

**Thames Tideway Tunnel**  
Thames Water Utilities Limited



# Application for Development Consent

Application Reference Number: WWO10001

## Heritage Statement

Doc Ref: **5.3**

### **Appendix B**

APFP Regulations 2009: Regulation **5(2)(m)**

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# Thames Tideway Tunnel

## Heritage Statement

### Appendix B: Putney Embankment Foreshore

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## Appendix B: Putney Embankment Foreshore

### B.1 Site location and context

- B.1.1 The proposed development site comprises an area of the foreshore of the River Thames and is divided into two sections.
- B.1.2 The main site is known as the 'Putney Embankment Foreshore CSO' site, which lies between St Mary's Church westwards to and including the (undesignated) Putney Pier, at which two residential houseboats are moored. It includes the area beneath the north end of the Grade II listed Putney Bridge, Waterman's Green and the historic public drawdock, known as Putney public slipway, in the foreshore immediately to the west of the bridge.
- B.1.3 The secondary site is known as the 'Putney Embankment Temporary Slipway' site, and lies in the foreshore between Thames Place and Glendarvon Street.
- B.1.4 The River Thames is designated as the River Thames and Tidal Tributaries Site of Importance for Nature Conservation. The site also falls within the Wandsworth Thames Policy Area in the London Borough of Wandsworth's *Core Strategy*, which supports and protects Putney's special character as an area for river-based recreation and river sports.
- B.1.5 The Putney Bridge listing includes a wing wall facing Waterman's Green on the raised edge of Lower Richmond Road. Grade II listed cast iron bollards are located adjacent to the top of the public slipway.
- B.1.6 The site is bounded by the River Thames to the north, east and west. An area of open space known as Waterman's Green, Lower Richmond Road and the Embankment carriageway form the southern boundary of the Putney Embankment CSO site. The Embankment carriageway also forms the southern boundary of the Putney Embankment Temporary Slipway site.
- B.1.7 There are a number of heritage assets and listed buildings in the vicinity of the site, which contribute to the character of the area. St Mary's Church to the east of the site, is Grade II\* listed.
- B.1.8 The closest residential properties lie to the south of Lower Richmond Road, including Richmond Mansions, the six-storey blocks of flats of Kenilworth Court and University Mansions. To the southwest of the site is the modern, two-storey Thai Square restaurant, the Grade II listed five storey 19th century Winchester House and the locally listed six-storey Star and Garter public house.
- B.1.9 The area to the west comprises residential properties, a commercial boat business and rowing clubs.
- B.1.10 Both the Putney Embankment Foreshore CSO Site and the Putney Embankment Temporary Slipway Site fall within the Putney Embankment Conservation Area, which includes the entire riverside and foreshore and

extends for approximately 1km. It begins approximately 150m to the east of Putney Bridge and ends after Leader's Gardens (a public recreational area) approximately 800m to the west of Putney Bridge.

- B.1.11 The Putney Embankment Conservation Area was designated to protect the special character of this conservation area which is derived from its riverside location, boathouses, former wharf and some of the oldest extant buildings in Putney.
- B.1.12 The two proposed sites are opposite both the Putney Bridge Conservation Area and Bishop's Park Conservation Area, within the London Borough of Hammersmith and Fulham. On the northern bank of the River Thames, opposite the site, lie the Grade II\* listed Parish Church of All Saints, the Grade I listed Fulham Palace and the Grade II\* registered Bishop's Park.
- B.1.13 Lower Richmond Road runs from Putney Bridge westwards, approximately parallel to the site. This busy street is characterised by a number of shops, restaurants, public houses and mansion blocks in a variety of Edwardian era buildings. These buildings are prominent in views of the riverside.
- B.1.14 The purpose-built Embankment (1887/88), with its concrete river wall and the cobbled Putney public slipway, is a much quieter street off Lower Richmond Road. This area is a popular place to enjoy the river and is characterised by both period residential buildings and modern boathouses which use the 19th century slipway to access the river for recreational and sports uses.
- B.1.15 Putney public slipway is important within the conservation area for its historic form, character and function. Waterman's Green, an adjacent strip of riverside green space with several semi-mature trees, softens the urban appearance of Putney in views from the other side of the river.

### Historical context

- B.1.16 The site lies near an ancient ford of the River Thames, which gave rise to a village on the dry ground to the south of the site and along the southbound road, which is now Putney High Street. The church of St Mary the Virgin was built in the 13th century and formed a focal point for the village. The site itself was used as a place to land and moor boats.
- B.1.17 A timber bridge was built across the River Thames circa 1730, which led to further expansion of Putney Village, although the land to the south and west of the site remained farmland and gardens.
- B.1.18 Lower Richmond Road and Embankment became increasingly built-up from the mid-19th century onwards, when the advent of the railway led to rapid expansion of the town.
- B.1.19 The 1880s saw considerable remodelling of the riverside in this area. The listed Putney Bridge designed by Sir Joseph Bazalgette was constructed to the west of the earlier timber structure where there had once been an aqueduct (from 1854). The bridge also incorporated part of Sir Bazalgette's sewerage system, which was implemented around the same period, and outfall gates for excess sewer flows were constructed beneath the southern abutment of the bridge. Waterman's Green was laid out to the west of Putney Bridge as a narrow strip of green space between Lower

Richmond Road and the cobbled public slipway. Putney public slipway was also built alongside the Embankment riverside road and promenade to provide access to the river.

- B.1.20 The majority of the present built form of Embankment and Lower Richmond Road arose in the 1890s and 1900s. This includes the four-storey shops that face Putney Bridge and Kenilworth Court, which is faced with striped red brick and stone. Further to the west is an Edwardian hotel, a Victorian pub, several 19th century houses and a series of boathouses that front a concrete slipway along the river.
- B.1.21 The concrete and iron riverboat pier probably dates to the early 20th century. In 1989, a mid-20th century petrol station was replaced by the triangular modern building that now houses the Thai Square restaurant. The riverside promenade now features modern paving and benches and is fronted by a plain post-war balustrade.

## B.2 Relevant local heritage policy and guidance

- B.2.1 As this application for development consent relates to a Nationally Significant Infrastructure Project the NPS is the primary basis for decision making on all planning issues raised by the application. When it comes to assessing the acceptability of the application proposals it is the NPS that sets the relevant criteria to be applied. However, the project has been developed in the knowledge of local planning policies and, particularly, local land use planning designations.
- B.2.2 The London Borough of Wandsworth's *Local Development Framework* comprises the *Core Strategy* (October 2010), the *Development Management Policies Document (DMPD)* (February 2012), the *Putney Embankment Conservation Area Appraisal and Management Strategy* also includes some relevant policy guidance.
- B.2.3 *Core Strategy* Policy IS3 (Good quality design and townscape) states:  
*"a. The Council will protect and reinforce the existing varied character and heritage of the borough:*  
*b. The layout, form and design of new buildings and the spaces around them should contribute positively to the local environment, creating places, streets and spaces which meet the needs of people, and while having their own distinctive identity maintain and reinforce local character"*.
- B.2.4 *DMPD* Policy DMS2 (Managing the historic environment) states:  
*"a. In addition to satisfying the relevant parts of Policy DMS1, applications affecting a heritage asset or its setting will be granted where it: i. is in accordance with PPS 5, the London Plan and relevant English Heritage guidance; ii. takes full account of the Council's Conservation Area Appraisals and Management Strategies; iii. is accompanied by a satisfactory Heritage Statement produced by a heritage specialist where appropriate;*  
*"b. Applications will be granted where they sustain, conserve and, where appropriate, enhance the significance, appearance, character and setting*

*of the heritage asset itself, and the surrounding historic environment, and where they have consideration for the following:*

- i the conservation of features and elements that contribute to the heritage asset's significance and character [...];*
- ii the reinstatement of features and elements that contribute to the heritage asset's significance which have been lost which may include any of the above items or others;*
- iii the conservation and, where appropriate, the enhancement of the space in between and around buildings as well as front, side and rear gardens;*
- iv the removal of additions or modifications that are considered harmful to the significance of any heritage asset [...];*
- v the use of the heritage asset should be compatible with the conservation of its significance;*
- vi historical information discovered during the application process shall be submitted to the Greater London Historic Environment Record.*

*“Development involving the demolition or removal of significant parts of heritage assets will be granted in exceptional circumstances which have been clearly and convincingly demonstrated to be in accordance with the requirements of PPS 5 policies HE 9 and 10; d. Proposals for development involving ground disturbance in Archaeological Priority Areas (as identified on the proposals map), will need to be assessed and may be required to be accompanied by an archaeological evaluation report. The recording and publication of results will be required and in appropriate cases, the Council may also require preservation in situ, or excavation”.*

B.2.5 DMPD Policy DMO6 (Riverside development) states:

*“a. New development on sites adjoining the River Thames and River Wandle will be permitted where it: [...] iv. protects and enhances the habitat value of the river and shoreline and does not cause harmful effects on the river regime, environment, biodiversity or archaeology of the river (including banks, walls and foreshore); [...] (See Policy DMS7 for further detail)”.*

B.2.6 DMPD Policy DMO7 (Development in the river and on the foreshore) states:

*“a. River related development which enhances the river infrastructure and increases access to the Thames [...] will be permitted in appropriate locations where: [...] vii. the development [...] does not cause harmful effects on the river regime, environment, biodiversity or archaeology of the river (including banks, walls and foreshore)”.*

B.2.7 The Putney Embankment Conservation Area Appraisal and Management Strategy states:

*“2.4 It is Council policy to protect the buildings that make a positive contribution to the character of the conservation area [...]; 2.5 Where there are opportunities for new buildings that do not involve the loss of a positive*

*buildings or a space that is of value to the character and appearance of the conservation area, a new building may be acceptable”.*

### **B.3 Description of heritage assets and significance summary**

B.3.1 The site contains two listed buildings, the Grade II listed Putney Bridge and Grade II listed bollards on Putney Embankment. It falls within Putney Embankment Conservation Area. There are a number of other heritage assets (as defined in the NPS, para. 4.10.2) within and near the site. These heritage assets are illustrated on the Historic environment features map and the Conservation areas map. The numbering on the Historic environment features map refers to the gazetteer in which the heritage assets are described in the *Environmental Statement*, which accompanies the application (Vol 7, Appendix E.1). The gazetteer is provided at the end of this Appendix.

B.3.2 The heritage assets include:

- a. the Grade II listed Putney Bridge, including the Waterman’s Green wing wall
- b. the brick arches that extend beneath Lower Richmond Road
- c. the Grade II I listed bollards at the top of Putney public slipway
- d. Putney Embankment Conservation Area
- e. the undesignated Embankment and Putney public slipway
- f. the undesignated University Boat Race Stone
- g. the Archaeological Priority Area
- h. the Grade II\* listed St Mary’s Church
- i. the Grade II listed White Lion Hotel
- j. Bishop’s Park Conservation Area
- k. Fulham Palace Registered Garden
- l. Putney Bridge Conservation Area
- m. Hurlingham Conservation Area
- n. Deodar Road Conservation Area
- o. Winchester House.

#### **Putney Bridge**

B.3.3 The Grade II listed Putney Bridge (refer to the Historic environment features map) was built in 1882/86 by Sir Joseph Bazalgette. It was widened for a tramway in 1909 and again to the east in matching stone by the London County Council in 1931/33. It features five arches of channelled pale grey Cornish granite, with slightly projecting piers above granite cutwaters. Ornamental iron lamp standards are fixed along the parapets.

- B.3.4 At the Putney end the western side sweeps round to form a retaining wall and parapet along the northern side of Lower Richmond Road. Between this wall and the river wall is Waterman's Green, within which are several trees and a projection containing stairs to disused public lavatories.
- B.3.5 There are also brick vaults under the bridge approach road, beneath which are located the two Putney Bridge CSO outfalls. They are of plain masonry and utilitarian in nature. These outfalls are set into the Putney Bridge abutment just beneath the high tide mark, with a cobbled apron in front (refer to Figure B.1). They were centrally located on Bazalgette's abutment but due to the subsequent bridge widening they are now off-centre towards the western side.
- B.3.6 On the southern bridge abutment and within the main site is a memorial stone from 1884 that marks the bridge's construction. On the southern side of the bridge is a plaque that marks the high point of a major 1928 flood.
- B.3.7 To the east of the bridge and just outside the site is a set of river stairs that date in their present form from 1931/33.
- B.3.8 On either side of the bridge abutments, extending for approximately 20m, are short stretches of river wall with chamfered channelled masonry, which may have been constructed as part of the bridge development.
- B.3.9 Figure B.1 shows the two rectangular CSO outfalls, without voussoirs or lintels, in the channelled stone of the bridge. Each opening has plain reveals and protective grilles and there is an apron in front of them. Figure B.2 shows Putney Bridge from the northeast and St Mary's Church behind (from Putney Bridge Conservation Area). The setting of the bridge includes the eastern granite river wall and the river stairs.

**Figure B.1 View of Putney Bridge abutments and CSO outfalls (standard lens)**



**Figure B.2 View of Putney Bridge from the northeast (standard lens)**



**Plate B.1 View of the staircase facing onto Waterman's Green (wide angle lens)**



### **Putney Bridge brick arches**

- B.3.10 There are brick arches running from Waterman's Green behind the listed wing wall below Lower Richmond Road (refer to the Historic environment features map). Currently undesignated, the arches may have been integral to the construction of the original listed bridge and lie partly within the site boundary. Part of the arches contain disused public lavatories that were formerly accessed from the projecting staircase.

### Listed bollards

- B.3.11 Five Grade II listed late Victorian iron bollards dating from 1887/88 are located at the top of Putney public slipway (refer to the Historic environment features map and the Existing and proposed listed bollard location plan). The bollards were originally arranged in a single row to protect the wide riverside walkway from vehicles. During the mid 20th century, the road was widened and two of the bollards relocated. They have a modest but characteristic late 19th century design, and their special interest derives from their reasonable state of preservation despite various abrasions, their role as part of the original concept for the Embankment, and their grouping; but not their present arrangement.
- B.3.12 Figure B.3 shows the five of the listed bollards. The two on the right were relocated as part of earlier road widening.

**Figure B.3 Listed bollards near the top of Putney public slipway  
(standard lens)**



### Putney Embankment Conservation Area

- B.3.13 Both sections of the site fall within the Putney Embankment Conservation Area (refer to the Conservation areas map), which encompasses the riverfront from Douglas Wharf east of Putney Bridge to Leader's Gardens and Beverley Brook west of the boathouses. It includes the various buildings along the river, Putney Bridge, the river walls, slipways and the foreshore.
- B.3.14 The conservation area's special character derives from its riverside location, manifested in the presence of boathouses, former wharves and many of the oldest buildings in Putney, as well as a pleasant riverside walkway along the Embankment.
- B.3.15 The conservation area comprises various periods in Putney's development. Parts of St Mary's Church date to the mid-15th century and there are several Georgian buildings in the centre; however, most development occurred in the late 19th and early 20th centuries, and the Thai Square Restaurant and modern riverside handrails represent later development. Architecturally this results in a pleasant variety of red and stock brick buildings, often with elaborate decorative features such as pilasters, ornamental railings and shaped gables. The river walls and slipways are mostly concrete.
- B.3.16 Section 1.4 of the *Conservation Area Appraisal* notes that “[t]he importance and character of the boathouses and Embankment cannot be overstated, with the high quality of the Georgian and many of the Victorian and Edwardian buildings (especially the mansion flats in the case of the latter) ensuring that this remains an area of excellence”. These attributes are displayed, for example, by the Star and Garter Hotel and Mansions, which forms an impressive riverside composition and is locally listed (refer to the Historic environment features map). The Star and Garter and Thai Square form a visual barrier and the parts of Lower Richmond Road within the conservation area behind these buildings have a more inland character.
- B.3.17 Views across the river to the varied frontage of the conservation area and along its length are significant (see Figure B.4). For views of the river bank within the conservation area see also Figure B.5, Figure B.6 and Figure B.7.

### Embankment and Putney public slipway

- B.3.18 The Embankment and Putney public slipway by Putney Bridge were constructed on the former foreshore and towpath in 1887/88, with the intention of providing a recreational amenity for river users and rowers (refer to the Historic environment features map).
- B.3.19 The river wall to the west of the slipway is constructed of mass concrete with a plain finish, topped by a granite kerb surmounted by 20th century railings. While the appearance of this river wall is of no value to the Putney Embankment Conservation Area, it has some interest relating to its role in the construction of the Embankment.

- B.3.20 The surface of the slipway comprises setts with two granite track ways. It is flanked to the north by a brick river wall, and to the south by a brick river wall featuring a number of timber fenders. It has heritage interest as a notable element of the 1887/88 works.
- B.3.21 Waterman's Green, which occupies the narrow strip of land between the river wall and Lower Richmond Road above, contains some mostly semi-mature trees and a lawn, and plays a role in views of Putney Bridge and the houses along Lower Richmond Road from the north and northwest, helping to soften their otherwise urban appearance. The river edge of Waterman's Green is bounded by a plain modern steel handrail along most of its length, with cast iron railings to the west.
- B.3.22 Figure B.4 shows Putney public slipway and the listed wing wall, with the undesignated mansion blocks behind. Figure B.7 shows the slipway and Waterman's Green in more detail from the west.

**Figure B.4 Putney public slipway and listed wing wall (standard lens)**



**Figure B.5 Putney public slipway and Waterman's Green (standard lens)**



## University Boat Race Stone

- B.3.23 To the west of Putney public slipway is the University Boat Race Stone (refer to the Historic environment features map), which is a plain granite pillar set on the riverside walkway. It denotes the starting point of the annual rowing race between Oxford and Cambridge Universities, which has acquired national (and possibly international) importance in the sporting calendar. The stone is also the finishing point for the annual Head of the River Race and other river events.
- B.3.24 Figure B.6 shows the University Boat Race Stone and the modern handrails along the riverside.

**Figure B.6 The University Boat Stone (wide angle lens)**



**Figure B.7 The concrete river wall and Putney Pier to the west (standard lens)**



**Figure B.8 Putney Pier with Putney Bridge from one of the boathouse slipways (standard lens)**



### Archaeology

- B.3.25 The Archaeological Priority Area along Putney High Street and Embankment relates to the remains of the historic riverside settlement and crossing point. Artefacts have been found in the vicinity of the site, including a Roman coin, Palaeolithic flints, and Neolithic pottery. On the Fulham side of the river, a number of artefacts from the Neolithic to Bronze Age periods have been found on the foreshore (see Figure B.1).
- B.3.26 Most of the archaeology identified within the site dates to the post-medieval period, including structural features associated with the former and present Putney Bridges and the former 1854 aqueduct on the site of the present bridge, a 19th century drain beneath the bridge approach, and an 18th century dump. A 19th century structure exists beneath the bridge approach, and what is assumed to be a chalk barge bed lies to the eastern side of the bridge approach.
- B.3.27 Due to the natural scouring action of the river and the construction activity associated with the previous aqueduct, bridge and slipway, the potential for surviving archaeological remains is low for all periods except for post-medieval. Any surviving archaeology would be of low to medium significance.

## St Mary's Church

- B.3.28 The Grade II\* listed St Mary's Church (refer to the Historic environment features map) is positioned alongside the eastern approach to Putney Bridge. The church has a mid-15th century stone tower; and its body was rebuilt in 1836 in pale yellow bricks and it retains an early 16th century chapel. The church has great significance as the only substantial survivor from medieval Putney. It also has communal value as the location of the 'Putney Debates' over the nation's constitution in 1647.
- B.3.29 The church's setting is characterised by the raised bridge approach, with its blocked brick arches, and river stairs, relating to Bazalgette's bridge and its later alterations. Another aspect of its setting are the stone piers and railings along the road and river wall that appear to date from the 1836 works and subsequent changes in the 1880s, although the roadside elements seem to have been relocated following the bridge widening in 1931/33. To the south and east, the setting is contemporary; it contributes little to the church's significance and contrasts with the historic elements. This area is dominated by Putney Wharf Tower. Wider views of the church tower contribute more to its significance than its nearby setting, which contributes little.
- B.3.30 Figure B.9 shows the Church from the south. The Gothic 15th century tower and 19th century gothic nave contrast with a modern southern extension. The raised area to the left is the road leading up to Putney Bridge, which encroached into the church's grounds when the road and bridge were widened.

