardens house botanic collections (conserved plants, living plants and documents) that

- have been considerably enriched through the centuries. Since their creation in 1759, the gardens have made a significant and uninterrupted contribution to the study of plant diversity and economic botany.
- 2.5.2. The sites are also part of the RBGK Grade I RPG (List Entry Number: 1000830) (Appendix 1), a botanic garden established in the early 18th century and increased in size under Sir William Hooker in the mid 19th century, and gardens which were set within a royal park and remodelled periodically by leading designers.
- 2.5.3. Development proposals with the potential to affect WHSs or their settings should be supported by Heritage Impact Assessments (HIAs). Where development proposals may contribute to a cumulative impact on a WHS or its setting, this should be clearly illustrated and assessed in the HIA, which is beyond the scope of this DBA.
- 2.5.4. There are no Listed Buildings within the site areas. However there is one Scheduled Monument (Kew Palace (remains of), List Entry Number: 1002019) (Appendix 1) and six Grade I Listed Buildings, 11 Grade II* Listed Buildings and 57 Grade II Listed Buildings within a radial study area of 750m taken from the centre point of the sites (NGR 518563, 176672) (Appendix 2, Appendix 8).
- 2.5.5. Listed building consent is required for works of demolition, and for works of alteration or extension which affect the special interest of a Listed Building, in accordance with Section 7 of the Planning (Listed Buildings and Conservation Areas) Act 1990 (DEPARTMENT FOR THE ENVIRONMENT 1990). In respect of demolitions and other interventions to listed buildings, RPGs or WHSs the NPPF states that 'Substantial harm to or loss of: a grade II listed building, or grade II registered park or garden should be exceptional'. Substantial harm to or loss of 'grade I and II* listed buildings, grade I and II* registered parks and gardens and World Heritage Sites, should be wholly exceptional.'
- **2.5.6.** Any evaluation or mitigation works following on from this DBA that would result in substantial harm to or loss of a Listed Building would be subject to approval from Historic England. The site lies within a Grade 1 RPG and therefore any evaluation or mitigation works within it will be subject to

approval from The Gardens Trust and Historic England. When preparing a Written Scheme of Investigation (WSI) for such works it should be noted that any garden features within RBGK could be considered to be of higher potential interest than would normally be the case. There will also be questions of setting to consider and these will be addressed in a HIA. However this is beyond the scope of this assessment.

3. Aims of the Assessment

- **3.1.**This report focuses on identifying the potential and significance of the buried historic environment resource within the sites. It covers archaeological evidence within a 750m radius surrounding the sites which will allow the historic environment resource to be assessed within its wider landscape context.
- 3.2. It is not the aim of this assessment to present a complete history of the RBGK, nor is it the intention of this report to examine every artefact found in the local area. Rather, the aim of this assessment is to review the available data and use it to construct a model of the potential archaeology within the sites.
- **3.3.**The assessment seeks to address the following issues:
 - ◆ To assess the potential for archaeology
 - To assess the significance of potential archaeology
 - To assess the condition of potential archaeology
 - To assess the impact of the proposed development on the potential archaeology

4. Methodology

- **4.1.**This document has been prepared in accordance with government guidelines, industry standards and local planning authority requirements. It conforms to the *Standard and Guidance for Historic Environment Desk-based Assessment* (CIFA 2020) of the Chartered Institute of Archaeologists (CIfA) and Historic England's *Guidelines for Archaeological Projects in Greater London* (GLAAS 2015).
- **4.2.** A site visit was undertaken on 10th January 2024 by S. Barton of MOLA.
- **4.3.**The following sources were consulted:
 - ◆ 750m radius search of the Greater London Historic Environment Record (GLHER)
 - ◆ Historic Maps
 - ◆ Geological data from the British Geological Survey (BGS 2024)
 - ◆ Archaeological Data Service (ADS 2024)
 - Internet sources and databases

4.4. SIGNIFICANCE CRITERIA

4.4.1. The NPPF definition of a heritage asset is as follows:

'A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including local listing).' (DEPARTMENT FOR LEVELLING UP, HOUSING & COMMUNITIES 2023)

4.4.2. Furthermore the NPPF states:

'Heritage assets range from sites and buildings of local historic value to those of the highest significance, such as World Heritage Sites which are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource, and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.' (DEPARTMENT FOR LEVELLING UP, HOUSING & COMMUNITIES 2023)

4.4.3. The significance of the heritage assets is determined using the following criteria shown in TABLE 1.

4.4.4. Designated and non-designated heritage assets will be measured against the significance values in TABLE 1.

VALUE	DESCRIPTION	
VERY HIGH	World heritage sites; designated or undesignated sites, buildings or landscapes	
	of international importance	
HIGH	Scheduled monuments; grade I and II* listed buildings; conservation areas or	
	parks and gardens containing very important monuments or buildings;	
	designated or undesignated sites, buildings or landscapes of national	
	importance	
MEDIUM	Grade II listed buildings; conservation areas or parks and gardens containing	
	monuments or buildings that contribute to their historic character; designated	
	or undesignated sites, buildings or landscapes of regional importance	
LOW	Locally listed monuments and buildings; designated or undesignated sites,	
	buildings or landscapes of local importance	
NEGLIGIBLE	Sites, buildings or landscapes with little or no significant historical interest	
UNKNOWN	Archaeological sites where the importance has not yet been ascertained;	
	buildings with hidden potential for historic significance	

Table 1 - Significance criteria used in this report

4.5.LIMITATIONS OF THE METHODOLOGY

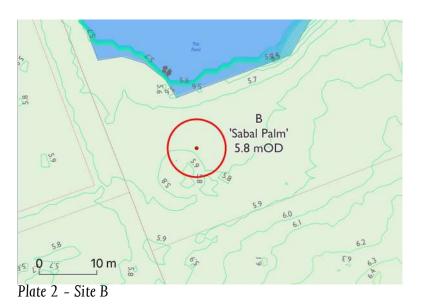
- **4.5.1.** The assessment relies on the accuracy of the data provided by the sources described above. There is always some degree of uncertainty in relation to these sources which include:
 - the GLHER entries can be limited because they are not based on a systematic search of the region but rather the records are reliant upon chance finds, opportunities for research and public contribution
 - documentary sources may be biased, inaccurate or difficult to interpret
 - the presence of buried archaeology is not always obvious during walk over surveys
 - grid coordinates for heritage assets may be rounded to such an extent that the actual location of the asset can be difficult to locate
 - the radial boundaries used in this report have been established in

order to maintain the focus and manageability of the data but still be large enough to rigorously consider context and character. It is important to note that any set boundaries on the report should be considered as permeable. Areas do not develop in isolation, and thought must always be given to significant relationships with places and events outside the area selected or defined

5. Site Background

5.1. LANDSCAPE AND TOPOGRAPHY (FIGURE 1, APPENDIX 3)

- 5.1.1. The ten sites are situated in the London Borough of Richmond upon Thames in southwest suburban London, within the perimeter of the historic park and open space RBGK, which is also a WHS and a Grade I RPG. It is 2.5km north of Richmond Park, 1.5km south of the M4 motorway at Brentford. The River Thames meanders approximately 300m northwest of the sites.
- **5.1.2.** Each site area includes a 5m radial buffer around a designated point location for each sculpture. This is considered sufficient to contain the expected area of impact at each sculpture location.



5.1.3. Site B is located to the south of the The Pond. The surface of site B is relatively flat sitting at 5.8m OD (PLATE 2).



5.1.4. Site C is located to the north of The Pond. The surface of site C is relatively flat sitting at 5.6m OD (PLATE 1).



Plate 3 - Site D

- **5.1.5.** Site D is located in the Rose Garden to the west of the Palm House. The surface of site D is relatively flat sitting at 5.5m OD (PLATE 3).
- 5.1.6. Site E is located to the north of the Temple of Bellona, upon the exact same location of the Chihuly sculpture 'Sapphire Star', which was installed between April and October 2019 as part of the major exhibition 'Chihuly: Reflecitions on Nature'. The surface of site E follows a gentle slope up towards the prominence at the Temple of Bellona from 6.9m OD to the south to 7.3m OD to the north (PLATE 4).

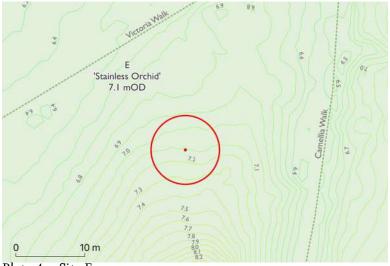


Plate 4 - Site E

5.1.7. Site F is located to the east of the south conservatory of the Temperate House. The surface of site F is relatively flat sitting at 6.7m OD (PLATE 5).



Plate 5 - Site F

5.1.8. Site G is located to the south east of the central conservatory of the Temperate House. The surface of site G is relatively flat sitting at 6.6m OD (PLATE 6).

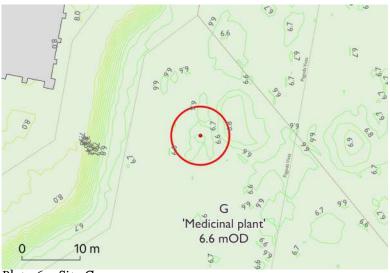
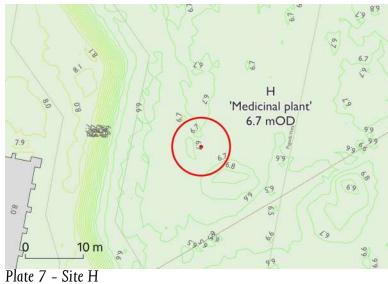
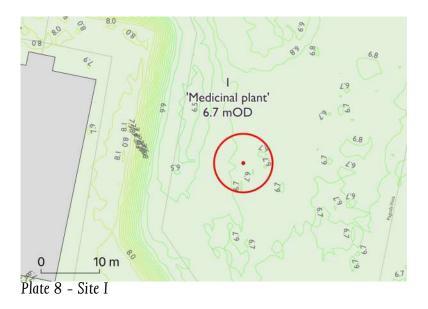


Plate 6 - Site G

5.1.9. Site H is located to the north east of the central conservatory of the Temperate House. The surface of site B is relatively flat sitting at 6.7m OD (PLATE 7).



