



**Feasibility study on the location of the  
Royal Row Barge 'Gloriana' (and Boat House)  
within the Borough**

**Client: London Borough of Richmond upon Thames**

**Final Report August 2013**

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PROJECT NO.:	LBR/004
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REPORT NO.:	LBR/004/20/08/13/MJA
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Author	[REDACTED]	[REDACTED]	20 <sup>th</sup> August 2013
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*Cover photograph:*

*Gloriana at Greenwich after naming by HM The Queen on 25<sup>th</sup> April 2012 ([REDACTED])*

*Contents page photograph*

*Gloriana with Olympic torch at Richmond Bridge on 27<sup>th</sup> July 2012 ([REDACTED])*

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## EXECUTIVE SUMMARY

- i This feasibility study reviews various locations that Richmond Council has identified to provide a mooring for the Royal Row Barge Gloriana and to build a bargehouse.
- ii Gloriana is a large vessel at approximately 27 metres long x 4 metres wide x 4 metres high. A bargehouse large enough to provide for maintenance, public access, crew facilities and storage would need to be some 32 metres long x 10 metres wide. A height of up to 8.5 metres would be necessary to provide a mezzanine floor above the bow of the barge to provide a crew room, education, storage etc. In addition a floorspace of some 100 square metres is desirable for a café and visitor centre.
- iii All three locations identified by the Council in the brief are subject to very onerous town planning policy constraints. The most significant of these are the London Plan 2011 and Richmond Core Strategy policies of maintaining the openness of Metropolitan Open Land – a designation that applies to all three locations. The potential sites have a planning policy status akin to Green Belt.

### **Option1: Buccleuch Gardens**

- iv A bargehouse and slipway is proposed at the southern end of the garden. The footprint of the building is minimised by utilising the existing adjoining toilets and converting the nearby open terrace into a visitor centre.
- v In our opinion this option would have a substantial adverse impact on the openness of Metropolitan Open Land at the point where there is a transition from the gardens to Petersham Meadows. There would be a loss of trees and green recreation space. Richmond town planners advise that the provision of a bargehouse together with a café and visitor centre would be contrary to policy.

### ***Recommendation: Reject Option 1***

### **Option 2: Gothic House Site**

- vi A bargehouse is proposed at the level of the upper footpath requiring excavation of the upper terrace levels to provide sufficient depth of site to accommodate the barge. A flat roof is proposed that would be at the same level as Petersham Road enabling it to be used as a roof terrace in the same way as the C18th and C19th boathouses in Richmond.
- vii It would be necessary to move Gloriana into the bargehouse by crane but a leading crane supplier has advised that it would be impractical to do so due to the very large foundation block needed to support a crane with an arm length of 13 metres. In addition Richmond town planners have advised that this site is not acceptable due to a range of town planning policy constraints.

### ***Recommendation: Reject Option 2***

### **Option 3: Marble Hill Park / Orleans Gardens**

- viii The brief focuses on opportunities in Marble Hill Park but we consider this to be impractical given the constraint of the Hammertons Ferry pontoon, the high river bank and the potential impact on the Marble Hill Historic Park and Garden.

- ix There is, however, a potential site in Orleans Gardens where there was a creek and C19th boathouse that has been demolished with the site occupied now by a café and part of a children's play area. The site has good road access and can provide level access for disabled people.
- x We have developed proposals to re-open the creek to provide a wet dock and covered bargehouse where Gloriana could be securely housed, maintained and displayed to the public. In addition, a tidal mooring is proposed at the entrance to the wet dock. Additional floorspace is proposed on a mezzanine level for crew room, storage and education. The existing café is relocated in the form of an adjoining single storey building of 100 square metres.
- xi There are a number of important issues that need to be resolved including:
  1. Negotiation with Hammertons Ferry / Port of London Authority (PLA) to reduce the length of the pontoon mooring that obstructs the access to the proposed bargehouse.
  2. Negotiation with [REDACTED] who has a tenancy of the existing café [REDACTED]
  3. Demonstrate the exceptional case to justify development on Metropolitan Open Land.
  4. Detailed design of wet dock infrastructure including sluice gate to maintain water level at mean high water.
  5. Detailed design of building. Both Richmond Council town planning officers and English Heritage have indicated agreement in principle to a building on this site but have expressed concern about scale and bulk.

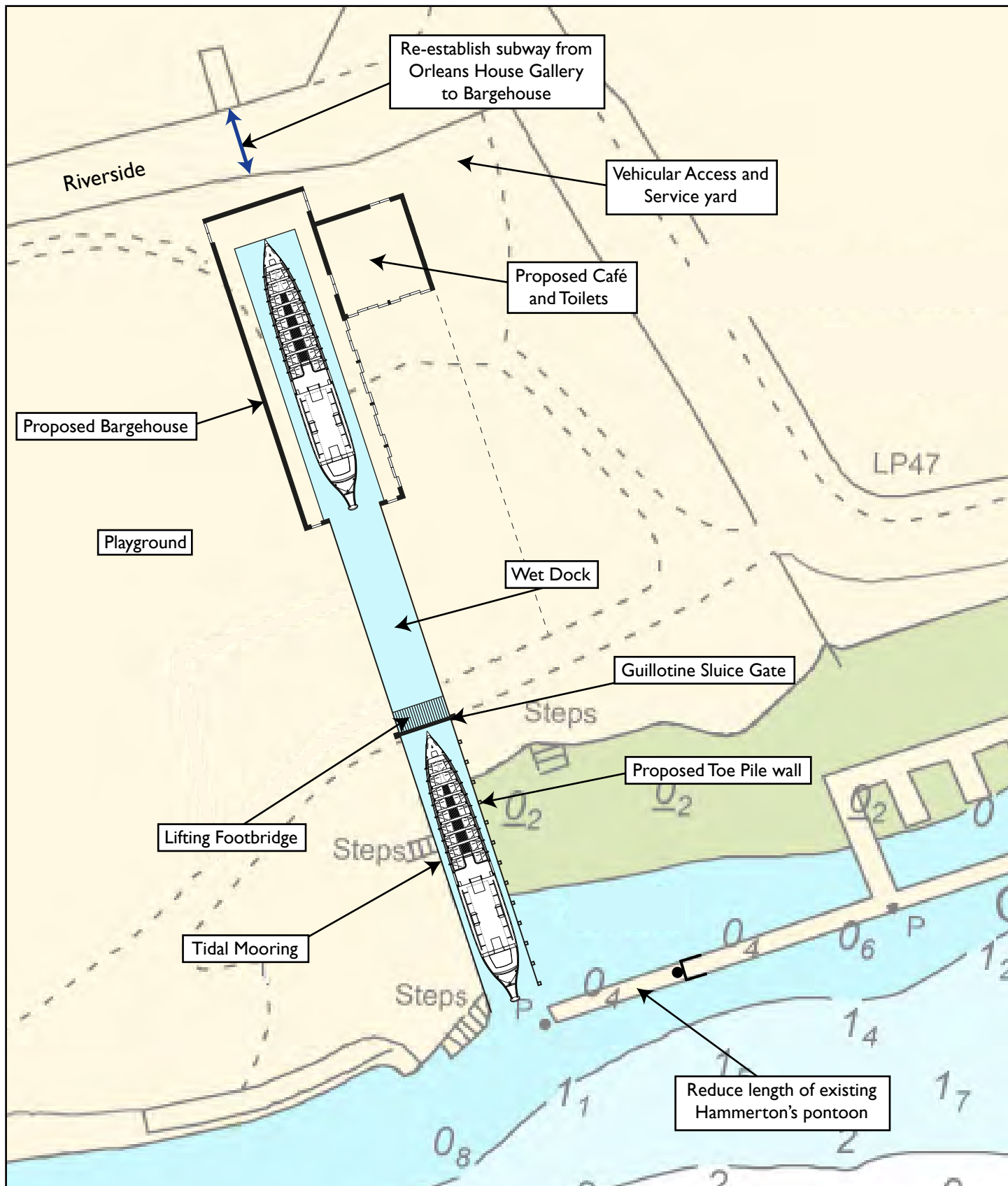
***Recommendation: Take Option 3 forward to resolve issues 1 – 5 above***

- Option 4: Use an existing boatyard and provide a mooring at Richmond**
- xii The operators of Gloriana used a site provided by the PLA at Denton Wharf, Gravesend in 2012/13 for winter storage and maintenance that extended from mid-November to mid-April. This site is available for winter storage 2013/14.
- xiii Existing boatyards in Richmond Borough with large slipways are heavily booked during the winter for maintenance work on passenger boats. We have evaluated the possibility of establishing a boatyard at the Council owned sites at Cruisemaster, Eel Pie Island and the wharf at the Lower Sunbury Road and a privately owned slipway on Platts Eyot.
- xiv We have identified a potential buoy mooring below Richmond Bridge and a site for a new pontoon mooring upstream of Richmond Pier. The operators have indicated that they would not wish to leave Gloriana on a mooring at Richmond for extended periods due to concerns about potential vandalism and trophy hunters but mooring on an occasional basis, with adequate security, is viable.

***Recommendation: Reject the split site option of using an existing boatyard for winter storage and a River Thames mooring for public display***

### **Conclusion**

- xv The constraints we have identified in this study indicate that, in our view, the only option that meets the full project objectives is **Option 3 Orleans Gardens**.



**Option 3 : Orleans House Gardens, Riverside, Twickenham**

**Key**

- Proposed Bargehouse 31m x 10m
- Proposed Café and Toilets 9.6m x 8.8m

Ref  
LBR/004/03/05/13

Scale: 1:500

Based on PLA Hydrographic  
Chart PLA/303 June 2010  
Copyright of Port of London Authority



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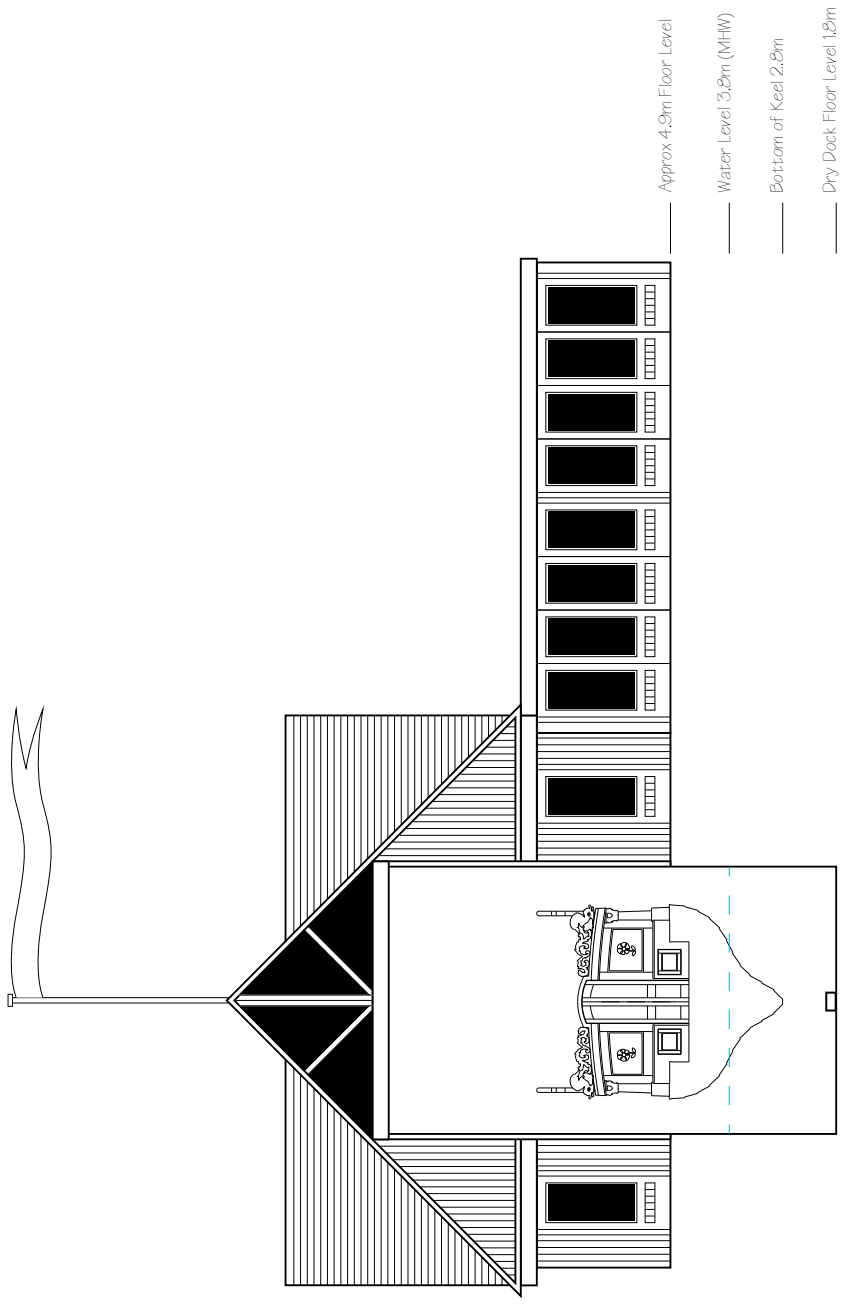
**Option 3 :**

Orleans House Gardens, Riverside,  
Twickenham

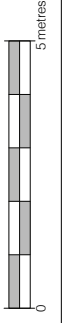
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Barge House and Cafe  
South Elevation 1:100





# 1 INTRODUCTION

- 1.1 Lord Sterling commissioned the construction of the Royal Row Barge 'Gloriana' to celebrate the Diamond Jubilee of the accession to the throne of Her Majesty The Queen. Gloriana was designed by Mark Edwards of Richmond Bridge Boathouses and she was built by a team of boatbuilders from Richmond. Gloriana led the procession of vessels that took part in the Diamond Jubilee Pageant on 2<sup>nd</sup> June 2012.
- 1.2 It is intended that Gloriana will be used for various state, civic and charitable events on the River Thames from year to year. An initial draft programme for 2013 is attached as Appendix 1. In between these events it will be necessary for Gloriana to have a permanent home that provides a secure base for the operation of the row barge. The London Borough of Richmond upon Thames ('LBRuT' or the 'Council') is keen for Gloriana to be based in the Borough and it has commissioned this feasibility study to review various locations it has identified for locating a mooring for Gloriana and building a barge house. Richmond is a practical location for Gloriana, positioned on the tideway for access to Central London and sufficiently upriver for good access to locations such as Windsor and Henley.
- 1.3 The Council's objectives for this study are set out in a draft brief dated 14<sup>th</sup> March 2013. The key elements contained in the draft brief are set out in section 2 of this report.
- 1.4 This study has been researched by [REDACTED] who has experience of various projects concerning marine facilities in London. In 2007 he led reviews of boatyard facilities on the River Thames for the Greater London Authority and on the London canal network for British Waterways. He has observed the construction of Gloriana and has an understanding of the sort of issues that are involved in maintaining and presenting a vessel of this size to the general public.
- 1.5 We provide an historical context in Section 3 that shows how row barges have been cared for in the past. Section 3 also provides examples of typical forms of boathouses in the Borough of Richmond.
- 1.6 A critical aspect of this study is the Council's strong town planning policy framework that seeks to protect and improve the outstanding landscape and townscape character of the River Thames and adjoining open spaces in the Borough. An assessment is therefore made for each of the potential locations of the key town planning policies that provide the context for any development proposals that may be made to house Gloriana. These matters are dealt with in the review of options in Section 4.
- 1.7 The Council's draft brief identifies three potential locations to house Gloriana. We have worked up draft proposals in Section 4 to show how the various objectives of the brief could be met and the nature of the town planning policy issues that are raised. We also look at the possibility of using an existing boathouse for winter storage in association with the use of a mooring in Richmond for the public display of Gloriana.
- 1.8 We provide our recommendations in Section 4 and report on consultation that we have undertaken on our preferred option in Section 5.

## 2 THE PROJECT BRIEF

- 2.1 The draft brief provided by LBRuT is for a feasibility study to evaluate potential options for the location of the Royal Row Barge, Gloriana. Gloriana is a 26.9 metres long row barge that was built to celebrate the Diamond Jubilee of the accession of Her Majesty the Queen.
- 2.2 The Council would like the barge to be moored in the borough to act as a tourist attraction and to be enjoyed by its residents and visitors, particularly as the barge has strong links with the borough. The priority is to provide a safe, secure and accessible mooring to view the barge. The feasibility of this will also need to consider the construction of a boat house large enough to house the barge to protect her from the elements during the winter and to keep the barge secure when not in use or on display.
- 2.3 The Brief identifies three possible locations that it considers present potential locations for the mooring and winter storage of Gloriana (see Figure 2.1). These are:
1. Buccleuch Gardens, Richmond;
  2. The Gothic House site, Richmond; and,
  3. Marble Hill Park, Twickenham.
- 2.4 For each of these sites the Brief sets out a synopsis of land ownership, public open space and planning issues that will need to be evaluated in the feasibility study.
- 2.5 The Brief sets out common objectives for each of the three identified locations. These are:
- To provide a secure mooring for the barge along the banks of the river together with the necessary pontoons and jetties for safe access and to provide a mechanism either by crane or slipway construction to allow the barge to be moved from the boat house into the river.
  - To construct a boathouse large enough to house the vessel, in a suitable location adjacent to the river which would be able to house the barge during the winter months (and when not in use or on display) which will also allow for educational visits and repairs and maintenance to be undertaken.
  - The construction of the boathouse is to be in keeping with local architecture, particularly the buildings and boathouses along the riverfront in Richmond. The design should also consider the additional uses in order to make the building both a popular destination for visitors as well as a profitable business opportunity. This could be achieved by including a restaurant/cafe and an educational/visitors centre within the proposed development.
- 2.6 Further, the brief sets out a fourth option to be evaluated that is to identify a secure and safe mooring with jetties and pontoons etc. for display during the summer months with winter storage and maintenance to be carried out at an existing boatyard. The purpose of this fourth objective is to obtain some of the tourism benefits for the borough during the summer with lower capital and revenue costs of building and operating a barge house.

**NOTES:**  
The general contractor is responsible for the verification of all dimensions on site and shall advise the Contract Administrator of any discrepancy.  
Do not scale from this drawing. Use figured dimensions only.

# Figure 2.1

## Options



Revision	Date	Description
E		
D		
C		
B		
A		

ISSUE:

**LONDON BOROUGH OF RICHMOND UPON THAMES**  
Civic Centre, 44 York Street  
Richmond, Middlesex TW9 1PL  
TEL: 0208 891 1411 FAX: 0208 891 7000

PROJECT:

TITLE:

CLIENT: THE LONDON BOROUGH OF RICHMOND-UPON-THAMES  
DRAWN BY: [Redacted]  
SCALE: NTS  
CHECKED BY: [Redacted]  
DATE: 16.01.13

DRAWING No: [Redacted] REV: [Redacted]

- 2.7 The brief does not specify who will run and maintain Gloriana or indicate the size of a boathouse that would be needed to maintain and display her. We set out below our working assumptions as to the floorspace required for these purposes and also to provide for commercial activities and education. These are based on our discussions with Lord Sterling and Lord True in October 2012 and experience of similar projects. These working assumptions may be revised in response to the consultation carried out for the study and also the site constraints.
- 2.8 Securing planning permission for a large building on the waterfront in Richmond or Twickenham will be a challenge. The public open space status of the land identified in the plans that forms part of the brief adds a major constraint.

***Dimensions of Gloriana and of any potential barge house***

- 2.9 The key dimensions of Gloriana are as follows:

Length:	26.9 metres
Beam	4.0 metres
Height	up to 4.65 metres (measured from keel)
Height	Up to 3.9 metres (measured from waterline)
Draught	0.75 metres

- 2.10 This study makes the following assumptions about the dimensions of the mooring and bargehouse for Gloriana.:

*Mooring*

- Floating pontoon with minimum length of 30 metres

*Bargehouse*

- A wet dock / dry dock that is 6 metres wide to enable 1 metre either side of Gloriana for access for winter maintenance.
- A walkway with a minimum width of 1.5 metres on each side of the wet dock and 3 metres around the bow to allow access for maintenance and public viewing.
- A minimum clearance of 2 metres headroom above Gloriana to allow for maintenance and public viewing.

- 2.11 The minimum internal dimensions of the barge house are therefore:

Length	30 metres
Width	9 metres
Height	6 metres

- 2.12 The key requirements for the bargehouse are:

- Minimum bargehouse dimension to allow for circulation, storage display and work bench 30 metres x 9 metres (internal);
- Bargehouse should provide dry storage of hull during winter months for maintenance period;
- Additional floorspace of approximately 100 square metres covered floorspace for education / storage / crew room;
- A restaurant / cafe / toilets of 100 square metres is desirable;

- External floorspace of 100 square metres minimum for circulation and seating;
- Minimum pontoon mooring length 30 metres;
- Utilities of electricity, water and foul drainage are required;
- The amount of glazing should be restricted to avoid damage to the barge from sunlight or high temperatures.

### ***Form of Barge House***

2.13 The barge house has two quite different functions that derive from the cycle of operations that are expected to take place during the year. Firstly, it will be used to house Gloriana during the operating season when she is not in use. The easiest way to move Gloriana in and out of the barge house would be to float her in and out during the high tides that occur approximately twice every 24 hours.

2.14 Secondly, there is a need for Gloriana to be dried out and aired internally for a period of a month or two each year. Any necessary maintenance and repairs, including painting and varnishing would be carried out during this period. Maintenance could be carried out in a dry dock or on a slipway

### 3 CONTEXT

- 3.1 The purpose of this section is to review the operation of royal, state and pleasure barges in history and to learn how their operation could inform proposals for housing Gloriana.

#### **Royal Barges**

- 3.2 Two of the surviving Royal barges have connections with the Borough of Richmond.

#### ***Queen Mary's Shallop***

- 3.3 William III built this shallop for Queen Mary II in 1689 at the same time that he commissioned the re-building of Hampton Court Palace. The shallop is 12.65 metres long by 2 metres beam. After 1849 when Prince Frederick's Barge was taken out of service she was the only state barge of the English Crown. She was last used in 1919 by King George V and Queen Mary. She was presented to the National Maritime Museum by Queen Mary and is currently in store.