**Figure B.9 View of St Mary's Church (standard lens)**



## White Lion Hotel

- B.3.31 This Grade II listed building dating from 1887 is an elaborate interpretation of the French Second Empire style. It faces St Mary's Church across Putney High Street (refer to the Historic environment features map). Its special interest resides principally in its street façade.

### **Bishop's Park Conservation Area**

- B.3.32 The Bishop's Park Conservation Area (refer to the Conservation areas map) is centred on the medieval Fulham Palace and its former moated grounds. It also includes the western side of Fulham High Street, the entire riverfront along Bishop's Park, and a number of residential streets on the western side of Fulham Palace Road.
- B.3.33 The riverside areas that have a visual relationship with the site are characterised by a long river wall facing a gravel foreshore. Behind this is a riverside walkway shaded by mature trees, which act as a visual barrier in views from/to the south bank, and a linear area of open space interspersed with railed gardens and playgrounds. The riverside walkway offers good views of Putney Bridge and the southern side of the river, including the site.

### **Fulham Palace Registered Garden**

- B.3.34 Fulham Palace is a Grade I listed late 15th and early 16th century courtyard house with later additions, set within a walled garden and a wider landscape with elements dating to the medieval, Roman and Neolithic periods. It is listed at Grade II on the Register of Parks and Gardens, and also stands within the Bishop's Park Conservation Area. The garden does not have a river frontage and offers no views of the site.

### **Putney Bridge Conservation Area**

- B.3.35 Although much of the significant elements of the conservation are inland, the Putney Bridge Conservation Area (refer to the Conservation areas map) includes the modern developments and public open space along the northern side of the River Thames between Putney Rail Bridge, which is locally listed, and Putney Bridge. It also includes the foreshore and northern half of the river channel. The western part of the area's riverfront offers partial views of the site of the Putney Embankment Foreshore CSO site approximately 300m to 400m away. The buildings nearest the riverside walk are from the late 20th century and are not of any special interest.

### **Hurlingham Conservation Area**

- B.3.36 The Hurlingham Conservation Area is centred on Hurlingham Park, an inland public park, and the Hurlingham Club, a riverside private park centred on the Grade II\* listed 18th century villa of Hurlingham House. The conservation area extends further inland to the west and east to take in a number of residential streets and the Edwardian South Park. It also extends westwards along the large 20th century blocks of riverfront flats, up to the edge of Putney Rail Bridge. The residents' communal garden in front of these flats and the riverside walk of the Hurlingham Club both offer a distant view of the Putney Bridge abutment and the Putney Embankment Foreshore CSO site.

## Deodar Road Conservation Area

- B.3.37 The Deodar Road Conservation Area includes the houses along Deodar Road that have long rear gardens backing onto the River Thames, along with the adjacent area of river and foreshore as far as the borough boundary.
- B.3.38 The special character of the area derives from the varied but complementary late Victorian character of most of the houses, but most importantly their unusual riverside setting with gardens backing onto the river wall. The conservation area also includes the southern half of Putney Rail Bridge, a locally listed structure, which was built in 1887/89 by William Jacomb. It features wrought iron latticework trusses suspended on giant Doric columns; the central two columns are encased in modern sheet-piled cutwaters. The bridge has a public footpath on its eastern side that faces away from the site. The views to/from the site are distant and oblique.

## Winchester House

- B.3.39 Winchester House, Putney Constitutional Club (refer to the Historic environment features map), is a classical Grade II listed 19th century building set back from the river frontage, which fronts on Lower Richmond Road. It has a two storey annexe.

## Significance summary

- B.3.40 An assessment of the significance of the heritage assets and the potential effects of the proposed works at this site is set out in the *Environmental Statement* (Vol 7). The assessment includes a full statement of significance for built heritage and buried archaeological assets at the site. The significance of the heritage assets is summarised below in Table B.1.

**Table B.1 Significance of heritage assets at Putney Embankment Foreshore**

Heritage asset	Heritage significance	Reason for significance
Putney Bridge	High	Significance derives from its architecture and history.
Putney bridge brick arches	Low	Significance derives from Putney Bridge.
Listed bollards	High	Significance derives from their architectural and historic interest and their association with the use of the River Thames.
Putney Embankment Conservation Area	High	Significance derives from the variety of periods, predominantly the late Victorian to Edwardian period, the relationship with the river, including its leisure emphasis, and the varied and active embankment
Embankment and Putney public slipway	Medium	Significance derives from its varied from and riverside public leisure associations.
University Boat Race Stone	High	Significance derives from its historic associations and its role in national events.

Heritage asset	Heritage significance	Reason for significance
St Mary's Church, Putney	High	Significance derives from its age, Gothic architecture and historic associations.
White Lion Hotel	High	Significance derives from its elaborate decoration and style.
Bishop's Park Conservation Area		Significance derives from Fulham Palace.
Fulham Palace Registered Garden	High	National significance as the grounds of Fulham Palace.
Putney Bridge Conservation Area	High	Significance derives from the riverside setting and the distinctive character of its inland elements.
Hurlingham Conservation Area	High	Significance derives from the park and 18th century house.
Deodar Road Conservation Area		Significance derives from the pattern of buildings with back gardens facing onto the river.
Winchester House	High	Significance derives from its architectural and historic interest
Archaeology	Low to medium	Significance derives from the potential for former river structures and riverside occupation.

## B.4 Description of proposals and required heritage consents

B.4.1 A summary of the proposed temporary and permanent works at Putney Bridge Foreshore is set out below.

### Temporary construction works

B.4.2 The main temporary worksite adjacent to Putney Bridge would contain a cofferdam and be protected with hoardings. Cranes and other plant machinery would be required.

B.4.3 A temporary slipway made of steel with circular piles would be constructed in the foreshore while Putney public slipway is unavailable for use. A section of the post-war balustrade would be removed to enable access. The temporary slipway would be removed following the completion of the works; and the balustrade and Putney public slipway would be made good.

B.4.4 The cofferdam under Putney Bridge would be set against its stone abutment with a non-intrusive seal; it would not be attached. Where a better seal is required, the cofferdam would be set into slots cut into the masonry of the river wall and set into a sealing material that would not damage the masonry on removal.

### Permanent above-ground structures

- B.4.5 A new CSO interception structure would be set against Putney Bridge's southern abutment. It would largely sit below the foreshore and entirely below the level of the springing point of the bridge's arch (refer to the Listed structure interface: interception chamber drawing).
- B.4.6 A 225mm diameter ventilation column would serve the CSO interception structure. It would be sympathetically sited on the bridge's southeastern pavement and connected to the structure via the vaults of the bridge approach.
- B.4.7 An electrical and control kiosk would be located within Waterman's Green. It would be a rectangular, flat-roofed, granite-faced structure with metal louvered doors to match the materials of the existing bridge parapet and staircase. It would also feature a parapet with mouldings similar to the adjacent walling. It would be located within the angle between the wall and the staircase walls from the raised road pavement down to the former public lavatories (refer to the Existing listed structure interface: kiosk, and Proposed listed structure interface: kiosk drawings).
- B.4.8 The permanent foreshore structure around the CSO drop shaft would project from the river wall between Putney public slipway and Putney Pier. The surface would be paved with granite and form a new area of public open space. Its detailed design would be of sufficient quality to enhance the appearance of the existing river wall. It would provide a platform from which to view recreational users of the river and preserve the location at the start and finish point of river races (refer to the Permanent works layout drawing 1 of 2).
- B.4.9 One ventilation column on the foreshore structure would serve the CSO drop shaft (refer to the Site works parameter plan). An electrical and control kiosk would sit on the northwestern corner of the foreshore structure.
- B.4.10 The evolution of the design of the permanent works and the alternatives considered are set out in the *Design and Access Statement*, which accompanies the application. The design proposals are illustrated in the drawings within the *Book of Plans* and were developed in line with the *Design Principles* and the *Code of Construction Practice*, which also accompany the application, to minimise the impact of the proposed works and structures on their surroundings, in line with relevant national, regional and local policies.
- B.4.11 The aspects of the proposed works that would affect the heritage assets are set out below. The proposals that would normally require Listed Building Consent or Conservation Area Consent are also identified.
- B.4.12 Refer to the Historic environment features map, the Conservation areas map and the drawings listed in Table B.2 below. This table sets out the drawings of the proposed works that may affect heritage assets, which are provided in A3 format at the end of this appendix. It also provides the status and location of the drawings within the application.

**Table B.2 Drawings relating to heritage assets at Putney Embankment Foreshore**

<b>Drawing title</b>	<b>Drawing status</b>
Location plan	For information
As existing site features plan	For information
Demolition and site clearance plan (1 of 3)	For approval
Demolition and site clearance plan (2 of 3)	For approval
Demolition and site clearance plan (3 of 3)	For approval
Site works parameter plan	For approval
Permanent works layout (1 of 2)	Illustrative
Permanent works layout (2 of 2)	Illustrative
Temporary slipway layout	Indicative
Proposed landscape plan (1 of 2)	Indicative save for layout of above ground structures which is illustrative
Proposed landscape plan (2 of 2)	Indicative save for layout of above ground structures which is illustrative
Section AA (1 of 2)	Illustrative
Section AA (2 of 2)	Illustrative
Section BB	Illustrative
As existing and proposed river elevation (1 of 2)	Illustrative
As existing and proposed river elevation (2 of 2)	Illustrative
As existing and proposed west elevation	Illustrative
As existing and proposed east elevation	Illustrative
As existing and proposed south elevation	Illustrative
As existing and proposed foreshore structure west elevation	Illustrative
As existing listed structure interface: Kiosk	For information save for maximum extent of loss of listed structures which is for approval
Proposed listed structure interface: Kiosk	Indicative
Foreshore kiosk design intent	Indicative
Listed structure interface: Interception chamber	Indicative save for the maximum extent of loss of listed structures which is for approval
Typical river wall design intent	Indicative
Existing and proposed listed bollard location plan	Indicative
Construction phase 1: Site set-up	Illustrative

Drawing title	Drawing status
Construction phase 2: Shaft construction and tunnelling	Illustrative
Construction phase 3: Construction of other structures	Illustrative
Construction phase 4: Site demobilisation	Illustrative
Construction phases 5: Temporary slipway	Illustrative

The drawings are located in Section 8 of the *Book of Plans*

## Putney Bridge

- B.4.13 The establishment of the site, including the erection of site hoardings and security fences, installation of on-site cranes and other plant machinery, and the construction of a cofferdam for the CSO interception structure would affect Putney Bridge. These works would be visible from both the northern and southern banks of the River Thames and would therefore affect the setting of the bridge and the surrounding area.
- B.4.14 The permanent works would require limited localised cutting of the bridge masonry to widen the two CSO outfalls and connect them to the interception structure. The CSO interception structure would be capped with a fair-faced concrete domed cover (refer to the Demolition and site clearance plan (2 of 3), Permanent works layout (2 of 2), and the Listed structure interface: Interception chamber drawing).
- B.4.15 The installation of the ventilation column would require cutting a channel through the structure of the brick arches.
- B.4.16 The electrical and control kiosk structure would be located on the listed wing wall facing onto Waterman' Green, within the angle between the wall and the projecting staircase wall from the raised road pavement down to the former public lavatories. It would be slightly recessed from the line of the staircase wall, and would be subordinate to the original structure (refer to the Proposed listed structure interface: Kiosk and Foreshore kiosk design intent drawings).
- B.4.17 The design principles for the final design of this site include the generic (project-wide) heritage design principles and the site-specific principles set out in Section 4.4 of the *Design Principles*. The site-specific principles that relate to the significance of Putney Bridge include the following:

Reference	Site-specific design principles
PUTEF.01	In order to minimise the visual and physical impact on the listed bridge, the top of the interception chamber shall sit below the springing point of the bridge arch and be as small as possible. The interception chamber shall be set back from the main bridge elevations as far as possible to maintain the architectural integrity of the existing bridge.
PUTEF.02	The interception chamber shall be finished in high quality, fair-faced concrete that complements the existing finish of the bridge.

Reference	Site-specific design principles
PUTEF.13	The design of the interception ventilation column (positioned on the listed bridge) shall be appropriate to the listed structure and in keeping with the character of surrounding street furniture.

### Works normally requiring Listed Building Consent

B.4.18 The proposed works that would normally require Listed Building Consent include those to two parts of the listed structure: Putney Bridge and the approach structure, and the wall facing onto Waterman's Green, are as follows:

#### Putney Bridge abutment

- a. A non-intrusive seal would be established between the eastern edge of the cofferdam and the bridge.
- b. The outfall apron beneath the bridge would be removed.
- c. The alteration works to the CSO outfalls would be undertaken as follows (refer to the Listed structure interface: Interception chamber drawing):
  - i. The screens around the outfalls would be carefully removed.
  - ii. Each rectangular opening would be widened to accommodate a sleeve to connect to the outfall pipe behind.
  - iii. Channels would be cut into the existing moulded masonry above the openings to enable the new precast concrete cover to be butted against the abutment in order to achieve a watertight seal.
  - iv. The reinforced concrete walls supporting the cover would be separate from the listed abutment and the gap filled with concrete. A hydrophilic joint would create a seal between the fabric of the bridge and the new interception structure, which would make the works reversible.
  - v. Behind the abutment a connection would be created between the overflow pipe, which would run through below the vaults behind the abutment, and the pavement on the each side of the bridge at its south end. The ventilation column would be installed in this location. The externally visible changes would include the removal of a small area of paving immediately on the bridge around the column. The connection would be drilled through the soffit of the relevant vault. The connections to the column would be hidden from view.
- d. The fabric of the bridge would be protected throughout, in accordance with Section 12 of the *Code of Construction Practice Part A* and the site-specific heritage management plan.

#### Wing wall kiosk

- a. A slot would be cut into the listed recessed granite-faced wall to accommodate the cable ducting into the vaults behind (refer to the Proposed listed structure interface: Kiosk drawing).

- b. The walls of the kiosk would be built into the listed wall. The existing staircase’s western wall and the main wall, including part of its parapet, would be cut locally in order to key in the kiosk’s new granite cladding.
- c. The kiosk’s granite cladding and parapet mouldings would match the adjacent wall.

**Listed bollards**

- B.4.19 During the construction works, the listed bollards would be temporarily removed in order to facilitate access to the site. They would be stored safely and securely, refurbished and reset in front of the foreshore structure. The bollards would continue to protect the reconfigured walkway close to the junction of Putney Embankment, Lower Richmond Road and Putney public slipway (refer to the Existing and proposed listed bollard location plan).
- B.4.20 Full details of the approach to be taken would be subject to a DCO requirement (see also the *Code of Construction Practice* for details of the means of protection, including the requirement for a heritage management plan).
- B.4.21 The site-specific principle that relates to the significance of the listed bollards is set out in Section 4.4 of the *Design Principles* and includes the following:

Reference	Site-specific design principles
PUTEF.20	The listed bollards shall be carefully removed, stored and reinstated. They shall be relocated in the vicinity of their current positions in keeping with the revised layout and access requirements.

**Works normally requiring Listed Building Consent**

- B.4.22 The proposed works that would normally require Listed Building Consent include the following:
  - a. The listed bollards would be removed, stored for the duration of the works to the foreshore structure, and reinstated at the end of the works period, during the resurfacing of the footways.
  - b. The paving around the bollards would be removed and the bollards removed carefully. If they are found to be set in concrete this would also be removed with the bollard, supported from beneath to avoid damage. The bollards would be dried, packed and removed to a storage facility where they would be stored together in a stable and secure environment to avoid damp and corrosion.
  - c. The bollards would be repositioned to continue their original function.

**Putney Embankment Conservation Area**

- B.4.23 The temporary worksites would alter the character and appearance of a proportion of the conservation area. The temporary works would obscure some views of Waterman’s Green and Putney public slipway as well as part of the plain concrete river wall. However, all the buildings within the

conservation area close to the sites, such as the listed Putney Bridge and the locally listed Star and Garden Hotel and Mansions, would remain visible in views into and along the length of the conservation area.

- B.4.24 A temporary slipway would be constructed further to the west during construction and removed on completion of the works. This would cause a temporary change.
- B.4.25 The mass concrete-faced river wall would be removed locally to attach the foreshore structure. The structure would be sympathetically designed with horizontal timber fendering on the sides and would also be faced in concrete. The public open space on top would be paved with granite paving. It would require the replacement of the present railings along the wall (of no heritage significance) with new railings. The space would also incorporate a physical marker drawing attention to the University Boat Race Stone, bench seating, and a small metal electrical and control kiosk (refer to the Proposed landscape plan drawing 1 of 2).
- B.4.26 The ventilation column on the foreshore structure would be a signature feature and stand 4m to 8m high (refer to the Site works parameter plan).
- B.4.27 The site-specific principles that relate to the significance of the river wall in relation to the foreshore structure and the removal of a Holly tree in Waterman’s Green include the following:

Reference	Site-specific design principles
PUTEF.063	The electrical and control equipment shall be housed in two structures. The main kiosk shall be located on Waterman’s Green and a smaller kiosk on the foreshore structure.
PUTEF.07	The design and materials of the facades of the main kiosk shall match the existing bridge abutment wall. The design and layout of this kiosk shall accommodate the continued use of an existing ventilation louvre located within the abutment wall.
PUTEF.08	The main kiosk shall be as narrow in depth as possible (ie, to minimise the extent to which it protrudes off the existing wall) to maximise space on Waterman’s Green.
PUTEF.09	The cable and ducting route to the main kiosk shall run partially beneath Waterman’s Green but mostly beneath the pavement and road surface in order to protect tree roots and avoid disturbance to the Green.
PUTEF.12	The kiosk on the foreshore structure shall be positioned to mark the western junction with the existing embankment and mediate the level change between the pavement and the foreshore structure. It shall be finished in way that enhances the public realm with the inclusion of public art, possibly incorporating historic interpretive information on the area and maritime events. Any public art at this site shall be procured in close collaboration with the local authority’s Arts Team.

Reference	Site-specific design principles
PUTEF.17	The foreshore structure sits on the starting line of the University Boat Race. The University Boat Race stone shall be retained in its current position. A physical marker shall run from the stone to the new river wall. The marker shall have a detailed treatment and could feature as a work of public art.
PUTEF.23	The Holly tree that would be removed from Waterman's Green during construction shall be replaced with another tree at a location to be agreed with the local authority.

### Works normally requiring Conservation Area Consent

- B.4.28 The proposed works that would normally require Conservation Area consent include:
- The demolition of the river wall, railings and non-listed street furniture within the Putney Embankment Conservation Area to construct the foreshore structure between the top of Putney public slipway and Putney Pier, and its replacement with the foreshore structure.

### Embankment and Putney public slipway

- B.4.29 The construction works would include the temporary removal of cobbles and fenders at the top of Putney public slipway (refer to the Construction phases: Temporary slipway drawing). The cobbles would be recorded, removed and stored for the duration of the works to enable access to the site without damaging the historic features. The rest of the slipway would be protected and covered with granular material to form an appropriate working environment. Following the completion of the works the cobbles would be reinstated in their original positions, and matching fenders would be installed to return the slipway to its former appearance and maintain its contribution to the character and appearance of Putney Embankment Conservation Area (refer to the Demolition and site clearance plan 1 of 3).
- B.4.30 The works would potentially include removing and storing a statue currently located at the junction of Lower Richmond Road and Putney public slipway (refer to the Demolition and site clearance plan 1 of 3).
- B.4.31 A section of the concrete and brick river wall at a point just beyond the interface with Putney public slipway would also be demolished (Demolition and site clearance plan 2 of 3).
- B.4.32 A Holly tree would be removed from Waterman's Green and replaced with another tree at a location to be agreed with the local authority..
- B.4.33 The site-specific principles that relate to the significance of the public slipway include the following:

Reference	Site-specific design principles
PUTEF.14	The layout of the permanent works shall minimise any visual and physical effects on the existing slipway and avoid the need for alterations. Any slipway materials that are disturbed by the works shall be removed with care, stored and reinstated to the existing standard.

Reference	Site-specific design principles
	The works shall not prejudice the possibility of widening the slipway in the future by others.