5.1.10.Site I is located to the east of the north conservatory of the Temperate House. south of the pond. The surface of site I is relatively flat sitting at 6.7m OD (PLATE 8).



5.1.11. Site J is located at the approach to the Shirley Sherwood Gallery, following a gentle slope rising from 7.0m OD to the south to 7.3m OD to the north (PLATE 9).

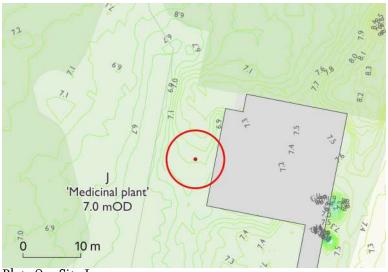


Plate 9 - Site J

5.1.12.Site N is located to the south of Cedar Vista near Thorn Avenue. The surface of site N is relatively flat sitting at 7.1m OD (PLATE 10).



Plate 10 - Site N

5.2.GEOLOGY

5.2.1. The British Geological Survey GeoIndex shows the site to be located on a bedrock of London Clay (clay, silt, sand and gravel), with superficial deposits of Kempton Gravel Member (sand and gravel) (BGS 2024). This data is at relatively low resolution and offers only a rough indication of the site geology.

- **5.2.2.** There are no historic borehole datasets from within the site areas. At borehole 580743, located between sites E and J, deposits containing flint, brick and concrete were encountered to a depth of 2m. Elsewhere within the study area at boreholes 17169318 and 17169319 topsoil and subsoil deposits were encountered to a depth of 1m BGL above the superficial geology (APPENDIX 3).
- **5.2.3.** No site-specific geotechnical information is currently available.

6. Archaeological and Historical Background

TIMESCALES USED IN THIS REPORT:

PERIOD	FROM	TO
PREHISTORIC		
PALAEOLITHIC	450,000	12,000 BC
MESOLITHIC	12,000	4,000 BC
NEOLITHIC	4,000	1,800 BC
BRONZE AGE	1,800	600 BC
IRON AGE	600	43 AD
HISTORIC		
ROMAN	43	410 AD
EARLY MEDIEVAL	410	1066 AD
MEDIEVAL	1066	1485 AD
POST MEDIEVAL	1485	1901 AD
MODERN	1901	PRESENT

Table 2 - Timescales used in this report

6.1.Information from the Greater London Historic Environment Record (GLHER) is referenced with the Monument ID/Event ID in brackets e.g. (MLO12345)/(ELO12345). The following analysis is from a 750m radius search of the GLHER around the centre point of the sites and some additional research.

6.2.PREHISTORIC (FIGURE 5)

- 6.2.1. There are nine records of archaeological material from the Prehistoric period within the GLHER data. Some of these are findspots from the River Thames and its foreshore, which give a general picture of activity during the Prehistoric period, but are not necessarily indicative of occupation during this period owing to a historic discovery bias of artefacts along the Thames. The other records are further inland and will be referred to in this report (FIGURE 5).
- 6.2.2. The finds near to the Thames in the GLHER data comprise of artefacts from the Mesolithic (MLO26811 three Tranchet Axes, MLO26812 a Tranchet Axe), Neolithic (MLO26810 a Greenstone Axe) and two unclassified Prehistoric Deposits (MLO69762, MLO69760).

- 6.2.3. Away from the Thames, there are four Prehistoric records in the GLHER. These include a retouched Palaeolithic flake (MLO10733), a Neolithic stone axe (MLO18941), a Bronze Age hoard found in 1753 (MLO19099), and an Iron Age gold stater found in 1870 (MLO18973). However, these were both historic findspots and therefore it is difficult to assess the accuracy of the records, or whether they were found *in situ*.
- **6.2.4.** More recent work at the RBGK Lower Nursery site in 2008/9 (LYK08; ELO8801), produced several worked and burnt flints of Prehistoric date, though again these are considered to be residual, washed by river action into secondary deposition.
- 6.2.5. In the Palaeolithic period the Thames at Kew would have been a braided river system, and the Kempton Gravel terrace was deposited in cold-climate conditions (JUBY 2011: 55). The river would have been a key source of food and other resources, and Palaeolithic artefacts are often found where ancient gravel islands were at high points in the river system (WYMER 1999: XVII). It is likely at this point in time that the sites would have been either completely submerged underneath the River Thames, or perhaps occupied of these gravel 'highs' that were been exploited by people in the Palaeolithic period. Bones of mammoth, hyena, elephant and polar bear have been found on the banks of the River Thames near Kew (LONDON BOROUGH OF RICHMOND UPON THAMES 2007: 1).
- 6.2.6. In the warmer climate of the Mesolithic several 'temporary camp sites' have been found in the Colne and Lea Valleys located on the floodplain edges, and on areas adjacent to the main channels (CORCORAN ET AL. 2011). It is likely that the sites during this period would have been on the floodplain of the Thames, and dominated by a woodland environment. This environment would have gradually become cleared in the later Neolithic and Bronze Age periods with the introduction of farming and settlement.
- **6.2.7.** Given the available evidence, the potential for Prehistoric archaeological deposits is considered low. Further from the modern course of the river, there is a general scarcity of finds and the recorded locations of such historic findspots are unlikely to be accurate.

6.3.ROMAN (FIGURE 6)

- **6.3.1.** Evidence for the Roman period is limited within the GLHER, and the two existing records are both findspots located at the Thames foreshore (FIGURE 6).
- **6.3.2.** A second century bronze brooch (MLO68818), and three ceramic loom weights (MLO17645) were discovered.
- **6.3.3.** There is no evidence for *in situ* Roman activity within the study area recorded within the GLHER, though such evidence of small rural farmstead settlements exist elsewhere along the Thames at Twickenham (HOARD 1995), Kingston-Upon-Thames (HAWKINS 2008: 200) and Hurst Park (ANDREWS & CROCKETT 1996).
- **6.3.4.** The scarcity of Roman evidence in the study area suggests that the potential for archaeology of this period to be present on the sites is low. The recorded Roman finds in the study area are located along the Thames foreshore and are of unstratified, residual or of unknown provenance. Such *ex situ* finds, such as coins, potsherds, or tiles, would be of low significance.

6.4. EARLY MEDIEVAL

- 6.4.1. It is believed that the area around Kew became settled in the Early Medieval period, as an area located on the northern periphery of the large Saxon administrative area based around Kingston ('Freoricsburna') for Saxon Royalty (GROOM & PROSSER 2006: 11). The name Kew comes from the Saxon word 'Cayho', which translates as a quay on a spur of land (LONDON BOROUGH OF RICHMOND UPON THAMES 2007: 1).
- **6.4.2.** Within the GLHER, there are no Early Medieval records.

6.5.MEDIEVAL (FIGURE 7)

- **6.5.1.** In 1314, Kew is mentioned in the Survey of the Manor of Shene, and in 1358 a royal palace was built at Shene (south east of the sites) (LONDON BOROUGH OF RICHMOND UPON THAMES 2007: 2) which was later rebuilt as the Palace of Richmond after it caught fire in 1497 (MALDEN 1911).
- **6.5.2.** There is scant evidence of Medieval archaeology within the study area. This includes a 14th century Kidney dagger (MLO68852), a 14th century White

Ware jug (MLO17646), two fish traps (MLO69774, MLO69775) and a burnt rubbish layer (MLO2142) (FIGURE 7). All of these examples of archaeological remains were found at the Thames foreshore, at least 300m from any of the sites.

6.5.3. Considering the available evidence, the potential for archaeological deposits of the Medieval period to be present on the sites should be considered low. It is likely in this period that the sites were initially wooded or cleared agricultural land owned by the Manor of Shene.

6.6.POST MEDIEVAL

EARLY POST MEDIEVAL PERIOD

- 6.6.1. During the early Post Medieval period, the sites would have been located within agricultural land to the west of the royal hunting ground at Shene Warren, separated by the main routeway from Richmond to the ferry at Brentford. This main route historically signified the boundary between the Kew estate to the east (where the sites are located) and Richmond estate to the west; later during the 18th century it was known as 'Love Lane' and its approximate route is followed within RBGK by present day Holly Walk and Princess Walk.
- 6.6.2. There is a cluster of Post Medieval GLHER monuments relating to Thames foreshore activity and some horticultural activity at the neighbouring Richmond estate, which are not directly relevant to the historical development of the sites. These include 18th century stone masonry fragments (MLO109118), a 19th century bedding trench (MLO75655) excavated in 2001, and an earthwork revetment (MLO2141) and other 19th century riverside structures including a sluice (MLO69776, MLO69777, MLO69771) (FIGURE 8).

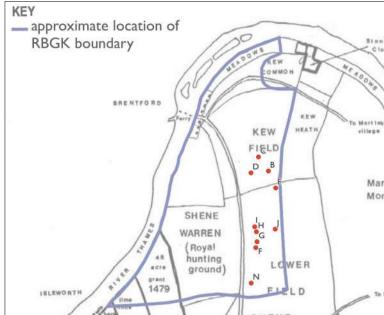


Plate 11 - Sites superimposed on the 15th century landscape (adapted CBA 2002)

6.6.3. During the 15th century sites B, C, D and E would have been located in 'Kew Field' and sites F, G, H, I, J and N in the 'Lower Field of Shene' (CLOAKE 1995) (PLATE 11).



Plate 12 - Sites superimposed on the early 17th century landscape (adapted CBA 2002)

6.6.4. During the late 16th and early 17th centuries the sites continued to be used as arable land, although the larger tracts of Kew Field and Lower Field became subdivided subject to enclosure (PLATE 12).