#### ***Prince Frederick's Barge***

- 3.4 The barge was built in 1731 – 1732 for Frederick Prince of Wales, the eldest, though estranged son of George II and Queen Caroline. After Prince Frederick's death in 1751, the barge became the principal royal barge. It made its last appearance in 1849. Figure 3.1 is an engraving of 1895 that shows the barge in storage at the boatyard of James Messenger, the Queen's Bargemaster 1862 - 1901, at Teddington. It demonstrates how the barge would have been raised into the boathouse using a Spring tide and then chocked into position. Prince Frederick's barge is displayed currently in the National Maritime Museum.



Figure 3.1 Prince Frederick's Barge in storage at Teddington in 1895

## The City Barge

- 3.5 The last City Barge was built by Searle and Godfrey for the Lord Mayor of London in 1807. She was 24.4 metres long by 4 metres beam. The barge was last used for the Lord Mayor's Procession in 1856. Figure 3.2 shows the barge in storage at the City of London Bargehouse on Bishops Walk, Lambeth in 1825. The barge would have been moved into the bargehouse on a Spring tide.



Figure 3.2 Searles Boathouse, Lambeth with the City of London Barge 1830

## Gloriana

- 3.6 The design of Gloriana is based on the 1807 City Barge but with a length of 26.9 metres and a beam of 4.0 metres. Gloriana has a draft of 0.75 metres and weighs 10 tonnes. Gloriana has a substantial keel and bilge rails so that she can 'take the ground'.

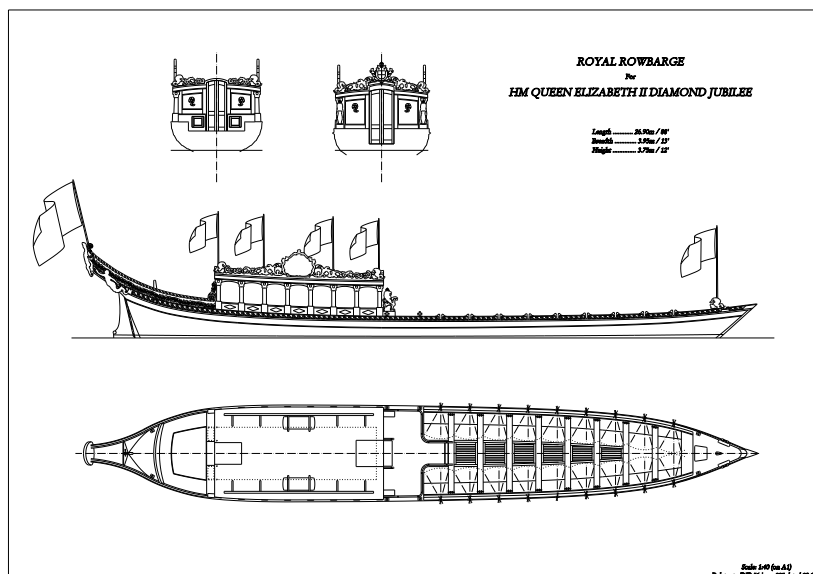


Figure 3.3 Plan and Elevations of Gloriana by [REDACTED]

## Barge Houses and Boat Houses

- 3.7 In the Eighteenth and Nineteenth Century it was the practice to either keep large ceremonial barges at boatyards (as shown in Figures 3.1 and 3.2 above) or for their owners to commission a purpose-built bargehouse. Figure 3.4 shows a plan of the bargehouse built by the Apothecaries Company at Chelsea Physic Gardens that also provided accommodation for the barges of the Tallow Chandlers and Vintners companies. These were large structures up to 25 metres long that were located directly on the riverfront. The bargehouses downstream of Battersea Bridge were cleared as a result of the commencement of construction of the Thames Embankment in 1862.

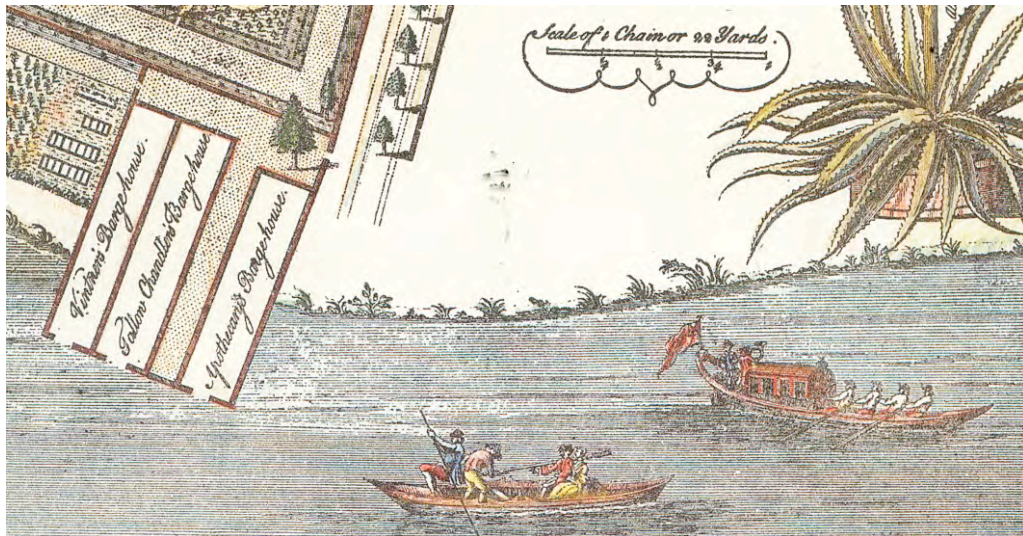


Figure 3.4 Extract from a plan of Chelsea Physic Garden of 1753 showing bargehouses extending into the River Thames

- 3.8 In Richmond and Twickenham the main highways are set back from the River Thames enabling boathouses to survive longer such as the Buccleuch House boathouse and the Orleans House boathouse that are recorded on the Ordnance Survey 1894 edition. Some of these boathouses survive. A good example is the boathouse and deep water dock that was built at Wharf Lane, Twickenham in the grounds of Poulett Lodge in 1870. It is listed Grade II.



Figure 3.5 Boathouse at Wharf Lane, Twickenham.



- 3.9 The wet dock arrangement of the boathouse at Wharf Lane, Twickenham enabled pleasure boats to be moved in and out of the boathouse more easily. This arrangement was also used for the boathouses serving Buccleuch House and Orleans House enabling easy access to the river.



*Figure 3.6 The Georgian boathouse at Orleans House in 1852*

- 3.10 Figure 3.6 shows the wet dock and boathouse that served Orleans House. This was demolished in the latter half of the 19<sup>th</sup> Century and replaced by a larger boathouse in the same location. A dock wall and the subterranean passage that linked the boathouse to Orleans House survive.

### **Findings**

1. Gloriana is larger than earlier royal barges and is more comparable in scale to the large livery company barges and the Lord Mayor's City Barge
2. During the Eighteenth and early Nineteenth Century state barges were used infrequently and spent most of their time in dry boathouses under the care of boatyards or livery company barge masters.
3. The bargehouses were large structures built up to the riverbank so that barges could be moved in and out on Spring tides.
4. In the Victorian period access from the river into the boathouse was made easier by the use of a wet dock to enable the vessel to be floated into the boathouse more easily.

## 4 ASSESSMENT OF OPTIONS AND RECOMMENDATIONS

### Introduction

- 4.1 In this section we analyse the three broad locations identified in the project brief that are shown in Figure 2.1 and develop the optimum proposal for a bargehouse in each of the areas. We identify the merits and impacts of each proposal and then report on the prospect of securing planning permission. Finally we make our recommendation on whether the draft proposals should be developed in more detail.
- 4.2 Having reviewed the three potential locations identified in the project brief we then analyse the fourth option of housing Gloriana in an existing boathouse during the winter and keeping her on a mooring in Richmond during the summer months.
- 4.3 The entire study area is protected by planning policies that seek to maintain the open character of the River Thames and the adjoining public spaces. In addition policies seek to encourage facilities for recreation and the development of water transport. Lastly there are policies covering a wide range of issues including design, flood risk, heritage, ecology and landscaping that will need to be addressed in the preparation of any planning application. We therefore first set out the town planning policy context that will be used in determining a planning application for any proposed bargehouse and landing stage. We then set out the other key issues that we use to advise on the feasibility of the four options.

### Town Planning Policy Context

- 4.4 The development plan comprises The London Plan July 2011, the retained policies of the Richmond Unitary Development Plan (that comprise site allocations), the LBRuT Core Strategy adopted April 2009 and the Development Management Plan adopted November 2011.
- 4.5 We identify below the key policies that we have taken into consideration for the feasibility study and reproduce the text of each policy in Appendix 2.

#### ***London Plan July 2011***

- 4.6 The two key policies in the London Plan are Policies 17 and 7.27. Policy 17 Metropolitan Open Land says that “*..the strongest protection should be given to Metropolitan Open Land and inappropriate development refused, except in exceptional circumstances....*” Policy 7.27c Blue Ribbon Network says that “*...new infrastructure to support water dependent uses will be sought. New mooring facilities should normally be off line from main navigation routes, i.e. in basins or docks.*”

### ***LBRuT Core Strategy adopted April 2009***

#### ***The Spatial Strategy***

- 4.7 The Spatial Strategy reinforces Richmond's role as an outer London Borough with a high quality urban and historic environment and open landscape, and as a sport and tourist destination. The Spatial Strategy is supported by the Core Policies set out in section 8 that include the following key policies:

- CP10 Open Land and Parks
- CP11 River Thames Corridor
- CP7 Maintaining and Improving the Local Environment
- CP4 Biodiversity

#### ***Development Management Plan adopted November 2011***

- 4.8 The DMP includes the detailed policies that will be used when new developments are considered. The DMP takes forward the strategic objectives in the Core Strategy and is consistent with it and with National and Regional Policies. Key policies include:

- Policy DM OS 2 Metropolitan Open Land
- Policy DM OS 11 Thames Policy Area
- Policy DM OS 12 Riverside Uses
- Policy DM OS 13 Moorings and Floating Structures
- Policy DM HD 1 Conservation Areas
- Policy DM OS 4 Historic Parks, Gardens and Landscapes
- Policy DM SD 6 Flood Risk

#### ***Twickenham Area Action Plan Publication adopted 2<sup>nd</sup> July 2013***

- 4.9 The brief indicates that the Option 3 location is subject to the Twickenham Area Action Plan but the site is located outside the plan area. It adjoins the area described as Civic and Cultural Quarter – the area focused on the Civic Centre, York House and Gardens, the Mary Wallace Theatre, Twickenham Museum and Library.

#### ***Policy guidance given by LBRuT planning officers***

- 4.10 Initial comments of LBRuT planning officers on the option sites are attached as Appendix 3.

#### ***Land Ownership, Covenants and Cost of Site***

- 4.11 Richmond Legal Services has provided details of land ownership for each of the sites together with covenants and leases, where relevant. We review existing covenants and leases and assess their impact on project costs and objectives.

#### ***Loss of Public Open Space***

- 4.12 All of the potential sites currently comprise public open space. Consultation with Richmond planning officers has indicated that the Council would not seek the replacement of public open space taken for the bargehouse (such as by means of a roof terrace) but any facility should be open for public enjoyment at no charge.

#### ***Operation of the Bargehouse***

- 4.13 Each of the sites raises different issues regarding the practicalities of moving Gloriana, display, maintenance and generating revenue to fund the operation of the barge. We have consulted with the operators of Gloriana together with

other specialists on detailed matters to determine the practicalities of the various options that we evaluate.

**Navigation and Marine matters**

- 4.14 The PLA Harbour Master, Marine Engineer, Environment Team and Planning and Partnership officers have provided comments on each of the options (see Appendix 4).

**Heritage Issues**

- 4.15 English Heritage has provided comments particularly in relation to Option 3 Orleans Gardens and its relationship to Marble Hill House.

**Loss of trees and scope for new planting**

- 4.16 There would be a need to remove a tree or trees on each of the option sites and we identify the extent of the tree loss.

**Visual Impact**

- 4.17 We make an assessment of the relative visual impact of each option.

**Education / Visitor Centre and Commercial Considerations**

- 4.18 The brief refers to these additional uses and we review how they could be provided at each of the option locations.

**Flood Risk**

- 4.19 We identify the status of each site with regard to the London Borough of Richmond upon Thames Strategic Flood Risk Assessment (SFRA) Level 1 Update August 2010 (Final Report).

**Nature Conservation**

- 4.20 We identify the status of each of the option sites with respect to their nature conservation interest and protected species.

**Synergies with local tourism, arts and education venues**

- 4.21 We review the opportunities that a bargehouse and visitor centre would present in relation to other local attractions and facilities.

**Prospect for securing full planning permission and other necessary consents**

- 4.22 We indicate our views on the prospects of securing planning permission for each option site.

**Cost estimates**

- 4.23 Feasibility order of cost estimates have been prepared provided by Huntley Cartwright Associates, Chartered Quantity Surveyors. These are attached as Appendix 5.

## Option 1 Buccleuch Gardens

### **Extract from the Council's Brief**

- 4.24 *“This site has been chosen due to its close proximity to the river and Richmond Town centre. It also offers the opportunity to utilise some existing public toilet buildings located on the site which have been earmarked by the council for disposal and / or redevelopment. LBRuT own the freehold for this site and is designated as Public Open Space within a Conservation Area.*
- 4.25 *The brief here would be to provide the following*
- 1 *To provide a secure mooring for the barge along the banks of the river along with the necessary pontoons and jetties for safe access and to provide a mechanism either by crane or slipway construction to allow the barge to moved from the boat house into the river.*
  - 2 *To construct a boat house large enough to house the vessel, in a suitable location adjacent to the river which would be able to house the barge during the winter months (and when not in use or on display) which will also allow for educational visits and repairs and maintenance to be undertaken.*
  - 3 *The construction of the boat house is to be in keeping with local architecture, particularly the buildings and boathouses along the riverfront in Richmond. The design should also consider the additional uses in order to the make the building both a popular destination for visitors as well as a profitable business opportunity. This could be achieved by including a restaurant/cafe and an educational/visitors centre within the proposed development.”*

### **Site History**

- 4.26 Richmond Borough Council acquired the riverside area of the Buccleuch estate, including Buccleuch House, in 1936. The Council demolished Buccleuch House in 1938 and opened a promenade on the site in the same year. The works to establish the open space took place in the context of the measures to acquire riverside lands for public access following the passing of the Richmond, Petersham and Ham Open Spaces Act 1902. Our understanding is that Buccleuch Gardens is protected by the provisions of the 1902 Act.
- 4.27 Figure 4.1 is an extract from the Ordnance Survey map of 1894. It shows a boathouse at the northern end of Buccleuch Gardens. This has been demolished and the promenade laid out by Richmond Borough Council in 1938 passes over the site.

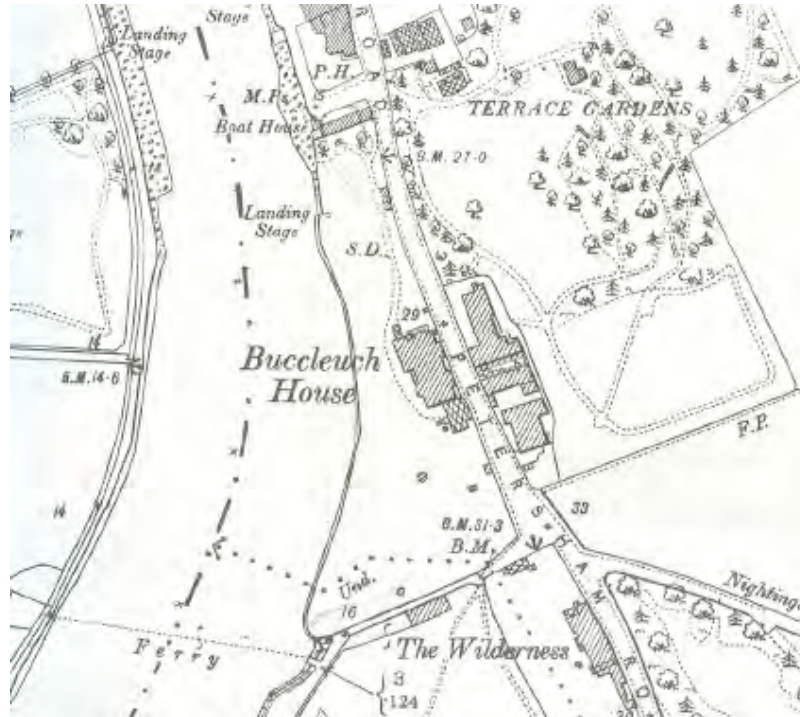


Figure 4.1 Buccleuch House and grounds in 1894. Source Ordnance Survey

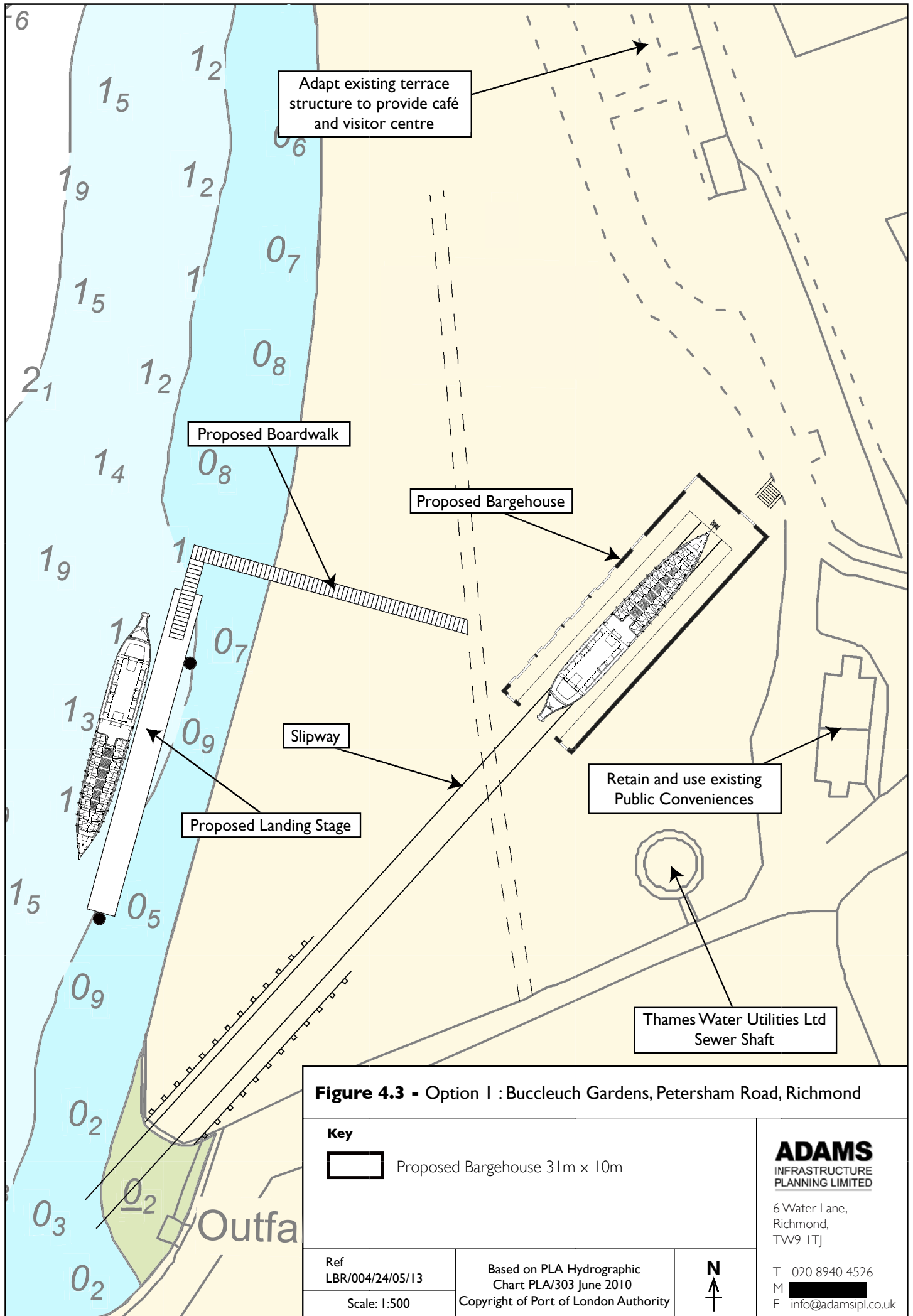
#### Site selection at Buccleuch Gardens

- 4.28 It is not possible to use the site of the demolished Buccleuch House boathouse because the site is too small. The site identified is at the south end of Buccleuch Gardens where there is sufficient space to locate a bargehouse, slipway and landing stage. The proposed bargehouse is located between the paved path and the unmaded path that is just above the high water mark at Spring tides (see Figure 4.2).