### Works normally requiring Conservation Area Consent

- B.4.34 The proposed works to Embankment and Putney public slipway that would normally require Conservation Area consent include:
- a. The possible temporary removal of the statue at the junction of Lower Richmond Road and Embankment.

### University Boat Race Stone

- B.4.35 The construction activities and structures would alter the setting of the University Boat Race Stone. The permanent works would make reference to its function.
- B.4.36 No heritage consent would normally be required.

### St Mary's Church

- B.4.37 Although the immediate setting of St Mary's Church is compromised by the raised bridge approach on Putney High Street and the dominant modern buildings to the east, the construction works would fall within the setting and alter it. The ventilation column on Putney Bridge would be close to the church and would also alter its setting.
- B.4.38 No heritage consent would normally be required.

### White Lion Hotel

- B.4.39 The White Lion Hotel faces east and the raised Putney Bridge approach would restrict views of the site.
- B.4.40 No heritage consent would normally be required.

### Bishop's Park Conservation Area

- B.4.41 The construction works and the foreshore structure would be visible from the conservation area's riverside path and would alter its riverside setting.
- B.4.42 No heritage consent would normally be required.

### Fulham Palace Registered Garden

- B.4.43 The Fulham Palace Registered Garden is set away from the embankment and would be screened from the site by trees.
- B.4.44 No heritage consent would normally be required.

### Putney Bridge Conservation Area

- B.4.45 The temporary works and cranes to the east of Putney Bridge would be visible from the riverside walkway. The nearest part of the site would be 300m to 400m away and the affected views have limited significance. However, there would be some effect on the conservation area's setting.
- B.4.46 No heritage consent would normally be required.

### Hurlingham Conservation Area

- B.4.47 Putney Rail Bridge would act as a barrier to views of the construction works.
- B.4.48 No heritage consent would normally be required.

### Deodar Road Conservation Area

- B.4.49 The construction works would partly alter views from the southern end of Putney Bridge towards the conservation area, along the linear embankment wall. These views are oblique and do not form a significant part of its setting.
- B.4.50 The locally listed Putney Rail Bridge falls partly within the conservation area. The views of the conservation area from the bridge are significant. The site would be peripheral within these views. The site would be barely visible from the bridge's footway, which runs along the eastern side.
- B.4.51 No heritage consent would normally be required.

### Winchester House

- B.4.52 Winchester House is set back from Embankment. The construction works at the Putney Embankment Temporary Slipway site would fall within the setting of its annexe.
- B.4.53 No heritage consent would normally be required.

### Archaeology

- B.4.54 The construction works in the foreshore and beneath the bridge would likely completely remove the foreshore deposits within the footprint of the cofferdams, particularly within the footprint of the CSO interception chamber and CSO drop shaft.
- B.4.55 Any potential harm to the significance of heritage assets during construction would be mitigated by a programme of investigation and recording. The details of this programme are set out in the *Overarching Archaeological Written Scheme of Investigation*, which accompanies the application.

## B.5 Heritage design considerations

- B.5.1 As most of the project works would be below ground, the key design objective for the permanent works was to integrate the functional components of the system into the context of the historic environment. The site-specific design objective at Putney Embankment Foreshore was successfully to integrate new infrastructure into the Grade II listed Putney Bridge, and to integrate the foreshore structure into Putney Embankment Conservation Area, the settings of its listed buildings and the other nearby heritage assets. The site also needed to remain useable by river users during and following construction.
- B.5.2 As the design evolved in response to consultation with the Design Council CABE, the London Borough of Wandsworth and English Heritage, several changes were made. The varied form of the existing structures along

Embankment and the sensitivity of the setting of Putney Bridge required the foreshore structure to move further away from Putney public slipway and the listed bridge in successive design iterations to the proposed location between the slipway and Putney Pier. In this position it would not sit in front of the slipway and would take advantage of an existing variation in the river frontage and the partial screening effect of Putney Pier in views from the west. It would also take advantage of the historic associations of the University Boat Race Stone and add to the area's historic focus as a centre of riverside leisure since the late Victorian and Edwardian periods. The ventilation column on the foreshore structure was reduced in size to avoid dominating the river bank and enhance its variety.

- B.5.3 Materials were also an important consideration. Timber fendering was selected for the foreshore structure to reflect the materials of Putney public slipway and other in-river structures. The mass concrete cladding on the electrical and control structures reflected the existing river walls. Paving the new public space with granite would be appropriate to its waterside setting and reflect surviving historic paving materials in the vicinity.
- B.5.4 The main design consideration for the external appearance of the interception chamber cover was to preserve the significance of the listed Putney Bridge and views towards it. The structure would sit below the springing level of the bridge arches and set back from the outer edges of the bridge abutments. The attachment of the proposed structure to the abutment was designed to minimise the amount of listed fabric to be removed.
- B.5.5 Another consideration was to sensitively locate and design the electrical and control kiosk. It was reduced in width and moved into the recess adjacent to the staircase on Waterman's Green. The cladding and classical form of the kiosk was designed to harmonise with but be subordinate to the adjacent listed fabric. As little historic fabric as possible would be removed when installing it. The louvered doorways would clarify its function. The kiosk on the foreshore structure was also designed to be unobtrusive.
- B.5.6 At Section 48 publicity, English Heritage stated that the latest scheme was an improvement in terms of the historic environment, especially the settings of Putney Bridge, St Mary's Church, and Putney public slipway, as well as the character and appearance of the Putney Embankment Conservation Area. The London Borough of Wandsworth agreed that the proposals represented a significant improvement in relation to those assets, and supported the proposed new area of public space on top of the foreshore structure.

## **B.6 Mitigation measures**

- B.6.1 Due to the presence of heritage assets nearby, the National Policy Statement for Waste Water (the 'NPS') requires the proposed development to be based on an understanding of the significance of heritage assets (para. 4.10.11), minimise any impacts on their significance (paras. 4.10.12 to 4.10.14), minimise impacts on their setting (para.

4.10.17), mitigate any negative impacts (para. 4.10.18 to 21), and ensure that the proposals are of a high design quality (Section 3.5). These requirements are reflected in similar policies in the *London Plan (2011)*, the *Core Strategy*, *DMPD* and *The Putney Embankment Conservation Area Appraisal and Management Strategy*.

- B.6.2 The temporary impacts on the bridge abutment and river walls from the cofferdams would be mitigated by restricting cutting works, fixing the cofferdam into a concrete anchoring structure away from the bridge abutment and inserting a seal between the abutment and the concrete. Any other elements that need to be fixed to existing structures would be fixed at the fewest possible points using the least intrusive methods, including fixing into mortar joints rather than masonry.
- B.6.3 A sensitive and detailed approach seeking to achieve the highest design standards would mitigate any impact of the permanent works on the physical appearance of Putney Bridge and its associated wing wall to an acceptable level. The proposals seek to balance the need to conserve the bridge's aesthetic and historical value and the need to undertake the works in this location.
- B.6.4 The impact of the foreshore structure would be mitigated by the decision to locate the CSO drop shaft some distance from the CSO interception structure below Putney Bridge to minimise the visual impact on the bridge. This is in line with the requirements of the NPS (para. 4.10.17). The structure's location between Putney public slipway and Putney Pier would also minimise visual impacts on the western part of the Putney Embankment Conservation Area and Putney Bridge.
- B.6.5 The CSO interception structure would be set beneath the springing point of the bridge arch under a low, domed cover. The design of the cover derived from the form of the abutment and cutwater ends. The low height, design quality and form of this structure would mitigate its impact on the character of the bridge in views from the east and west. It would be structurally independent of the bridge abutment.
- B.6.6 The permanent alterations to the Putney Embankment Conservation Area would be mitigated by utilising high quality materials for the new river wall and by improving the public realm. New views of heritage assets on both the Putney and Fulham sides of the River Thames would be created. The ventilation column on the foreshore structure would be of a high standard of design and form an appropriate new feature along Embankment.
- B.6.7 The impact from the construction of an electrical and control kiosk on Waterman's Green would be mitigated by its sensitive design, which would be detailed to match the architectural character and materials of the existing staircase.
- B.6.8 With the exception of the Holly tree on Waterman's Green, the nearby trees would be retained. The loss of the tree would be mitigated by a replacement tree in a location to be agreed with the local authority.
- B.6.9 The construction phase would also risk accidental loss of or damage to heritage assets. The risk of these impacts would be mitigated by the protective measures set out in the *Code of Construction Practice* (see

para. B.7.14). A comprehensive survey of the area would be undertaken in addition to a programme of recording to English Heritage Level 2 for the 1928 flood marker, river wall, Putney public slipway and the former set of river stairs. The programme would be implemented to English Heritage Level 3 for the Putney Bridge vaults where existing pipework would require modification.

- B.6.10 The excavation of the upper stratum of the foreshore within the temporary worksite and the construction of the cofferdams would lead to the loss of archaeology in these areas. As no highly significant archaeology is anticipated that would merit preservation *in situ*, a watching brief during site preparation and construction would constitute sufficient mitigation. However, targeted investigations could be carried out as the works proceed, if necessary, in accordance with the *Overarching Archaeological Written Scheme of Investigation*, that accompanies the application. A suitable programme of investigation would ensure preservation by record. It would advance understanding of the significance of any finds, which would be appropriately disseminated via the usual channels. This would satisfy the requirement in the NPS (para. 4.10.18) to record any unavoidable losses.
- B.6.11 The programme of archaeological mitigation would be tailored to respond to evolving conditions on site. It would also continue after the completion of the works in the event that river scour patterns change and affect potential archaeology. Discoveries made during this process of pre- and post construction investigation would enable enhanced public understanding of the history of Putney and London more generally.
- B.6.12 For the duration of the construction phase, all heritage assets would be safeguarded by the provisions of a site-specific heritage management plan. This plan would be prepared by the contractor prior to commencing construction in accordance with Section 12 of the *Code of Construction Practice Part A*, which also states the following:
- a. An archaeological watching brief shall be undertaken through the layers of archaeological interest during excavation works.
  - b. Impacts associated with outfall (Grade II listed bridge abutment) shall be mitigated by putting mitigation measures in place during construction activities.
  - c. Putney public slipway shall be protected during construction. In localised areas where cobbles would be removed, the cobbles shall be securely stored and reinstated. The University Boat Race Stone shall be protected from damage.
  - d. The listed bollards shall be removed, protected, renovated and reinstated. The contractors working methods shall minimise the risk of accidental strikes on the listed bridge. Protection barriers shall be installed as required but not attached to the structure unless otherwise agreed.

## B.7 Assessment of effects

B.7.1 The *Environmental Statement* assesses the significant effects of the proposals on the historic environment. The discussion below sets out the significant and less than significant effects having regard to the criteria in the NPS.

B.7.2 A summary of the assessment of effects on the heritage assets based on the significance of the heritage assets identified in Section B.3, the impacts identified in Section B.4 above, and the mitigation measures described in Section B.7 is set out below.

### Putney Bridge

B.7.3 The temporary construction works and installation of the new ventilation column on the southeastern corner of Putney Bridge would have a minor negative effect on the upper surface of the bridge.

B.7.4 However, when viewed from Embankment and in relation to the bridge itself, the works would have a moderately negative effect on the setting of the bridge.

B.7.5 With regard to the physical effects on the bridge, locally there would be major negative temporary effects on the southern bridge abutment from the removal of the apron, the cutting of small areas of stonework (refer to the Listed structure interface: Interception chamber drawing), and the presence of the cofferdam and worksite. However, the Grade II listed Putney Bridge is a robust structure. It has previously undergone renovation and modernisation works, such as road widening and structural strengthening, which have not affected its significance. Considering the whole structure and the localised and relatively discrete intervention proposed to install the CSO interception chamber, the intervention would result in a moderate negative temporary effect overall. This would amount to less than substantial harm, as the bridge's significance would not be substantially diminished.

B.7.6 The works would be harmful to the original fabric of the abutment, the interior vaults and the roadway above. However, the works would improve and utilise the existing 19th century CSO outfalls and therefore would not impact on the character and function of the bridge. They would also not affect the public's appreciation of the bridge or the contribution it makes to Putney's riverside setting.

B.7.7 The CSO interception structure would have minor negative effects on views of the bridge. However, it would make the bridge's historic function as part of Bazalgette's sewerage system more legible and better reveal its significance, in accordance with para. 4.10.17 of the NPS.

B.7.8 Overall, these impacts would constitute less than substantial harm to the bridge, as its significance would not be substantially diminished.

### Listed bollards

- B.7.9 Although the five listed bollards would be temporarily removed during the construction works, they would be fully refurbished prior to reinstatement, which would enhance their general condition and appearance. They would be reinstated in a different configuration but would continue to perform their intended role of protecting the the footway from vehicles at the sensitive junction which they were originally designed to protect. As a result the works would safeguard their long-term future and would constitute less than substantial harm, as any loss of significance would be mitigated.
- B.7.10 The permanent effects would not be significant, as any negative effects from the bollards' altered configuration would be off-set by their improved appearance and continued functionality.

### Putney Embankment Conservation Area

- B.7.11 The construction works at both sites would have a temporary moderate negative effect on the significance, character and appearance of the conservation area. This would arise from the sizeable temporary structures and activities along the embankment, the foreshore and on Waterman's Green. The effect would constitute less than substantial harm to the conservation area as a whole, as it would only affect a portion of its approximately 1km river frontage. The elements on Lower Richmond Road to the west of its junction with Putney Embankment would not be affected. The significance of the conservation area would not be substantially diminished.
- B.7.12 The permanent impact of the CSO interception works on views and the character of Putney Embankment Conservation Area and would be minor negative. The new element introduced into the river frontage would add to the existing variety. The CSO interception structure would be sensitively located beneath the springing of the listed bridge, set back from the face of the arch. Views of the bridge and arch would not be affected, as the structure would be detailed to respect the listed bridge. The Waterman's Green electrical and control kiosk would also harmonise with the existing wall.

### Embankment, Putney public slipway and Waterman's Green

- B.7.13 The temporary removal and storage of the slipway cobbles and fenders, and the demolition of a stretch of wall would constitute a moderately negative harmful intervention. However, it would represent less than substantial harm as it would only affect a portion of the river wall. The setting of these assets would also be temporarily compromised by the foreshore works.
- B.7.14 The shape and function of Putney public slipway would remain legible and most of the embankment would be unaltered. The most intrusive temporary interventions would be undertaken to protect the significance of these features in the long term. Overall, there would be a moderate negative effect to these undesignated assets during construction.

- B.7.15 The reinstatement of Putney public slipway following the works and the presence of the permanent structures in the wider setting would have a minor permanent negative effect.

### **University Boat Race Stone**

- B.7.16 Although the setting of the University Boat Race Stone against the modern river wall handrail is robust, the construction activities and structures would have a minor negative effect. They would restrict its visibility and alter its relationship with the River Thames. However, the permanent works would make reference to its function. Therefore there would be a moderate positive effect on its setting.

### **St Mary's Church**

- B.7.17 The ventilation column close to St Mary's Church would have a minimal affect on the setting or character of the Church as it would be no larger than a lamp post. The construction works would also temporarily alter the setting. However, the church is partly screened from the site and Putney Bridge by mature trees and street signage. The setting is also substantially compromised by the widened Embankment roadway and the existing surrounding buildings. Its immediate setting therefore does not play a major part in its significance, which overall would suffer less than substantial harm.

### **White Lion Hotel**

- B.7.18 The White Lion hotel would not have a direct visual relationship with the permanent structures, apart from the ventilation column on Putney Bridge. The temporary works around Putney Bridge would minimally affect the building's setting; however the building faces east and views of the site would be restricted by the raised Putney Bridge approach. Overall, the effects on its setting would be minimal.

### **Bishop's Park Conservation Area**

- B.7.19 The effects of the construction and permanent works on views from the edge of the conservation area would be minor negative overall.

### **Fulham Palace Registered Garden**

- B.7.20 There would be very little effect on the significance of the Fulham Palace Registered Garden from the proposals as it is set back from the river frontage and views across the River Thames are very limited.

### **Putney Bridge Conservation Area**

- B.7.21 The construction works would occupy the furthest part of Putney Bridge that would be visible from the conservation area. The works would have minor negative effects on the setting of its river frontage.

- B.7.22 The CSO interception structure would be just visible beneath the southern bridge arch and set back from its eastern face. The permanent effects would be minor negative.

### Deodar Road Conservation Area

- B.7.23 Due to the distance between the site and the conservation area and the oblique angle of views there would be non-significant, negligible adverse effects from the construction works on its setting. The permanent works would have no effect.

### Hurlingham Conservation Area

- B.7.24 The impact of the works on the setting of conservation area as a whole would be negligible given the distance between them and the intervening Putney Bridge and Putney Rail Bridge.

### Winchester House

- B.7.25 The temporary alterations to the setting of Winchester House would not significantly affect its heritage value and would be negligible overall.

### Archaeology

- B.7.26 The construction works in the foreshore and beneath Putney Bridge would likely remove archaeology of low to medium significance.
- B.7.27 This harm would be mitigated by a programme of investigation and recording. The details of this programme are set out in the *Overarching Archaeological Written Scheme of Investigation*.
- B.7.28 Such mitigation would be proportionate to the expected significance of the archaeology. Therefore the proposals constitute an acceptable impact, in line with the requirements of para. 4.10.18 of the NPS, which are reflected in *London Plan Policy 7.8* and *Core Strategy Policy DMS2*.

### Assessment in relation to policy

- B.7.29 Putney Bridge would be subject to less than substantial harm during construction. Its significance would not be substantially diminished by the construction works and would be largely preserved by the permanent works. The design of the CSO interception structure took full account of the significance and sensitivity of the bridge and its setting and would be integrated with minimum harm. The design reconciles the need to attach the structure to the bridge with the need to minimize harm to its significance, which satisfies para 4.10.11 of the NPS. The design would also better reveal the bridge's role in Bazalgette's wastewater system, which satisfies para 4.10.17 of the NPS.
- B.7.30 The effects on the bridge overall would constitute less than substantial harm, which satisfies paras. 4.10.13 and 4.10.14 of the NPS and reflects *London Plan Policies 7.8* and *7.29*, *Core Strategy Policies PL9*, *IS3*, *DMS1*, *DMS2* and *DMO6*, and *Section 2.4 of the Putney Bridge Conservation Area Appraisal and Management Strategy*.
- B.7.31 During construction, there would be moderate negative effects on Putney Embankment Conservation Area and especially the embankment and Putney public slipway. However, this would amount to less than substantial harm as their significance would only be partially diminished on a temporary basis.

- B.7.32 All alterations carried out within the conservation area would respect the area's existing elements. Views of the five-arch silhouette of Putney Bridge would remain intact. The electrical and control kiosk on Waterman's Green would match the existing granite wall in both materials and detailing. Putney public slipway would be protected during the works, and the relatively small areas of cobbles and fenders removed to facilitate access and protect the historic features would be made good. The temporary slipway would be removed after the works and the embankment made good. The river wall would be enhanced by the addition of the foreshore structure, with its high quality design and materials, and the new area of public open space offering views of Embankment and Putney Bridge.
- B.7.33 Views into the conservation area would generally experience little or no change since the permanent structures would not obscure existing buildings or other elements. The foreshore structure would form a new element in views from the east and west and add to the existing variety of features along the embankment. Putney Pier would also partly screen the structure in views from the west.
- B.7.34 The new additions and works to the river wall would maintain its contribution to the conservation area, and its role in the setting of the riverside buildings, which satisfies para. 4.10.17 of the NPS, and reflect *London Plan* Policy 7.29, and *Core Strategy* Policies PL1, IS3, DMS2 and DMO6.
- B.7.35 None of the effects on the settings of other heritage assets nearby would amount to substantial harm, which satisfies the requirements of paras. 4.10.1 and 4.10.14 of the NPS.