Plate 13 - Brick Stable estate in 1762

- 6.6.5. During this time sites B, C and D and E would have been located within the arable plot 'Brick Kiln Furlong' or its immediate neighbouring plots to the north and south, 'Park Furlong and 'Foxholes'. The name 'Brick Kiln Furlong' may have alluded to brickworks further to the east in the direction of Mortlake, where there was an extensive estate named 'Brick Stable' to the east of these sites, still visible on the Rocque map of 1762 (PLATE 13).
- 6.6.6. During the late 17th century the area to the north of RBGK was known as 'Kew Park' and contained a dwelling (Tudor remains were excavated in 2002, MLO6745) owned by the families of Bennett, Capel and Molyneux. In 1688 the diarist John Evelyn wrote 'we went to Kew to visit Sir Henry Capel's whose orangery and myrtetum are most perfectly kept.' The Capel garden would have been focused around The White House at the north but may once have extended as far south as sites B, C D and E.

THE 18TH CENTURY PLEASURE GARDEN

6.6.7. At around 1721 Richmond Lodge estate was acquired by George Augustus, Prince of Wales and became centre of the royal court, with the purchase of the Dutch House (Kew Palace) in 1728. In 1731 Frederick Prince of Wales acquired the White House (MLO101302), part of an estate which included a garden with a collection of exotic imported plants which used to belong to the Capel family, and employed William Kent to work on the house and garden.

This area would have included the sites B, C, D and E (PLATE 14).

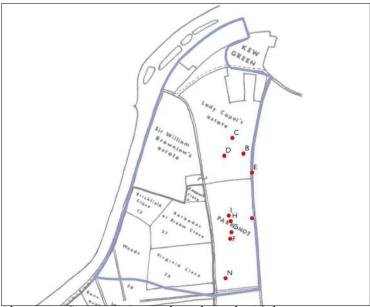


Plate 14 - Sites superimposed on the early 18th century landscape (adapted CBA 2002)

- 6.6.8. During the late 1730s and 1740s the area immediately south of the house became landscaped, with the creation of the Great Lawn and the Lake. In 1749 and 1750 Frederick Prince of Wales extended his grounds southwards bringing the southern boundary of the estate down to the driveway from Richmond Lodge across to the Kew Road (CLOAKE 1996).
- 6.6.9. Nine (probably all ten) of the sites were located within this historic landscape (FIGURE 9, FIGURE 10, FIGURE 11). Sites B, C, D and E would have been in or near the Lake towards the north; sites F, G, H, I and very probably N would have been part of the newly acquired parkland 'Parkshot' (previously part of the large open field called Richmond Lower Field). It is possible that Site N was in a thickly planted area at the south end already styled 'The Wilderness'. Shortly before Frederick Prince of Wales' death in 1751 Joseph Goupy submitted designs for a number of early follies for the garden, including The Chinese Arch, which may have been in the vicinity of Site N. This may be an early indicator of the chinoiserie concept envisaged for this part of the garden. An alternative interpretation of the available documentary evidence suggests that the extent of Frederick's southern expansion did not exceed the haha at the south end of the south lawn, based on the fact that land on which the Pagoda now stands was leased in 1757 before it was finally bought in 1822 by George IV (DEFRA 2003).

PRINCESS AUGUSTA'S GARDEN

- 6.6.10. From 1751 Princess Augusta, Frederick's widow, continued to tend to the development of the pleasure grounds and in 1759 founded a botanic garden within and commissioned William Chambers to redesign the White House grounds and construct various architectural features within it. The grounds became divided into three parts by a large lake (which would have included sites B, C and D) that covered the ground now occupied by the Palm House itself and included the lake in front of the Palm House. South of the lake were two meadows for sheep (sites F, G, H and I), surrounded by ha-has, barely separated by a low ridge planted with a few trees. There was a thick planting around the perimeter (which would have included Site J), with a small Wilderness at the southern end (which would have included Site N). A winding walk among the trees encircled the whole design, with further serpentine paths in the wilderness. North of it were the White House and its lawns. To the east of it lay the Botanic Garden, which was strictly functional, walled and about nine acres in size. Chambers added little hillocks, most of them topped with follies built in the classical style (BLOMFIELD 2004).
- 6.6.11. In all Chambers designed 23 buildings, of which only six survive today. These are The Temple of Arethusa (1758, since resited, Grade II Listed Building 1251777), The Temple of Bellona (1760, since resited, Grade II Listed Building 1262581), The Ruined Arch (1760, Grade II* Listed Building 1251956), The Orangery (1761, Grade I Listed Building 1263075), The Great Pagoda (1762, Grade I Listed Building 1262593) and the Temple of Aeolus (1763, since rebuilt by Burton, Grade II Listed Building 1262669).
- 6.6.12. Various extant gates, ornaments, sculptures and structures are listed buildings that date from the 18th century onwards and are scattered throughout the landscaped grounds (Appendix 2). The sites are typically located at the approach to major buildings or in otherwise prominent locations and it is therefore likely that the sites have been particularly subject to iterative cosmetic landscaping because of their setting.
- **6.6.13.** Of particular relevance regarding Site E are the Theatre of Augusta and the Temple of Bellona, both designed by Chambers. There may be remains of the Chinese Arch and the Mosque at or near Site N.

THE THEATRE OF AUGUSTA

- **6.6.14.**The Theatre of Augusta (1760) was a semicircular colonnade designed for theatricals (PLATE 15) and was located on rising ground along a winding walk at the present location of the Temple of Bellona.
- 6.6.15.It is not known what materials were used in its construction. Many of Augusta's follies were flimsy structures, of wood, lath and plaster (and some were reputedly constructed overnight), although some were more substantial (ROYAL BOTANIC GARDENS, KEW 2020).

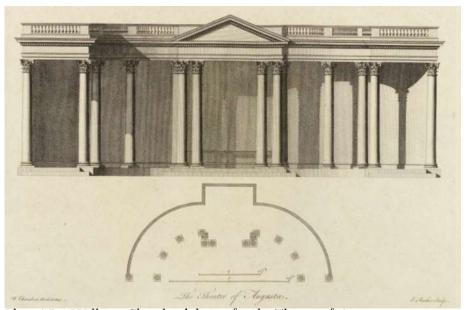


Plate 15 - William Chambers' design for the Theatre of Augusta **6.6.16.**The Theatre of Augusta was located very near Site E (PLATE 16).



Plate 16 - Area of Site E in 1785

6.6.17.In 1803 The Temple of Bellona (1760) was moved 500m southwards to its current location, 26m to the south of Site E. This action either involved the clearing away of the Theatre, or the Theatre had already been removed by this date. The history of the mound on which the Theatre stood, and on which the Temple of Bellona now stands, is not known; it is not known whether the mound was created in order to stand the Theatre on it, or if the mound predated the Theatre but the earthwork can be identified on the 1785 and 1800 plans of the Gardens (PLATE 16, PLATE 17).



Plate 17 - Area of Site E in 1800

6.6.18. Archaeological remains of the Theatre of Augusta possibly survive in the vicinity of Site E. However this area is also likely to have undergone a degree of landscaping to form the setting for the relocated Temple of Bellona in 1803, and the Victoria Gate entrance nearby in the mid 19th century.

THE WILDERNESS (THE CHINESE ARCH & THE MOSQUE)

- 6.6.19. The Wilderness had existed since at least 1752 and was an area of trees and shrubs cut into winding walks which existed in this form until the 1860s/1870s when it was transected by radiating vistas. It was part of the original setting of The Pagoda and occupied the southern end of Kew Gardens, surrounding The Pagoda. The follies The Alhambra and Mosque marked its northern edge.
- **6.6.20.** An early folly called 'The Chinese Arch' is thought to have been located within the Wilderness, somewhere near to the Kew Road and along a line extending from the

- current Japanese Gateway. This was designed by Joseph Goupy in 1750/1751 and is only referenced in 1754 and 1757 and appears to have been demolished prior to 1763. No further information is available on its form or materials.
- 6.6.21. Intriguingly, when present day locations of The Pagoda and Japanese Gateway are superimposed upon the 1762 Rocque map, the location of Site N is at or very near a point from which several radial paths emanate, suggesting this may have been the location of a feature like The Chinese Arch (PLATE 18).



Plate 18 - Area of Site N in 1762

6.6.22.On the 1800 Plan of Richmond and Kew Gardens hints that this may have been the location of a circular landscape feature forming one of two focal points placed either side of The Pagoda (PLATE 19).



Plate 19 - Area of Site N in 1800

- 6.6.23.There may therefore be some archaeological remains of The Chinese Arch in the vicinity of Site N.
- 6.6.24. The Japanese Gateway (1911) was probably constructed upon the mound which had been the site of Sir William Chambers' Mosque (1761) (PLATE 20), giving it its name of 'Mossy Hill'.

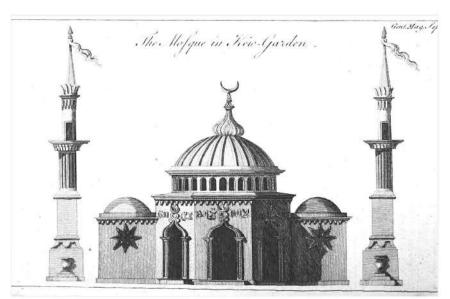


Plate 20 - The Mosque (1772 engraving)

- 6.6.25. The Mosque is recorded to have stood on a small mound near the Pagoda and consisted of one large central dome flanked by two smaller domes and minarets. The building was highly decorative and painted outside with Arabic text and inside with rococo style panels. It was a flimsy structure and demolished by 1783. Archaeological remains of The Mosque possibly survive in the vicinity of the Japanese Gateway and could conceivably also be present at Site N.
- **6.6.26.** After Augusta died in 1772, her son George III moved to the White House at Kew then demolished it and Love Lane in 1802 thus uniting the Richmond and Kew estates. He left the structure of the landscape established by his parents at Kew Gardens largely intact.