Figure 4.2 Buccleuch Gardens looking south towards Petersham Meadows

- 4.29 Plans and elevations of the proposed bargehouse, slipway and mooring are shown as Figures 4.3 – 4.6



Adapt existing terrace structure to provide café and visitor centre

Proposed Boardwalk

Proposed Bargehouse

Slipway

Retain and use existing Public Conveniences

Proposed Landing Stage

Thames Water Utilities Ltd Sewer Shaft

**Figure 4.3 - Option I : Buccleuch Gardens, Petersham Road, Richmond**

**Key**  
 Proposed Bargehouse 31m x 10m

**ADAMS**  
 INFRASTRUCTURE  
 PLANNING LIMITED

6 Water Lane,  
 Richmond,  
 TW9 1TJ

Ref  
 LBR/004/24/05/13

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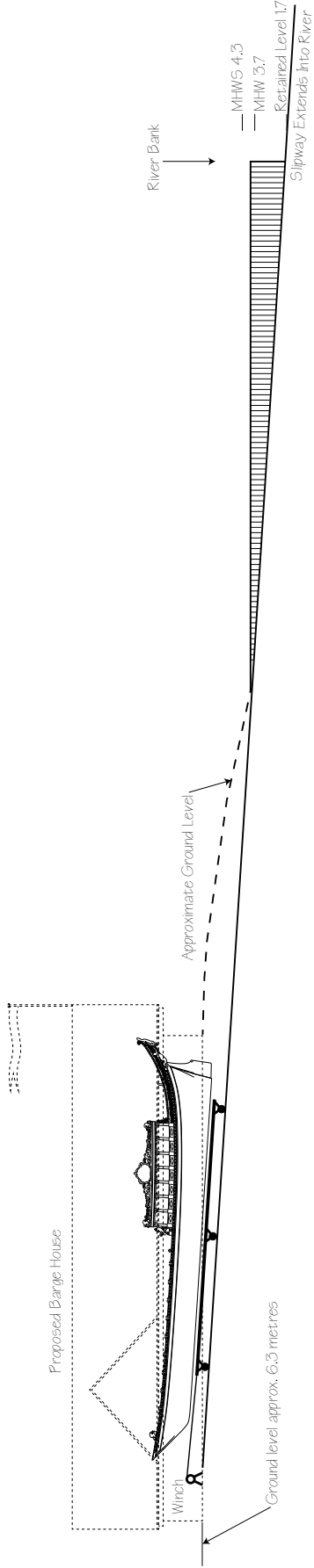


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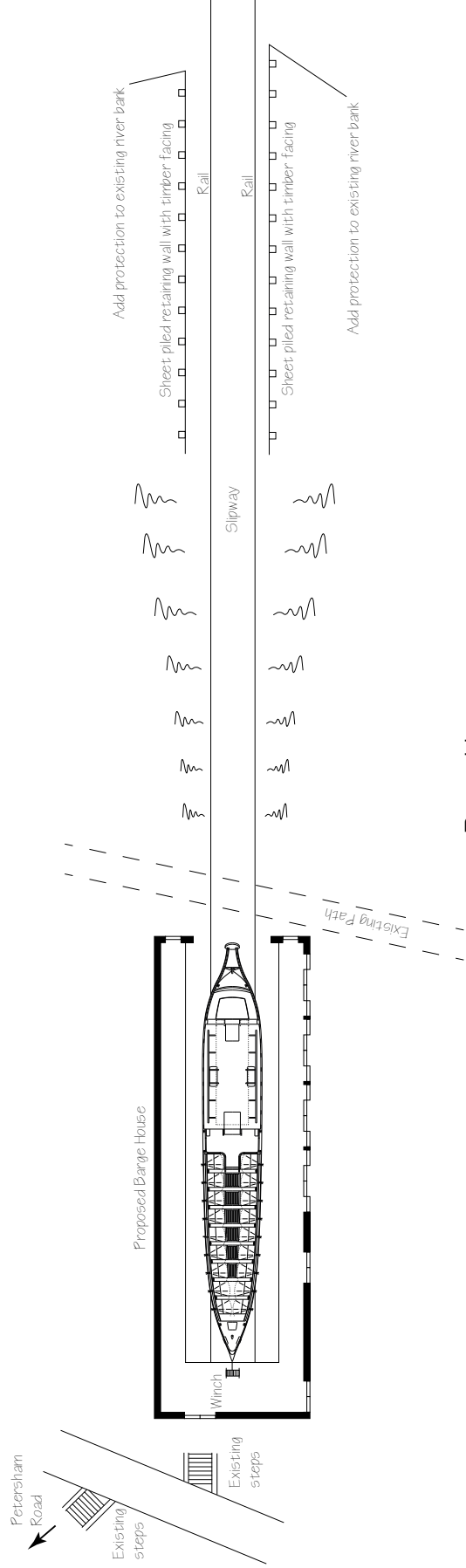
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Figure 4.4 -

Option 1 : Buccleuch Gardens,  
Petersham Road, Richmond



Barge House  
Section 1:300



Barge House  
Plan View 1:300

Ref: LBR/004/24/05/13 Scale: 1:300@A3



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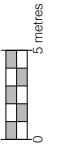
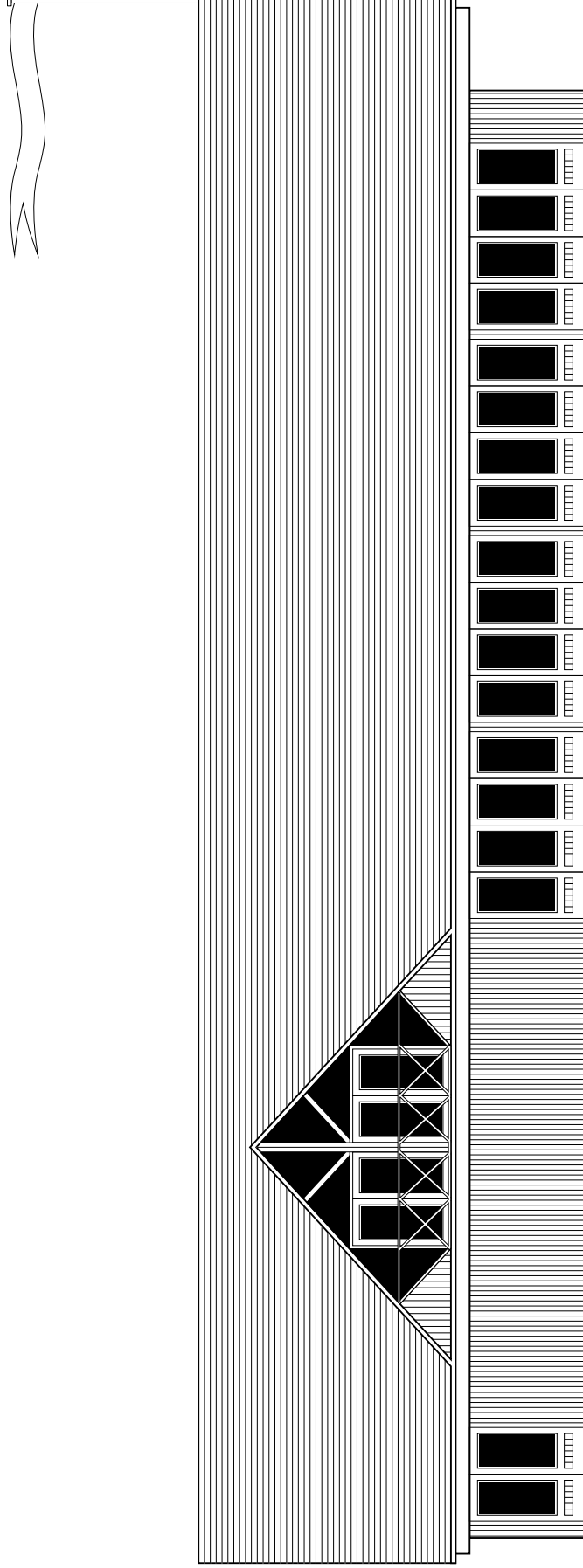




Figure 4.5 -

Option 1 : Buccleuch Gardens,  
Petersham Road, Richmond



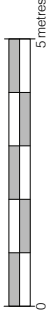
Barge House  
North West Elevation 1:100

Ref: LBR/004/24/05/13 Scale: 1:100@A3

**ADAMS**  
INFRASTRUCTURE  
PLANNING LIMITED

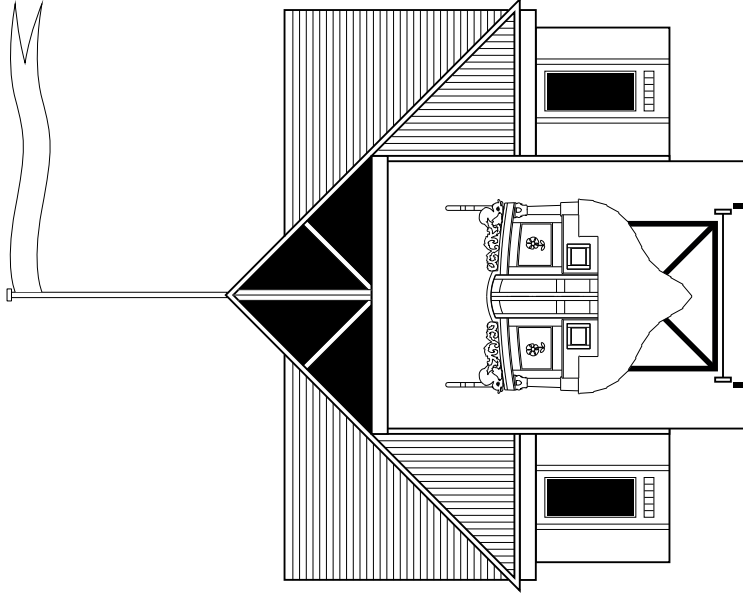
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**Figure 4.6 -**

Option 1 : Buccleuch Gardens,  
Petersham Road, Richmond



Barge House  
South West Elevation 1:100

Ref: LBR/axx/24/04/13 Scale: 1:100@A3

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## **Description of Development**

### ***Barge House***

- 4.30 The proposed barge house is set back from the river bank to minimise its visual impact, retain the unmade pedestrian path that runs through the middle of the site and to provide a suitable gradient for the proposed slipway. The overall size of the building is 31 metres long x 10 metres wide x 8.5 metres high. The proposals do not include a café and toilets to reduce the overall footprint of the building. It is suggested instead that the existing toilet block is retained and the former terrace of Buccleuch House could be enclosed and used as a café and visitor centre. Richmond Council has offered storage space in the Terrace Gardens gardener's store and this could be used for the winter storage of items such as carpets and cushions.

### ***Slipway***

- 4.31 A slipway is proposed rather than a wet dock as this would have a lesser visual impact. It would maintain the grass character of the gardens apart from the slipway rails. The proposed slipway is angled so that it reaches the river at 'Chitty's Hole' a location that was formerly used for a ferry and boat hire by the Chitty family. This would enable Gloriana to be positioned on the slipway during an incoming tide without obstructing the navigation channel.

### ***Mooring***

- 4.32 A mooring is shown alongside Buccleuch Gardens with a short boardwalk across the part of the gardens that is subject to flooding at Spring tides.

### ***Access and Vehicle Parking***

- 4.33 It would be possible to make deliveries to the site from Petersham Road but there are no car parking facilities available in the vicinity of the site.

## **Site Evaluation**

### ***Land Ownership, Covenants and Cost of Site***

- 4.34 The site is entirely within the Council's registered title TGL277063 that comprises both Buccleuch and Terrace Gardens. There may be a need to obtain consents from Crown Estates with respect to the lower end of the slipway if it extends into the river.

### ***Operation of the Bargehouse***

- 4.35 The proposals would work well in this location. The PLA's marine engineer has advised that from a marine engineering perspective this option looks best in terms of ease of boat docking and re-launch.
- 4.36 Economies could be made by using the existing toilet block and converting the terrace building to provide a visitor centre / café.

### ***Navigation and Marine matters***

- 4.37 The PLA Harbour Master has no objection, in principle, to this location.

### ***Loss of Public Open Space***

- 4.38 The towpath diverges from the river bank at Buccleuch Gardens to provide the first area of riverside grassland upstream from Richmond. The proposed bargehouse would take some 310 square metres of public open space. Richmond planning officers advise that any facility should be open for public enjoyment at no charge. In addition, it would be necessary to significantly

modify the existing grassed area on the riverbank by excavating a slope and installing rails to provide a slipway. The area would remain grass covered but much of the character of the urban 'green beach' during summer months would be lost.

- 4.39 In our view the proposed bargehouse and slipway would have a significant adverse impact on the amenity of this public open space.

***Heritage Issues***

- 4.40 In our view, the proposals would have a significant adverse impact on the character of Buccleuch Gardens in the context of its listing by English Heritage as part of the Buccleuch and Terrace Gardens Historic Park and Garden, due to the scale of the structures and the openness of the site.

***Loss of trees and scope for new planting***

- 4.41 A large oak tree has recently fallen within the site of the proposed bargehouse. Part of the trunk remains on the site of the proposed bargehouse (see Figure 4.2) but there are no other trees affected by the proposed structure. Three smaller trees are located close to the proposed slipway and may need to be removed (see the right hand side of Figure 4.2)

***Visual Impact***

- 4.42 The proposed bargehouse is located at the landward side of Buccleuch Gardens to minimise its visual impact. But, in our opinion, the proposed bargehouse would still have a significant adverse impact on the openness of the Metropolitan Open Land at the point of transition from the enclosed character of Buccleuch Gardens to the open aspect of Petersham Meadows.

***Education / Visitor Centre and Commercial Considerations***

- 4.43 This could be established in the existing covered terrace nearby but we are advised that this would be contrary to the planning policy to restrict additional Class A3 uses in this location.

***Flood Risk***

- 4.44 The proposed bargehouse is located within an area designated as Zone 3a flood risk where it would be necessary to meet the Exception test to justify development in this location. The proposed slipway would increase the flood storage capacity of the flood plain. It would be necessary to design the building to mitigate the effects of possible flooding.

***Thames Water Utilities Ltd. (TWUL) Infrastructure***

- 4.45 There is a TWUL pumping station located to the south of the proposed bargehouse and a sewer outfall located close to the point where the proposed slipway enters the River Thames. It will be necessary to consult TWUL to ensure that any proposals on this site do not conflict with their sewer infrastructure.

***Nature Conservation***

- 4.46 The site is located in an Other Site of Nature Conservation Importance where Core Strategy Policy CP4 Biodiversity seeks to conserve ecological diversity.

***Synergies with local tourism, arts and education venues***

- 4.47 [REDACTED], Head of Parks, has advised that a bargehouse in this location would meet a Council objective to draw visitors from Richmond Riverside upriver to attractions such as the Terrace Gardens and Ham House. He has

suggested that the covered terrace in Buccleuch Gardens could be adapted to display material about Gloriana and royal barges.

***Prospect for securing full planning permission and other necessary consents***

- 4.48 [REDACTED], the Council's Assistant Development Control Manager, has advised that this site is a 'non starter' in terms of its prospects of securing planning permission. This is due to its location on land designated as Metropolitan Open Land, Historic Parks and Gardens and Other Site of Nature Conservation Importance. In addition the proposal would be prominent and would harm the open and rural character of Petersham Meadows (see Appendix 3).

***Cost estimate***

- 4.49 Huntley Cartwright estimates the cost of Option 1 to be approximately £2,280,000.

***Conclusion***

- 4.50 Option 1 performs well in operational terms. The location of a visitor attraction here would draw people upriver and potentially onward to other attractions such as Ham House. However, the bargehouse, slipway and pontoon mooring would have a significant adverse impact on Buccleuch Gardens and would be contrary to the development plan.

***Recommendation***

Reject Option 1 Buccleuch Gardens

## Option 2 Gothic House Site

### **Extract from the Council's Brief**

- 4.51 *"This option is one preferred by the Council and follows the same brief as detailed (in paragraph 4.25 above) in terms of construction but at a location further along the river bank heading North towards Richmond and is known as the Gothic House site. It is felt that this site would lend itself due to its access onto the towpath and the relatively close distance to Richmond Bridge and the Town centre.*
- 4.52 *The 'Gothic House site' is shown on the attached plan. It includes the building area demised to Steins restaurant / bar. The strip in front of that is known as Mear's Walk and is also in the Council's freehold ownership as far as the towpath. This part includes the seating area for Steins.*
- 4.53 *The site was looked at by the Council around 2003 for potential development but LDF proposals map currently shows the site as Metropolitan Open Land, Public Open Space and within a Conservation Area".*

### **Site History**

- 4.54 This site was formerly occupied by Gothic House, 51 Petersham Road, hence the name. The Council acquired the site and cleared the building to provide additional open space that is shown in Figures 4.7 and 4.8. The upper part of the site has Heras fencing in place to restrict access due to what appear to be structural problems with retaining walls adjoining Petersham Road.



Figure 4.7 The Gothic House Site with Steins Restaurant to the right

## Description of Development

- 4.55 Plans and elevations of the proposed bargehouse, crane and mooring are shown as Figures 4.9 – 4.12

### **Barge House**

- 4.56 A bargehouse is proposed at the level of the upper footpath ('Mear's Walk') requiring excavation of the upper terrace levels to provide sufficient length to accommodate the barge. This would require a major construction exercise including a sheet pile wall support of Petersham Road. A flat roof is proposed that would be at the same level as Petersham Road enabling it to be used as a roof terrace in the same way as C18th and C19th boathouses in Richmond. The roof terrace has the protection of balustrades to a traditional design.

### **Crane**

- 4.57 It would be necessary to move Gloriana into the bargehouse by crane but a leading crane supplier has advised that it would be impractical to do so. It would be possible to design a suitable crane, albeit with large steel sections needed to achieve a reach of 13 metres. However, the crane suppliers say that a crane in this location is "impractical because the size of the foundation block required to support the crane would be enormous". The foundation block would need to be piled.

### **Mooring**

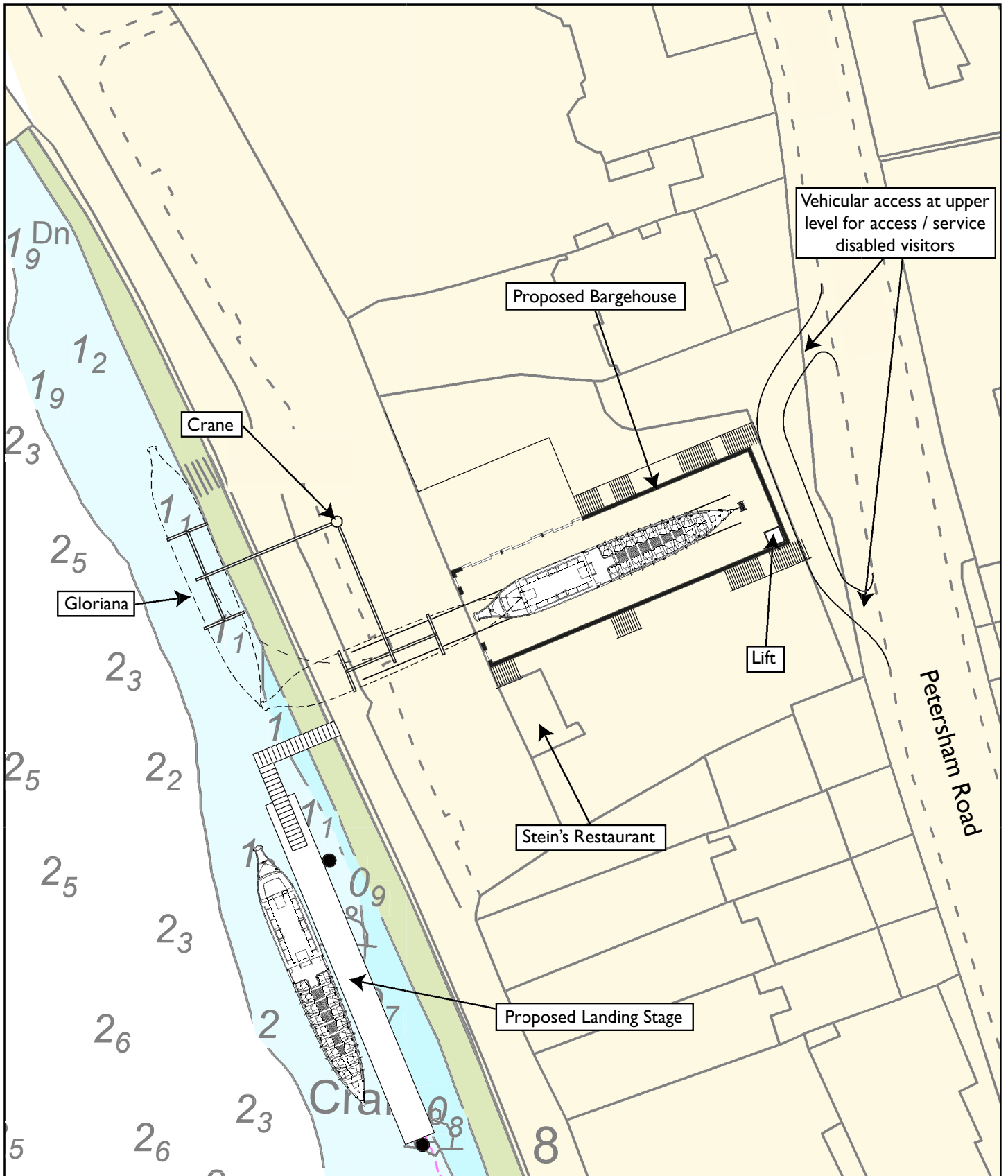
- 4.58 A pontoon mooring is proposed with access from the towpath.

### **Access and Vehicle Parking**

- 4.59 The towpath is heavily used by pedestrians and cyclists and the Council's policy is to restrict vehicular access. Vehicular access for deliveries and special events is proposed in the form of a service road off Petersham Road. A lift is proposed to provide access for deliveries and disabled people. A new pedestrian access to the waterfront would be provided from Petersham Road.