## **B.8 Conclusion**

- B.8.1 The main potential heritage impact at this site would be from the construction works on the character of the Putney Embankment Conservation Area as the foreshore structure would alter the 19th century embankment. The permanent effects would be minor.
- B.8.2 There would be heritage impacts on the Grade II listed Putney Bridge, which would be minimised by the careful design and positioning of the CSO interception structure below the springing line of the southern abutment and the ventilation column on the pavement above.
- B.8.3 The foreshore structure presented the most difficult design challenge; however it also provided the opportunity to develop an enhanced public open space. This space, with its high quality design, would be a positive addition to Embankment and would offer improved views of the surrounding conservation areas, Putney Bridge, and other notable heritage assets. It would also play a significant role in one of Putney's most important public events – the annual University Boat Race.
- B.8.4 The impact of the construction works on the Post-Medieval archaeology in the foreshore, the CSOs outfalls and associated apron beneath Putney Bridge, and part of the undesignated river wall would be mitigated by a programme of recording and dissemination.

- B.8.5 The settings of and views from other heritage assets and conservation areas nearby would be affected to a low to moderate degree. In some cases there would be no significant effects.
- B.8.6 The overall impact of the proposals would constitute less than substantial harm to the heritage assets in the vicinity. The careful, sympathetic massing and detailing of the permanent above-ground structures would make a positive contribution to the distinctive local character, as required by para. 4.10.12 of the NPS.

## Gazetteer of known heritage assets

Details of known heritage assets within the assessment area are provided in Table B.3 below as illustrated on the Historic environment features map.

All known heritage assets within the assessment area are referred to by a historic environment assessment (HEA) number. Assets within the site are referred to and labelled in the Historic environment features map with the prefix 1, eg, HEA 1a, 1b, 1c. References to assets outside the site but within the assessment area are referred to numerically from 2 onwards, eg, HEA 2, 3, 4, and 5). The gazetteer also appears within the *Environmental Statement*, Vol 7 Appendix E.1.

**Table B.3 Historic environment: Gazetteer of known heritage assets shown on the historic environment features map**

HEA ref.	Description	Site code/ GLHER ref/ List entry number
1A	Putney Bridge. Grade II listed: 1884 by Sir Joseph Bazalgette, modelled on Rennie's London Bridge. Rusticated granite-faced bridge of four cutwaters with buttresses, five spans with false voussoirs with stepped extrados. Bold cornice and plain parapet. On the parapets iron lamp standards with foliate base and three foliate branches: lamps replaced.	1357672
1B	Thames Foreshore, adjacent to Lower Richmond Road: A flint flake (MLO26796) dating to the upper Palaeolithic period and an undated ring (MLO26921) were discovered here by the Thames Archaeological Survey (TAS) in the 1990s.	106039 MLO26796 MLO26921 FWW02 TAS 1999 A103
1C	Thames Riverfront, immediately behind the slipway to the west of Putney Bridge: Timber piles which formed a post-medieval flood defence/river wall. Located immediately behind the present embankment and slipway. Identified by the TAS foreshore shore survey in the 1990s.	FWW02 TAS 1999 A308
1D	Subterranean toilets, adjacent to Putney Embankment: The location of subterranean toilets dating to the late 19th century, contemporary with Putney Bridge. Now disused, they were observed through pavement lights during the site visit.	---
1E	Wall of public garden, located between Putney Embankment and slipway: A low stone wall, dating to the 19th century, located between the Putney Embankment river wall and 19th century slipway.	---
1F	Cobbled slipway, adjacent to Putney Embankment: A cobbled stone and granite slipway leading down to the foreshore, dated to the later 19th century and still in use. One of the only remaining examples along the Thames of its kind.	FWW02 A301

HEA ref.	Description	Site code/ GLHER ref/ List entry number
1G	Subterranean brick-built vaults with arched ceilings, part of the Putney Bridge approach, beneath Lower Richmond Road. The remains of brick vaults with arched brick ceilings were observed during the MOLA Thames Tideway Tunnel project site visit in 2011 through a hole bored through the granite facing of the listed bridge approach (carried out illegally by a developer in 2008).	---
1H	Junction of Lower Richmond Road and Putney High Street: The remains of 19th century steps with a commemorative stone dating to 1884, leading to the Thames foreshore west of Putney Bridge.	FWW03 TAS 1999 A113 022688 MLO70080
1I	Thames foreshore: Chalk barge bed, which was probably used in the construction of Putney Bridge (see also HEA 1O). Identified by the TAS foreshore shore survey in the 1990s. The MOLA site visit as part of the Thames Tideway Tunnel project in 2011 noted that the remains were still present.	FWW02 A303
1J	Thames foreshore, beneath Putney Bridge: Foundation piles, composed of grouped square wooden timbers, probably part of a cofferdam, used in the construction of Putney Bridge. Identified by the TAS foreshore shore survey in the 1990s. The MOLA site visit as part of the Thames Tideway Tunnel project in 2011 noted that the remains were still present.	FWW03 TAS 1999 A101
1K	Putney Bridge: The remains of a Bazalgette late 19th-century outfall drain set within the Putney Bridge abutment beneath the bridge. The outfall consists of a culvert with two metal, gridded outlets (A120) and a timber and stone drain apron (A121).	FWW03 TAS 1999 A120 A121
1L	Beneath Putney Bridge foreshore: The remains of three post-medieval metal, circular piles driven into the foreshore; possibly the remains of the 19th century Chelsea Waterworks viaduct. Identified by the TAS foreshore shore survey in the 1990s.	FWW03 A302
1M	Putney Bridge foreshore: Dump of stone rubble to consolidate the foreshore around the Bazalgette outfalls beneath the bridge (HEA 1K), and possibly contemporary. Note by the Thames Foreshore Survey (TAS) in 1996. The MOLA site visit as part of the Thames Tideway Tunnel project in 2011 noted that the remains were still present.	022108 022678 MLO70089 FWW03 A120 & A122
1N	Line of the Bazalgette Southern Lower Level Sewer. Constructed in the 1880s.	---
1O	Thames Foreshore, to the east of Putney Bridge: Hard chalk consolidation layer perhaps the remains of a barge bed related to the construction of Putney Bridge (see also HEA 1I). Dated to the 19th century. Identified by the TAS foreshore	MLO10053 TAS 1999 A102

HEA ref.	Description	Site code/ GLHER ref/ List entry number
	shore survey in the 1990s.	
1P	Thames Foreshore, to the east of Putney Bridge: Medieval pot sherd found by chance and noted on the Greater London Historic environment Record (GLHER).	106049 MLO26922
1Q	Port of London Authority (PLA) marker set into the brick riverside wall recording the high water level of the 1928 flood.	FWW02 A306
1R	A swamped mooring (No. 115) on foreshore, described by a PLA survey as consisting of a mooring screw and chain.	63700000113401 5
1S	A swamped mooring (No. 116) on foreshore, described by a PLA survey as consisting of a mooring screw and chain.	63700000113401 2
1T	Thames foreshore, beneath Putney Bridge: Three circular metal piles set into the foreshore. Identified by the Thames Discovery Programme (TDP) foreshore shore survey in 2009.	FWW03 TDP2009 A302
1U	Stone stairway, adjacent to Putney Bridge. Identified by the TAS foreshore shore survey in the 1990s.	FWW03 TAS 1999 A113
1V	Thames foreshore, to the east of Putney Bridge: Brick footings of the south bridgehead of Putney Old Bridge (c. 1729). Exposed and recorded by the TAS foreshore shore survey in the 1990s.	FWW03 TAS 1999 A103
1W	Thames Foreshore, immediately to the east of Putney Bridge: 18th century remains described in the Greater London Historic environment Record (GLHER) entry as comprising "random scattered timbers, angled into foreshore".	022681 MLO70073 TAS 1999 A106
1X	Thames foreshore, adjacent to the Putney Constitutional Club: A post-medieval timber structure; possibly an access causeway.	FWW02 TAS 1999 A102
1Y	Thames foreshore: The approximate location of finds recorded by the Portable Antiquities Scheme (PAS), including a Roman mount, a post-medieval token and a post-medieval handle.	LON-672808 LON-8303C5 LON-91DFE1
1Z	Putney Embankment, to the west of Putney Bridge: The University Boat Race stone that marks the starting line of the Oxford and Cambridge Boat Race that was first held in 1829. It is situated on the south bank adjacent and to the west of the site. Observed during MOLA Thames Tideway Tunnel project site visit in 2012.	---
2A	Thames Foreshore, at the junction of Putney Embankment and Lower Richmond Road: The foundation of the river wall, with the remains of round wooden timbers surrounding. Observed during MOLA Thames Tideway Tunnel project site visit in 2012.	FWW02 A104

HEA ref.	Description	Site code/ GLHER ref/ List entry number
2B	Thames Foreshore, to the west of Putney Bridge: Putney Pier. Post-medieval pier consisting of four earthfast timber structures connected by modern walkways. First appears in this location on the Ordnance Survey 1st edition map of 1862 (but possibly earlier). Possibly rebuilt in the 20th century.	FWW02 TAS 1999 A105
3	2–4 Lower Richmond Road: An archaeological watching brief and excavation was carried out by Sutton Archaeological Services (SAS) in 1996. At least three timber waterfronts were revealed, dating to the late 16th century and late 17th or early 18th century. Traces of other, incomplete, timbers were also recovered, but it is not known to what structures or dates they belonged. The site was stripped down to the natural river gravels and alluvial clay. Coins, pottery and other finds from the Roman, medieval and post-medieval periods were recovered, including 11 Roman coins, mostly dated to the 4th century AD, and a 14th century pot.	LWR96
4	ICL House, Putney High Street: An evaluation and watching brief was carried out by Pre-Construct Archaeology (PCA) in 1998. Natural sand was discovered to have been cut by two medieval ditches (HER 025336; MLO072853) and HER025337; MLO072852), possibly boundaries, the larger of which was backfilled in the 16th century. In the west of the site the remains of structures (HER 025338; MLO072854) were found; these are identified as cottages, documented from 1636 to 1888, when they were demolished. A boundary wall (HER 025341; MLO72857) defined an area of intense pitting (HER 025339; MLO072855) that probably represents domestic refuse disposal. To the east of the wall were features of a horticultural nature, perhaps bedding trenches (HER 025343; MLO72859) with some very fragmentary remains of a large house (HER 025342; MLO72858), probably that represented on 17th–19th century maps. One residual struck flint tool was recovered. The remains of a post-medieval road (MLO72856) were also discovered.	PTY98 025336 025337 025338 025339 025340 025341 025342 025343 MLO72856
5	Friends Provident, Brewhouse Street: An evaluation of the site was carried out by Foundations Archaeology in 1997. No features or artefacts of archaeological significance were noted, probably due to terracing, carried out when the brewery was built in the 19th century.	BWS97
6	Thames foreshore, to the east of Putney Bridge: The approximate location of finds recorded by the PAS, including a Roman coin and an early medieval pin beater.	LON-A3E53 LON-1A16F3
7	Approximate line of the Platt: The approximate line of a Roman road, tracked as far north as Thames Place, adjacent to Putney Embankment.	---
8	Thames Foreshore, immediately to the south-east of Putney Bridge: The remains of 19th century brick and stone flood defences. At the bottom of the steps down to the foreshore,	022689 MLO70081 FWW03

HEA ref.	Description	Site code/ GLHER ref/ List entry number
	immediately to the east of the bridge, was a deposit of stone rubble, perhaps associated with a drain outlet. Probably part of the same structure as HEA 1M.	TAS 1999 A114
9	The findspot of a piece of Roman tile (HER 031304) discovered by chance at this location. Noted on the GLHER.	031366 212227 031304
10	Thames foreshore, to the east of Putney Bridge: The approximate location of a Neolithic axe, recorded by the PAS.	LON-27B591
11	Thames Foreshore, immediately to the east of Putney Bridge: Flint artefacts (MLO19296; 25011) and two axes (MLO26120; 19970), dating to the Lower Palaeolithic period, were discovered here.	106066
12	Thames foreshore, Fulham: A possible wattle revetment/structure, noted by the TDP in 2011.	FHM07 TDP 2011 A307
13	Thames Foreshore, to the east of Putney Bridge: Rectangular vertical wooden post. Possibly relating to Putney Old Bridge and dating to c. 1729. Noted by TAS in the 1990s.	022685 MLO70077 FWW03 A301
14	Thames Foreshore, to the east of Putney Bridge: The remains of a 19th riverfront defence of brick with timber fenders and mooring chain. Noted by the TAS in the 1990s.	022690 MLO70082 FWWW03 A115
15	River Thames, to the east of Putney Bridge: Medieval ferry crossing point. The ferry continued until the wooden bridge was erected in 1729.	031581 MLO17111
16	Thames Foreshore, to the east of Putney Bridge: Medieval mullion window fittings, dating to the 15th century; possibly associated with St. Mary's Church. Noted by the TAS in the 1990s.	022697 MLO70091 FWW03 TAS 1999 A123
17	Thames Foreshore, to the east of Putney Bridge: Medieval pot sherd, dated to the 13th century.	106050 MLO26779
18	Thames Foreshore, to the east of Putney Bridge: Post-medieval timber drain. Noted by TAS in the 1990s.	022682 MLO70074 FWWW03 A107
19	Riverside Walk, opposite Brewhouse Lane: The remains of a 19th century cobbled slipway. Noted by TAS in the 1990s.	022687 MLO70079 FWW03 A112

HEA ref.	Description	Site code/ GLHER ref/ List entry number
20	Riverside Walk, east of Putney Bridge: Timber structure, possibly a causeway, dated to the late 18th or early 19th century (constructed prior to the building of the riverwall in the 19th century). Noted by TAS in the 1990s.	022683 MLO70075 FWW03 A108
21	Thames foreshore, west of the northern end of Putney Bridge: Around 40 objects, mainly dating from the late Neolithic to the late Bronze Age, consisting of a Bronze Age sword, a Bronze Age axe, palstaves, spearheads, pot sherd, flint implements, a Bronze Age pin, a ring, a razor and a bowl were all discovered within this area. They may have been uncovered as a result of dredging. Also the location of an unclassified structure, consisting of two small posts, located about 1m apart, and a peat/organic clay layer, exposed at lowest tides. Noted by the TAS in the 1990s.	100165 – 100191; 100033; 10043 – 5 TAS 1999 A109 A110 FHM07
22	Hippodrome Theatre car park, west of Weimar Street: A gravel surface (road) (HER 020736; MLO19068) with an adjacent ditch (HER 020823; MLO27480); both dated to the 1st century AD, interpreted as a roadway. It is suggested that the gravel was originally flanked by ditches on both sides, which were subsequently removed. Excavated by the Wandsworth Historical Society (WHS) in 1981.	FEL VIII 020736 020823 MLO19068 MLO27480
23	16 Mount Court, Weimar Street: Roman settlement evidence excavated by the WHS in 1976.	FEL V 020754 MLO16731
24	2 Waterman Street, near University Mansions: A Roman pottery assemblage (HER 031331), a medieval pot sherd (HER 031376), and a post medieval pottery assemblage (HER 031488).	031331 031376 031488
25	6 Waterman Street: A shallow Roman ditch, post holes and spread of pottery. Excavated by the WHS in 1966.	GAY IX 020748 MLO1480
26	7 Waterman Street: 512 Roman pot shards and two Roman coins dating to the mid-3rd and mid-4th century AD were discovered to the southwest of a nearby Roman ditch and post hole, discovered at 6 Waterman Street.	GAY I 020751 MLO16725
27	22–25 Waterman Street: Unclassified Roman and medieval finds, including pot sherds, and an Elizabeth I coin, recovered from a modern drainage ditch. The area was much disturbed by modern walls and foundations. Excavated by the WHS in 1962.	GAY II 020741 020742 MLO1487
28	24–38 The Platt: Roman road and ditch and Roman and medieval pot shards.	031336 031379 MLO1476 MLO23419

HEA ref.	Description	Site code/ GLHER ref/ List entry number
29	Junction of Waterman Street (nos. 13–14): Roman potsherd from a borehole. Excavated by the WHS in 1962.	GAY VI 020757 MLO23105
30	38–42 Gay Street: Seven sherds of unstratified Roman pottery from a spoil heap as part of a WHS investigation in 1968.	GAY V 020756 MLO16747
31	38 Felsham Road: A Roman settlement (HER 031318): a hut with timber beam foundations and stakeholes (HER 03131802; MLO38308; MLO38310), apparently contemporary with a ditch (HER 03131803; MLO38309), a road (HER 03131801; MLO52641) and rubbish pits (MLO46692). Iron Age pottery (HER 031277; MLO9562) and a medieval lynchet (HER 020743; MLO3232).	031277; 0313101–03; 031318; 020743
32	Felsham Street, adjacent to Weimar Street: A Roman pit and ditch. Noted on the GLHER.	020866
33	South-west of Putney High Street: The GLHER approximate centre point of the medieval settlement of Putney, which is believed to have clustered around the parish Church of St. Mary.	MLO73313
34	Brewhouse Street: Foundations Archaeology investigation in 1997. No archaeological finds or features were recorded.	MLO71644 PRO97
35	3–29 Putney High Street: An unspecified find/monument. No further information available.	MLO3646
36	Thames Foreshore, to the east of Putney Bridge: Unspecified find/monument. The GLHER records “observations made by the WHS in 1973”. No further information listed.	HIG IV MLO10040
37	Thames Foreshore, to the east of Putney Bridge: Four unspecified finds. No further information listed in the GLHER.	MLO10044-47
38	Thames Foreshore, to the east of Putney Bridge: Post-medieval timber-lined drain noted by the TAS in the 1990s.	MLO10048 FWW03 TAS 1999 A107
39	River Thames, to the north-west of Putney Bridge: The antiquarian find spot of a Bronze Age ring; accessioned in 1915.	MLO10065
40	Putney Wharf, Brewhouse Street, Putney Bridge Road: An evaluation by Compass Archaeology (CA) in 2001. A medieval ditch (MLO75978) and cut feature were found beneath plough soil which contained finds dating to the mid-18th century. Above the plough soil was a brick wall which separated the more domestic activity on the west side of the site – including a series of 18th century pits – from agricultural	PHT01 MLO77627 MLO75978 MLO77624 MLO77625

HEA ref.	Description	Site code/ GLHER ref/ List entry number
	activity on the east side. A prehistoric struck flint flake (MLO77224), a Roman coin and Roman structural remains (MLO77625) were also uncovered on the site.	
41	Church of St. Mary the Virgin. Grade II* listed: Earliest remaining fabric dates from the 15th century with early 16th century and early 17th century additions. Restored by Edward Lapidge 1836-37 and again in the 1980s by Ronald Sims following a fire in 1973. 2005 additions by Alan Pates.	1065519
42	The White Lion Hotel Public House. Grade II listed: Dated 1887; symmetrical three-bays, four-storeys and dormers. Red brick, stone dressings, French pavilion slate roof with elaborate iron cresting. Ground floor altered. Upper floors form succession of pilaster orders. First and second floors, two-storey canted bow with stone balconies and iron balustrades, third floor pedimented centre bay, fourth floor tripartite centre window surmounted by dated blocking and stone figure of lion passant.	1184658
43	Group of five bollards at junction with Lower Richmond Road. Grade II listed: Group of five cast iron bollards: one group of three aligned north-west to south-east across the pavement, the other pair aligned approximately west to east along the pavement edge. Each bollard has a flared base, a slim band of chevron patterning and a knob finial.	1300019
44	Thames Foreshore, to the west of Putney Bridge: The remains of a post-medieval timber causeway or slipway. Noted by the TAS in the 1990s.	FWW02 TAS 1999 A101
45	Thames channel/foreshore, to the east of Putney Bridge: Two pieces of human cranial (skull) bone, belonging to a mature male, dated to the mid-Iron Age, were recovered in 2003 at very low tide from within a grey-black silty sand deposit; possibly an in situ prehistoric deposit within the foreshore now subject to erosion. Analysis of the skull revealed some trauma/injury to the head.	524300; 175620
46	Thames foreshore, Fulham: Two horizontal timbers. Noted by the TDP in 2011.	FHM07 TDP 2011 A306
47	Thames foreshore, to the east of Putney Bridge: Post-medieval, rectangular timber post. Noted by the TAS in the 1990s.	FWW03 TAS 1999 A110
48	Thames foreshore, Fulham: The find spot of an artefact scatter, including Roman building material. Noted by the TAS in the 1990s.	FHM07 TAS 1999 A102/A105
49	Thames foreshore, Fulham: Vertical, squared post-medieval timber stake. Noted by the TAS in the 1990s.	FHM07 TAS 1999