THE 19TH CENTURY BOTANIC GARDEN

- **6.6.27.** By 1812 Augusta's lake had been mostly filled in, leaving just a small stretch of water that now fronts the Palm House (BLOMFIELD 2004). Sites B, C and D are located upon this reclaimed land.
- 6.6.28. During the 1830s the gardens had fallen into a state of disrepair after a period of underfunding during the reigns of George IV and William IV (PARKER, L & ROSS-JONES, K 2013).
- 6.6.29.In 1840 Kew was transferred from the Crown to the government and Sir William Hooker was appointed Director. This was when the gardens were first opened to the public. In 1844, Nesfield was asked to redesign the arboretum at Kew Gardens. His plans were extensive and included several vistas radiating from the Palm House (constructed 1844-1848), a parterre, the remodelling of the formal landscape around the Palm House as well as The Palm House Pond (FIGURE 12). One vista faced south and was called the Pagoda Vista, another facing west toward the Thames was named the Syon Vista. The structure of Nesfield's formal landscape still largely survives today. Site D is located within Syon Vista.
- 6.6.30. Hooker commissioned Decimus Burton and Richard Turner for the construction of the Palm House (1844-1848, Grade I Listed Building, List Entry Number 1262670) and remodelling the Botanic Gardens, including the rebuilding of follies. Sites B and C are located either side of the pond to the east of the Palm House and site D is located within the rose garden to the west of the Palm House.
- 6.6.31. Decimus Burton designed The Temperate House (MLO91412, Grade I Listed Building, List Entry number 1262590), which was built in 1860-1899. Sites F, G, H and I are located in front of the east facade of The Temperate House. The Temperate House required so much gravel for its terraces that a huge hole was dug beside the Syon Vista, which was then created into The Lake. The construction of the Temperate House and its surrounding terraces and walkways is likely to have resulted in landscaping activity at sites F, G, H and I.
- 6.6.32.In 1867 bitter frost and snow killed many of the trees and most of the shrubs

at Kew and new grass avenues and vistas were created, with the Pagoda as a focal point. Thorn Avenue was created in 1868 and the avenue of Cedars in 1871, and Holly Walk in 1874.

6.7.MODERN

- **6.7.1.** In 1911 the Japanese Gateway (Grade II Listed Building 1251790) was built 50m to the west of Site N (FIGURE 14).
- **6.7.2.** During the Second World War vegetables and medicinal plants were grown at Kew as part of the 'Dig for Victory' Campaign. During this time numerous excavations would have taken place throughout RBGK which were not necessarily structured within the scheme of the landscape.
- **6.7.3.** In 2008 the Shirley Sherwood Gallery of Botanical Art was constructed. Excavations for the building foundations, surrounding walkways and terracing activity would have taken place at Site J.
- **6.7.4.** The Temperate House (MLO91412) has recently undergone substantive restoration (Royal Botanic Gardens, Kew 2018).

6.8.PREVIOUS INTERVENTIONS (FIGURE 15)

- **6.8.1.** Levelling deposits and deposits of reworked garden soil, subsoil and topsoil were recorded during a watching brief (ELO19435) undertaken in 2019 500m to the north of the sites at the historic kitchen gardens.
- 6.8.2. No archaeological features were revealed during a watching brief at the Treetop Walkway undertaken in 2022 (RGD22, PRN 211246), 160m west of Site I. Observed stratigraphy included in situ and redeposited natural sands and gravels overlain by a buried subsoil / topsoil sealed below a modern madeground surface of construction gravels and tarmac. Natural deposits comprised banded sands and gravels of pale-brown / orange hue. These deposits were present throughout the gardens and in the wider area and have been observed on many similar projects within the gardens. The natural was present from c5.69mOD (1.20m below existing ground level).
- **6.8.3.** During 2014-2017 a watching brief was undertaken at The Temperate House (ELO18836). A service trench 1.00m wide, by 0.80m deep and located 7m to

the south of Site G showed much the same stratigraphy as elsewhere on the site; mixed sandy-gravels were sealed below the existing topsoil, which varied from between 0.15m and 0.30m thick. (AARONSON 2018) (PLATE 21).



Fig.338: Service trench exiting the southeast of the main Temperate House compound, facing NNE, 0.8m scale

NNE, 0.8m scale
Plate 21 - Service trench to the south of Site J from the south looking north-northeast (Aaronson 2018)

- **6.8.4.** Between July and November 2018 a watching brief was undertaken 70m to the southeast of Site F (ELO19222). The stratigraphy was composed of made ground deposits, overlying disturbed natural sand and gravels, followed by undisturbed natural sands and gravels at between 6.52m and 5.61m AOD. It was clear that truncation had occurred on the site. The remnants of a thin brick wall were thought to be a small drainage structure associated with the earlier building. An earlier sewer and garden soil were also observed.
- **6.8.5.** A watching brief (ELO11956) was undertaken in 2011 100m to the south of Site J. The groundworks were small scale at three locations and no archaeological finds or features were encountered. The works were primarily surface clearance and did not penetrate to a depth where archaeological remains might be expected to survive, or be encountered.
- **6.8.6.** In 2016 an evaluation was undertaken at The Pagoda (ELO18708) 80m to the east of Site N. The stratigraphy was composed of natural sands and gravels (observed at a highest level of 6.36m aOD) sealed by a deposit of 18th century

garden soil (up to 6.98m aOD). This was cut by a garden feature and overlain by a stone block. A former topsoil surface sealed both the stone and garden feature and was in turn overlain by a gravel path. Modern make up and tarmac sealed this path. Above the tarmac was the current gravel surface.

6.8.7. No significant archaeological remains were encountered during these activities. The typical profile consists of topsoil overlying subsoil/ redeposited sand and gravel, over natural banded sands and gravels.

6.9. DISCUSSION

- 6.9.1. Due to the importance of Kew Gardens throughout the Post-Medieval period, it is likely that there will be archaeological remains in the area. In addition, its proximity to the River Thames means that Prehistoric evidence could also exist in the area. This has been shown by the GLHER data and previous events. However, the gardens have been developed and redeveloped throughout the Post-Medieval and Modern periods, including construction of buildings, altering pathways and forestation. These factors would have a damaging effect on any surviving archaeological remains.
- 6.9.2. The proposed locations of the sculptures are all areas of historical importance, due to their proximity to monuments and listed buildings. There is the potential for buried remains, especially beneath Site E and Site N. In the case of Site N, such remains relating to the Chinese Arch would be of high significance. In the case of Site E, there is a low potential for remains of the Theatre of Augusta to be found, given its probable original location over 15m away at the Temple of Bellona.

7. Site Conditions and Proposed Development

7.1.SITE CONDITIONS AND PREVIOUS IMPACTS

7.1.1. A site visit was carried out by S.Barton of MOLA on 10th January 2024.

SITE B

7.1.2. Site B (PLATE 22) is located 10m to the south of the Pond upon the flat area of the surrounding lawn. There is a circular planted area measuring 8m in diameter with a central urn located immediately to the south of the central point location for the proposed location of the sculpture 'Sabal Palm'. This is partially included within the 5m site area buffer.



Plate 22 - Site B from west looking east

7.1.3. A utility site survey from 2018 (PLATE 23, Appendix 4) has identified the existence of a 2.5m wide service tunnel containing various utility feeds running northwest — southeast beneath Site B, passing through the centre of the site area.

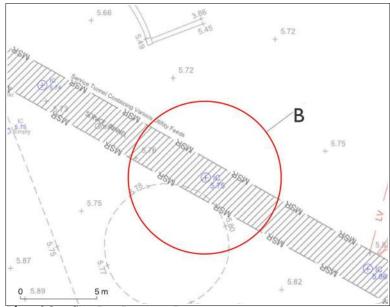


Plate 23 – Site B – Previous Impact

7.1.4. The excavation undertaken to accommodate the service tunnel would have truncated any likely potential archaeology at the centre of the Site B.

SITE C



Plate 24 - Site C from west looking east

7.1.5. Site C (PLATE 24) is located 10m to the north of the Pond upon the flat area of the surrounding lawn. There is a circular planted area measuring 8m in

diameter with a central urn located immediately to the west of the central point location for the proposed location of the sculpture 'Sabal Palm' which is partially included within the 5m site area buffer.

SITE D

7.1.6. Site D (PLATE 25) is located along Syon Vista within the central lawned area of the Rose Garden 36m to the west of The Palm House. This is the proposed location for the sculpture 'Sobralia'. The ground has been levelled as part of the 750m long vista extending towards Syon Outlook at the River Thames. The site area is flanked by sunken garden areas to the north and south.



Plate 25 - Site D (between circular planted areas) from Palm House looking southwest along Syon Vista

7.1.7. The area was stripped for a tea party event during the IncrEdibles Festival in 2013.

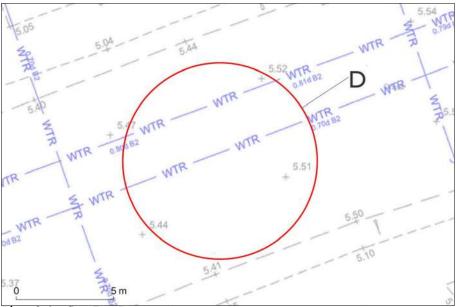


Plate 26 - Site D - Previous impact

- **7.1.8.** A utility site survey undertaken in 2018 (PLATE 26, Appendix 4) has identified two parallel water supply pipes (at a depth of 0.7 0.8m BGL) traversing Site D west-southwest east-northeast centrally and through its north segment.
- **7.1.9.** Previous impact would have truncated any likely potential archaeology within the north section of Site D.

SITE E



Plate 27 - Site E from north looking south

- 7.1.10.Site E (PLATE 4) is the proposed location for the sculpture 'Stainless Orchid'. It is located 20m to the north of the Temple of Bellona upon the lawned area rising up towards the Temple, enclosed by Victoria Walk to the west and Camellia Walk to the east which converge 35m to the northeast of the site in front of the entrance at Victoria Gate. The surface of site E follows a gentle rising slope from 6.8m OD to the south to 7.2m OD to the north.
- 7.1.11. Site E is located at the exact same position as the 2019 Chihuly installation 'Sapphire Star', which featured a sculpture centrally located within a circular planted area. There is a circular parch mark (PLATE 28) on the lawn which pinpoints the location of the planted area around the installation. The parch mark measures 8m across and is centrally included within the 5m site area buffer (at 1m within its perimeter).
- 7.1.12. According to the specification for the Sapphire Star installation it was 3.9m tall and mounted on a plinth anchored to the ground. The anchored base was 1.2m wide base and anchored into the soil at a depth of 1m (COWELL 2018) (CHIHULY STUDIO & DYNAMARK ENGINEERING 2018) (Appendix 6).