Figure 4.8 The Gothic House Site viewed from the upper terrace level



**Figure 4.9 - Option 2 : Gothic Site, Petersham Road, Richmond TW10 6UT**

**Key**

 Proposed Bargehouse 31m x 10m

Ref  
LBR/004/24/05/13

Scale: 1:500

Based on PLA Hydrographic  
Chart PLA/303 June 2010  
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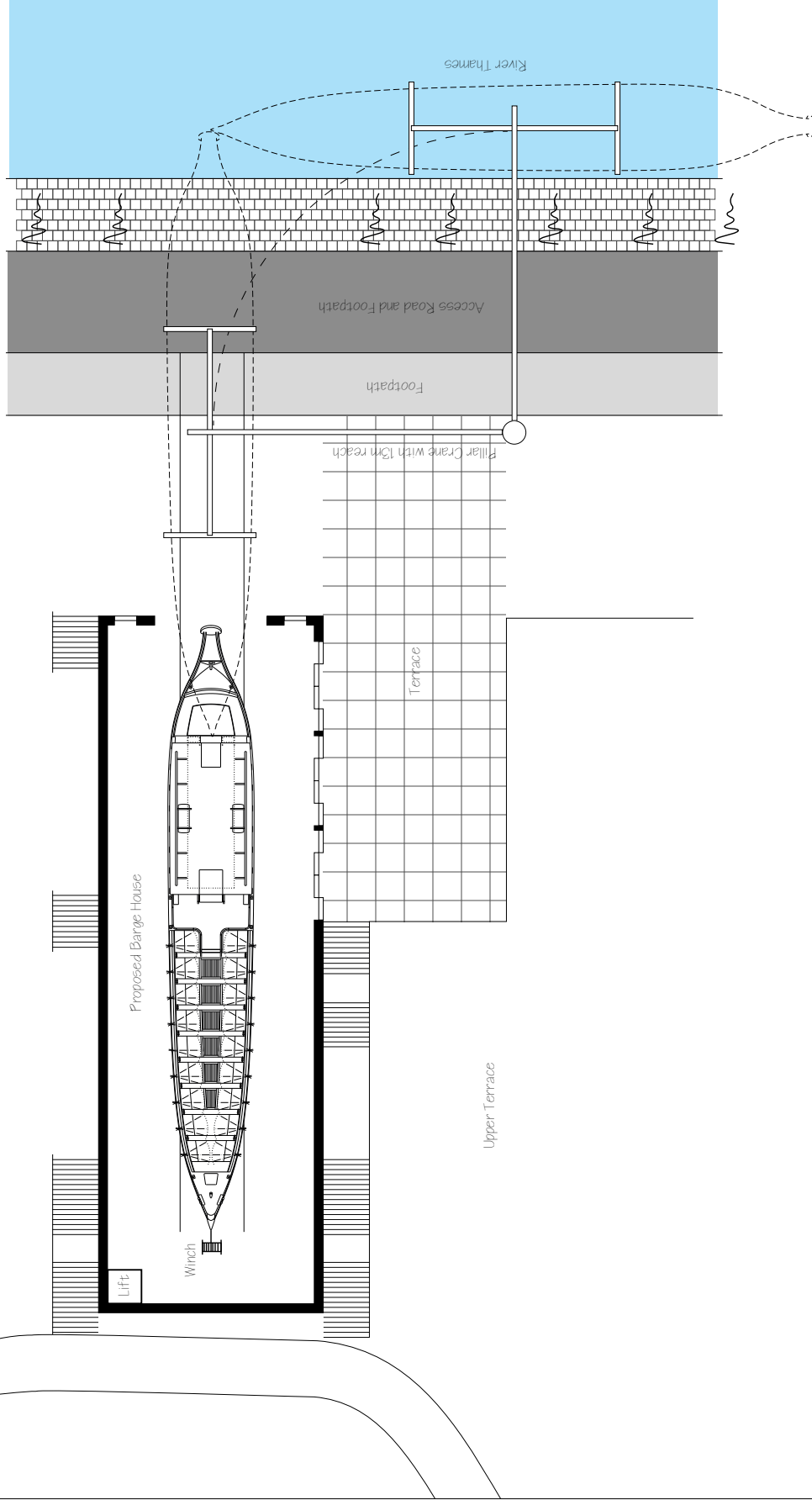
T 020 8940 4526  
M   
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Figure 4.10 -

Option 2 : Gothic Site, Petersham  
Road, Richmond



Barge House  
Plan View 1:200

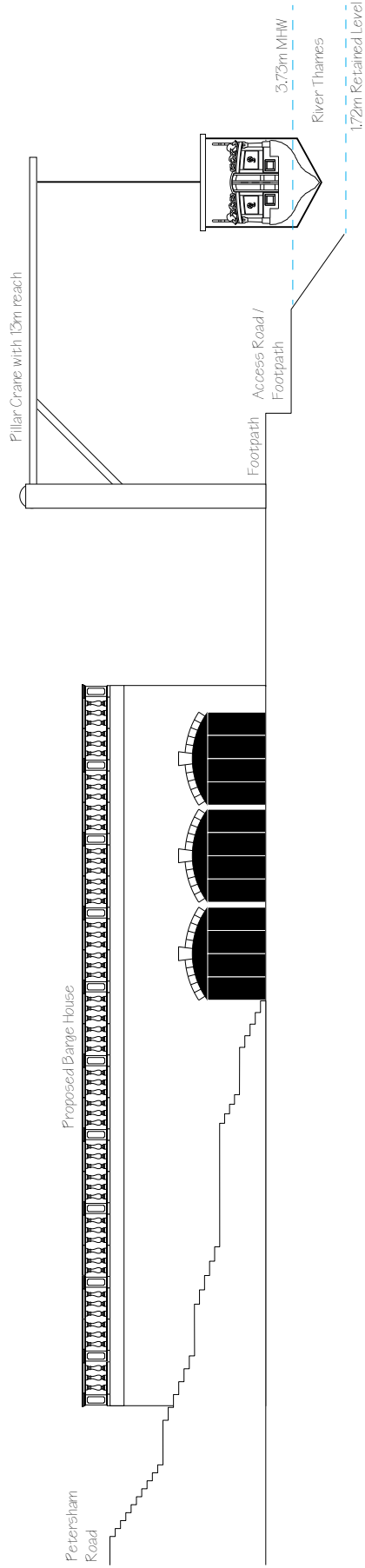
Ref: LBR/004/24/05/13 Scale: 1:200@A3

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Figure 4.11 -

Option 2 : Gothic Site, Petersham  
Road, Richmond

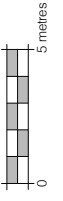


Barge House  
North Elevation 1:200

Ref: LBR/004/24/05/13 Scale: 1:200@A3

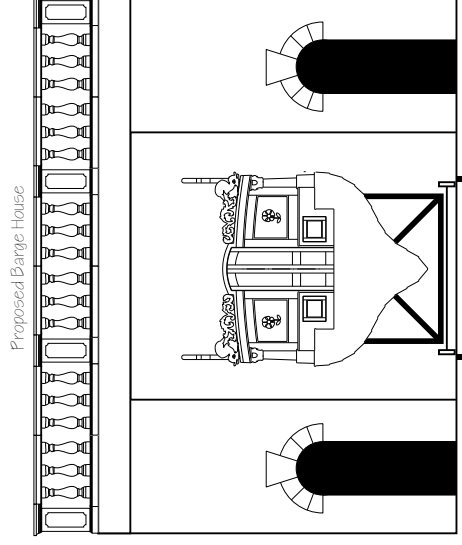
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**Figure 4.12 -**

Option 2 : Gothic Site, Petersham  
Road, Richmond



Barge House  
West Elevation 1:100



Ref: LBR/004/24/05/13 Scale: 1:100@A3

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## Site Evaluation

### **Land Ownership, Covenants and Cost of Site**

- 4.60 The site is entirely within the Council's registered title TGL311371. There are rights enjoyed by residents of 43, 45, 47 and 49 Petersham Road to pass across the land needed to site the crane but so long as the occupiers of the properties are reasonably able to do so this should not provide a constraint.
- 4.61 The construction of the pontoon in the river is outside of the Council's title and will require the consent of the PLA, on behalf of the Crown as owner of the river bed, and as a requirement of the byelaws. The work will involve interference with the river bed (byelaw 48), mooring attaching to PLA controlled lands (byelaw 15) and creating a structure that will restrict navigation (byelaw 50).

### **Operation of the Bargehouse**

- 4.62 Having consulted with a leading crane supplier we do not believe that the construction of a crane of the size required to lift Gloriana over the towpath and upper pedestrian path would be realistic. In addition the towpath is heavily used by service vehicles, pedestrians and cyclists and any lifting operation would require significant resources to ensure public safety. The scale of operation required is shown by Figure 4.13



Figure 4.13 Launch of Gloriana at Old Isleworth 19<sup>th</sup> April 2012

### **Navigation and Marine matters**

- 4.63 The Harbour Master has concerns about this option as it would mean Gloriana berthing on the floating pontoon in the river. *"If a passing vessel causes wash this may lead to complaints and damage to the vessel"*. The Harbour Master also raises queries about the craning operation.

### ***Public Open Space***

- 4.64 The upper levels of the public open space on the Gothic House Site are underused as there is no access from Petersham Road. The proposed open space in the form of a roof terrace on the bargehouse would increase the area of usable public open space.

### ***Heritage Issues***

- 4.65 The principal issue is the effect of the proposed development on the setting of listed buildings. The most significant of these would be the impact of the proposed crane on views of Richmond Bridge, Listed Grade I.

### ***Loss of trees and scope for new planting***

- 4.66 Option 2 would result in the biggest loss of trees including a large yew tree and a large London plane on the waterfront (shown on Figure 4.7). In addition, four or five smaller London planes would need to be felled on the Petersham Road frontage. Scope for replanting would be limited as tree planting would not be possible on the proposed roof terrace.

### ***Visual Impact***

- 4.67 The proposed bargehouse would be some 6 metres high and therefore have a significant impact on the waterfront and the setting of the adjoining Steins restaurant. In addition the proposed fixed crane would have a significant visual impact, in particular on views towards Richmond Bridge from the towpath.
- 4.68 The proposed bargehouse and crane would have an impact on views from properties at 43, 45, 47 and 49 Petersham Road towards the River Thames.

### ***Education / Visitor Centre and Commercial Considerations***

- 4.69 The Assistant Development Control Manager has advised that a visitor centre/café in this location would be contrary to the Council's policy for no more Class A3 uses in this area. Therefore a visitor centre/café is not shown on the plans. The only way to provide a visitor centre / café would be to do so on the site of Steins restaurant [REDACTED]

### ***Flood Risk***

- 4.70 The front of the proposed bargehouse is located within an area designated as Zone 3a flood risk where it would be necessary to meet the Exception Test to justify development in this location. The proposed excavation into the bank would bring the whole of the site into the Zone 3a category of flood risk. It would be necessary to design the bargehouse to mitigate the effects of possible flooding.

### ***Nature Conservation***

- 4.71 The site is adjacent to an Other Site of Nature Importance where planning policy seeks to conserve the ecological diversity.

### ***Synergies with local tourism, arts and education venues***

- 4.72 The main benefit of Option 2 would be to provide a new attraction for visitors to the waterfront and to bring into full use the open space on the Gothic House Site by means of the proposed roof terrace and access from Petersham Road.

***Prospect for securing full planning permission and other necessary consents***

- 4.73 [REDACTED], the Council's Assistant Development Control Manager, has advised that this site is a 'non starter' in terms of its prospects of securing planning permission. This is due to its location on land designated as Metropolitan Open Land, Conservation Area, Thames Policy Area; area restricting further A3 uses, adjacent to Other Site of Nature Importance. In addition there are concerns about land use, ground levels, tree issues, accessibility, setting of historic buildings, design and scale.

***Cost estimate***

- 4.74 Huntley Cartwright estimates the cost of Option 2 to be approximately £1,858,000. Note that the building costs and design fees are lower for this option, in part because this scheme does not include a café and toilets.

***Conclusion***

- 4.75 We have been advised that it would be impractical to construct a crane in this location that has the 13 metre reach that would be necessary to lift Gloriana into the bargehouse. The lifting operation would also present difficulties on a heavily used stretch of public waterfront. The bargehouse would require a major construction exercise to excavated the upper terrace levels and a sheet pile wall support of Petersham Road.
- 4.76 In addition to the practical challenges there are significant planning policy objections to a bargehouse on this site.

***Recommendation***

Reject Option 2 Gothic House Site

### Option 3 Marble Hill Park

#### **Extract from the Council's Brief**

- 4.77 *"The third option is to look at a location for the Gloriana on the opposite side of the River in the Twickenham area in Marble Hill Park close to Orleans House Gallery. This is slightly more complicated in as much that Marble Hill Park is not owned by the Council. The site is owned by English Heritage and the park, whilst a public park, it is in fact the gardens and grounds of Marble Hill House. The adjacent Orleans House Gallery is a Council asset although this is now held in trust.*
- 4.78 *Locating the Gloriana in this location would fit in with the Council's Twickenham Area Action Plan for the redevelopment of the Twickenham area, and in particular the creation of river park and cultural quarter running from the Marble Hill Park down to Diamond Jubilee gardens in central Twickenham.* This statement is noted as being incorrect in item 4.9 page 15 of the report.
- 4.79 *The issues around ownership of the site could prove complicated. However, there could be clear benefits to EH and Marble Hill House by the attraction of more visitors to the site which could impact on the number of visitors to the House which we understand has been falling over recent years.*
- 4.80 *Planning issues could be slightly more complex here the proposed site is Public Open Space and within the curtilage of two listed buildings as well as being within a designated conservation area*
- 4.81 *The brief for construction and mooring would follow the same lines as that for options 1 & 2 above" (see paragraph 4.25).*

#### **Suitability of a site in Marble Hill Park**

- 4.82 The brief focuses on opportunities in Marble Hill Park but we consider this to be impractical given the constraint of the Hammertons Ferry pontoon, the high river bank and the potential impact on the Marble Hill Park (see Figure 4.14 below).



Figure 4.14 Pontoon moorings, flood defences and Marble Hill Park

- 4.83 There is, however, a potential site in Orleans Gardens where there was a creek and C19th boathouse that has been demolished with the site occupied now by the café and part of the children's play area. We therefore evaluate this as 'Option 3 Orleans Gardens'.

### **Description of Development**

- 4.84 Plans and elevations of the proposed bargehouse, café, wet dock and mooring are shown as Figures 4.15 – 4.18.

#### ***Barge House***

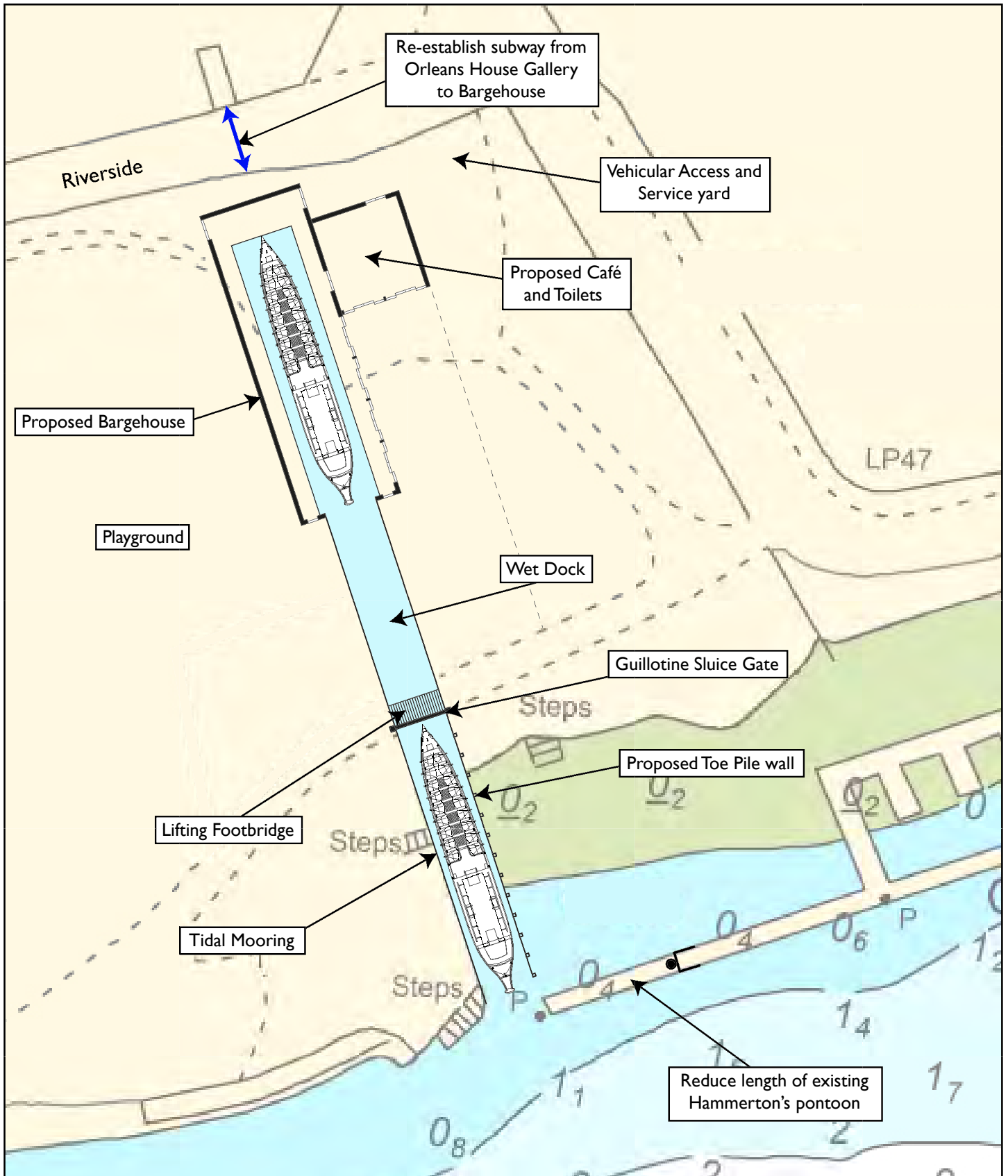
- 4.85 A bargehouse is proposed on the site of a C19th boathouse that served Orleans House (see Figure 4.19). This took the form of a covered wet dock and part of the quay wall, that formed the entrance from the River Thames, and a subterranean passage that linked the site to Orleans House survive. It is likely that the original wet dock survives under the children's play area and café that were built following the acquisition of Orleans Gardens by the Borough of Twickenham in 1928. There is evidence for this on the foreshore (see Figure 4.20).



*Figure 4.19 Extract from Ordnance Survey Edition of 1894-6 showing Orleans House and Boat House*

- 4.86 The proposed bargehouse is a lightweight structure that has a crew room, storage and potentially education facilities in on a mezzanine floor that extends across the northern half of the bargehouse. There is an adjoining café that provides a replacement for the existing café that would be demolished. It would be necessary to relocate two items of play equipment comprising a slide and a maze.





**Figure 4.15 - Option 3 : Orleans House Gardens, Riverside, Twickenham**

**Key**

- Proposed Bargehouse 31m x 10m
- Proposed Café and Toilets 9.6m x 8.8m

**ADAMS**  
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PLANNING LIMITED

6 Water Lane,  
Richmond,  
TW9 1TJ

Ref  
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Chart PLA/303 June 2010  
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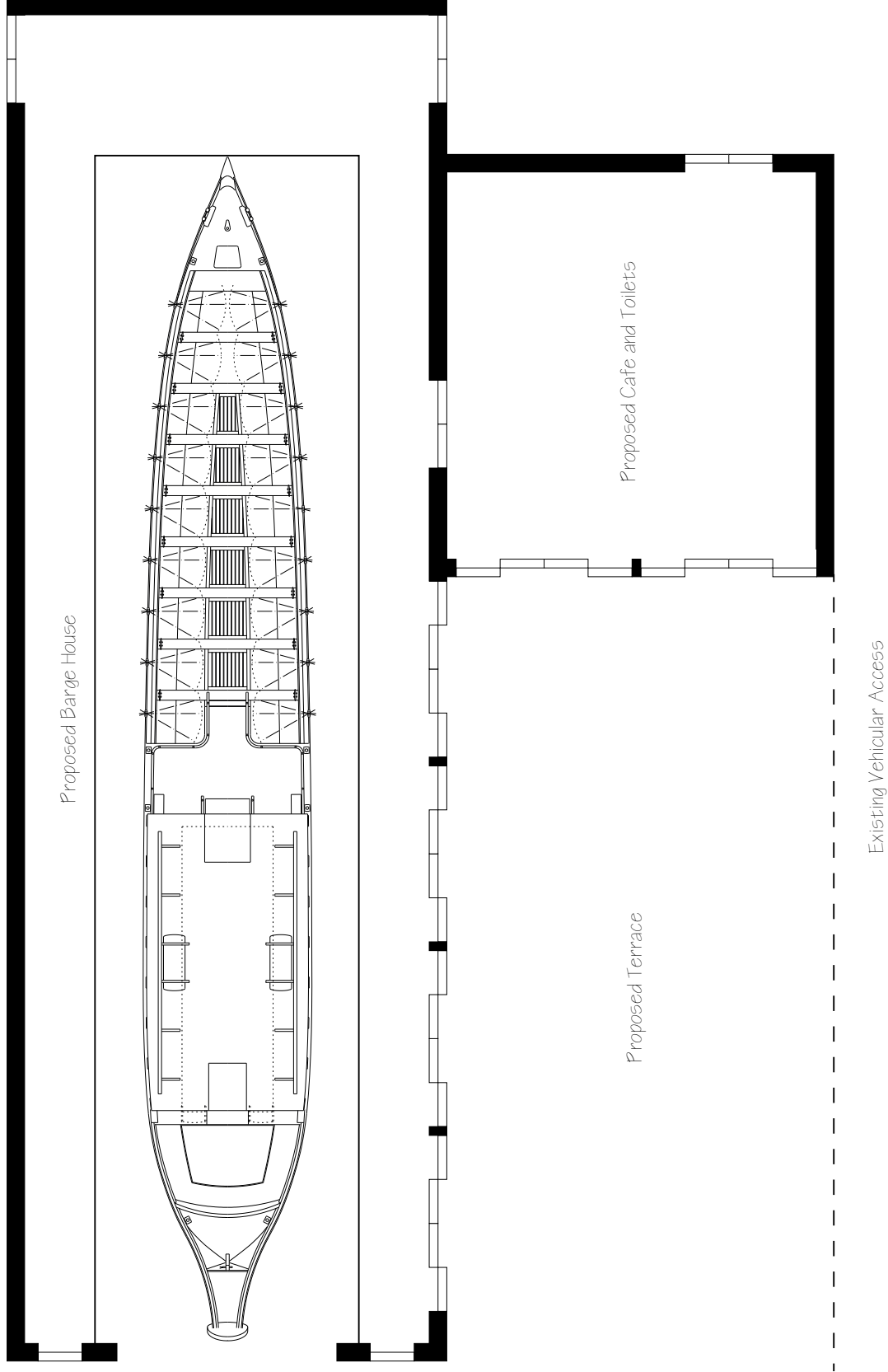
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M [REDACTED]  
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Scale: 1:500