HEA ref.	Description	Site code/ GLHER ref/ List entry number
		A106
50	Thames foreshore, Fulham: Prehistoric tree root. Noted by the TAS in the 1990s.	FHM07
51	Thames foreshore, Fulham: Post-medieval mooring feature/chain. Noted by the TAS in the 1990s.	FHM07
52	Star and Garter Hotel, Putney Embankment: A locally listed building dating to the later 19th century. It continues to function as a hotel and public house. Four storey and attics, red brick with slate roofs. Triangular pedimented windows to the first floor, circular windows with festoons to the second floor. Corner turret with decorative stone cupolas.	Locally Listed
53	Star and Garter Mansions, Putney Embankment: A locally listed building dating to the later 19th century and currently functioning as residential mansion flats. Four storey and attics, red brick with slate roofs. Stone arcading to ground floor, stone pilasters and window dressings to upper storeys.	Locally Listed
54	Thames foreshore, Fulham: Three Iron Age timber piles.	FHM07 TDP 2009 A301
55	Thames foreshore, to the east of Putney Bridge: The find spot of a worked stone block, observed during the MOLA site visit in 2011.	---
56	Thames foreshore, to the east of Putney Bridge: Four square timber piles, to the west of A108. Noted by the TDP in 2011.	FWW03 TDP 2011 A308
57	Central Thames channel, to the west of Putney Bridge: The site of a swamped mooring (No. 114).	63700000113400 1
58	Winchester House, Putney Constitutional Club. Grade II listed: 19th century; mid three storeys, five windows wide with three window splayed projection (west). Brown brick slightly projecting centre with open pediment with circular panel and keystone. Band at first floor. Gauged flat arches to recessed windows, lunette window second floor. Palladian window first floor with brick pilasters with stone moulded caps and bases and triple keystone. Wood doorcase with Doric columns, pulvinated frieze and architrave with scroll and sculptured head. Panelled hall and two staircases with turned balusters with enrichment and carved ends. Other good interior features. Two storey, three window annex with cove cornice to tiled roof.	1300160
59	37, 39 and 41 Lower Richmond Road SW15. Grade II listed. Early 19th century, yellow stock brick two-storey terrace with pantile roof. Simple bracketed hoods to doors. Cambered arches to windows. No 37 one window wide with addition	1065543

HEA ref.	Description	Site code/ GLHER ref/ List entry number
	containing the entrance. No 39 three windows wide with blind window over central entrance. No 41 one window wide with entrance offset to left.	
60	Three bollards at junction with Putney Embankment. Grade II listed: 19th century, cast iron.	1065492
61	Bollard at junction with Lower Richmond Road. Grade II listed.	1065493
62	4 Bemish Road: WHS excavation in 1962 uncovered a 1st or 2nd century Roman cremation cemetery, containing cremation urns, along with fragments of calcinated bone, grey ware pottery and a brooch.	BEM1/62 MLO23210 MLO617
63	10 Bemish Road: WHS excavation in 1972 uncovered sherds of Neolithic pottery (Fengate and other), flints, a few Iron Age pottery sherds and a great deal of Roman pottery and building material. Other Roman features discovered included two ditches and two hearths.	BEM3/72
64	Spring Passage: WHS investigation as part of flood defence works in 1978: four Roman pot sherds; later medieval pottery dating to the 14th and 15th centuries; 17th century pottery; late 17th– early 18th century brick foundations and late 19th century fill material. (Roman and medieval finds were uncovered as part of the PAS II investigation; 17th–19th century remains as part of PAS III).	PAS II & III MLO13097 MLO13116 MLO9594 MLO12171
65	22 Bendemeer Road: WHS investigation in 1977 revealed prehistoric flint flakes; and Roman settlement remains, including tile and pottery sherds, dating from the 1st to the 5th centuries AD; late medieval pottery; post-medieval pottery and the remains of a WWII air raid shelter.	PAS I MLO12035 MLO10494 MLO10513 MLO23279 MLO12016
66	51 Lower Richmond Road: The find spot of a Roman coin, minted in the 1st century AD, brought to the attention of WHS by a local resident; date of discovery unrecorded by the GLHER.	MLO10493
67	6–12 The Platt: Roman settlement evidence, including a ditch system, postholes and associated floor, and a cremation burial, discovered by WHS; date of investigation unrecorded by the GLHER.	GAY X MLO22041 MLO10483 MLO10484
68	37 Lower Richmond Road: An unclassified Roman find from an investigation by the WHS in 1967. No further information listed in the GLHER.	GAY XI MLO1479
69	Thames Channel, opposite the Putney slipway: A number of finds dating to the Mesolithic period, including two unclassified finds, two axes and a blade were uncovered	MLO105 MLO14586–90

HEA ref.	Description	Site code/ GLHER ref/ List entry number
	here, probably recovered in channel dredging.	
70	Thames foreshore, Fulham: Five unclassified finds, recorded by the PAS as having been discovered in 2008. No further information listed in the GLHER.	MLO100370 MLO100371 MLO100372 MLO100373 MLO100374
71	Thames foreshore, Fulham: Antiquarian find of a 1st century Roman legionary sword with a highly decorated scabbard, dredged from the Thames in 1846.	MLO8665
72	Thames foreshore, Fulham: Unclassified find, recorded by the PAS as having been discovered in 2009. No further information listed in the GLHER.	MLO100429
73	Thames foreshore, Fulham: A possible mooring block/feature. Noted by the TDP in 2011.	FHM07 TDP 2011 A305
74	Thames foreshore, Fulham: Timber cofferdam. Noted by the TAS in the 1990s.	FHM07 TAS 1999 A108
75	Thames foreshore, to the east of Putney Bridge: Square, timber pile; possibly related to the construction of Putney Old Bridge (c. 1729). Noted by the TDP in 2011.	FWW03 TDP 2011 A309
76	Thames foreshore, Fulham: An anchor chain; probably modern. Noted by the TAS in the 1990s.	FHM07 TAS 1999 A113
77	Thames foreshore, Fulham: A possible causeway structure; consisting of four roundwood stakes. Possibly associated with Bishop's Palace Stair. Noted by the TAS in the 1990s.	FHM07 TAS 1999 A107
78	Thames foreshore, to the east of Putney Bridge: A copper-alloy mid 2nd–3rd century Roman mount-looped vessel documented by Pamela Greenwood of the WHS.	524230; 175650
79	Thames foreshore, to the east of Putney Bridge: The approximate location of numerous finds, including a mid-Bronze Age spearhead with a narrow, leaf-shaped blade; a lead bird, thought to be Roman, found in 1987; an iron sword with a double-edged blade dated to c. 1300 discovered in 1922; a 17th century iron dagger with a leaf-shaped blade, curved quillons and a wooden grip, discovered in 1922; an 18th century iron hammer with an original oak handle discovered in c. 1922; and a post-medieval gold ring with a herringbone decoration, inscribed "Je ne croisse tout seul", with an angel in enamel and loop for suspension. Chance finds were also made of one or more medieval coins	524250; 175620

HEA ref.	Description	Site code/ GLHER ref/ List entry number
	(pennies); pilgrim badges (some dedicated to Mary and possibly reflecting a medieval ferry point by St Mary's church), and a medieval sword dated to the 13th century.	
80	Thames foreshore, to the east of Putney Bridge: Iron Age spearhead and four worked flints including a Mesolithic/Neolithic flint blade, found pre-1981.	524300; 175600
81	Thames foreshore, to the east of Putney Bridge: The findspot of a 2nd century Samian (glossy, red-brown fine pottery; mass-produced and used as tableware) bowl, discovered by chance in 1998.	524305; 175613
82	Thames foreshore, to the east of Putney Bridge: The findspot of a late Iron Age-early Roman copper-alloy rosette/thistle brooch, discovered by chance in 1995.	524307; 175610
83	Thames channel, to the west of Putney Bridge: Antiquarian findspot of an early Palaeolithic handaxe, dredged from the site as part of the construction of the present Putney Bridge in the 1880s.	524200; 175750
84	Felsham Road: An investigation was carried out here by the WHS in 1976, which uncovered numerous early Neolithic remains indicating a settlement, including pottery, evidence of flint-knapping and a fire-pit.	FEL VI
85	Felsham Road/Kingsmere Close: WHS investigation in 1986 revealed Roman pottery and a possibly Roman ditch. Large quantities of 19th century (Victorian) finds were also recovered, consisting mainly of bottles, jars, and glass and paint pots.	FEL X

**Table B.4 List of drawings in order**

<b>Drawing title</b>
Historic environment features map
Conservation areas map
Location plan
As existing site features plan
Demolition and site clearance plan (1 of 3)
Demolition and site clearance plan (2 of 3)
Demolition and site clearance plan (3 of 3)
Site works parameter plan
Permanent works layout (1 of 2)
Permanent works layout (2 of 2)
Temporary slipway layout
Proposed landscape plan (1 of 2)
Proposed landscape plan (2 of 2)
Section AA (1 of 2)
Section AA (2 of 2)
Section BB
As existing and proposed river elevation (1 of 2)
As existing and proposed river elevation (2 of 2)
As existing and proposed west elevation
As existing and proposed east elevation
As existing and proposed south elevation
As existing and proposed foreshore structure west elevation
As existing listed structure interface: Kiosk
Proposed listed structure interface: Kiosk
Foreshore kiosk design intent
Listed structure interface: Interception chamber
Typical river wall design intent
Existing and proposed listed bollard location plan
Construction phase 1: Site set-up
Construction phase 2: Shaft construction and tunnelling
Construction phase 3: Construction of other structures
Construction phase 4: Site demobilisation
Construction phases 5: Temporary slipway

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Key

- Limits of Land to be Acquired or Used
- Local Authority Boundary
- Heritage Feature/Findspot
- Statutorily Listed Building
- Locally Listed Building
- Past Investigation
- Bazalgette sewer
- Projected Line of Roman Road
- Wreck/Obstruction

The reference number for historic environment features correspond to the descriptions in the 'Gazetteer of known heritage assets' in Environmental Statement Vol. 7 Appendix E.1



## FOR INFORMATION

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Heritage Statement**  
Historic environment features map

1PL03-HE-65227  
January 2013





Key

- Limits of Land to be Acquired or Used
- Local Authority Boundary
- Conservation Area

Richmond upon Thames LB

BISHOPS PARK CONSERVATION AREA

Hammersmith and Fulham LB

PUTNEY EMBANKMENT CONSERVATION AREA

PUTNEY BRIDGE CONSERVATION AREA

HURLINGHAM CONSERVATION AREA

Wandsworth LB

DEODAR ROAD CONSERVATION AREA



Scale 1 : 6,000 at A3

## FOR INFORMATION

**Location**

**Putney Embankment Foreshore**  
London Borough of Wandsworth

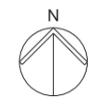
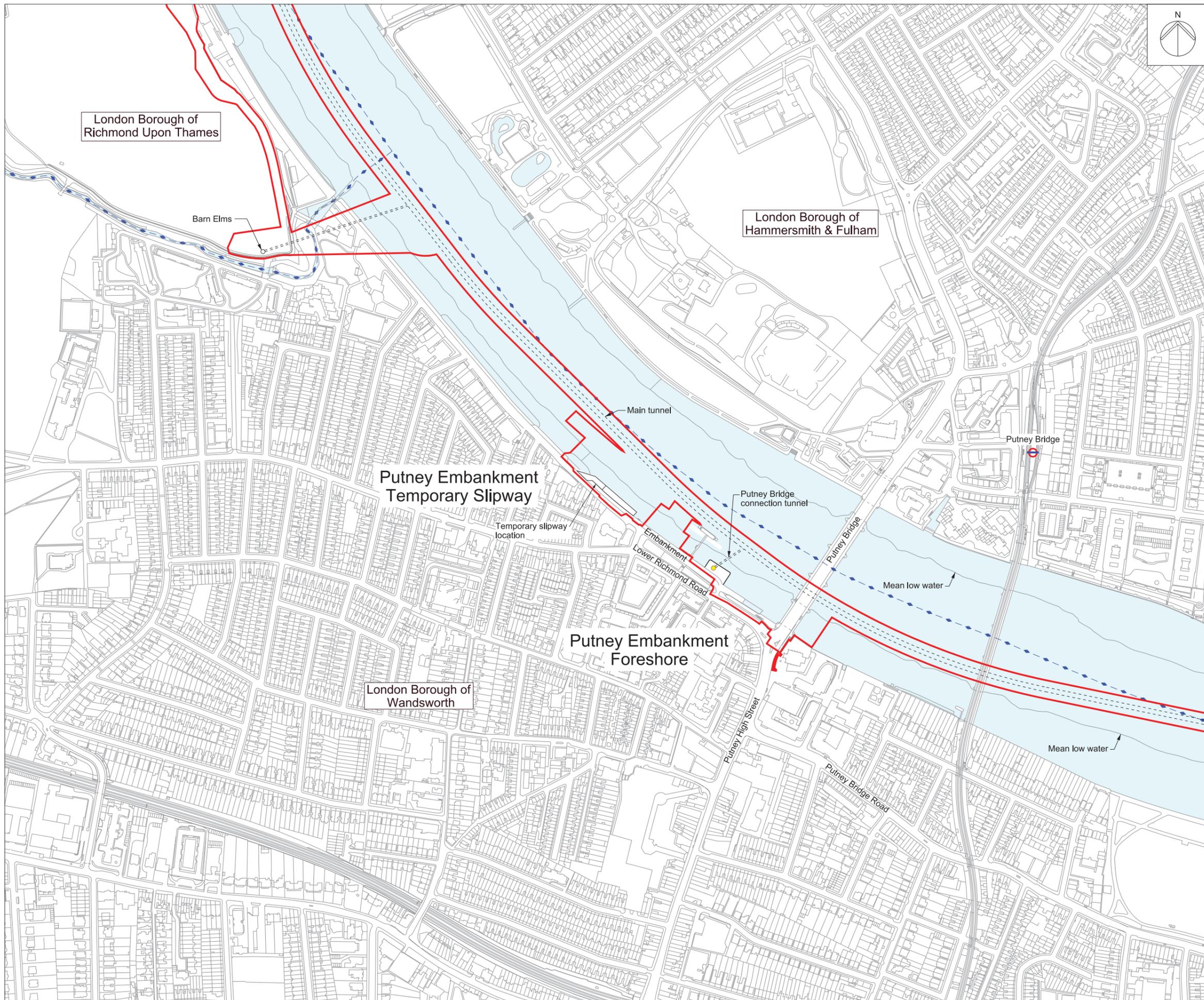
**Document Information**

**Heritage Statement**  
Conservation areas map

PL03-HE-65241  
January 2013

**Thames Tideway Tunnel**  
Creating a cleaner, healthier River Thames





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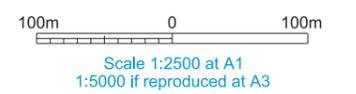


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:
- Local authority boundary
  - Order limits
  - Tunnel
  - Shaft

Notes:

- The alignment of the tunnels are illustrative within limits of deviation.



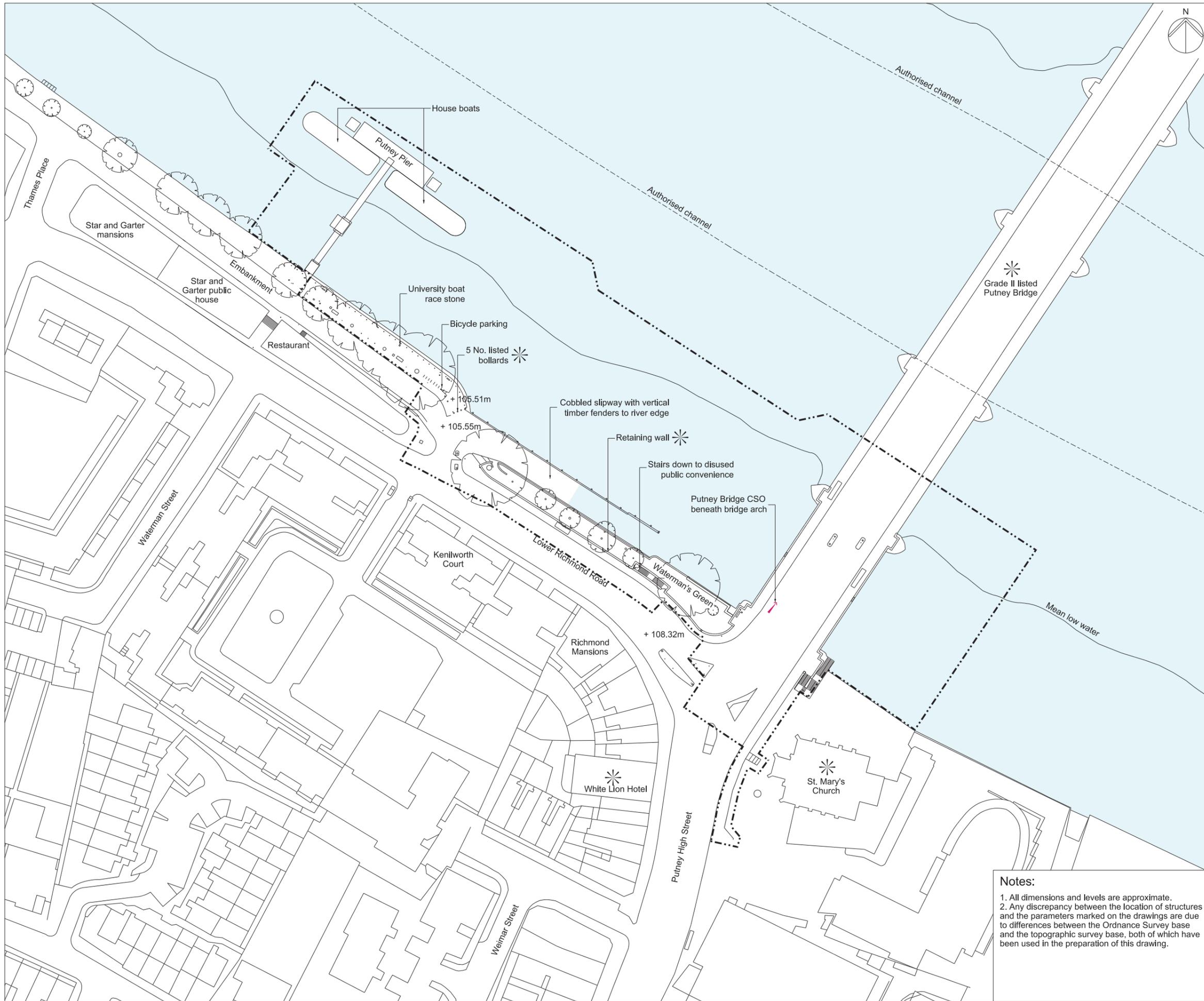
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**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Location plan

Book of plans - section 8  
DCO-PP-05X-PUTEF-080001  
January 2013





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- Key:**
- Limits of land to be acquired or used (LLAU)
  - - - - - Authorised channel
  - + 105.40m Existing levels (shown in metres above tunnel datum)
  - \* Listed buildings/structures
  - Approximate position of CSO outlet
  - ⊙ Existing trees within surveyed area (trunk sizes vary)



## FOR INFORMATION

**Location**  
**Putney Embankment Foreshore**  
 London Borough of Wandsworth

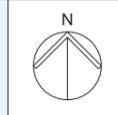
**Document Information**  
**Application for Development Consent**

As existing  
 Site features plan  
 Book of plans - section 8  
 DCO-PP-05X-PUTEF-080002  
 January 2013



**Notes:**

1. All dimensions and levels are approximate.
2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and the topographic survey base, both of which have been used in the preparation of this drawing.