Plate 28 - Location of parch mark visible to southwest of Site E

SITE F

7.1.13. Site F (PLATE 29) is located to the east of the south conservatory of the Temperate House, 8m east of the walkway linking Thorn Avenue with Cherry Walk. The surface of site F is relatively flat at 6.7m OD. The terrain is given over to a landscaped lawn and there is a small apple tree (*Malus domestica 'Costard'*, ID:1959-30002) located immediately to the south of the site area.



Plate 29 - Site F from north looking south

SITE G

7.1.14.Site G (PLATE 30) is located to the south east of the central conservatory of the Temperate House, approximately 36m south of Raffill's Walk. The surface of site G is relatively flat sitting at 6.6m OD. The terrain is given over to a landscaped lawn and there is a mature holm oak tree (*Quercus Ilex*, ID:1969-16860) located three metres northeast of the site area.



Plate 30 - Site G from east looking west across Pagoda Vista

7.1.15.The utility site survey from 2018 identified an empty duct at a depth of 0.5m BGL traversing the north part of Site G (PLATE 31, Appendix 4).

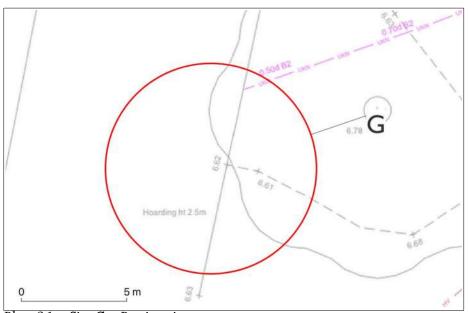


Plate 31 - Site G - Previous impact

7.1.16.This means there will have been some truncation of any potential archaeology from previous impact at the north area of Site G.

SITE H



Plate 32 - Site H from south looking north

7.1.17. Site H (PLATE 32) is located to the north east of the central conservatory of the Temperate House, approximately 40m north of Raffill's Walk. The surface of site B is relatively flat sitting at 6.7m OD. The terrain is given over to a landscaped lawn and there is a mature holm oak tree (*Quercus Ilex*, ID:1969-16858) located four metres southeast of the site area.

SITE I

7.1.18.Site I (PLATE 33) is located to the east of the north conservatory of the Temperate House, approximately 80m north of Raffill's Walk and 9m east of the walkway linking Thorn Avenue with Cherry Walk. The surface of site I is relatively flat sitting at 6.7m OD. The terrain is given over to a landscaped lawn.



Plate 33 - Site I from east looking west across Pagoda Vista

SITE J

7.1.19.Site J (PLATE 34) is located at the approach to the Shirley Sherwood Gallery, following a gentle slope rising from 7.0m OD to the south to 7.3m OD to the north. The central point of the site area is located 3.5m to the west of the building upon a grass border extending along its western facade, immediately to the east of the paved access ramp.



Plate 34 - Site J looking east from west

- 7.1.20. The Shirley Sherwood Gallery was constructed in 2008.
- 7.1.21. The 2018 utility site survey (PLATE 35, Appendix 4) identified a storm drain at a depth of 1.5m BGL running north-south across the west half of Site J.

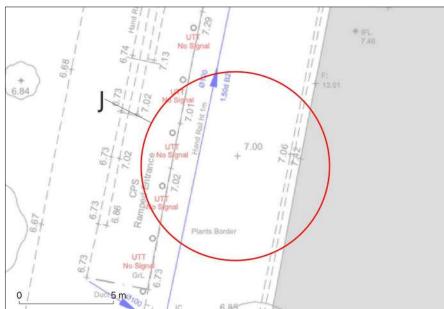


Plate 35 - Site J - Previous impact

7.1.22.Previous impacts from the construction of The Shirley Sherwood Gallery and associated access routes and services would have destroyed any likely potential archaeology at Site J.

SITE N

7.1.23. Site N (PLATE 36) is the proposed location for the sculpture 'Red Orchid'. It is located to the south of Cedar Vista near the southern end of Thorn Avenue, approximately mid-way between The Pagoda (Grade I Listed Building Entry Number: 1251790) and the Japanese Gateway (Grade II Listed Building Entry Number 1262593). The surface of site N is relatively flat sitting at 7.1m OD within a grassed area populated with tree and shrubs. There is a single hawthorn tree (*Crataegus mollis*) located within the site area, approximately 3m to the southeast of the central point.



Plate 36 - Site N from north looking south

7.2.PROPOSED REDEVELOPMENT

7.2.1. The proposed redevelopment includes the erection of ten sculptures at various external locations (Appendix 5) within Kew Gardens as part of the upcoming 'Light into Life' exhibition. The sculptures will be mounted on concrete bases of varying sizes, constructed according to a similar scheme as that shown in a representative plan of design for Opium Poppy (Appendix 7). At the time of writing the dimensions of the bases are not expected to exceed 2.3m x 2.3m within excavated foundations 0.7m deep.

7.3.PROPOSED IMPACT

- **7.3.1.** The proposed developments indicate a low level of ground disturbance within each of the ten redevelopment areas, as the surface area affected is unlikely to exceed 50m² or require excavation deeper than 1m for a central concrete base (not expected to exceed 10m²) within the core of each site area.
- **7.3.2.** For Site E, where the proposed redevelopment will take place entirely within the footprint of previous excavations carried out in 2019 for the installation of the Chihuly exhibit 'Sapphire Star', there will not be any impact upon below ground archaeology.
- 7.3.3. The low archaeological potential of the majority of the sites together with the

size of the redevelopment plots indicate that redevelopment of the site is unlikely to have an overall adverse archaeological impact, with the possible exception of at Site N, where there may be remains of the Chinese Arch, an early feature of the pleasure garden about which little is currently known. If found these could shed light on an aspect of the early design of the WHS and therefore be of high significance.

8. Conclusions

- **8.1.**Ten sites at the Royal Botanic Gardens at Kew are proposed for redevelopment. The proposed redevelopment involves the erection of sculptures at various locations. The sculptures will be mounted on concrete bases sunk in the ground to a depth of 0.7m.
- **8.2.**The available evidence suggests there is a low potential for archaeological deposits of low significance for the Prehistoric, Roman, Early Medieval and Medieval periods. This is due to the scarcity of *in situ* archaeological deposits within the study area relating to these periods. If any *in situ* deposits were to be present on the sites, this would be of medium significance and could contribute to regional research objectives.
- **8.3.**Throughout the Post Medieval period the landscape has been developed and redeveloped. Though the proposed sculptures are all located near to important Post-Medieval remains, the majority are not directly related to them.
- **8.4.**There is a moderate potential for the Theatre of Augusta, an 18th century folly, to have been located at or very near Site E. However any redevelopment within Site E will take place entirely within the footprint of 2019 excavations which were undertaken to accommodate the Chihuly exhibit 'Sapphire Star'.
- **8.5.** With the single exception of Site N, the sites have a negligible to low potential for archaeological deposits of significance, and as such the proposed redevelopment is unlikely to have an overall adverse archaeological impact. However there is the potential for highly significant remains to exist at Site N which could be destroyed during the proposed redevelopment. Archaeological monitoring of the groundworks at Site N would mitigate against this loss. Therefore it is the conclusion of this report that a watching brief is recommended at Site N and that no further archaeological investigation would be necessary at sites B, C, D, E, F, G, H, I or J.