**Figure 4.16 -**

Option 3 : Orleans House Gardens,  
Riverside, Twickenham

Retain Existing Childrens Play Area



Proposed Barge House

Proposed Terrace

Proposed Cafe and Toilets

Existing Vehicular Access

Barge House and Cafe  
Plan View 1:100

Ref: LBR/004/2405/13 Scale: 1:100@A3

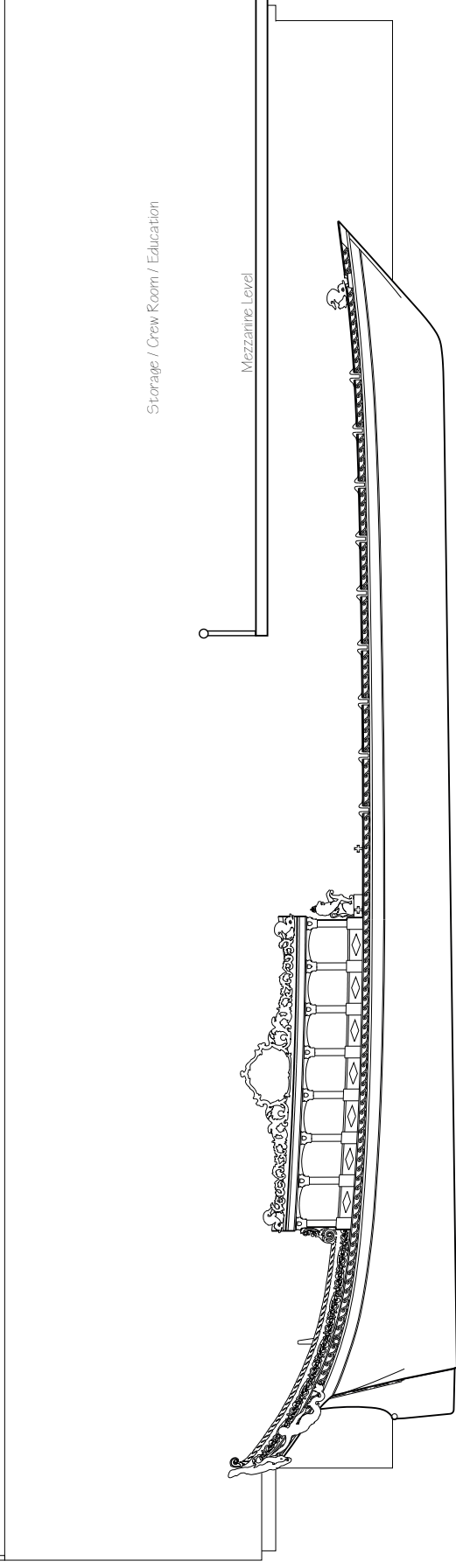
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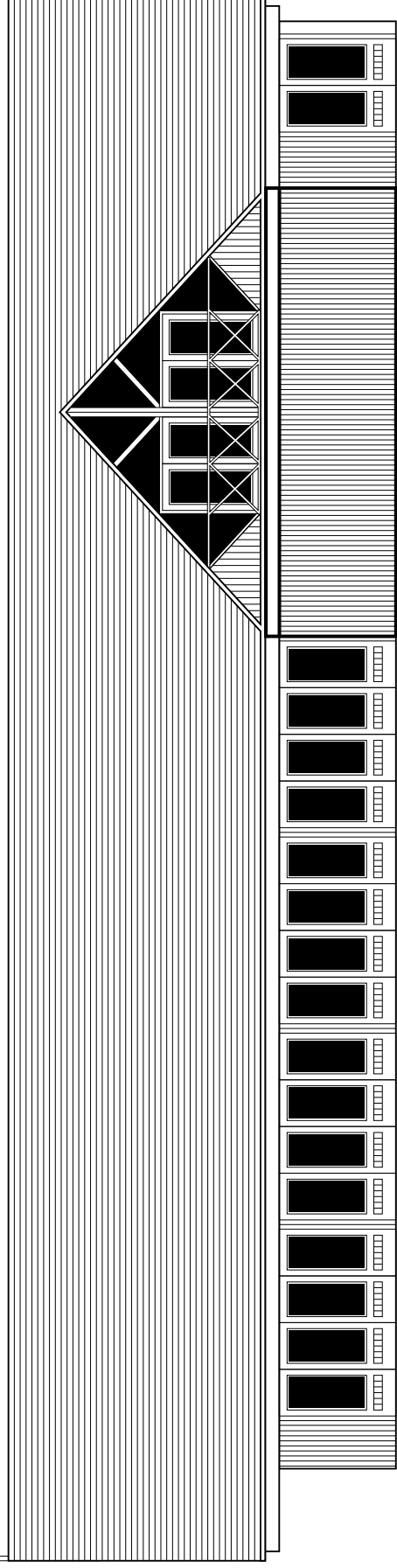
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Figure 4.17 -

Option 3 : Orleans House Gardens,  
Riverside, Twickenham



Barge House and Cafe  
Longitudinal Section 1:100



Barge House and Cafe  
East Elevation 1:100

Ref: LBR/004/2405/13 Scale: 1:100@A3

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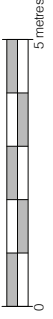
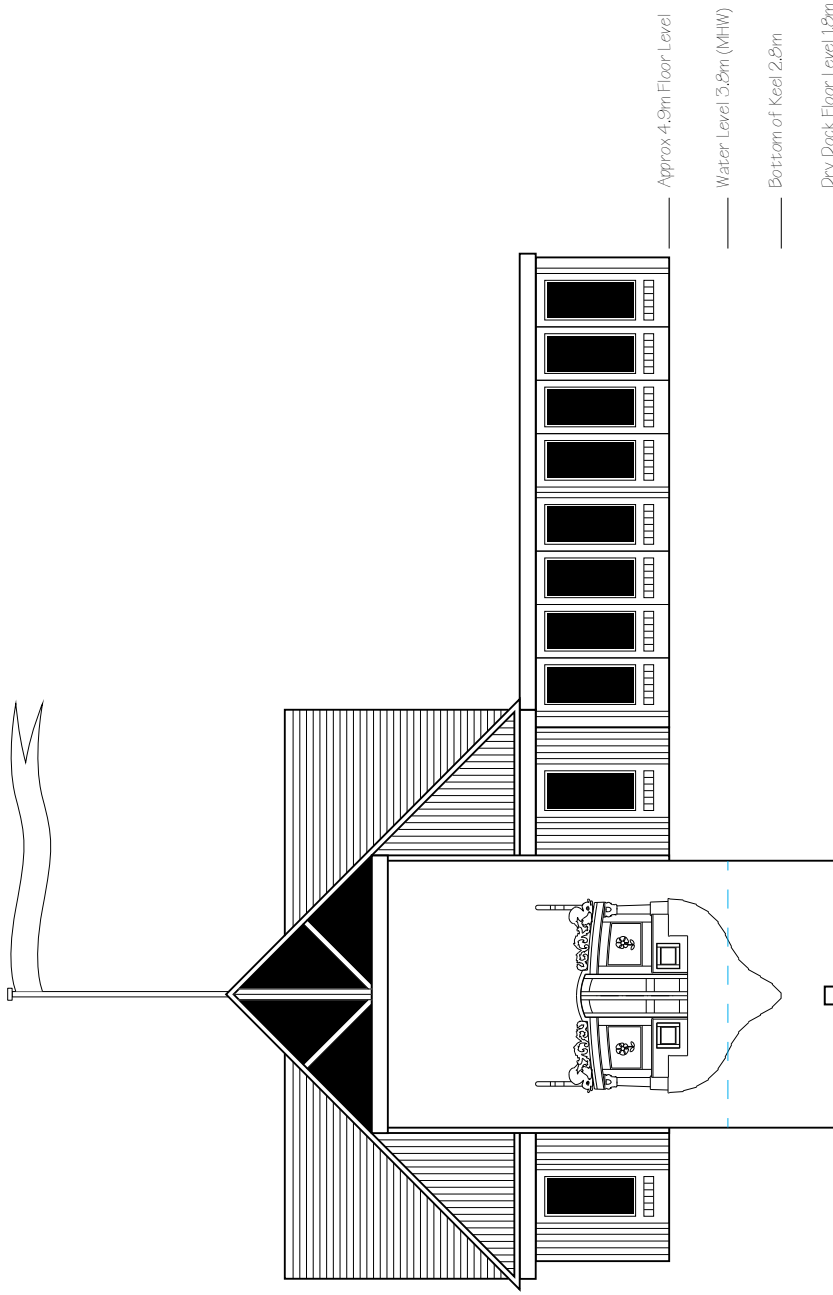


Figure 4.18 -

Option 3 : Orleans House Gardens,  
Riverside, Twickenham



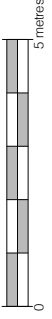
Barge House and Cafe  
South Elevation 1:100

Ref: LBR/004/2405/13 Scale: 1:100@A3

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**Wet dock**

- 4.87 Gloriana would be floated into the bargehouse at high tide by means of a wet dock. It would be necessary to construct a lifting bridge for pedestrians where the wet dock crosses the existing riverside footpath. A guillotine sluice gate would retain the water in the wet dock at Mean High Water so that Gloriana would be raised high enough for display.
- 4.88 It would be necessary to shorten the length of the Hammertons Ferry pontoon at its upstream end to enable access into the proposed bargehouse.

**Mooring**

- 4.89 A mooring is proposed using the quay wall that previously formed part of the entrance to the Orleans House boathouse. It would be necessary to undertake dredging of the foreshore to ensure sufficient water depth at the retained (half tide) water level.

**Access and Vehicle Parking**

- 4.90 There is an existing service vehicle access to the site from Riverside and there is adjacent public parking in Riverside and Orleans Road.

**Site Evaluation**



*Figure 4.20 site of former boathouse in Orleans Gardens*

**Land Ownership, Covenants and Cost of Site**

- 4.91 The site is mostly within the Council's registered title TGL283358. Part of the area proposed for use as the bargehouse and café is the site of an existing cafeteria that is subject to a lease



4.92



**Foreshore**

4.93 The plan attached to the 1928 conveyance to the Corporation includes the land on the foreshore but this is excluded from the registered land. It may have been excluded if the Land Registry ruled that it was affected by erosion but this appears unlikely as the bank is artificially supported and may have been altered deliberately. If the Council is unable to secure registered title, then it will belong to the Crown, in which case, the Council will need to secure the necessary rights to occupy the land, in addition to those required under the byelaws mentioned in the following paragraph.

4.94 PLA Byelaw 48 is relevant in relation to the creation of the wet dock. In addition, the Council would need to seek the consent and necessary rights to use that part of the foreshore where dredging is to take place. If it is necessary to deepen the river adjacent to the wet dock in order to provide sufficient draught, this will also require the consent of the PLA as it will involve interference with the river bed.

**Operation of the Bargehouse**

4.95 It would be possible to move Gloriana into the bargehouse at high tide, subject to an agreement with the operators of Hammertons Ferry to reduce the length of their mooring pontoon. It would also be possible to exhibit the gilded stern of Gloriana by moving her to the open part of the wet dock on summer days.

4.96 The glazed wall of the bargehouse adjoining the proposed terrace and café would work well together to provide a visitor attraction.

**Navigation and Marine matters**

4.97 The Harbour Master has no in principle objections to this option but would be interested to hear how the Master of the Gloriana envisages maneuvering the vessel into the wet dock. This is because the existing Hamilton Ferry pontoon as existing would obstruct easy access to the boathouse/wet dock/slipway. The PLA has commented that *“In general terms negotiation with the licensee is the way forward if you require them to modify their pontoon layout. Whilst licences do generally have clauses in them relating to revocation / alteration / removal of works we cannot exercise these powers lightly (For example navigational reasons, impact on river regime or a breach of the terms of the licence could be a reason to revoke a licence) and there is an appeals process to the Department for Transport”*.

**Public Open Space**

4.98 The area proposed for the bargehouse comprises public open space.

### **Heritage Issues**

- 4.99 [REDACTED] Inspector of Historic Buildings and Areas, has commented “*In principle, English Heritage would support the proposals outlined in your option 3, for a new boathouse and dock on the site of the long-lost former boathouse to Orleans House.*”
- 4.100 *The site is within the Twickenham Riverside Conservation Area, and adjacent to the Grade II\* registered landscape of Marble Hill Park. It is also close to Marble Hill House itself, which is listed at Grade 1, but unlikely to impact upon its setting. The Grade 1 listed Octagon Room of the former Orleans House overlooks the park in which the proposed boathouse would be situated, and views towards the river from this room should form an important consideration in your detailed design. We would recommend that the design of the boathouse is subtle and low-key to preserve the open character of this well-used part of the Riverside. It would not necessarily be appropriate to design a replica of the former, lost, boathouse, given the changes to the context of the land since it was brought into public ownership many years ago”.*

### **Loss of trees and scope for new planting**

- 4.101 Option 3 would result in the loss of the London plane tree shown growing out of the riverbank in Figure 4.21. It would be possible to plant a replacement tree within Orleans Gardens.

### **Visual Impact**

- 4.102 The proposed bargehouse would be some 8.5 metres high but it would be set well back from the riverbank. The barge house is in the vista from Ham House and should be designed so as to provide a focal point on this axis.



Figure 4.21 View of Orleans Gardens from Ham House

### **Education / Visitor Centre and Commercial Considerations**

- 4.103 The Assistant Development Control Manager has advised that it would be acceptable to relocate the existing café into the proposed development provided it has an equivalent floorspace. This would mean that there would be limited scope for a visitor centre other than the space within the bargehouse.



**Flood Risk**

- 4.104 The front of the proposed bargehouse is located within an area designated as Zone 3a flood risk where it would be necessary to meet the Exception Test to justify development in this location. It would be necessary to design the bargehouse to mitigate the effects of possible flooding.

**Nature Conservation**

- 4.105 The site of the bargehouse is developed for the café and play area already and has little value for nature conservation. The area shown for the proposed mooring may, however, be occupied by the Depressed River Mussel, *Pseudanodonta complanata*. This is only found in London on the north bank of the River Thames between Twickenham and Richmond. The mussel is not legally protected but it is a species of principal importance for the conservation of biodiversity in England and Richmond Council is one of the managing agents for its protection. It would be necessary to survey the site and, if found, undertake mitigation measures.

**Synergies with local tourism, arts and education venues**

- 4.106 In our view this location could work well with the Council's objectives of establishing a cultural quarter in this part of Twickenham with a physical link to Orleans House, via a reopened subway, and an added attraction in the vicinity of Marble Hill House. There would be the prospect of attracting visitors from across the water on the Surrey bank by means of Hammertons Ferry.

**Prospect for securing full planning permission and other necessary consents**

- 4.107 [REDACTED], the Council's Assistant Development Control Manager has advised that whilst contrary to policy, this site is the most suitable out of the three. The site is located within Metropolitan Open Land, adjacent to Other Site of Nature Importance, within a conservation area, adjacent to an Historic Park, within the Thames Policy Area and in proximity to listed buildings.
- 4.108 The advice says key areas to be addressed in a planning application include:
- 1 Address height adjacent to road – need lightweight construction – any building shouldn't be overbearing on this narrow road or out of keeping with park setting;
  - 2 Views across to Ham House;
  - 3 Establish relationship with river;
  - 4 How will be managed / linked to Gloriana – don't want to accept boat house then Gloriana doesn't get moored here;
  - 5 Scheme should replace facilities (café, toilets, playground) – should be accessible for all to use;
  - 6 Flooding issue – flood defences; and,
  - 7 Need more details of size / uses



### **Cost estimate**

- 4.109 Huntley Cartwright estimate the cost of Option 3 to be approximately £2,530,000.

### **Conclusion**

- 4.110 In our view this site offers the only realistic opportunity to develop a bargehouse within the three locations identified in the brief. There are a number of important issues that need to be resolved including:
1. Negotiation with Hammertons Ferry / Port of London Authority (PLA) to reduce the length of the pontoon mooring that obstructs the access to the proposed bargehouse.
  2. Negotiation with [REDACTED] the existing café [REDACTED]
  3. Demonstrate the exceptional case to justify development on Metropolitan Open Land.
  4. Detailed design of wet dock infrastructure including sluice gate to maintain water level at mean high water.
  5. Detailed design of building. Both Richmond Council town planning officers and English Heritage have indicated agreement in principle to a building on this site but have expressed concern about scale and bulk.
- 4.111 If these issues can be resolved we consider that a bargehouse in this location could work well in raising the number of visitors to the waterfront in Twickenham. It could provide a measure to add to the attractions of Orleans House Gallery and revive interest in the adjoining Marble Hill House and Park. It would provide a new focal point for the view from Ham House.

### **Recommendation**

Take Option 3 forward to resolve issues 1 – 5 above

#### **Option 4**

#### **Use an existing boatyard and provide a display mooring at Richmond**

##### ***Extract from the Council's Brief***

- 4.112 *"There is a fourth option that we would like to be considered. This option is to look at providing a secure and safe mooring with jetties and pontoons etc. only without the construction of a boathouse, café, visitors centre and slipway etc.*
- 4.113 *The thought here is that the Gloriana could be brought to the mooring during the summer months (when not in use) and placed in the mooring on public view for visitors and the public to enjoy. During the winter the barge could be taken away to an existing boathouse for storage.*
- 4.114 *This option should provide considerable savings in terms of capital investment and ongoing revenue as there would be no requirement to construct and maintain a boathouse and other facilities.*
- 4.115 *In terms of location it is felt that those referred to in options 1 & 2 above would be preferred. However, we are happy for the consultant undertaking the feasibility study to look at alternative locations along the river within the Borough for this option."*

##### ***Current arrangements***

- 4.116 The operators of Gloriana used a site provided by the PLA at Denton Wharf, Gravesend in 2012/13 for winter storage and maintenance that extended from mid-November to mid-April. This site is available for 2013/14.
- 4.117 Home moorings are available for Gloriana, at no charge, at St. Katharine Docks and Imperial Wharf. The St. Katherine Docks mooring are secure being in the dock basin that has 24 hour security.

#### **Moorings at Richmond**

- 4.118 We have identified two potential moorings at Richmond as follows:
1. Buoy mooring below Richmond Bridge; and
  2. Pontoon mooring above Richmond Bridge.

##### ***1 Buoy mooring below Richmond Bridge***

- 4.119 [REDACTED] of Richmond Bridge Boathouses, the boatbuilder for Gloriana, has offered a buoy mooring below Richmond Bridge

(i)



(ii)



*Figure 4.22 Site for buoy mooring between Richmond Bridge and Richmond Ait*

***Pontoon mooring above Richmond Bridge***

4.120 A pontoon mooring upstream of Richmond Bridge is shown for Option 2. We recommend that the option of locating a bargehouse here should be rejected but it would be possible to locate a pontoon mooring here. We have consulted Colliers Launches, who operate Richmond Pier as part of the Westminster Passenger Association (Upriver) Ltd., and they have no objection to the location. They have suggested that the brow (or gangway) to the pontoon could be sited at the upstream end of Richmond Pier. The PLA Harbour Master has advised that if a passing vessel causes wash this may lead to complaints and damage to the vessel moored in this location.

***Position of Gloriana's operators with respect to a mooring at Richmond***

4.121 The operators have indicated that they would not wish to leave Gloriana on a mooring at Richmond for extended periods due to concerns about vandalism and trophy hunters. We consider that these concerns are well founded and our consultation with Colliers Launches for this study has highlighted their experiences of vandalism at Richmond during the night. This has included smashed windows and a break-in to a passenger vessel on a buoy mooring.

4.122 The operators of Gloriana have indicated that if, for example, Option 3 Orleans Gardens is developed then they would be able to move Gloriana for

display at Richmond from time to time when the vessel is not in use elsewhere.

### **The use of an existing boatyard for storage**

- 4.123 Existing boatyards in Richmond Borough with large slipways are heavily booked during the winter for maintenance work on passenger boats and do not have spare capacity to store Gloriana.
- 4.124 There are two sites owned by the Council that have potential to be used for winter storage of Gloriana. These are:
- (i) Parish Draw Dock, Lower Sunbury Road, Hampton
  - (ii) Cruisemaster boatyard, Eel Pie Island

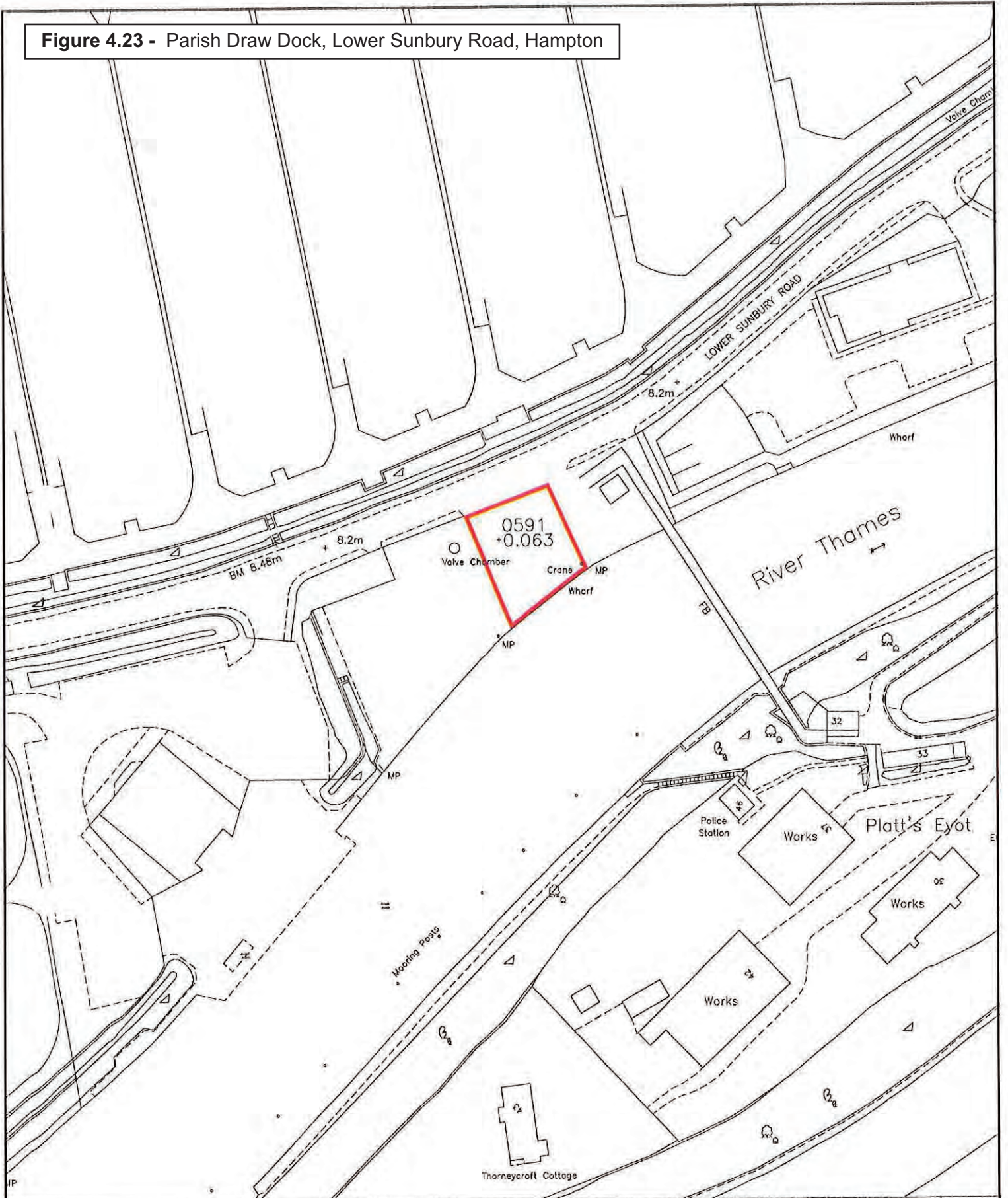
#### ***Parish Draw Dock, Lower Sunbury Road, Hampton***

- 4.125 This site is shown in Figure 4.23. It is currently used to provide moorings and also for car parking in relation to the adjoining Platt's Ait. The site identified is an open area similar to Denton Wharf that is currently used to accommodate Gloriana during the winter maintenance period. The site has good public access but it is remote from the main visitor attractions in the Borough of Richmond. It would be necessary to install a crane or slipway together with a bargehouse if it is to meet the requirement for safe storage and maintenance. This would require a considerable investment.
- 4.126 Work would be needed to establish the legal status of the Parish Draw Dock. Our work for other local authorities on public quays has identified legal constraints to enclosing areas where the public has a right to land and load goods and this would need to be researched before any proposals are developed for this site.