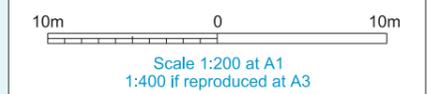
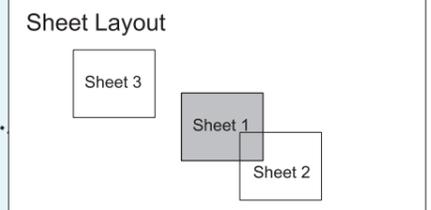
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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Trees to be pruned
  - Structure to be removed and relocated or reinstated
  - Below ground structures to be removed or infilled

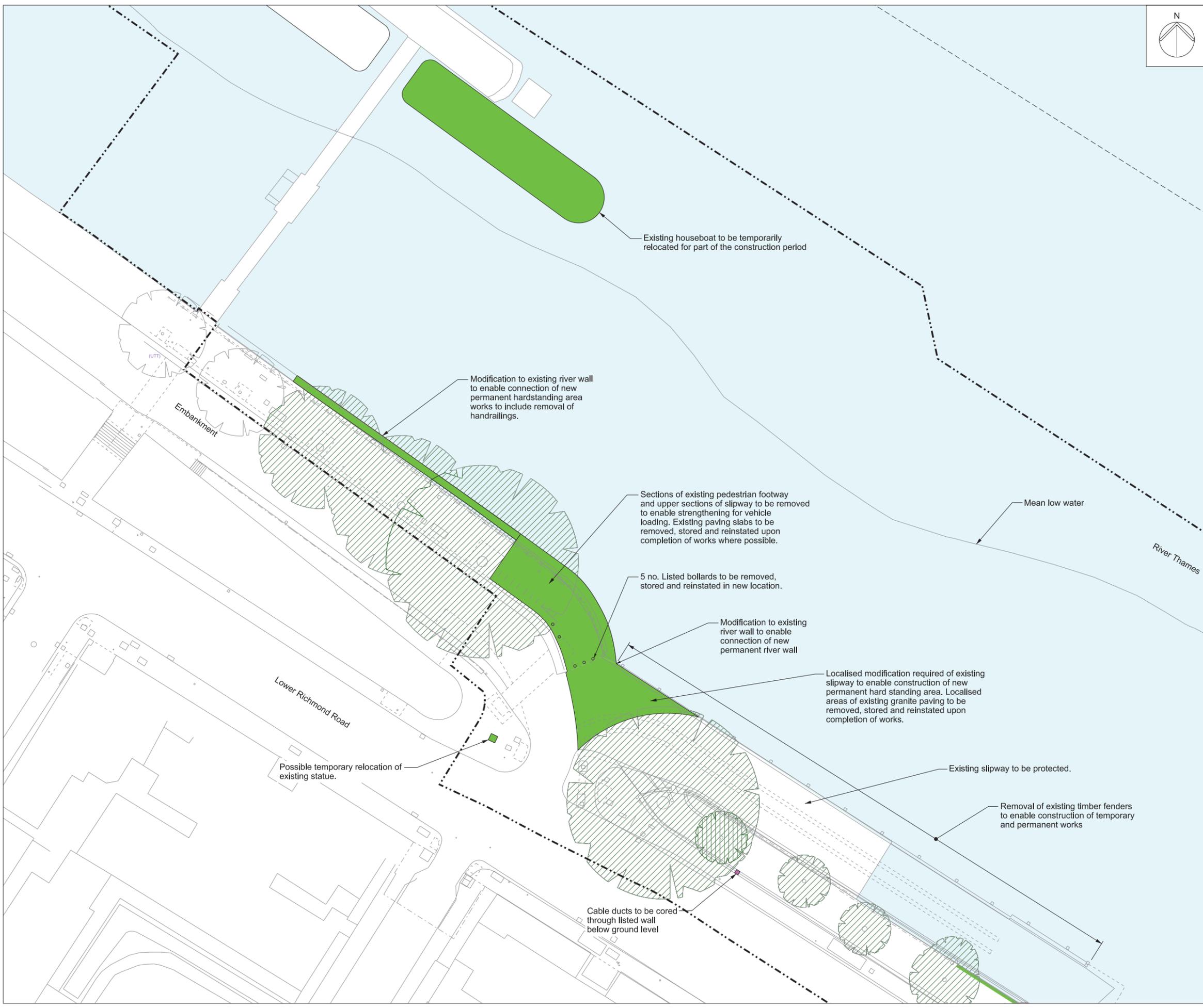
- Notes:**
1. Area of foreshore will require dredging prior to formation of temporary working area.
  2. Formation of temporary working area not illustrated. refer to construction phasing layout drawings.
  3. Minor items to be removed (e.g. barriers, bollards etc.) are not shown.
  4. General activities of site clearance such as removal of hardstanding and foundations, stripping of topsoil and clearance of minor vegetation not shown.

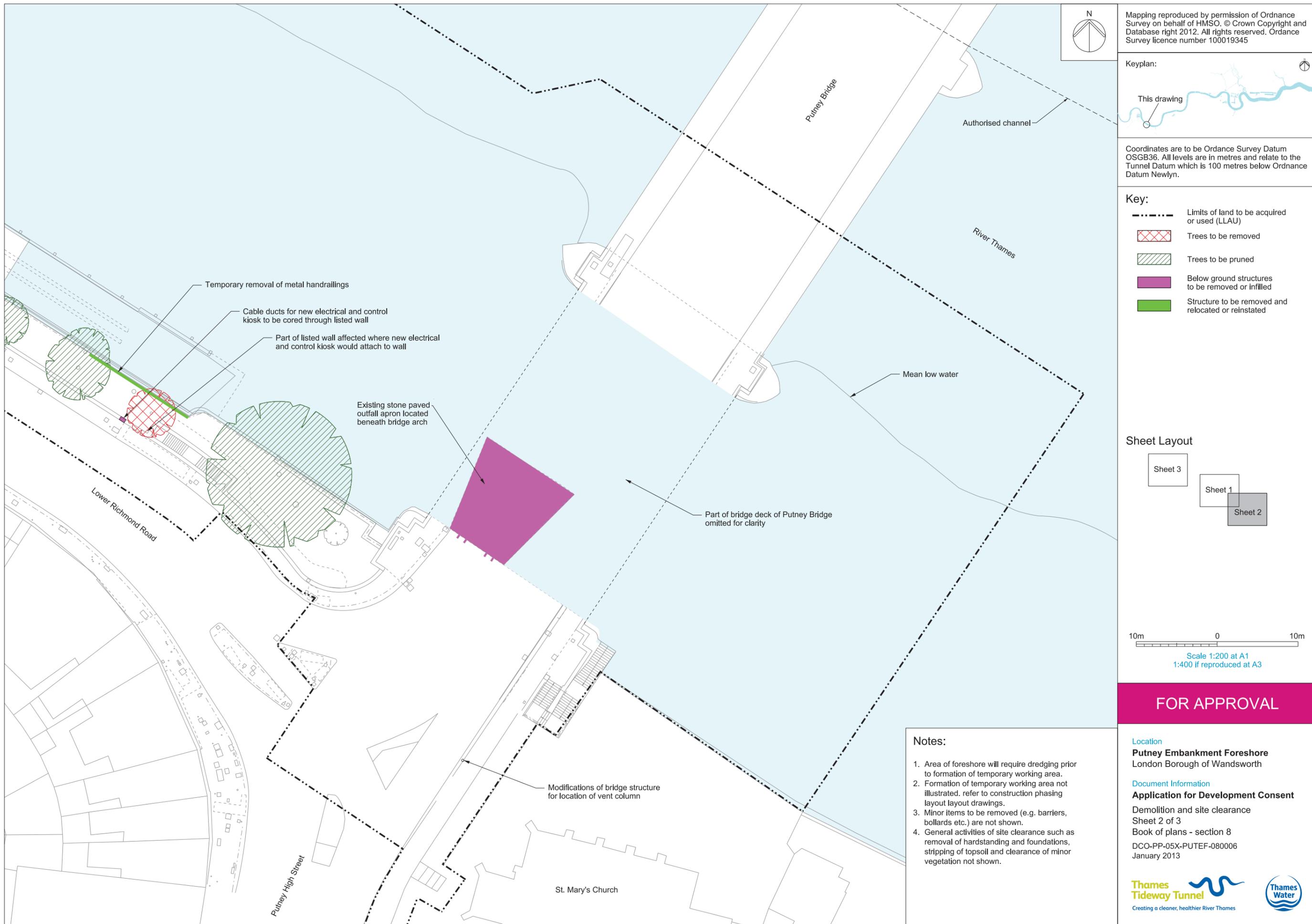


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**Location**  
**Putney Embankment Foreshore**  
 London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
 Demolition and site clearance  
 Sheet 1 of 3  
 Book of plans - section 8  
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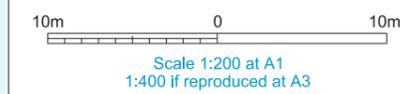
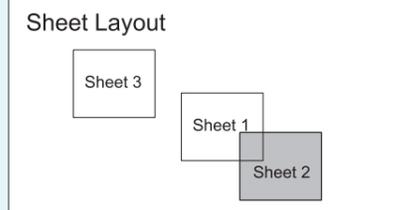
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**Key:**

	Limits of land to be acquired or used (LLAU)
	Trees to be removed
	Trees to be pruned
	Below ground structures to be removed or infilled
	Structure to be removed and relocated or reinstated



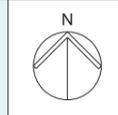
**FOR APPROVAL**

- Notes:**
1. Area of foreshore will require dredging prior to formation of temporary working area.
  2. Formation of temporary working area not illustrated. refer to construction phasing layout drawings.
  3. Minor items to be removed (e.g. barriers, bollards etc.) are not shown.
  4. General activities of site clearance such as removal of hardstanding and foundations, stripping of topsoil and clearance of minor vegetation not shown.

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Demolition and site clearance  
Sheet 2 of 3  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080006  
January 2013





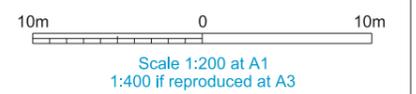
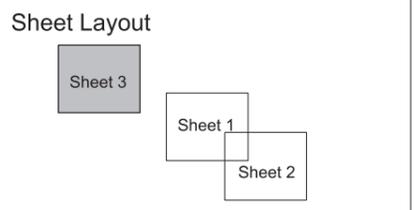
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- Key:
- Limits of land to be acquired or used (LLAU)
  - Trees to be pruned
  - Structure to be removed and relocated or reinstated

- Notes:
1. Minor items to be removed (e.g. barriers, bollards etc.) are not shown.
  2. Formation of temporary working area not illustrated. refer to construction phasing layout drawings.
  3. General activities of site clearance such as removal of hardstanding and foundations, stripping of topsoil and clearance of minor vegetation not shown.

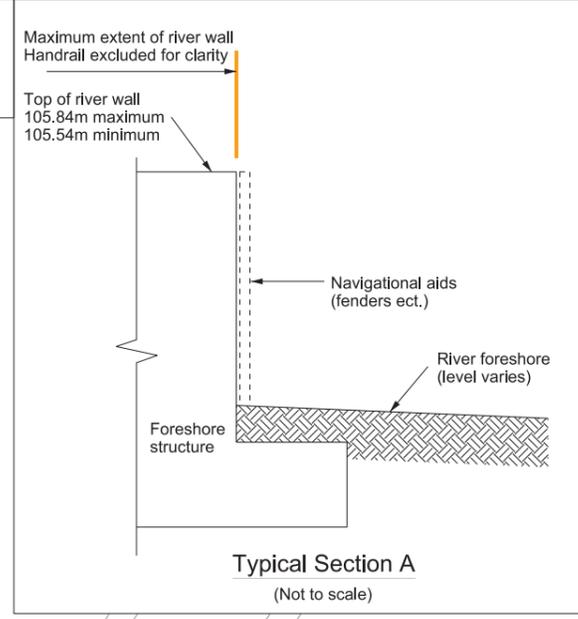
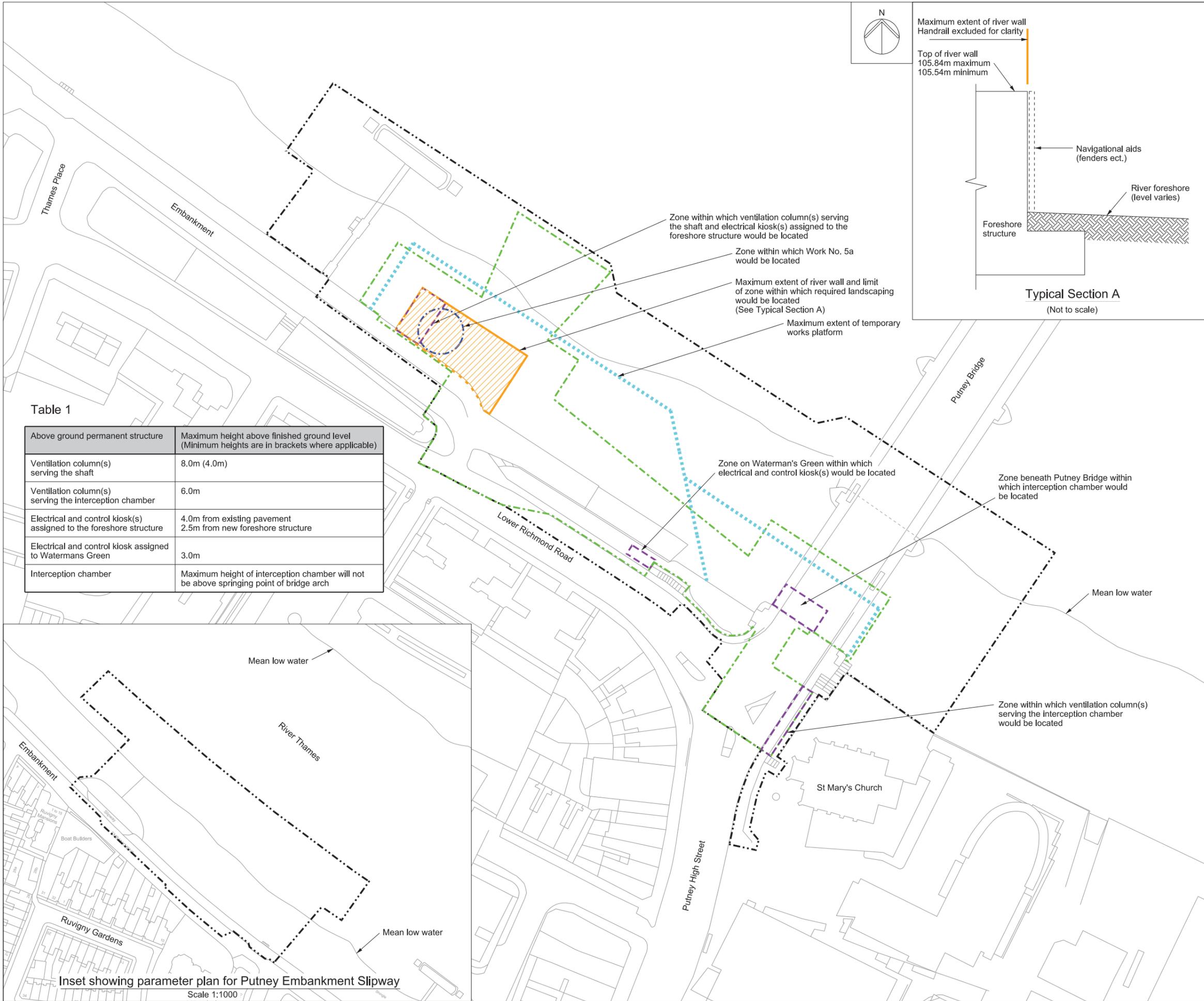


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Putney Embankment Foreshore  
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January 2013





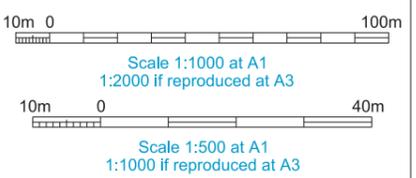
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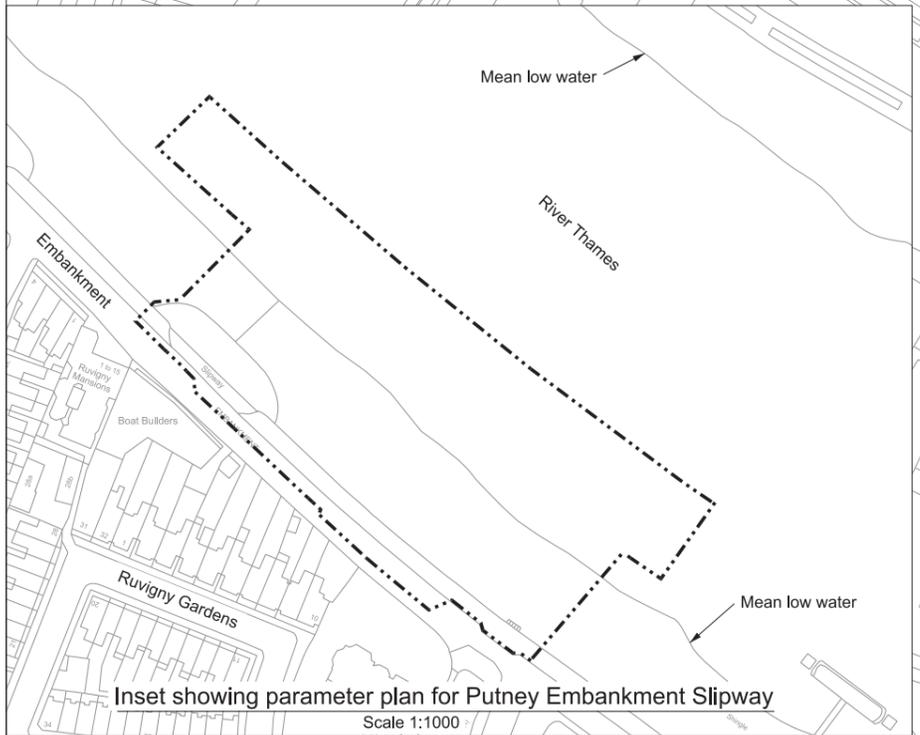
- Key:**
- Limits of land to be acquired or used (LLAU)
  - Zone within which all permanent site structures would be located
  - Zone within which the shaft would be located
  - Zone within which permanent above ground structures would be located (those listed in Table 1)
  - Zone within which required landscaping would be located
  - Maximum extent of top of river/parapet wall
  - Maximum extent of temporary works platform

- Notes:**
1. All dimensions and levels are approximate.
  2. The Site Works Parameter Key Plan identifies each zone independently.
  3. The zone within which the shaft would be located would include all permanent works including shaft walls (including appropriate allowances for construction tolerances) and if applicable under-reaming. Shaft construction temporary works may be located within or outside this zone provided they are located within the Limits of land to be acquired or used.