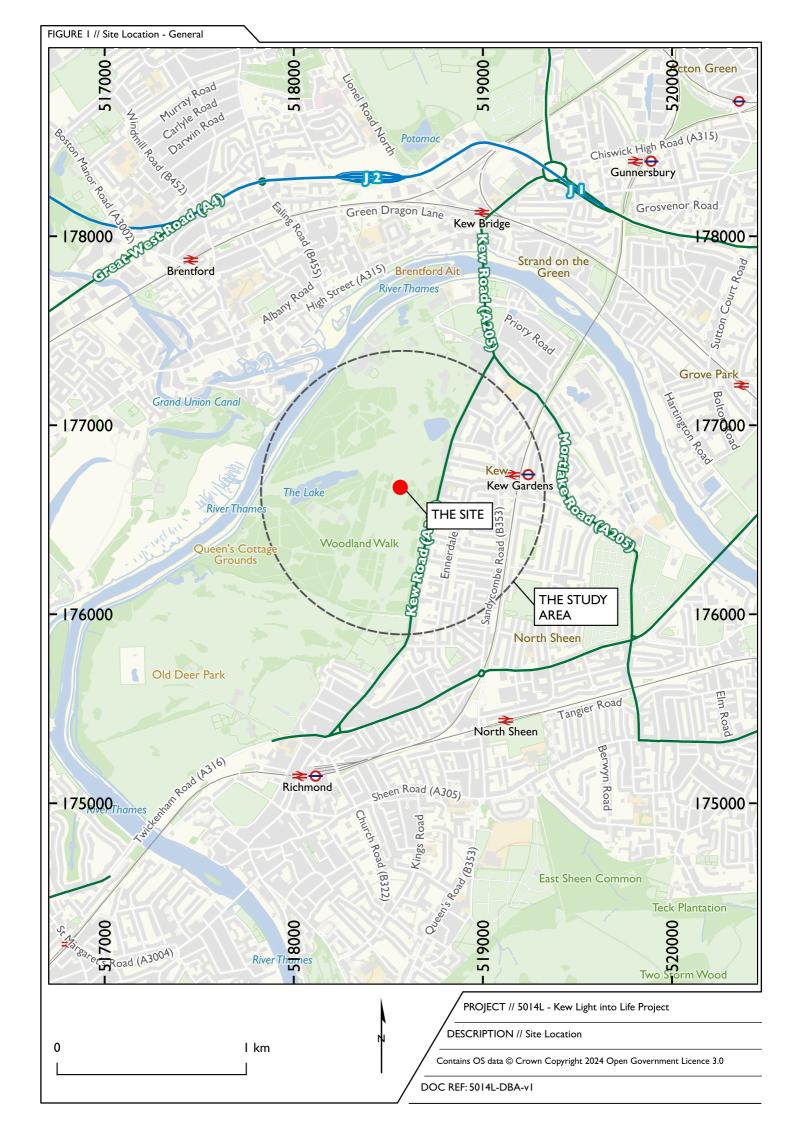
SOURCES CONSULTED

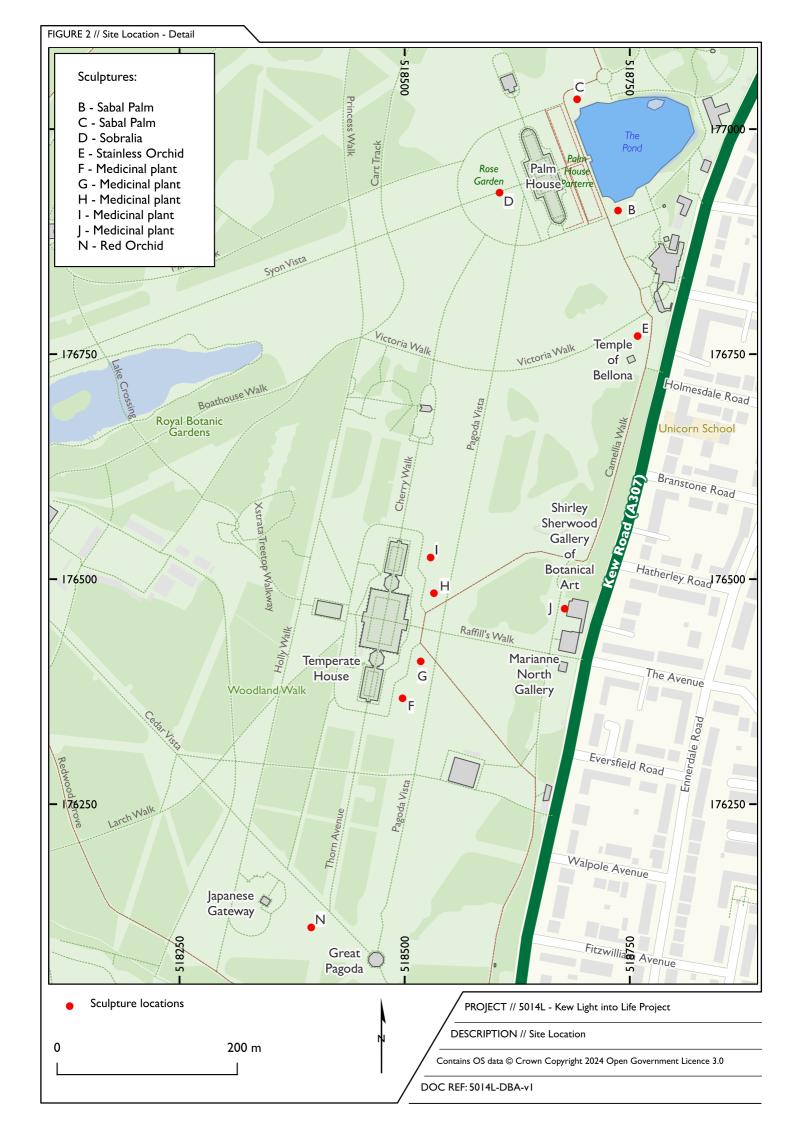
BIBLIOGRAPHIC

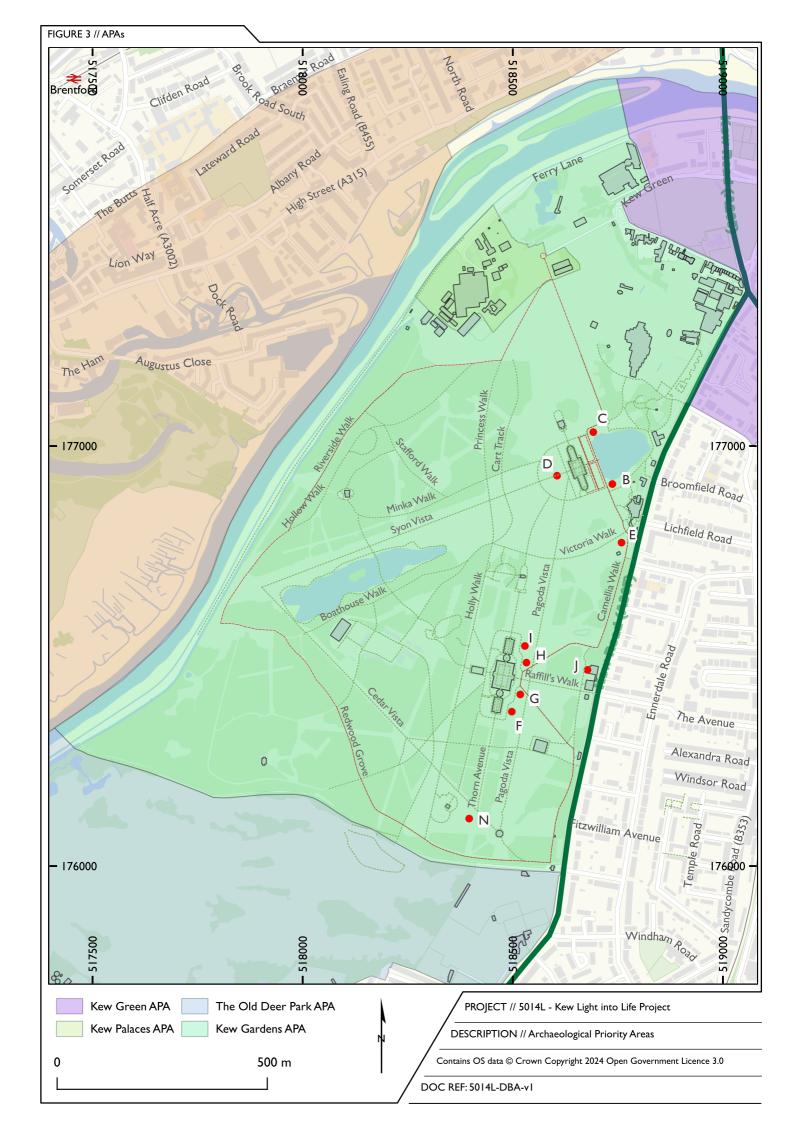
- AARONSON, J., 2018. *The Temperate House Precinct Project Royal Botanic Gardens Kew.* Compass Archaeology.
- ADS, 2024. 'Archaeological Data Service'. Available at: https://archaeologydataservice.ac.uk/.
- Andrews, P. & Crockett, A., 1996. *Three excavations along the Thames and its tributaries, 1994.* Wessex Archaeology.
- BGS, 2024. 'British Geological Survey Geoindex'. *British Geological Survey Geoindex*. Available at: https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/.
- BLOMFIELD, D., 2004. Kew Past. Phillimore & Co. Ltd.
- CBA, 2002. 'Royal Botanic Gardens, Kew. Site Conservation Plan.'.
- CHIHULY STUDIO & DYNAMARK ENGINEERING, 2018. 'Kew, Royal Botanical Gardens 2019: Blue Star A4'.
- CIFA, 2020. 'Standard and guidance for historic environment desk-based assessment'.
- CLOAKE, J., 1995. *Palaces and Parks of Richmond and Kew: Vol. 1: The Palaces of Shene and Richmond: The Palaces of Shene and Richmond v. 1.* Phillimore & Co Ltd.
- CLOAKE, J., 1996. Palaces and Parks of Richmond and Kew: Vol. 2: Richmond Lodge and the Kew Palaces v. 2. Phillimore & Co Ltd.
- CORCORAN, J. ET AL., 2011. Mapping past landscapes in the lower Lea valley: A geoarchaeological study of the Quaternary sequence.
- Cowell, S., 2018. Chihuly Exhibition, Kew Gardens. L P: Archaeology.
- DEFRA, 2003. 'Royal Botanic Gardens, Kew: World Heritage Site Nomination Document'.
- Department for Levelling Up, Housing & Communities, 2023. 'Revised National Planning Policy Framework 2023'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf.
- Department for the Environment, 1990. Planning (Listed Buildings and Conservation Areas) Act.
- GLAAS, 2015. 'Guidelines for Archaeological Projects in Greater London'. Available at: https://historicengland.org.uk/images-books/publications/glaas-standards-for-archaeological-work/glaas-archaeological-standards-apr15/.
- Greater London Authority, 2021. *The London Plan*. London. Available at: https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf.
- GROOM, S. & PROSSER, L., 2006. Kew Palace. The Official Illustrated History.