#### ***Cruisemaster boatyard, Eel Pie Island***

- 4.127 The Cruisemaster site is shown in Figure 4.24. It is approximately 50 metres long and it is 15.5 metres wide at the river frontage. The site narrows to some 8 metres at the northern end. A minimum of 2 metres would be needed for working space either side of Gloriana. This indicates a minimum footprint for a maintenance area of 30 x 8 metres. The site is the right size and shape to be able to accommodate Gloriana but the slipway is currently only suitable for smaller vessels.
- 4.128 The PLA chart shows two slipways. A long one that is about 4 metres wide and a short one that is about two metres wide. The long slipway extends along the length of the site. Figure 4.24 indicates a building that was approximately 23 metres long x 6 metres wide was located over the slipway. This building has been demolished. The smaller building to the side of the slipway remains. It is in poor condition. There is a slipway winch at the northern end of the site.

**Figure 4.23 - Parish Draw Dock, Lower Sunbury Road, Hampton**



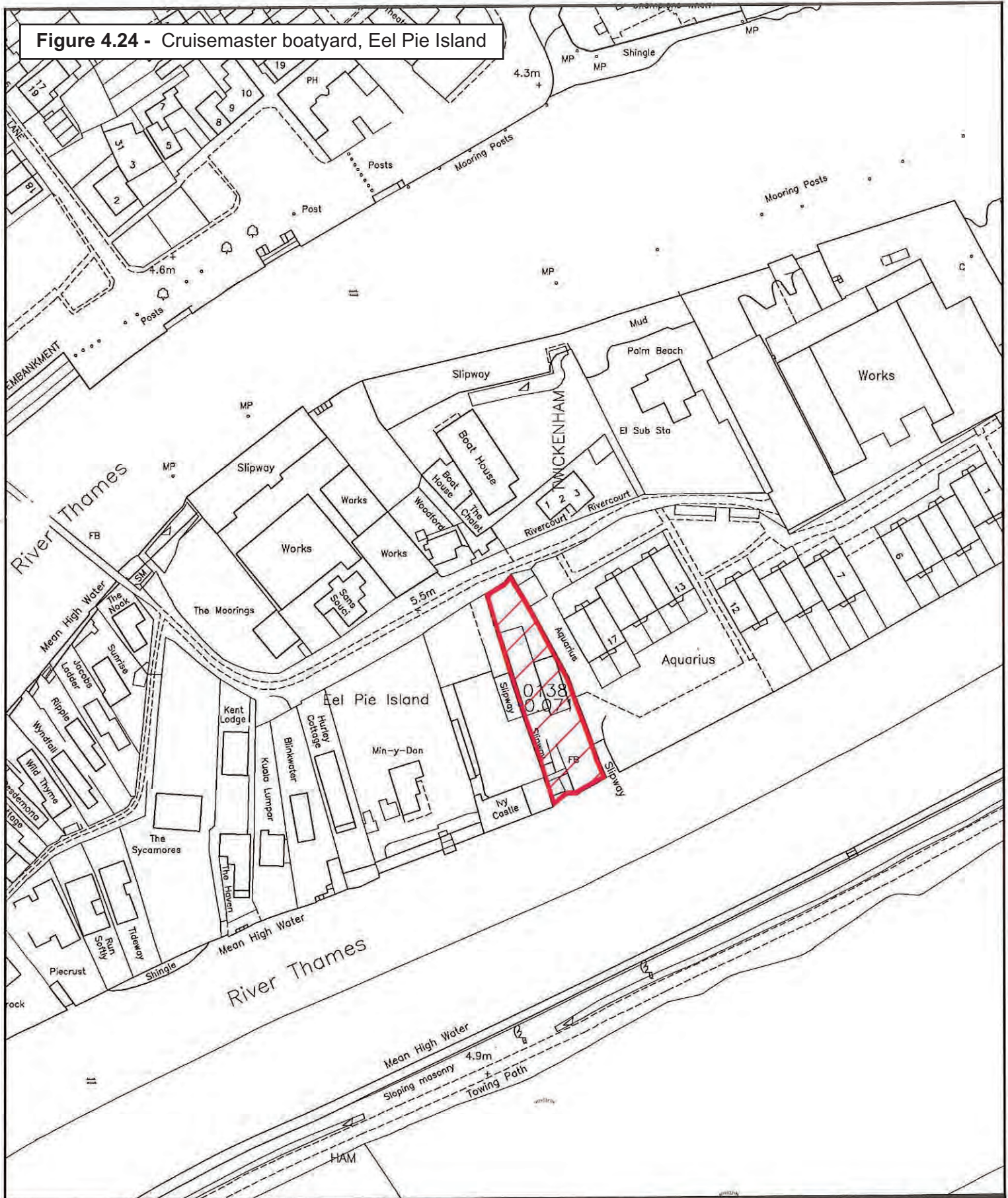
TITLE  
 0591 LOWER SUNBURY ROAD, PARISH DRAWDOCK

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 Scale 1:1250  
 Date MARCH 2009

**Figure 4.24 - Cruisemaster boatyard, Eel Pie Island**

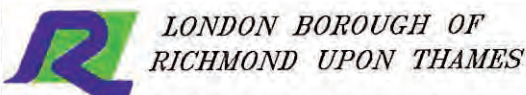


TITLE  
0138 EEL PIE ISLAND BOATYARD PREMISES, TWICKENHAM

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- 4.129 The site presents an opportunity but there are also some significant constraints that include:
1. The lack of a mooring long enough to berth Gloriana before and after the haul out operation;
  2. The need to widen the slipway and to lower the angle of the slipway so that it is more suitable for a 27 metres long vessel; and,
  3. Potential difficulties with the haul out operation when the River Thames is in flood condition as this slipway is sited on the main river channel.
- 4.130 It would probably be necessary to reconstruct the slipway to widen it and provide a lower angle of entry into the River Thames. In addition, it may be necessary to strengthen the existing concrete slab of the slipway to take the 10 tonnes weight of Gloriana. These works could prove to be expensive as the slipway is bounded by a party wall on the upstream side that supports 'Ivy Castle', a residential property.
- 4.131 As with other Eel Pie boatyards, Cruisemaster has residential neighbours and any proposals will need to be carefully worked out and consulted on, but the site is safeguarded for boatyard use and the maintenance of wooden boats is not a particularly noisy activity.

**Unit 2 Platts Eyot, Hampton**

- 4.132 Planning officers at Richmond Council have drawn attention to the opportunity to use a boatshed at Platts Eyot to provide a winter storage option for Gloriana. We assessed this site in 2007 as part of a study of boatyard facilities on the River Thames for the GLA (see page 48 at <http://legacy.london.gov.uk/mayor/planning/docs/boatyard-report.pdf>). Unit 2 has a slipway that is 36.5 metres long x 4.8 metres wide. [REDACTED] for the management of the Gloriana has approached the Terrence Hill Group to enquire whether the slipway is available. Terrence Hill Group has advised [REDACTED] that the slipway is not available [REDACTED]

**Conclusion**

- 4.133 We have identified a potential buoy mooring below Richmond Bridge and a site for a new pontoon mooring upstream of Richmond Pier. The operators have indicated that they would not wish to leave Gloriana on a mooring at Richmond for extended periods due to concerns about potential vandalism and trophy hunters but mooring on an occasional basis, with adequate security, is viable.

**Recommendation: Reject the split site option of using an existing boatyard for winter storage and a River Thames mooring for public display**

## 5 CONSULTATION ON DRAFT RECOMMENDATIONS WITH HAMMERTONS FERRY, LONDON BOROUGH OF RICHMOND UPON THAMES AND THE GLORIANA TEAM AND BECKETT RANKINE

### ***Meeting with LBRuT***

- 5.1 [REDACTED] presented a draft report to Lord True, Leader of Richmond Council, on 4<sup>th</sup> June with an explanation of why the report concludes that Orleans Gardens is the best location for the development of a bargehouse.

### ***Meeting with Hammertons Ferry***

- 5.1 A meeting was held on site between [REDACTED] of LBRuT, [REDACTED] and [REDACTED] of Hammertons Ferry and [REDACTED] on 27 June to discuss Option 3 Orleans Gardens within the context of the current operation of Hammertons Ferry. A note of this meeting is attached as Appendix 6.

- 5.2 The owners of Hammertons Ferry indicated their agreement in principle to shortening the existing pontoon mooring to enable access to the proposed bargehouse at Orleans Gardens. This would be subject to detailed design and making the appropriate agreements concerning the re-arrangement of existing pontoon mooring.

### ***Meeting between LBRuT and the Gloriana team***

- 5.4 On 8<sup>th</sup> July Lord True showed Lord Sterling the Orleans Gardens site in the context of other regeneration proposals on the Twickenham waterfront. These included the proposed children's play area at Champions Wharf.

- 5.5 Lord Sterling indicated that the site could prove suitable to provide a permanent home for the Gloriana provided it is possible to design the bargehouse in such a way that it can be accessed when the river level is at the half tide, retained level so that it is not necessary to wait until high tide to berth the vessel. [REDACTED] advised that it would be necessary to seek advice from a marine consulting engineer on this matter and then report back. Lord Sterling indicated the urgency of this matter and asked for a response by Friday 12<sup>th</sup> July.

### ***Meeting with [REDACTED] of Beckett Rankine***

- 5.6 A meeting was held between [REDACTED] a director of Beckett Rankine, Marine Consulting Engineers, [REDACTED] of LBRuT and [REDACTED] at Orleans Gardens on 10<sup>th</sup> July 2013. [REDACTED] outlined the engineering advice sought from Beckett Rankine as to the feasibility of securing access by water to the proposed bargehouse when the river level is at the half-tide, retained level. [REDACTED] indicated that, in his opinion, it would be possible to obtain access when the river is at the retained level but this would be subject to the resolution of a number of technical issues as described in the note that [REDACTED] supplied by e-mail on 11<sup>th</sup> June. This is attached as Appendix 8. The advice from [REDACTED] was sent to LBRuT on 11<sup>th</sup> June so that it could be shared with the Gloriana team.

### ***Consultation with the Environment Agency***

- 5.7 Following the meeting on site on 8<sup>th</sup> July [REDACTED] consulted the Environment Agency on the draft proposals for Orleans Gardens that included the requirement expressed by the Gloriana team for access to the proposed bargehouse at all states of the tide.



- 5.8 [REDACTED] of the Environment Agency replied on 7<sup>th</sup> August and was supportive of the proposals, *“We welcome proposals which “make space for water” and restore more natural environmental processes which can deliver multiple environmental, social and economic benefits”*. The full text of his letter is attached as Appendix 9.
- 5.9 The letter highlighted a number of issues that will need to be addressed in the development of the proposals to meet the requirements of the Environment Agency. These relate to:
- Flood risk management
  - Flood defences and climate change
  - Biodiversity and fisheries
- 5.10 The Environment Agency advises that a bargehouse is considered to be a form of development that is compatible with a location in Flood Zone 3B. The café element of the proposal is classed as unsuitable development at this location but the Environment Agency would have no objection to the replacement of the footprint of the existing café on a like for like basis as this would not be increasing / introducing new risk into the functional flood plain.
- 5.11 The one element of the draft proposals that is of concern to the Environment Agency is the flood risk presented by reopening the subway connection to the grounds of Orleans House Gallery, as set out in the following comment:
- “Flood defences  
It is essential the level of flood defence protection is maintained for this area of high risk and regular flooding at high tides. We have concerns on the potential negative impacts of reinstating the subway from Orleans House Gallery to the barge house. We recommend that an alternative form of access is considered or we agree ways to maintain flood defences.”*
- 5.12 The Environment Agency has offered to review proposals as they are developed, prior to submission, to assist in the design process.

### **Conclusion**

- 5.13 The constraints and opportunities that we have identified in this study indicate, in our view, the only option that meets the full feasibility study objectives is Option 3 Orleans Gardens.

## **Appendix 1**

### **GLORIANA SUMMER EVENTS 2013**

#### ***Draft Programme of events for QRB 'Gloriana' to attend***

15-17 May	Test events, trial rowing, etc. Thames Ditton/Hampton Court
1 June	GB Row 2013 (Round UK Rowing Race) Location: Tower Bridge
15-16 June	Diamond Jubilee Regatta Location: Windsor
21-23 June	The Samsung Rowing World Cup Location: Eton Dorney
24-26 June	Waterside Inn photocall
29 June	To Windsor
1 July	Presentation of the Olympic Cauldron to River and Rowing Museum Location: Henley-on-Thames
3-7 July	Henley Royal Regatta Location: Henley-on-Thames
9 July	Coronation Row attended by Her Majesty the Queen Location: Windsor Great Park
10-14 July	The Henley Festival Location: Henley-on-Thames
20-21 July	Traditional Boat Rally Location: Fawley Meadows, Henley-on-Thames

#### **CONFIRMED EVENTS**

Auction cruises

Hampton Court Palace event(s)

LYR training events

**CORPORATE EVENTS**

## **Appendix 2**

### **Extracts from the London Plan 2011**

#### **POLICY .17 METROPOLITAN OPEN LAND**

##### **Strategic**

- A The Mayor strongly supports the current extent of Metropolitan Open Land (MOL), its extension in appropriate circumstances and its protection from development having an adverse impact on the openness of MOL.

##### **Planning decisions**

- B The strongest protection should be given to London's Metropolitan Open Land and inappropriate development refused, except in very special circumstances, giving the same level of protection as in the Green Belt. Essential ancillary facilities for appropriate uses will only be acceptable where they maintain the openness of MOL.

#### **POLICY 7.27 BLUE RIBBON NETWORK: SUPPORTING INFRASTRUCTURE AND RECREATIONAL USE**

##### **Planning decisions**

- A Development proposals should enhance the use of the Blue Ribbon Network, in particular proposals:
  - a that result in the loss of existing facilities for waterborne sport and leisure should be refused, unless suitable replacement facilities are provided
  - b should protect and improve existing access points to (including from land into water such as slipways and steps) or alongside the Blue Ribbon Network (including paths). New access infrastructure into and alongside the Blue Ribbon Network will be sought.
  - c should protect waterway support infrastructure such as boatyards, moorings, jetties and safety equipment etc. New infrastructure to support water dependent uses will be sought. New mooring facilities should normally be off line from main navigation routes, i.e. in basins or docks.

## **Extracts from the LBRuT Core Strategy adopted April 2009**

### **6 The Spatial Strategy**

6.0.1 The spatial strategy reinforces Richmond's role as an outer London Borough with a high quality urban and historic environment and open landscape, and as a sport and tourist destination. The overarching principles are to achieve a high level of sustainability in the borough, maintain and enhance our open space and our heritage and conservation areas, and ensuring all communities have access to appropriate housing, employment opportunities, services and facilities. The Spatial Strategy is supported by the Core Policies set out in section 8.

#### **8.2.4 CP10 Open Land and Parks**

The open environment will be protected and enhanced. In particular: 10.A The Borough's green belt, metropolitan open land and other open land of townscape importance, World Heritage Site (Royal Botanic Gardens, Kew), land on the Register of Parks and Gardens of Special Historic Interest, green chains and green corridors will be safeguarded

#### **8.2.5 CP11 River Thames Corridor**

11.A The natural and built environment and the unique historic landscape of the River Thames corridor within the Borough will be protected and enhanced, and the special character of the different reaches identified in the Thames Strategy and the Thames Landscape Strategy respected.

11.B River related industries will be protected, and encouraged.

#### **8.2.1 CP7 Maintaining and Improving the Local Environment**

7.A Existing buildings and areas in the Borough of recognised high quality and historic interest will be protected from inappropriate development and enhanced sensitively, and opportunities will be taken to improve areas of poorer environmental quality, including within the areas of relative disadvantage of Castlenau, Ham, Hampton Nurserylands, Heathfield and Mortlake.

7.B All new development should recognise distinctive local character and contribute to creating places of a high architectural and urban design quality that are well used and valued. Proposals will have to illustrate that they:

- (i) are based on an analysis and understanding of the Borough's development patterns, features and views, public transport accessibility and maintaining appropriate levels of amenity;
- (ii) connect positively with their surroundings to create safe and inclusive places through the use of good design principles including layout, form, scale, materials, natural surveillance and orientation, and sustainable construction.

#### **8.1.4 CP4 Biodiversity**

4.A The Borough's biodiversity including the SSSIs and Other Sites of Nature Importance will be safeguarded and enhanced. Biodiversity enhancements will be encouraged particularly in areas of deficiency (parts of Whitton, Hampton, Teddington, Twickenham and South Kew), in areas of new development and along wildlife corridors and green chains such as the River Thames and River Crane corridors.

4.B Weighted priority in terms of their importance will be afforded to protected species and priority species and habitats in the UK, Regional and Richmond upon Thames Biodiversity Action Plans

## **Extracts from the Development Management Plan adopted November 2011**

### **Policy DM OS 2 Metropolitan Open Land**

The borough's Metropolitan Open Land will be protected and retained in predominately open use. Appropriate uses include public and private open spaces and playing fields, open recreation and sport, biodiversity including rivers and bodies of water and open community uses including allotments and cemeteries.

It will be recognised that there may be exceptional cases where appropriate development such as small scale structures is acceptable, but only if it:

1. Does not harm the character and openness of the metropolitan open land; and
2. Is linked to the functional use of the Metropolitan Open Land or supports outdoor open space uses; or
3. Is for essential utility infrastructure and facilities, for which it needs to be demonstrated that no alternative locations are available and that they do not have any adverse impacts on the character and openness of the metropolitan open land. Improvement and enhancement of the openness and character of the Metropolitan Open Land and measures to reduce visual impacts will be encouraged where appropriate. When considering developments on sites outside Metropolitan Open Land, any possible visual impacts on the character and openness of the Metropolitan Open Land will be taken into account.

### **Policy DM OS 11 Thames Policy Area**

The special character of the Thames Policy Area (TPA), as identified on the Proposals Map, will be protected and enhanced by:

1. ensuring development protects the individuality and character, including the views and vistas, of the river and the identified individual reaches;
2. discouraging land infill and development which encroaches into the river and its foreshore other than in exceptional circumstances, which may include where necessary for the construction of river dependent structures such as bridges, tunnels, jetties, piers, slipways etc.;
3. ensuring development establishes a relationship with the river and takes full advantage of its location, addressing the river as a frontage, opening up views and access to it and taking account of the changed perspective with tides;
4. encouraging development which includes a mixture of uses, including uses which enable the public to enjoy the riverside, especially at ground level in buildings fronting the river;
5. protecting and promoting the history and heritage of the river, including landscape features, historic buildings, important structures and archaeological resources associated with the river and ensuring new development incorporates existing features;
6. protecting and improving existing access points to the River Thames, its foreshore and Thames Path, including paths, cycle routes, facilities for launching boats, slipways, stairs etc. and encouraging opening up existing access points to the public, both for pedestrians and boats;
7. requiring public access as part of new developments alongside and to the River Thames, including for pedestrians, boats and cyclists, where appropriate;
8. increasing access to and awareness of the river including from the town centres.

### **Policy DM OS 12 Riverside Uses**

Existing river-dependent and river-related uses that contribute to the special character of the River Thames, including river-related industry (B2) and locally important wharves, boat building sheds and boatyards and other riverside facilities such as slipways, docks, jetties, piers and stairs will be protected and enhanced by:

- 1 ensuring development on sites along the river is functionally related to the river and includes river-dependent or river-related uses where possible, including gardens which are designed to embrace and enhance the river, and to be sensitive to its ecology;
- 2 requiring an assessment of the effect of the proposed development on any existing river-dependent uses or riverside gardens on the site and their associated facilities on- and off-site; or requiring an assessment of the potential of the site for river-dependent uses and facilities if there are none existing
- 3 ensuring that residential uses within mixed use schemes along the river are compatible with the operation of the established river-related and river-dependent uses;
- 4 ensuring that new riverside development incorporates existing river features and takes into account the changing perspective with tides, flood risk, climate change, biodiversity and navigation;
- 5 encouraging setting back development from river banks and existing flood defences along the River Thames, where practicable.

### **Policy DM OS 13 Moorings and Floating Structures**

Existing houseboats, moorings and other floating structures are an established part of the river scene and will be protected. The River Thames is designated Metropolitan Open Land and the character and openness of the River Thames will be safeguarded from inappropriate uses.

Proposals for new houseboats including extensions to existing houseboats, moorings and other floating structures will only be permitted if they are appropriate developments compliant with Metropolitan Open Land policy. There may be exceptional cases where development is acceptable but only:

- 1 if it does not harm the character, openness and views of the river, by virtue of its design and height;
- 2 if the proposed use is river-dependent;
- 3 if it is a replacement of existing facilities;
- 4 if there is no interference with the recreational use of the river, riverside and navigation;
- 5 if there is adequate provision of land based infrastructure and support facilities; and,
- 6 if the proposal is of wider benefits to the community.

### **Policy DM HD 1 Conservation Areas - designation, protection and enhancement**

The Council will continue to protect areas of special significance by designating Conservation Areas and extensions to existing Conservation Areas using the criteria as set out in PPS 5 and as advised by English Heritage. The Council will prepare a Conservation Area Appraisal and Management Plan for each Conservation area, these will be used as a basis when determining proposals within or where it would affect the setting of, Conservation Areas together with other policy guidance. Buildings or parts of buildings, street furniture, trees and other features which make a positive contribution to the character, appearance or significance of the area should be retained. New development (or redevelopment) or other proposals should

conserve and enhance the character and appearance of the area.