**Table 1**

Above ground permanent structure	Maximum height above finished ground level (Minimum heights are in brackets where applicable)
Ventilation column(s) serving the shaft	8.0m (4.0m)
Ventilation column(s) serving the interception chamber	6.0m
Electrical and control kiosk(s) assigned to the foreshore structure	4.0m from existing pavement 2.5m from new foreshore structure
Electrical and control kiosk assigned to Watermans Green	3.0m
Interception chamber	Maximum height of interception chamber will not be above springing point of bridge arch



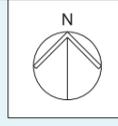
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**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Site works parameter plan

Book of plans - section 8  
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January 2013





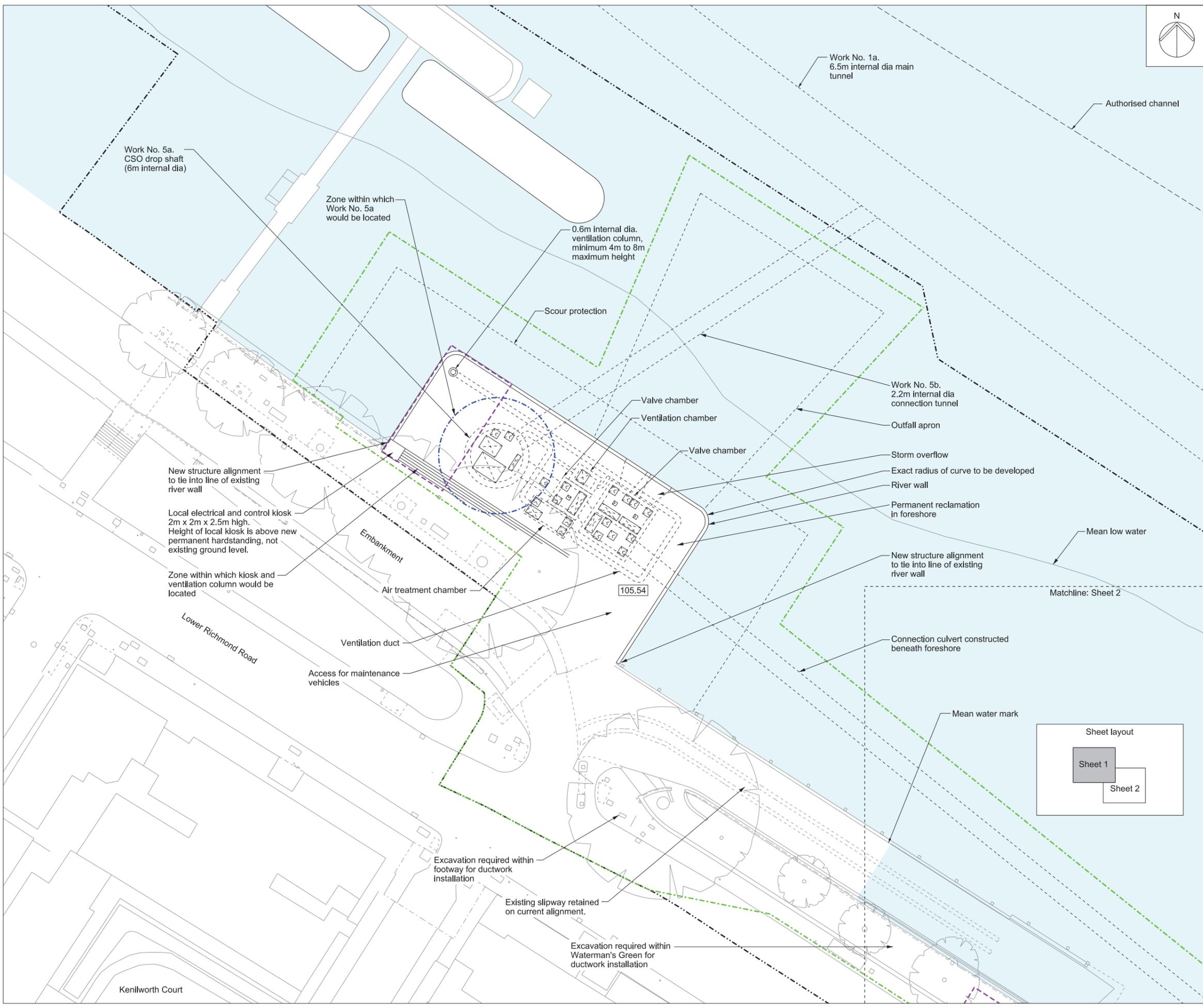
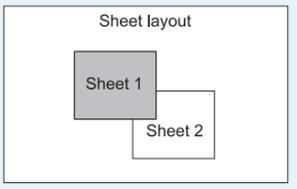
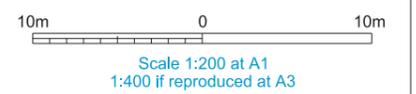
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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Proposed access cover
  - Proposed level (shown in metres above tunnel datum)
  - Zone within which all permanent site structures would be located
  - Zone within which the shaft would be located
  - Zone within which permanent above ground structures would be located

- Notes:**
1. All dimensions and levels are approximate.
  2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and topographical survey base, both of which have been used in the preparation of this drawing.
  3. This drawing shows permanent site structures only. Landscaping hard works and soft works are shown on the Proposed landscape plan and/or Proposed site features plan.
  4. Two electrical and control kiosks are required. One local kiosk situated upon the new permanent handstanding area and one situated upon Waterman's Green against the listed retaining wall.

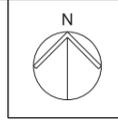


**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Permanent works layout  
Sheet 1 of 2  
Book of plans - section 8  
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January 2013





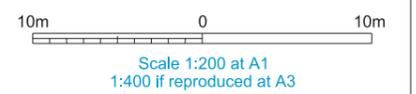
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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Existing sewers
  - Zone within which all permanent site structures would be located
  - Zone within which permanent above ground structures would be located

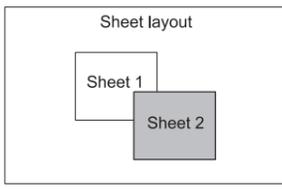
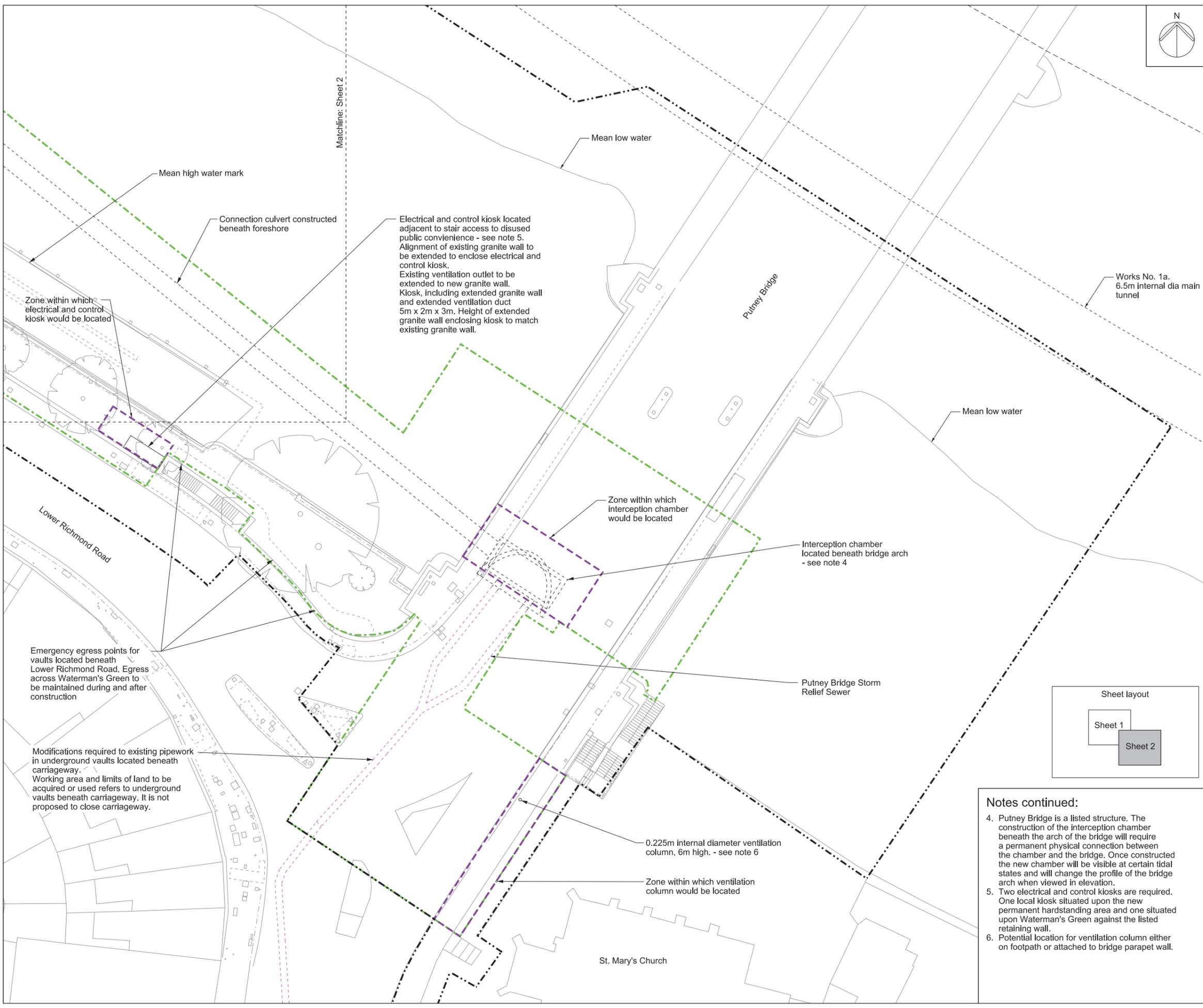
- Notes:**
1. All dimensions and levels are approximate.
  2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and topographical survey base, both of which have been used in the preparation of this drawing.
  3. This drawing shows permanent site structures only. Landscaping hard works and soft works are shown on the Proposed landscape plan and/or Proposed site features plan.



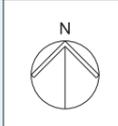
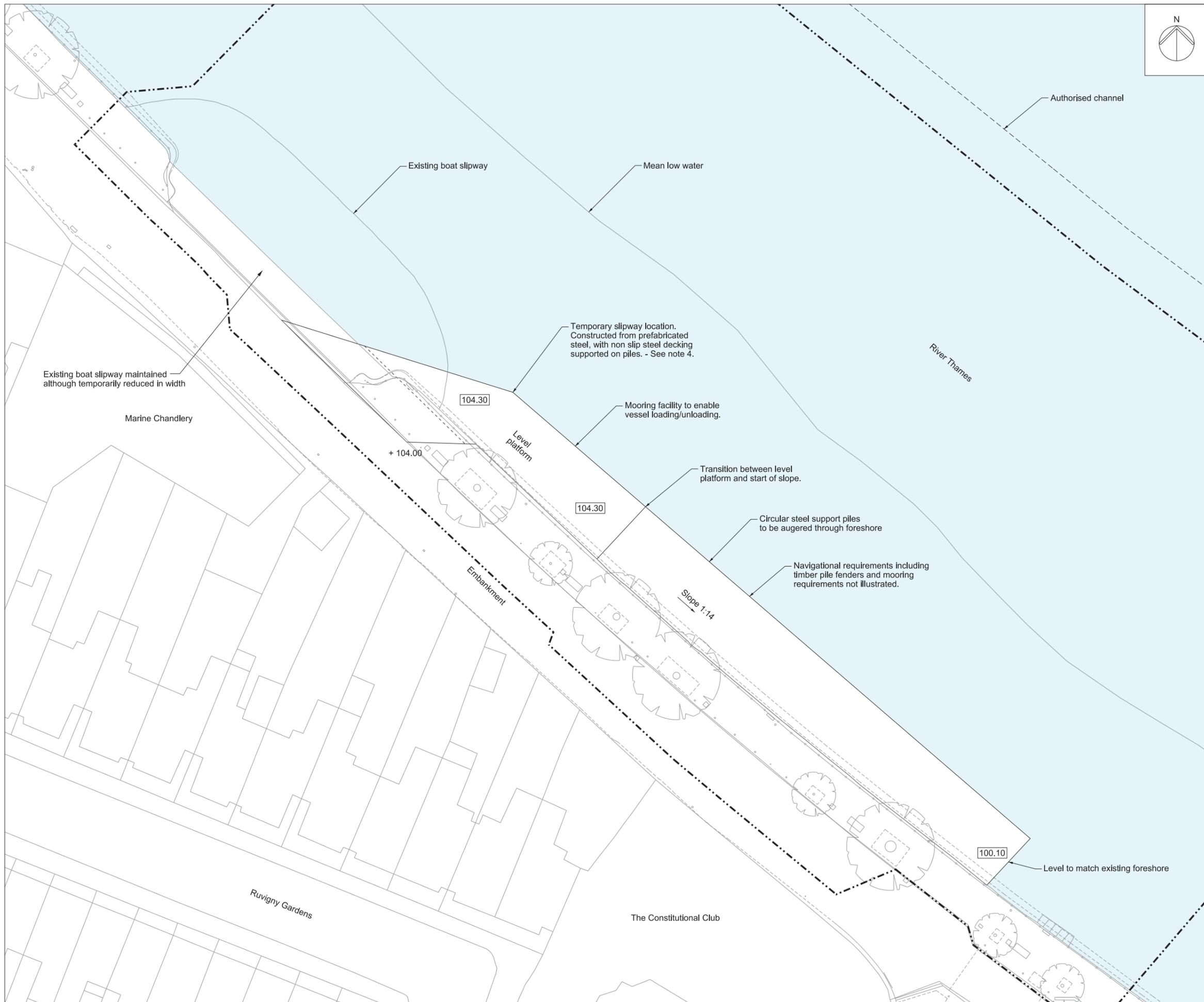
ILLUSTRATIVE

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Permanent works layout  
Sheet 2 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080011  
January 2013



- Notes continued:**
4. Putney Bridge is a listed structure. The construction of the interception chamber beneath the arch of the bridge will require a permanent physical connection between the chamber and the bridge. Once constructed the new chamber will be visible at certain tidal states and will change the profile of the bridge arch when viewed in elevation.
  5. Two electrical and control kiosks are required. One local kiosk situated upon the new permanent hardstanding area and one situated upon Waterman's Green against the listed retaining wall.
  6. Potential location for ventilation column either on footpath or attached to bridge parapet wall.



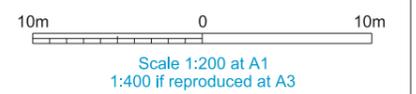
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:
- Limits of land to be acquired or used (LLAU)
  - + 104.10m Existing Level (shown in metres above tunnel datum)
  - 104.50 Proposed level (shown in metres above tunnel datum)

- Notes:
1. All dimensions and levels are approximate.
  2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and topographical survey base, both of which have been used in the preparation of this drawing.
  3. This drawing shows permanent site structures only. Landscaping hard works and soft works are shown on the Proposed landscape plan and/or Proposed site features plan.
  4. This slipway is to be provided as a temporary replacement for the slipway at Putney Embankment foreshore site. It is proposed that this temporary slipway be removed once work at the Putney Embankment foreshore site is complete.



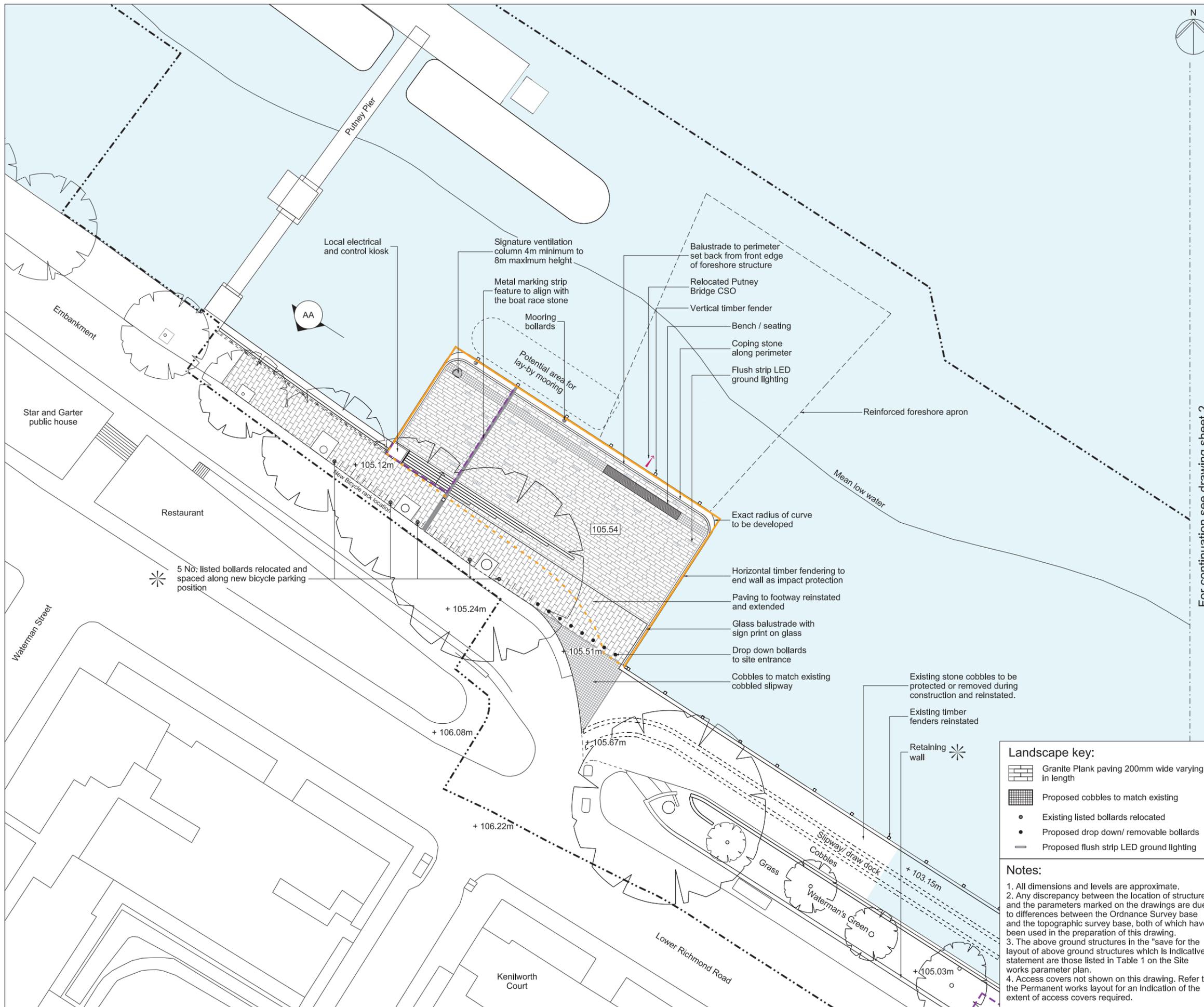
**INDICATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Temporary slipway layout

Book of plans - section 8  
DCO-PP-05X-PUTEF-080012  
January 2013





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Keyplan:

Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Key:

- Limits of land to be acquired or used (LLAU)
- - - Zone within which permanent above ground structures would be located
- . - . Zone within which required landscaping would be located
- Maximum extent of foreshore structure
- + 105.40m Existing levels (shown in metres above tunnel datum)
- 105.40 Proposed levels (shown in metres above tunnel datum)
- \* Listed buildings/structures
- Approximate position of CSO outlet
- ⊙ Existing trees within surveyed area (trunk sizes vary)

Sheet layout

For continuation see drawing sheet 2

Scale 1:200 at A1  
1:400 if reproduced at A3

**INDICATIVE**  
Save for layout of above ground structures which is illustrative

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Proposed  
Landscape plan sheet 1 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080013  
January 2013

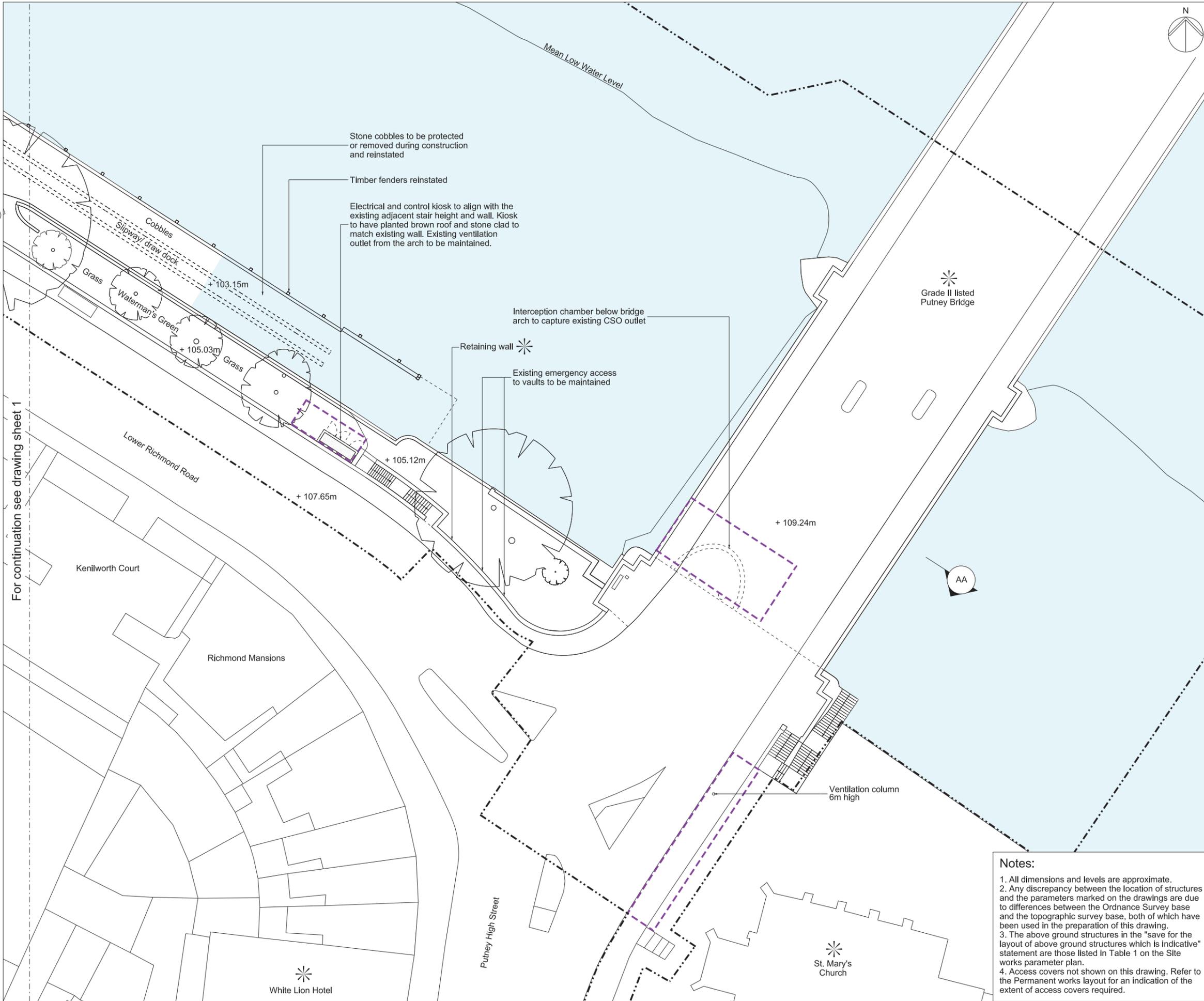
**Thames Tideway Tunnel**  
Creating a cleaner, healthier River Thames

**Thames Water**

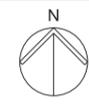
© Thames Water Utilities Ltd 2008

- Landscape key:**
- Granite Plank paving 200mm wide varying in length
  - Proposed cobbles to match existing
  - Existing listed bollards relocated
  - Proposed drop down/ removable bollards
  - Proposed flush strip LED ground lighting

- Notes:**
- All dimensions and levels are approximate.
  - Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and the topographic survey base, both of which have been used in the preparation of this drawing.
  - The above ground structures in the "save for the layout of above ground structures which is indicative" statement are those listed in Table 1 on the Site works parameter plan.
  - Access covers not shown on this drawing. Refer to the Permanent works layout for an indication of the extent of access covers required.