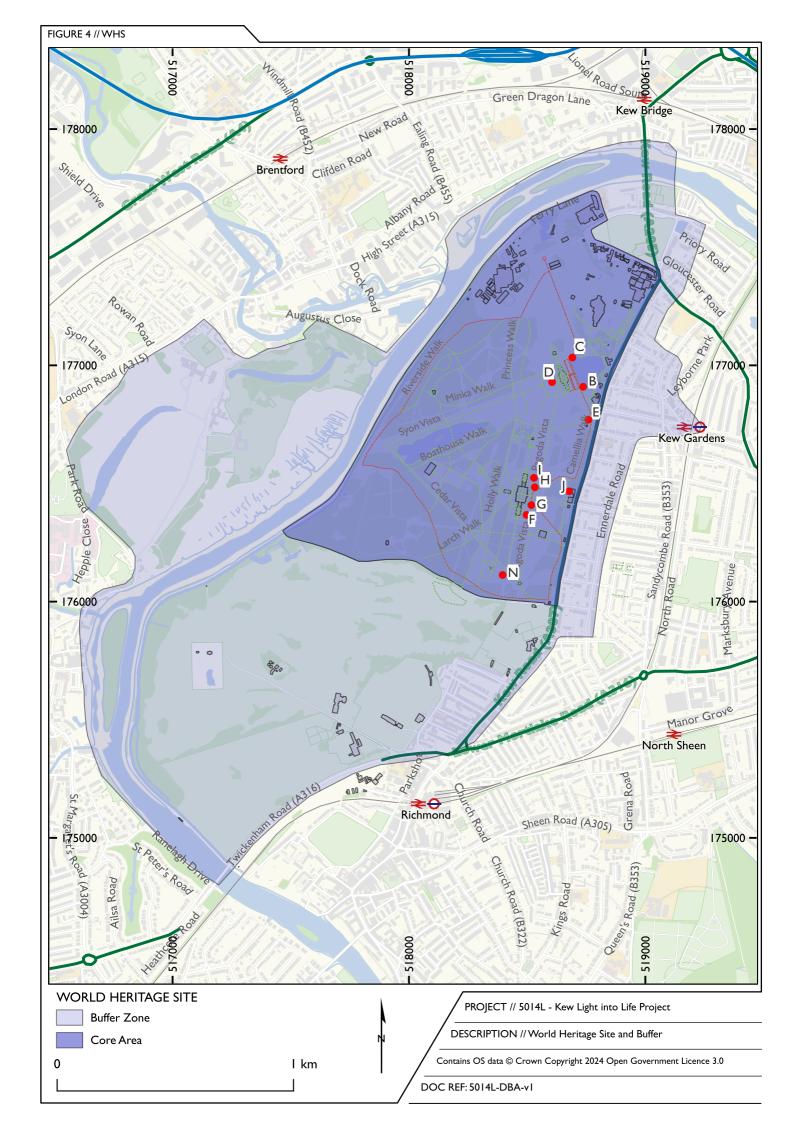
- Hawkins, D., 2008. A product of its environment: revising Roman Kingston. LA.
- HISTORIC ENGLAND, 2022. 'Planning and Archaeology: Historic England Advice Note 17 (HEAN 17)'.
- HOARD, S., 1995. Romans in Twickenham. London: London Archaeologist.
- Juby, C., 2011. *London before London: Reconstructing a Palaeolithic Landscape.* London: Royal Holloway University of London.
- London Borough of Richmond Upon Thames, 2007. 'Conservation Area Study: Kew Road no.55, Kew Gardens no.15 & Lawn Crescent no.20'.
- London Borough of Richmond Upon Thames, 2018. *Local Plan*. Available at: https://www.richmond.gov.uk/media/15935/adopted_local_plan_interim.pdf.
- Malden, H.E. ed., 1911. A History of the County of Surrey: Volume 3. Victoria County History.
- Parker, L & Ross-Jones, K, 2013. *The Story of Kew Gardens in Photographs*. London: Arcturus Publishing Ltd.
- ROYAL BOTANIC GARDENS, KEW, 2020. 'Royal Botanic Gardens, Kew: World Heritage Site Management Plan 2020 -2025.'.
- Wymer, J.J., 1999. *The Lower Palaeolithic Occupation of Britain*. Salisbury: The Trust for Wessex Archaeology Ltd and English Heritage.