**Policy DM OS 4 Historic Parks, Gardens and Landscapes**

Parks and gardens as well as landscapes of special historic interest included in the Register compiled by English Heritage and other historic parks, gardens and landscapes referred to in para 4.1.11 below, will be protected and enhanced. Proposals which have an adverse effect on the settings, views, and vistas to and from historic parks and gardens, will not be permitted.

4.1.11 Richmond borough has currently 14 open spaces on the English Heritage register of historic parks and gardens, including Richmond Park, Bushy Park, Hampton Court Park, Royal Botanic Gardens Kew (including Old Deer Park), Ham House, Marble Hill House, Strawberry Hill, Hampton Court House, Richmond Terrace Walk, Pope's Garden, York House Gardens, Terrace Gardens and **Bucclough Gardens (Richmond Hill)** and Teddington Cemetery. These areas are shown on the Proposals Map but there are also other areas which could be included on the Register and which merit protection and enhancement, including the following: Kew Green, **Orleans Gardens**, Radnor Gardens and Richmond Green.

**Policy DM SD 6 Flood Risk**

Development will be guided to areas of lower risk by applying the Sequential Test as set out in paragraph 3.1.35. Unacceptable developments and land uses will be restricted in line with PPS25 and as outlined below. Developments and Flood Risk Assessments must consider all sources of flooding and the likely impacts of climate change. Where a Flood Risk Assessment is required and in addition to the Environment Agency's normal floodplain compensation requirement, attenuation areas to alleviate fluvial and/or surface water flooding must be considered where there is an opportunity. The onus is on the applicant/developer for proposals on sites of 10 dwellings or 1000sqm of non-residential development or more to provide evidence and justification if attenuation areas cannot be used. In areas at risk of flooding, all proposals on sites of 10 dwellings or 1000sqm of non-residential development or more are required to submit a Flood Warning and Evacuation Plan.

### Appendix 3 Comments of Assistant Development Control Manager LBRuT

**From:** [REDACTED]  
**Date:** Monday, 8 April 2013 18.41  
**To:** [REDACTED]  
**Subject:** Re Gloriana Meeting with [REDACTED] 5<sup>th</sup> April 10.30 re Planning Policy Context

Nice to meet you last week regarding the above. As promised a couple of points (I also have discussed with the UD and policy officers)

#### *Petersham Road site:*

- Within conservation area, MOL, Thames Policy Area; area restricting further A3 uses, adjacent to Other Site of Nature Importance
- Think this is a none starter – land use concerns, ground levels, tree issues, accessibility, setting of historic buildings, design and scale concerns

#### *Buckleuch Gardens:*

Again, none starter:

- Within other site of nature importance, MOL, Historic Parks and Gardens
- Prominence, harm character of open / rural Petersham Meadows,

#### *Orleans Gardens:*

- Whilst contrary to policy, most suitable out of the three
- With Metropolitan Open Land, Adjacent to Other Site of Nature Importance, Within conservation Area, Adjacent to Historic Park, Thames Policy Area, Proximity to listed buildings
- Key areas:
  - Address height adjacent to road – need lightweight construction – any building shouldn't be overbearing on this narrow road or out of keeping with park setting.
  - Address views across to Ham House
  - Establish relationship with river
  - How will be managed / linked to Gloriana – don't want to accept boat house then Gloriana doesn't get moored here.
  - Scheme should replace facilities (café, toilets, playground) – should be accessible for all to use
  - Flooding issue – flood defences
  - Need more details of size / uses

I think the feasibility study should also consider other sites before building in MOL considered: For example, how about Platts Eyot (Hampton); or store on Eel Pie and shown at Twickenham Riverside with associated buildings there;

Environment Agency contact: [REDACTED]  
English Heritage contact: [REDACTED]  
Greater London Archaeological Advisory Service – 020 7 973 3712

#### **Regards**

[REDACTED]

#### **Assistant Development Control Manager**

This e-mail contains my opinion only that I give without prejudice to any consideration that the Local Planning Authority may give to an application on this site in the future.



#### Appendix 4 Comments of the Port of London Authority

**From:** [REDACTED]  
**Date:** Tuesday, 21 May 2013 16:52  
**To:** [REDACTED]  
**CC:** [REDACTED]  
**Subject:** Location for Royal Row Barge

Hi [REDACTED]

I asked internally for some high level comments bearing in mind that you are undertaking a feasibility study. I have not had the chance to send round for comment your email from this morning but I think I can cover the issues in general terms.

Option 1 – The Harbour Master has no in principle objections to this option but would be interested to hear how the Master of the Gloriana envisages manoeuvring the vessel into the ‘wet dock/slipway.’

There is Crown ownership in the general vicinity so it depends on exactly where you draw your red line as to whether Crown land is affected. If it is on Crown foreshore then consent will be required from the Crown as well as from the PLA.

I can see an outfall on the plans so we would want to understand if there are any implications for this river work.

Option 2 – The Harbour Master has concerns about this option as it would mean Gloriana berthing on the floating pontoon in the river. If a passing vessel causes wash this may lead to complaints and damage to the vessel

What type of crane is proposed to lift Gloriana from the river, over the public tow path and into the barge house. It is questioned whether it is feasible to get a mobile crane along the tow path or whether it would have to be permanent

I believe the Crown own the foreshore in this location and therefore consent will also be required from them.

Option 2 plan attached to today's email. Similar issues to the original option 2 plan but access would be provided to the vessel. I have not had the chance to pass this plan past the Harbour Master so I cannot add to the navigational comments set out above.

With both option 2's we would need to look at whether the stairs are on a River Works Licence and what access/egress rights are associated with them and whether these would be affected by the proposal.

Option 3 – As with option 1 The Harbour Master has no in principle objections to this option but would be interested to hear how the Master of the Gloriana envisages manoeuvring the vessel into the ‘wet dock/slipway.’

The existing Hamilton Ferry pontoon as existing would obstruct easy access to the boathouse/wet dock/slipway. In general terms negotiation with the licensee is the way forward if you require them to modify their pontoon layout. Whilst licences do generally have clauses in them relating to revocation/alteration/removal of works we cannot exercise these powers lightly (For example navigational reasons, impact on river regime or a breach of the terms of the licence could be a reason to revoke a licence) and there is an appeals process to the Department for Transport.

There are also a number of ‘steps’ shown on the chart extract and entries on our river works licensing system relating to works such as ‘cutting for barge dock.’ I have not had the

chance to look at any of the entries to see who the various licensee's are but there may be similar issues to resolve with these works as there are with the Hammerton Ferry's works. As with all options we would want to see full details in due course but we would be particularly interested in the boardwalk and footbridge with this option. Who would operate/manage it etc.

Environment have commented that the issues would depend upon the construction/renovation of the sites, and therefore an assessment of the impacts would be helpful. Key points would be the use of the dock/quay and sediment and contaminant control. Access to the entrance may also be restricted by the tide and dredging may have a significant environmental impact – it does not tend to be long lasting in the Upper District and this would have cost implications for your client.

The PLA's marine engineer has advised that from a marine engineering perspective option 1 looks best in terms of ease of boat docking and relaunch.

There is quite a big difference between a wet dock or a slipway so we would want to see more details in due course.

Sorry for the necessarily broad comments, we would be happy to provide further comments in due course when there are more details.

Regards

█

█

Planning Officer  
Port of London Authority  
London River House  
Royal Pier Road  
Gravesend  
Kent DA12 2BG

## **Appendix 5 Huntley Cartwright cost estimate**

**GLORIANA BARGE HOUSE PROJECT**

**RIBA STAGE A - FEASIBILITY - ORDER OF COST ESTIMATES OPTIONS 1 - 3**

**FOR LONDON BOROUGH OF RICHMOND UPON THAMES**

**HUNTLEY CARTWRIGHT**

**Chartered Quantity Surveyors**

**Victoria House**

**Harestone Valley Road**

**Caterham**

**Surrey**

**CR3 6HY**

**4th June 2013**

**Revision 0**



## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

## SUMMARY

4th June 2013

REF.	DESCRIPTION	OPTION 1 - Buccleuch Gdns	OPTION 2 - Gothic Site	OPTION 3 - Orleans House Gardens
<b>A</b>	BUILDING WORKS	1,374,500	1,142,800	1,548,150
	<b>SUB TOTAL: BUILDING WORKS</b>	<b>1,374,500</b>	<b>1,142,800</b>	<b>1,548,150</b>
<b>B</b>	MAIN CONTRACTOR'S PRELIMINARIES, OH&P	178,685	148,564	201,260
	<b>SUB TOTAL (A - B)</b>	<b>1,553,185</b>	<b>1,291,364</b>	<b>1,749,410</b>
<b>C</b>	DESIGN FEES	232,978	193,705	262,411
<b>D</b>	OTHER COSTS	35,000	35,000	35,000
<b>E</b>	RISK	254,963	212,810	286,555
	<b>SUB TOTAL CONSTRUCTION (A - E)</b>	<b>2,076,126</b>	<b>1,732,878</b>	<b>2,333,376</b>
<b>F</b>	CLIENT DIRECT WORKS	75,000	20,000	50,000
	<b>TOTAL PROJECT COST (A - F)</b>	<b>2,151,126</b>	<b>1,752,878</b>	<b>2,383,376</b>
<b>G</b>	INFLATION	129,068	105,173	143,003
	<b>TOTAL PROJECT COST</b>	<b>2,280,193</b>	<b>1,858,051</b>	<b>2,526,378</b>
<b>H</b>	VALUE ADDED TAX	EXCLUDED	EXCLUDED	EXCLUDED
	<b>TOTAL PROJECT COST</b>	<b>2,280,193</b>	<b>1,858,051</b>	<b>2,526,378</b>
	<b>SAY: £</b>	<b>2,280,000</b>	<b>1,860,000</b>	<b>2,530,000</b>
	GIFA (m2)	N/a	N/a	N/a
	Cost per m2			

## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

## NOTES AND ASSUMPTIONS

4th June 2013

REF		
1	<b><u>NOTES</u></b>	
1.2	<b>DOCUMENT QUALITY AND HISTORY</b> <b>Document Revision</b> - Feasibility Cost Estimate RIBA Stage A - First Issue <b>Purpose of Issue</b> - Initial Budget for Site Appraisal/ Options <b>Prepared by</b> IRJ <b>Checked by</b> IRJ <b>Document History Revision 0</b> - First Issue <b>Document History Revision 1</b> <b>Document History Revision 2</b>	   03/06/2013 04/06/2013 05/06/2013
1.3	<b>INFORMATION USED</b> <u>Adams Infrastructure Planning</u> LBR/004/05/13 - Option 1 LBR/004/05/13 - Option 2 LBR/004/05/13 - Option 3  <b>EXCLUSIONS AND ASSUMPTIONS</b> <u>ASSUMPTIONS:</u> Consultant fees and construction works are procured using competitive tender Costs based on site works commencing 3Q2014 and taking no more than 12 months to complete Provisional allowance has been made for dredging a river channel Allowance has been made for piled foundations A BREEAM rating of Very Good will be required	
1.4.2	<u>EXCLUSIONS:</u> No allowance has been made for costs arising from the following: Renewable or sustainable energy equipment Resolving any back log maintenance matters e.g. leaking roofs, defective windows etc. Archaeological investigation and recording Contaminated ground or land remediation Temporary support of adjacent structures or work arising from Party wall awards Requirements arising from listed building and/or conservation area status Public Art s106 or s278 costs Changes in legislation relating to the built environment or employment Invasive plant growth (e.g. japanese knotweed) Ecological issues - endangered species/ habitats or sites of special scientific interest Restrictions on site access and working hours Fire suppression sprinklers within the building Land Purchase Costs Value Added Tax	

## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

## OPTION 1

Buccleuch Gardens, Petersham Road, Richmond

4th June 2013

	ELEMENT	Quantity	Unit	Rate	Sub-Total	Total	Notes
<b>1</b>	<b>BARGE HOUSE</b>						
1.1	General site clearance		item		5,000		
1.2	Construction of new boat house	310	m2	1,800.00	558,000		
1.2.1	Extra over for ground conditions - piled foundations	310	m2	100.00	31,000		
<b>2</b>	<b>VISITOR CENTRE</b>						Assumed area: Café 50m2, visitor centre 40m2, WC's 25m2, circulation and plant space 20m2 = 135m2
2.1	Allow a sum for adapting existing terrace to provide café and visitor centre	135	m2	3,000.00	405,000		
<b>3</b>	<b>EXTERNAL WORKS</b>						
3.1	Allow a sum for external works - paths, fences, landscaping, signage, new utility services and the like		item		150,000		
<b>4</b>	<b>SLIPWAY &amp; LANDING STAGE</b>						
4.1	Concrete slipway	240	m2	250.00	60,000		80m x 3m wide
4.1.1	Extra for construction below high water level	45	m2	100.00	4,500		15m x 3m wide
4.2	Retaining wall to sides of slipway	50	m	500.00	25,000		
4.3	Allow a sum for 25m launch dolly and winch		item		35,000		
4.4	Boardwalk; 1m wide	20	m	250.00	5,000		
4.5	Access bridge; 1m wide	20	m	500.00	10,000		
4.6	Floating landing stage/ pontoon	105	m2	200.00	21,000		6m wide x 35m long
4.6.1	Extra for mooring piles	4	nr	5,000.00	20,000		
4.7	Allow a sum for providing electrical power to the landing stage		item		25,000		Costed elsewhere - see item 5.2 below
<b>5</b>	<b>RIVER WORKS</b>						
5.1	Allow a sum for dredging the area around the slipway and landing stage	2,500	m3	6.00	15,000		Provisional - need to be confirmed, assumed to be by suction method
5.1.1	Extra for mobilization and de-mobilization costs		item		5,000		
	<b>Sub Total</b>				<b>1,374,500</b>	<b>£ 1,374,500</b>	
	<b>SUB TOTAL: BUILDING WORKS</b>					<b>£ 1,374,500</b>	
<b>6</b>	<b>Main Contractors Costs</b>						
6.1	Preliminaries and General Cost items	10	%	1,374,500.00	137,450		
6.2	Main Contractor's Overheads and Profit	3	%	1,374,500.00	41,235		
	<b>Sub Total</b>				<b>178,685</b>	<b>£ 178,685</b>	
	<b>TOTAL: BUILDING WORKS ESTIMATE (A)</b>					<b>£ 1,553,185</b>	
<b>7</b>	<b>PROJECT/ DESIGN TEAM FEES</b>						
7.1	Consultant's fees	15	%	1,553,185.00	232,978		
7.2	In-House fees			inc in 7.1 above			
7.3	Legal fees			inc in 7.1 above			
<b>8</b>	<b>OTHER DEVELOPMENT/ PROJECT COSTS</b>						
8.1	Surveys, Statutory Applications etc	1	item	35,000.00	35,000		Inc allowance for Marine Environment Consents Unit and Port of London Authority consents
	<b>TOTAL: PROJECT/ DESIGN TEAM FEES AND OTHER DEVELOPMENT/ PROJECT COSTS ESTIMATE (B)</b>				<b>267,978</b>	<b>£ 267,978</b>	
	<b>BASE COST ESTIMATE (C) [C = A + B]</b>					<b>£ 1,821,163</b>	
<b>9</b>	<b>RISKS</b>						
9.1	Design Development Risks (5%)	5	%	1,821,163	91,058		
9.2	Construction Risks (5%)	5	%	1,821,163	91,058		
9.3	Employer Change Risks / Contingencies (4%)	4	%	1,821,163	72,847		
	<b>TOTAL: RISK ALLOWANCE ESTIMATE (D)</b>				<b>254,963</b>	<b>£ 254,963</b>	
	<b>COST LIMIT (excluding inflation) (E) [E = C + D]</b>					<b>£ 2,076,126</b>	

## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

## OPTION 1

Buccleuch Gardens, Petersham Road, Richmond

4th June 2013

	ELEMENT	Quantity	Unit	Rate	Sub-Total	Total	Notes
<b>10</b>	<b>CLIENT DIRECT WORKS</b>						
10.1	Furniture and Equipment - Allow a sum		item		75,000		For boat house and visitor centre/ café
10.2	ICT Equipment		item		inc above		
10.3	Moving and re-location costs		item		inc above		
	<b>TOTAL: CLIENT DIRECT WORKS (F)</b>				<b>75,000</b>	<b>£ 75,000</b>	
	<b>COST LIMIT (excl. Inflation &amp; VAT Assessment) (G)</b> [G = E + F]					<b>£ 2,151,126</b>	
<b>11</b>	<b>INFLATION</b>						
11.1	Allow a sum for inflation from 3Q2013 to 2Q2015	6.0	%	2,151,126	129,068		Provisional - programme to be confirmed
	<b>TOTAL: INFLATION ALLOWANCE (H)</b>				<b>129,068</b>	<b>£ 129,068</b>	
	<b>COST LIMIT (excl. VAT Assessment) (J)</b> [J = G + H]					<b>£ 2,280,193</b>	
<b>12</b>	<b>VAT</b>						
12.1	Value Added Tax			EXCLUDED			Presume that the council will obtain full recovery of VAT
	<b>TOTAL PROJECT COST</b>					<b>£ 2,280,193</b>	

<b>SAY</b>	<b>£ 2,300,000</b>
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## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

## OPTION 2

Gothic Site, Petersham Road, Richmond

4th June 2013

	ELEMENT	Quantity	Unit	Rate	Sub-Total	Total	Notes
<b>1</b>	<b>BARGE HOUSE</b>						
1.1	General site clearance		item		5,000		
1.2	Construction of new boat house	310	m2	2,500.00	775,000		
1.2.1	Extra over for ground conditions - piled foundations	310	m2	100.00	31,000		
<b>2</b>	<b>EXTERNAL WORKS</b>						
2.1	Allow a sum for external works - paths, fences, landscaping, signage, new utility services and the like		item		75,000		
2.2	New vehicular access/ layby on Petersham road	19	m	1,200.00	22,800		
2.3	Crossovers	2	nr	1,500.00	3,000		
2.4	External steps (flights)	8	nr	4,000.00	32,000		
2.5	Terracing	400	m2	120.00	48,000		Extent estimated
<b>3</b>	<b>PILLAR CRANE &amp; LANDING STAGE</b>						
3.1	Pillar crane, 10,000kg rating	1	nr	20,000.00	20,000		
3.2	Allow a sum for 25m launch dolly and winch		item		35,000		
3.3	Access bridge; 1m wide	20	m	500.00	10,000		
3.4	Floating landing stage/ pontoon	105	m2	200.00	21,000		6m wide x 35m long
3.4.1	Extra for mooring piles	4	nr	5,000.00	20,000		
3.5	Allow a sum for providing electrical power to the landing stage		item		25,000		Costed elsewhere - see item 5.2 below
<b>4</b>	<b>RIVER WORKS</b>						
4.1	Allow a sum for dredging the area around the slipway and landing stage	2,500	m3	6.00	15,000		Provisional - need to be confirmed, assumed to be by suction method
4.1.1	Extra for mobilization and de-mobilization costs		item		5,000		
	<b>Sub Total</b>				<b>1,142,800</b>	<b>£ 1,142,800</b>	
	<b>SUB TOTAL: BUILDING WORKS</b>					<b>£ 1,142,800</b>	
<b>5</b>	<b>Main Contractors Costs</b>						
5.1	Preliminaries and General Cost items	10	%	1,142,800.00	114,280		
5.2	Main Contractor's Overheads and Profit	3	%	1,142,800.00	34,284		
	<b>Sub Total</b>				<b>148,564</b>	<b>£ 148,564</b>	
	<b>TOTAL: BUILDING WORKS ESTIMATE (A)</b>					<b>£ 1,291,364</b>	
<b>6</b>	<b>PROJECT/ DESIGN TEAM FEES</b>						
6.1	Consultant's fees	15	%	1,291,364.00	193,705		
6.2	In-House fees			inc in 6.1 above			
6.3	Legal fees			inc in 6.1 above			
<b>7</b>	<b>OTHER DEVELOPMENT/ PROJECT COSTS</b>						
7.1	Surveys, Statutory Applications etc	1	item	35,000.00	35,000		Inc allowance for Marine Environment Consents Unit and Port of London Authority consents
	<b>TOTAL: PROJECT/ DESIGN TEAM FEES AND OTHER DEVELOPMENT/ PROJECT COSTS ESTIMATE (B)</b>				<b>228,705</b>	<b>£ 228,705</b>	
	<b>BASE COST ESTIMATE (C) [C = A + B]</b>					<b>£ 1,520,069</b>	
<b>8</b>	<b>RISKS</b>						
8.1	Design Development Risks (5%)	5	%	1,520,069	76,003		
8.2	Construction Risks (5%)	5	%	1,520,069	76,003		
8.3	Employer Change Risks / Contingencies (4%)	4	%	1,520,069	60,803		
	<b>TOTAL: RISK ALLOWANCE ESTIMATE (D)</b>				<b>212,810</b>	<b>£ 212,810</b>	
	<b>COST LIMIT (excluding inflation) (E) [E = C + D]</b>					<b>£ 1,732,878</b>	
<b>9</b>	<b>CLIENT DIRECT WORKS</b>						
9.1	Furniture and Equipment - Allow a sum		item		20,000		For the boat house only
9.2	ICT Equipment		item		inc above		

## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

	ELEMENT	Quantity	Unit	Rate	Sub-Total	Total	Notes
9.3	Moving and re-location costs		item		inc above		
	<b>TOTAL: CLIENT DIRECT WORKS (F)</b>				<b>20,000</b>	<b>£ 20,000</b>	
	<b>COST LIMIT (excl. Inflation &amp; VAT Assessment) (G)</b> <b>[G = E + F]</b>					<b>£ 1,752,878</b>	
10	<b>INFLATION</b>						
10.1	Allow a sum for inflation from 3Q2013 to 2Q2015	6.0	%	1,752,878	105,173		Provisional - programme to be confirmed
	<b>TOTAL: INFLATION ALLOWANCE (H)</b>				<b>105,173</b>	<b>£ 105,173</b>	
	<b>COST LIMIT (excl. VAT Assessment) (J)</b> <b>[J = G + H]</b>					<b>£ 1,858,051</b>	
11	<b>VAT</b>						
11.1	Value Added Tax			EXCLUDED			Presume that the council will obtain full recovery of VAT
	<b>TOTAL PROJECT COST</b>					<b>£ 1,858,051</b>	