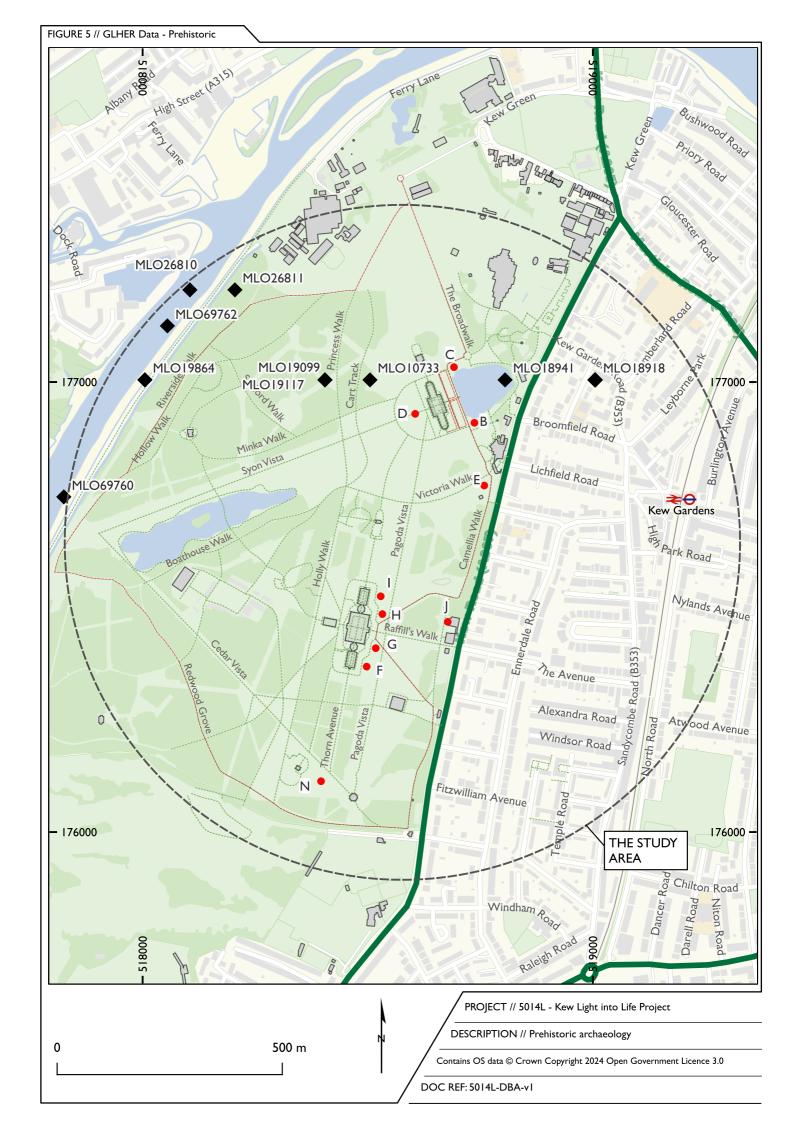
FIGURES

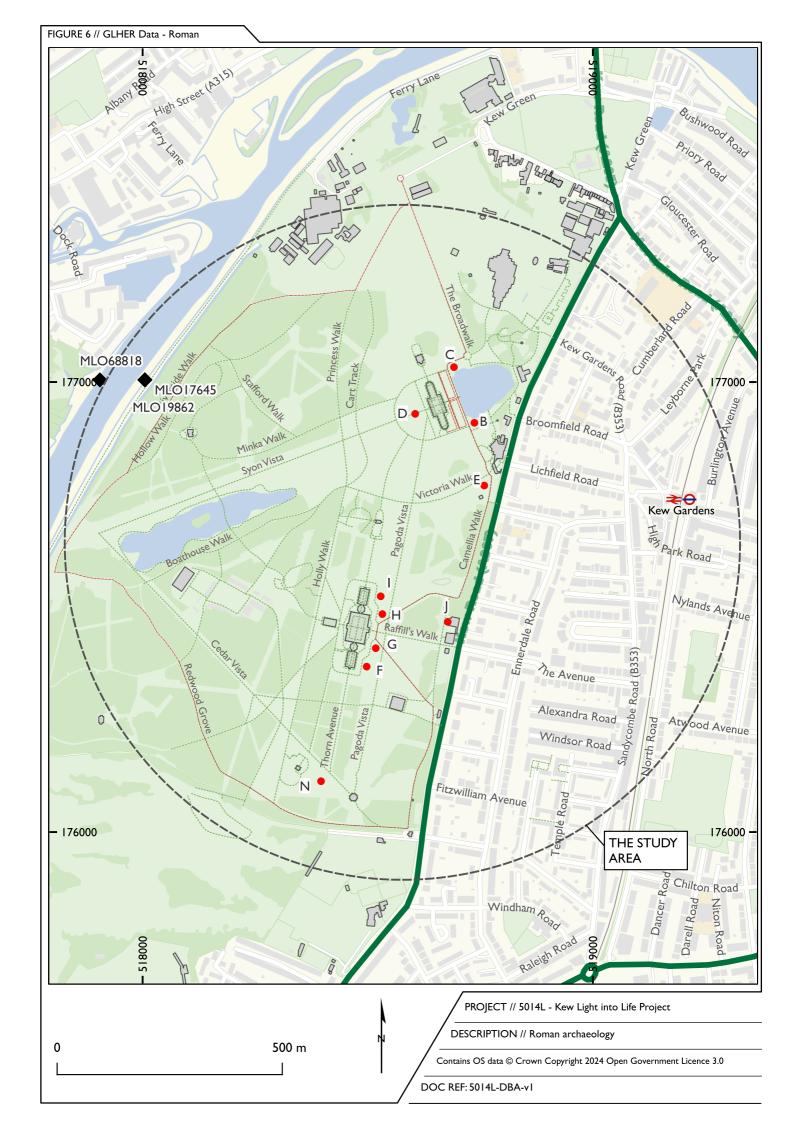


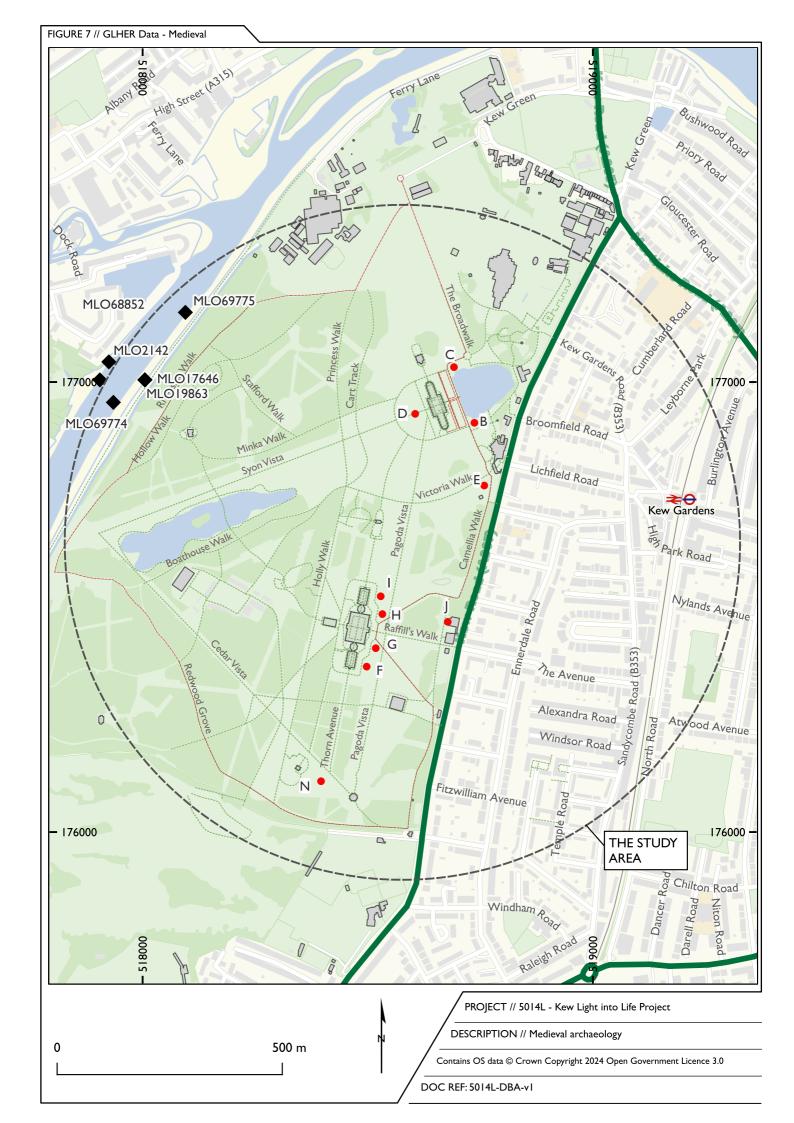


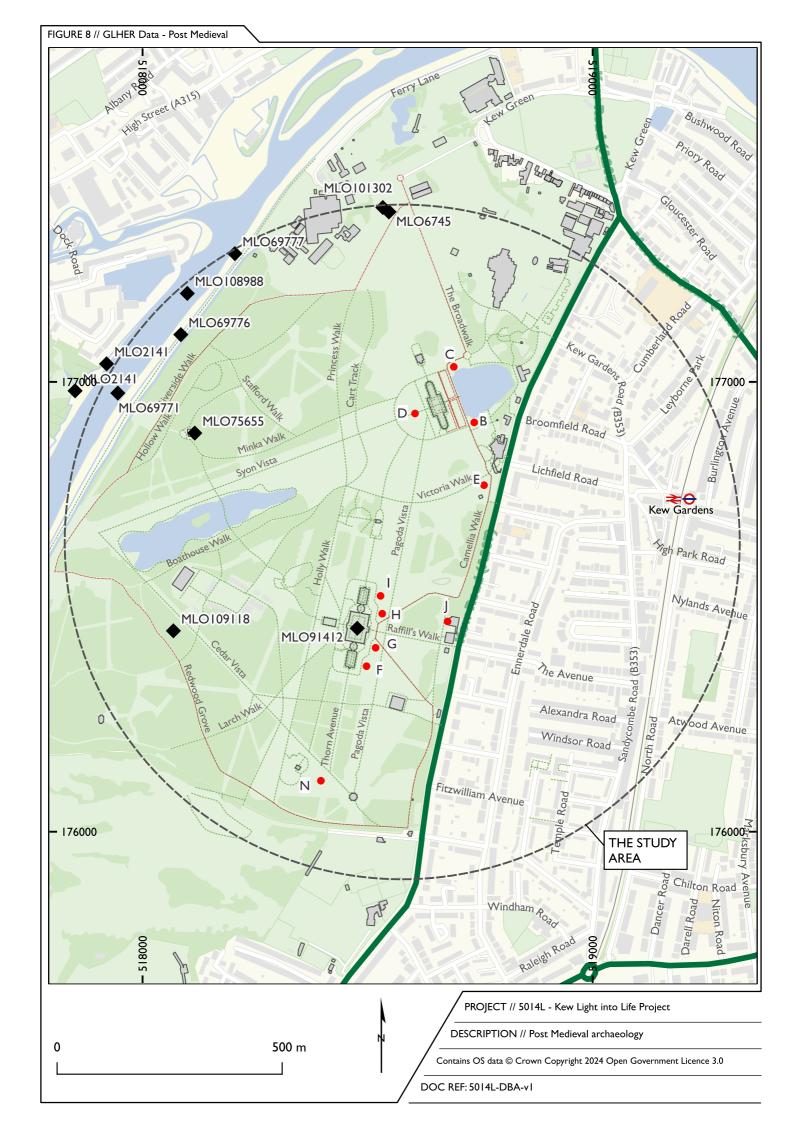


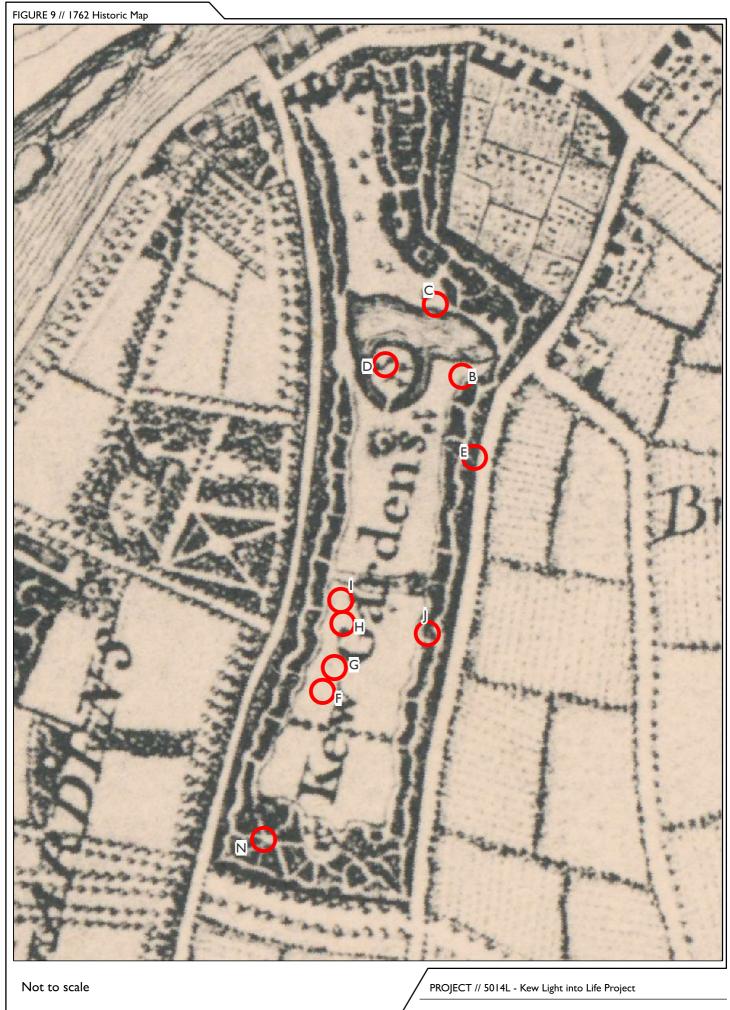






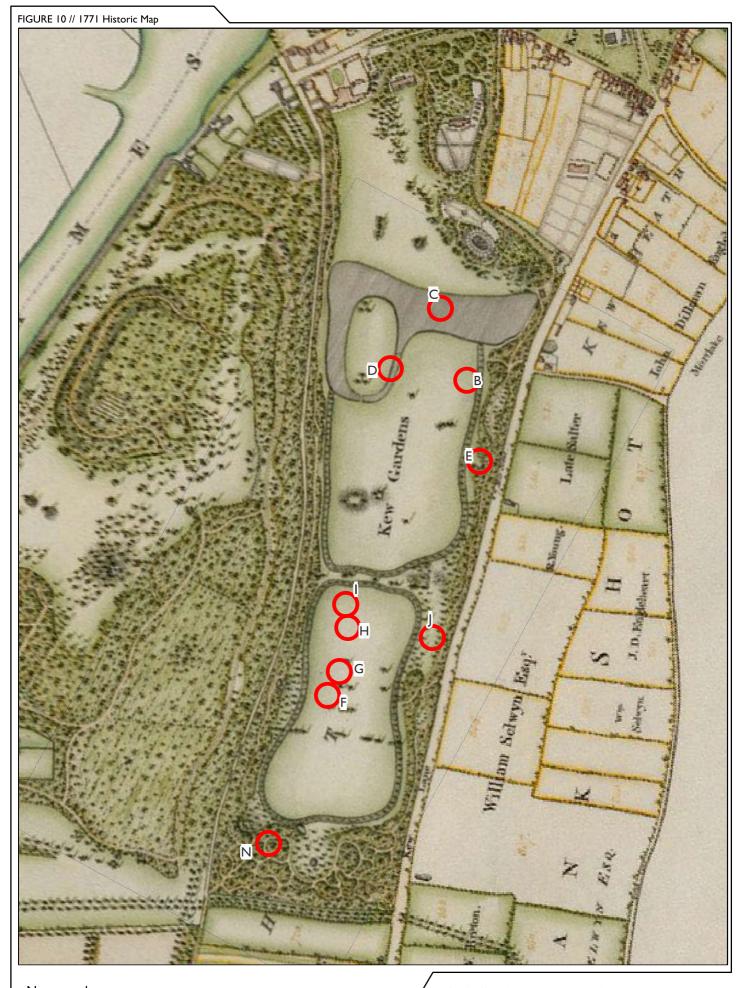






Proposed sculpture locations

DESCRIPTION // Rocque's Map of Surrey 1762



Not to scale

Proposed sculpture locations

PROJECT // 5014L - Kew Light into Life Project

DESCRIPTION // Burrell's Plan of the Royal Manor of Richmond 1771



Proposed sculpture locations

DESCRIPTION // 1785 Plan of Kew Gardens and the Environs