<b>SAY</b>	<b>£ 1,900,000</b>
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## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

## OPTION 3

## Orleans House Gardens, Riverside, Richmond

4th June 2013

	ELEMENT	Quantity	Unit	Rate	Sub-Total	Total	Notes
<b>1</b>	<b>BOAT HOUSE</b>						
1.1	General site clearance		item		5,000		
1.2	Construction of new boat house	310	m2	1,800.00	558,000		
1.2.1	Extra over for ground conditions - piled foundations	310	m2	100.00	31,000		
	Construction of café and toilets	85	m2	3,000.00	255,000		
<b>3</b>	<b>EXTERNAL WORKS</b>						
3.1	Allow a sum for external works - paths, fences, landscaping, signage, new utility services and the like		item		50,000		
	Allow a sum for reestablishing subway from Orleans House Gallery to boat house		item		30,000		
<b>4</b>	<b>WET DOCK</b>						
4.1	Excavation and disposal	1,890	m3	35.00	66,150		
	Sheet piling						
	Establishment		item		8,000		
	Piles	1,200	m2	100.00	120,000		
	Driven length of piling	1,000	m2	150.00	150,000		
	Allow a sum for whalings and welded corners		item		10,000		
	Reinforced concrete slab	525	m2	100.00	52,500		
	Reinforced concrete walls	530	m2	150.00	79,500		
	Allow a sum for the guillotine sluice gate with lifting footbridge		item		75,000		
	Allow a sum for pumps and associated drainage to drain dry dock		item		50,000		
<b>5</b>	<b>RIVER WORKS</b>						
5.1	Allow a sum for dredging the area beyond the wet dock to form tidal mooring	500	m3	6.00	3,000		Provisional - need to be confirmed, assumed to be by suction method
5.1.1	Extra for mobilization and de-mobilization costs		item		5,000		
	Toe pile wall to tidal mooring	40	m				
	Piles	280	m2	100.00	28,000		
	Driven length of piling	200	m2	150.00	30,000		
	Allow a sum for consequential improvements to the existing steps and jetty		item		25,000		
	Allow a sum for reducing the length of Hammertons pontoon		item		10,000		
	<b>Sub Total</b>				<b>1,548,150</b>	<b>£ 1,548,150</b>	
	<b>SUB TOTAL: BUILDING WORKS</b>					<b>£ 1,548,150</b>	
<b>6</b>	<b>Main Contractors Costs</b>						
6.1	Preliminaries and General Cost items	10	%	1,548,150.00	154,815		
6.2	Main Contractor's Overheads and Profit	3	%	1,548,150.00	46,445		
	<b>Sub Total</b>				<b>201,260</b>	<b>£ 201,260</b>	
	<b>TOTAL: BUILDING WORKS ESTIMATE (A)</b>					<b>£ 1,749,410</b>	
<b>7</b>	<b>PROJECT/ DESIGN TEAM FEES</b>						
7.1	Consultant's fees	15	%	1,749,409.50	262,411		
7.2	In-House fees			inc in 7.1 above			
7.3	Legal fees			inc in 7.1 above			
<b>8</b>	<b>OTHER DEVELOPMENT/ PROJECT COSTS</b>						
8.1	Surveys, Statutory Applications etc	1	item	35,000.00	35,000		Inc allowance for Marine Environment Consents Unit and Port of London Authority consents
	<b>TOTAL: PROJECT/ DESIGN TEAM FEES AND OTHER DEVELOPMENT/ PROJECT COSTS ESTIMATE (B)</b>				<b>297,411</b>	<b>£ 297,411</b>	
	<b>BASE COST ESTIMATE (C) [C = A + B]</b>					<b>£ 2,046,821</b>	
<b>9</b>	<b>RISKS</b>						
9.1	Design Development Risks (5%)	5	%	2,046,821	102,341		

## FEASIBILITY COST ESTIMATES OPTIONS 1 - 3

	ELEMENT	Quantity	Unit	Rate	Sub-Total	Total	Notes
9.2	Construction Risks (5%)	5	%	2,046,821	102,341		
9.3	Employer Change Risks / Contingencies (4%)	4	%	2,046,821	81,873		
	<b>TOTAL: RISK ALLOWANCE ESTIMATE (D)</b>				<b>286,555</b>	<b>£ 286,555</b>	
	<b>COST LIMIT (excluding inflation) (E) [E = C + D]</b>					<b>£ 2,333,376</b>	
<b>10</b>	<b>CLIENT DIRECT WORKS</b>						
10.1	Furniture and Equipment - Allow a sum		item		50,000		
10.2	ICT Equipment		item		inc above		
10.3	Moving and re-location costs		item		inc above		
	<b>TOTAL: CLIENT DIRECT WORKS (F)</b>				<b>50,000</b>	<b>£ 50,000</b>	
	<b>COST LIMIT (excl. Inflation &amp; VAT Assessment) (G) [G = E + F]</b>					<b>£ 2,383,376</b>	
<b>11</b>	<b>INFLATION</b>						
11.1	Allow a sum for inflation from 3Q2013 to 2Q2015	6.0	%	2,383,376	143,003		Provisional - programme to be confirmed
	<b>TOTAL: INFLATION ALLOWANCE (H)</b>				<b>143,003</b>	<b>£ 143,003</b>	
	<b>COST LIMIT (excl. VAT Assessment) (J) [J = G + H]</b>					<b>£ 2,526,378</b>	
<b>12</b>	<b>VAT</b>						
12.1	Value Added Tax			EXCLUDED			Presume that the council will obtain full recovery of VAT
	<b>TOTAL PROJECT COST</b>					<b>£ 2,526,378</b>	

<b>SAY</b>	<b>£ 2,500,000</b>
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## Appendix 6 Note of meeting at Hammertons Ferry on Thursday 27<sup>th</sup> June 2013

Present:

██████████	r	FS	Hammertons Ferry
██████████		AS	Hammertons Ferry
██████████		DS	London Borough of Richmond Upon Thames
██████████		MA	Adams Infrastructure Planning Ltd.

MA introduced ██████████ from Richmond Council and his commission from Richmond Council to find a suitable location for a permanent home for the Royal Row Barge, 'Gloriana'. MA said that the Leader of Richmond Council is keen that the barge should be based in the Borough.

FS said that Gloriana is a beautiful boat and had generated a lot of interest from the public when she was moored at Hammertons for the Great River Race in 2012. FS indicated that Gloriana is programmed to return for the 2013 Great River Race and that he had offered to provide a mooring for the event.

MA outlined the three locations that the Council had asked him to evaluate. These were Buccleuch Gardens, the Gothic House site that is next to Steins restaurant in Richmond and Marble Hill Park / Orleans Gardens. Town planning constraints apply to all three locations and it would not be practical to crane out Gloriana onto the Gothic House site or into Marble Hill Park. He said that he is recommending a site in Orleans Gardens that was used for a boathouse in the nineteenth century. The boathouse was subsequently demolished and the site is currently occupied by part of the children's play area and the café.

MA said the proposed bargehouse would provide another visitor attraction that could potentially fit well with Orleans House Gallery, Marble Hill House etc.

FS said that, in his view, tourist trade had dropped off in the locality since the London bombings.

MA showed FS and AS sketch drawings of the plan of the wet dock and bargehouse together with some indicative elevations. MA stressed that the proposals are only at a very draft stage at the moment. It was necessary to show some detail in order to establish if the location could work and to obtain indicative cost estimates but these details could change.

MA also said that it would be necessary to reduce the length of the Hammertons Ferry pontoon at the upstream end.

AS said that it is possible to move quite large vessels through the gap to the moorings between the pontoon and the river bank but he appreciated that a wider gap would be necessary to manoeuvre Gloriana, particularly when the tide is running.

FS indicated that he would be happy to reduce the length of the pontoon. MA said that it may be possible to extend the pontoon at the downstream end by agreement with the PLA. MA said that there may be merits in revising the layout of the brow to the pontoon by keeping the existing brow but adding a second one outside the proposed bargehouse to provide a more direct route for visitors to the ferry and to the hire boats. FS indicated that he thought that there may be some merit in this.

MA said that there would be a meeting on site shortly to give Lord True, Leader of Richmond Council and Lord Sterling an opportunity to see the site and make a decision as to whether proposals should be advanced to the next stage. If they decide to go ahead with the Orleans Gardens site then it would be necessary to engage FS/AS in the development of more detailed proposals.

MA asked whether FS/AS had any initial comments on the draft proposals.

FS made the following comments:

1. There is congestion in Orleans Road at the weekend and it would be necessary to consider the provision of a one way access route to the bargehouse;
2. It would be necessary to consider the provision of a car park as this will be a massive attraction; and,
3. There is a need to survey the condition of the riverside trees and prune them where necessary. FS said that there is a PLA responsibility for trees growing out of the bank and a Richmond responsibility for the trees landward of the bank. He said that he has had problems with unstable trees threatening his property but the PLA is reluctant to act and he has had to take action himself.

28.6.13

## Appendix 7 Note of meeting at Orleans Gardens on Monday 8<sup>th</sup> July

Present:

Lord Sterling	LS	Gloriana
[REDACTED]	MK	Gloriana
Lord True	LT	Leader, London Borough of Richmond Upon Thames
[REDACTED]	IM	London Borough of Richmond Upon Thames
[REDACTED]	DS	London Borough of Richmond Upon Thames
[REDACTED]	MA	Adams Infrastructure Planning Ltd.

### *York House*

The meeting started at York House where LS said that he supported the recommendation in the draft feasibility study for a bargehouse at Orleans Gardens.

LS asked how long would it take to deliver the project?

DS indicated a period of 6 – 8 months to progress to RIBA Stage D design and to submit a planning application. LS said that this is too long and the timescale needs to be shortened.

LT indicated that the timescale could be reduced. DS said that there would be a need for public consultation before the planning application is submitted.

### *York House Gardens*

LT guided LS through the York House grounds to the Twickenham waterfront to view Eel Pie Island and then along to Riverside to show Orleans House and Orleans Gardens.

### *Bargehouse at Orleans Gardens*

MA indicated the preferred site for the bargehouse. The water was at the retained (half-tide) level. Lord S said that Simon Thurley, (the Chief Executive of English Heritage) is keen on a bargehouse in this location. MA showed the remaining wall of the C19th dry dock and explained that the land formerly extended further into the river. LBRuT has title to land that is now in the river. This is not shown on Land Registry plans and LBRuT solicitors are seeking to resolve this discrepancy.

MA showed evidence of the former wet dock in the river wall and said that the rest of the structure is now filled in and is located beneath the children's play area.

LS said that there should be plans of this and that these should be obtained.

LS and MK asked at what states of the tide access could be obtained? MA said that the plan in the draft report shows a toe pile wall at the entrance to the wet dock and this would allow for Gloriana to moor prior to accessing the wet dock / bargehouse on the high tide. An alternative would be for Gloriana to be moored on a pontoon prior to entering the bargehouse.

MA said that the PLA engineer has commented that a dredged berth is likely to fill with silt quite quickly here when the river is in flood.

LS said that it is essential that the proposed bargehouse can be accessed at all states of the tide. LS does not want Gloriana to be restricted in the same way as at St. Katharine's Dock. MA said that restricted access would be less of a problem in this location because trips down river would normally start and end at high tide.

LS said that he would wish to have an assurance from a marine engineer that it would be possible to access the bargehouse at all states of the tide before confirming his support for this location. If it cannot be made to work then he would have to look at sites that are upriver.

*Post meeting note*

MA has arranged for [REDACTED] a director of Beckett Rankine to attend a site visit on 10<sup>th</sup> July and to advise on the engineering aspects of securing access to the proposed wet dock when the river is at the retained (half tide) level. The meeting will be attended by DS and MA.

[REDACTED] 9.7.13



**Appendix 8 Advice from [REDACTED] of Beckett Rankine Marine Consulting Engineers following site visit at Orleans Gardens 10.07.13**

[REDACTED]

It was good to meet with you and [REDACTED] on the Riverside at Orleans House Gardens yesterday. This would certainly be an excellent location for Gloriana's bargehouse.

Clearly there are several issues that will have to be resolved but I do think these can all be worked out and, from a technical point of view, I believe the development of this project would be achievable. My summary thoughts at this stage are:

- It would be good to in some way reinstate the use of the former boathouse, but we will have to find out by site investigation what if anything remains underground from that structure.
- Some dredging could be needed adjacent to the existing river wall which might require some strengthening or underpinning, depending on the extent of deepening.
- Access to the site will require agreement with Hammerton's to modify their pontoon berths and then approvals from the authorities. As we discussed I think this could provide a beneficial opportunity for all concerned.
- There is some linkage between the desired level of Gloriana while on display, the depth of excavation for the dock, access time requirements for transferring her between the river and bargehouse and how this manoeuvre is to be done. These all need to be considered jointly and in some detail.
- The proposal is for a wet dock accessible at higher tidal levels, although it has been mentioned that access at maintained water level would be preferable. Technically both would be feasible but for access at the lower, maintained, water level it would obviously be necessary to excavate more soil on land and in the river. This would be more costly not just because of the increased volume but it would also make the construction work slightly more difficult as it would be below the minimum water level, unless it is possible to carry out this construction during a period of drawdown. Maintenance costs including dredging and silt removal would also be greater for the deeper excavation.
- To facilitate Gloriana's maintenance it would be desirable to dewater the dock, making it become a dry dock. When studying options for doing this, the relative merits of constructing a slipway rather than a dock, or even inside the dock, should also be considered.
- Some dredging will be required in the river and the creation of a new wet dock will cause river water to flow into the newly excavated space. Siltation will inevitably occur to some extent in both places. Mitigation measures can be put in place to minimise this effect.
- A guillotine gate can provide a simple and effective entrance to the dock and a walkway could be connected as an integral part so that gate and walkway lift out together. It can also be useful to help flush accumulated silt from the dock as in various examples we discussed. However this will have to be agreed and approved by the relevant authorities. Navigation in and out of the dock will inevitably require Gloriana to be aligned perpendicular to the river flow. At times the flow can be strong and this might require some delay until slacker water near to the turn of the

tide. The entrance should be designed to allow some flexibility for this manoeuvre.

- I understand that Depressed River Mussels may be present in the area.

These and other environmental issues will have to be taken into account and mitigation measures put in place if required.

Obtaining consents from authorities for marine projects can take several months even for projects such as this that appear to have only limited impact. This needs to be taken into account in the programme.

I hope this is useful at this stage and I very much look forward to working with you to further develop this project towards its successful implementation.

Kind regards

[REDACTED]

*Director*

**Beckett Rankine Marine Consulting Engineers**

On 08/07/2013 22:25, [REDACTED] wrote:

Re Gloriana Bargehouse - meeting at Orleans Gardens on Wednesday 10th July at 12.00 noon

[REDACTED]

Many thanks for offering to attend a site visit at Orleans Gardens on Wednesday. I suggest that we meet on site on the riverside path. I will be accompanied by [REDACTED] who is Head of Construction and Maintenance at the London Borough of Richmond. The site for the bargehouse is immediately upstream of the Hammertons Ferry moorings. If you are coming by car you need to take the Orleans Road turning off the A305 Richmond Road and continue down towards the river. Please contact me if you need more information about the location.

Essentially we would value your initial views on the practicalities of building a wet dock that could be accessed when the river is at the retained half tide level as well as high tide. The river will be at the retained level at noon on Wednesday. Should the Gloriana team be happy with the access to the proposed site for the bargehouse then the next stage would be for a design team to be put together to advance the project and it would be useful for [REDACTED] to understand what elements of the design would come within the scope of your marine engineering role.

I look forward to meeting you on Wednesday.

Kind regards

[REDACTED]

*Director*

Project Number: LBR/004

Attachments: None

**Adams Infrastructure Planning Limited**

6 Water Lane, Richmond, TW9 1TJ Tel: 020 8940 4526 Mob: [REDACTED]

**Appendix 9 Consultation response from Environment Agency 07/08/13**

██████████  
Adams Infrastructure  
6 Water Lane  
Richmond  
Surrey  
TW9 1TJ

**Our ref:** SL/2013/111436/01-L01  
**Your ref:** LBR/004

**Date:** 7 August 2013

Dear ██████████

**Proposal:** The proposed construction of a barge house large enough to house the barge, store equipment and provide display and education opportunities including a replacement café ; wetdock with a guillotine sluice gate to hold water at mean high water so that the barge can be displayed to the public and a dredged channel to enable access when river is at the retained level of 1.7m AOD

**Location:** Orleans Road, Twickenham, TW1 3BL.

Thank you for consulting us at the pre-application stage. We welcome proposals which “make space for water” and restore more natural environmental processes which can deliver multiple environmental, social and economic benefits.

Having reviewed the proposal we would like to highlight the following issues and opportunities for this key riverside park. These are related to:

- Flood risk management
- Flood defences and climate change
- Biodiversity and fisheries

### **Flood risk management**

The site is located in the highest risk zone called Flood Zone 3 in front of the Thames Tidal Defences. As such it could be considered to be functional flood plain (FZ3b). The proposal is classified and water compatible (barge house) and less vulnerable (café) in Table 2: Flood risk vulnerability classification of the Technical Guidance to the National Planning Policy Framework.

Table 1: Flood zones sets out the suitability of certain type of development within areas of flood risk. Water compatible development is classed as appropriate development in flood zone 3B, however less vulnerably development is classified as unsuitable at this location. In this case the less vulnerable element will be a replacement café on a like for like footprint and so would not be increasing/introducing new risk into the functional flood plain so we would have no objection. In order for the proposal to be acceptable in its current form you should discuss the issue of functional flood plain with Richmond Local Planning authority. If the proposal were to progress to a planning application then you would need to produce a Flood Risk Assessment (FRA). The FRA should be prepared in accordance with the Technical Guidance to the NPPF. Much of the information required to inform the assessment may be obtained from the London Borough of Richmond’s Strategic Flood Risk Assessment (SFRA), which shows local flood



risk at a strategic level.

Your FRA should include the following:

- Identification of the Flood Zone and vulnerability classification in accordance with Table 2 of the Technical Guidance to the NPPF.
- Confirmation of the flood defences and standard of protection provided, to confirm the level of residual risk in accordance with the SFRA for the borough.
- Estimation of flood depths at the site for a range of flood events, to calculate internal flood depths in the event of a flood event.
- Suitable flood mitigation measures based on flood characteristics at site.

We recommend that you use flood resistance and resilience measures and construction techniques to help reduce the impact of flooding should it occur. Please refer to “Improving the Flood Performance of New Buildings: Flood Resilient Construction” (CLG, 2007).

You may also wish to consider whether a Flood Warning and Evacuation Plan would assist in reducing the impact of flooding on the future users of the development. We do not normally comment on or approve the adequacy of flood emergency procedures accompanying development proposals, as we do not carry out these roles during a flood. Our involvement with this development during an emergency will be limited to delivering flood warnings to occupants/users covered by our flood warning network.

Paragraph 9 of the Technical Guidance to the NPPF states that those proposing developments should take advice from the emergency services when producing an evacuation plan for the development as part of the flood risk assessment. In all circumstances where warning and emergency response is fundamental to managing flood risk, we advise local planning authorities to formally consider the emergency planning and rescue implications of new development in making their decisions.

Our Customers and Engagement Team can provide any relevant flooding information that we have available. Please be aware that there may be a charge for this information. Please contact 01707 632 511 or email:

[NETenquiries@environment-agency.gov.uk](mailto:NETenquiries@environment-agency.gov.uk).

### **Climate change and Thames Estuary 2100 (TE2100)**

As the development is within the floodplain you will need to consider TE2100 advice. An assessment should be made on the implications that rising water levels due to climate change would have on the development and how the flood defences can be raised if required. We recommend discussing the proposed works to the flood defences in this area with London Borough of Richmond upon Thames and how it fits with the wider long term management of flood defence structures in Richmond and Twickenham.

More information can be found here

<http://www.environment-agency.gov.uk/homeandleisure/floods/125045.aspx>

### **Flood defences**

It's essential the level of flood defence protection is maintained for this area of high risk and regular flooding at high tides. We have concerns on the potential negative impacts of reinstating the subway from Orleans House Gallery to the barge house. We recommend that an alternative form of access is considered or we agree ways to maintain flood defences

Under the terms of the Water Resources Act 1991, and the Thames Land Drainage Byelaws 1981, the prior consent of the Environment Agency is required for any proposed works or structures, in, under, over or within 16 metres of the landward edge of the tidal defence of the River Thames, designated a 'main river'.

### **Water Framework Directive**

The Water Framework Directive (WFD) came into force in 2000 and is the most substantial piece of EU water quality legislation to date. The Thames River Basin Management Plan was produced in 2009 to provide an initial guide on how the targets for water quality improvements as set out in the WFD could be met for this catchment. All new activities in the water environment will need to take the Directive and the river basin management plan into account.

A fundamental requirement of the Water Framework Directive is to attain good ecological water quality status and that deterioration in the status of waters is prevented. Any new development must ensure that these two fundamental requirements of the Directive are not compromised.

As your development involves bank and in channel works you should investigate if a WFD assessment is required. WFD assessments aim to determine the effects of proposed schemes on ecological quality, identifying any potential impacts that could cause deterioration in the status of a water body or could hinder the water body from meeting its WFD objectives. More information can be found at <http://www.environment-agency.gov.uk/research/planning/125035.aspx>

### **Biodiversity and fisheries**

Please refer to "Rivers by Design" which provides a useful guide for planners, designers and developers, providing practical advice and information on restoring and protecting rivers and sharing good practice case study examples of projects that have been successfully implemented across Europe. This available in the link below

<http://www.restorerivers.eu/>

Due to the developments location and the potential for work in the River Thames you should produce an environmental assessment to ensure there is no risk to wildlife and look at ways to improve the riverside environment for people and wildlife. We will also require a method statement setting detailing any in channel works and how the impact on fish and aquatic biodiversity will be mitigated.

### **Advice for developers**

We have updated our advice for developers and it is now a joint agency document with advice from Environment Agency, Natural England and Forestry Commission, it's available to view on our website

<http://www.environment-agency.gov.uk/business/sectors/136252.aspx>

I trust hope our response is helpful and we look forward to working with you on this exciting project. We are happy to review any draft reports prior to formal submission. If you require any additional information please contact me on [REDACTED]

Yours sincerely

**[REDACTED]**

**Sustainable Places - Planning Advisor**