For continuation see drawing sheet 1

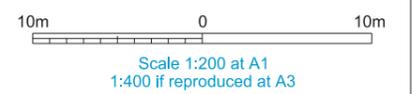
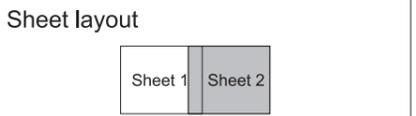


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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
- Limits of land to be acquired or used (LLAU)
  - Zone within which permanent above ground structures would be located
  - + 105.40m Existing levels (shown in metres above tunnel datum)
  - Listed buildings/structures
  - Existing trees within surveyed area (trunk sizes vary)



**INDICATIVE**  
Save for layout of above ground structures which is illustrative

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Proposed  
Landscape plan sheet 2 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080014  
January 2013



- Notes:**
1. All dimensions and levels are approximate.
  2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and the topographic survey base, both of which have been used in the preparation of this drawing.
  3. The above ground structures in the "save for the layout of above ground structures which is indicative" statement are those listed in Table 1 on the Site works parameter plan.
  4. Access covers not shown on this drawing. Refer to the Permanent works layout for an indication of the extent of access covers required.

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Keyplan:



Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Notes:

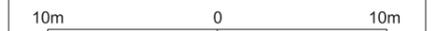
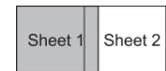
1. All dimensions and levels are approximate.
2. The purpose of this section is to show the scale of the below ground infrastructure to be provided.



For continuation see sheet 2

Section AA

Sheet layout



Scale 1:200 at A1  
1:400 if reproduced at A3

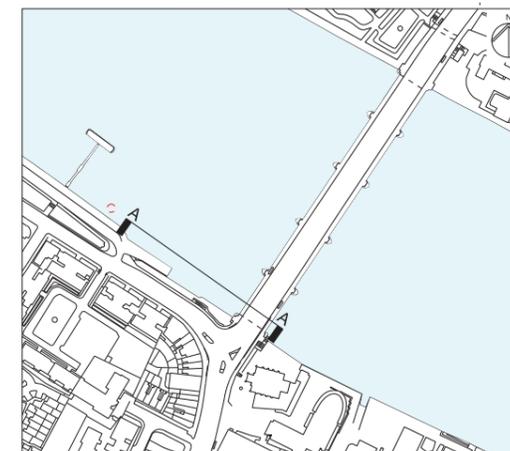
ILLUSTRATIVE

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent

Section AA  
Sheet 1 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080015  
January 2013

Thames Tideway Tunnel  
Creating a cleaner, healthier River Thames



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Keyplan:

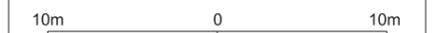


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Notes:

1. All dimensions and levels are approximate.
2. The purpose of this section is to show the scale of the below ground infrastructure to be provided.

Sheet layout



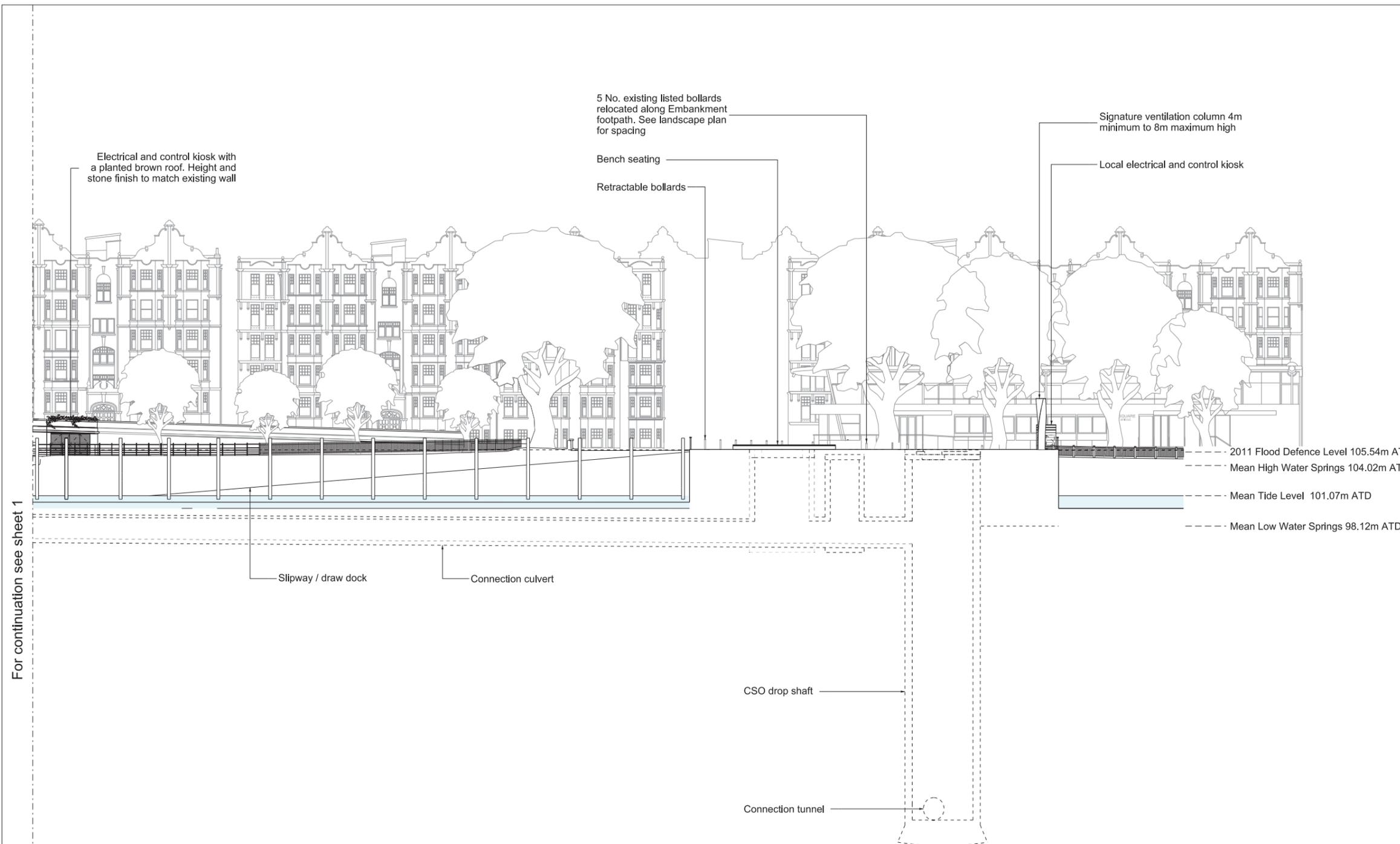
Scale 1:200 at A1  
1:400 if reproduced at A3

**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

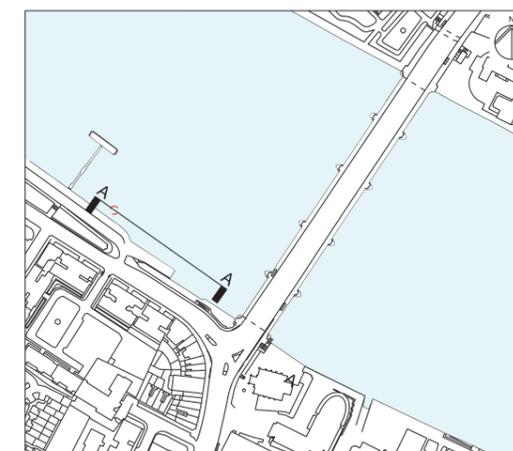
**Document Information**  
Application for Development Consent

Section AA  
Sheet 2 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080016  
January 2013



For continuation see sheet 1

Section AA



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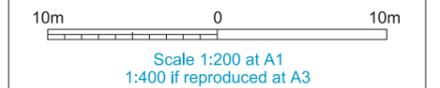
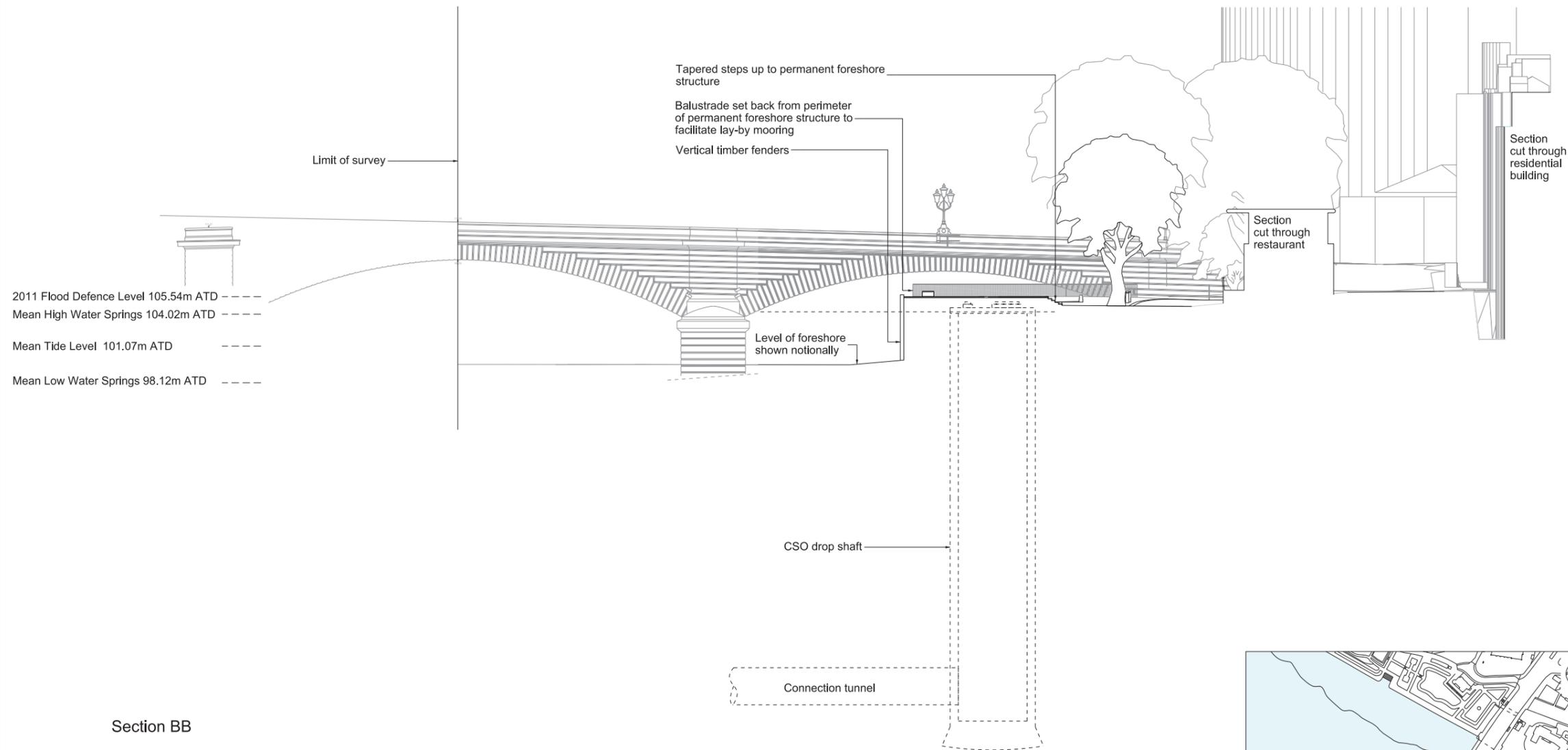
Keyplan:



Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Notes:

1. All dimensions and levels are approximate.
2. The purpose of this section is to show the scale of the below ground infrastructure to be provided.



ILLUSTRATIVE

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Section BB

Book of plans - section 8  
DCO-PP-05X-PUTEF-080017  
January 2013

**Thames Tideway Tunnel**  
Creating a cleaner, healthier River Thames



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Keyplan:



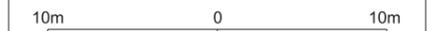
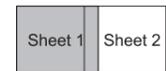
Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Notes:

1. All dimensions and levels are approximate.

For continuation see sheet 2

Sheet layout



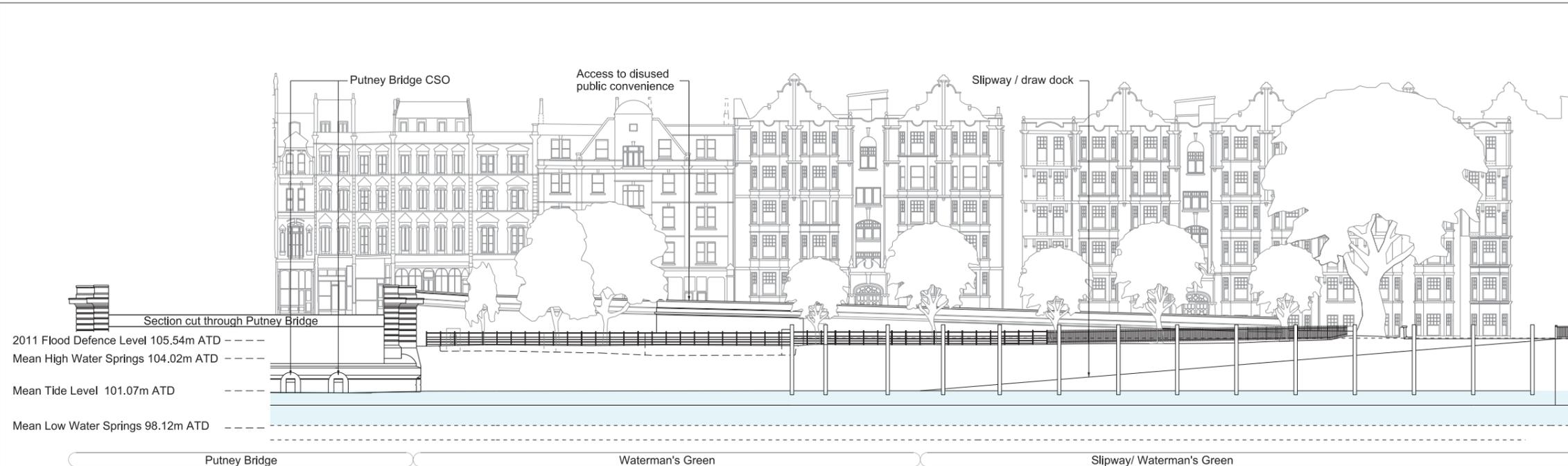
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**ILLUSTRATIVE**

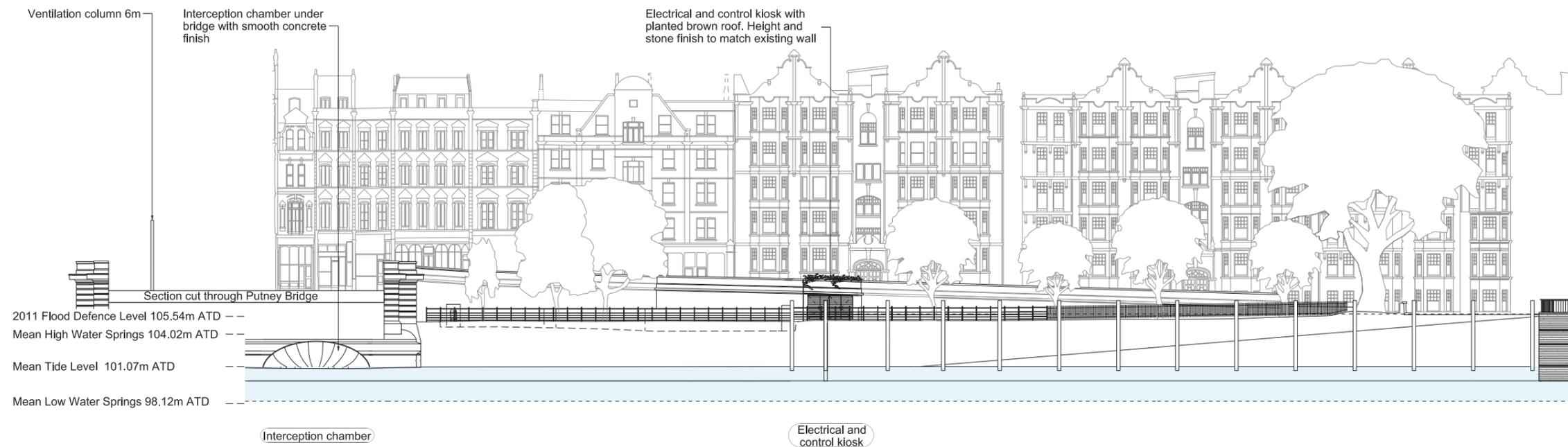
**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent

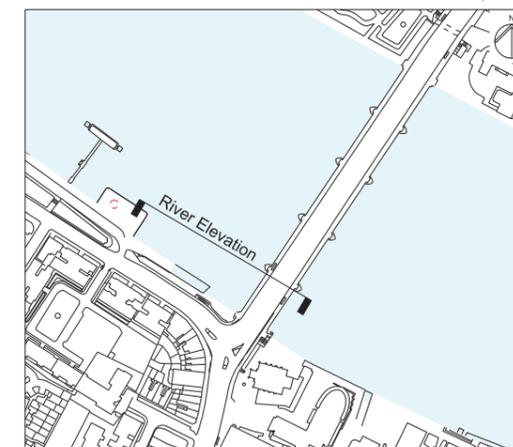
As existing and proposed  
River elevation sheet 1 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080018  
January 2013



As existing River elevation



Proposed River elevation



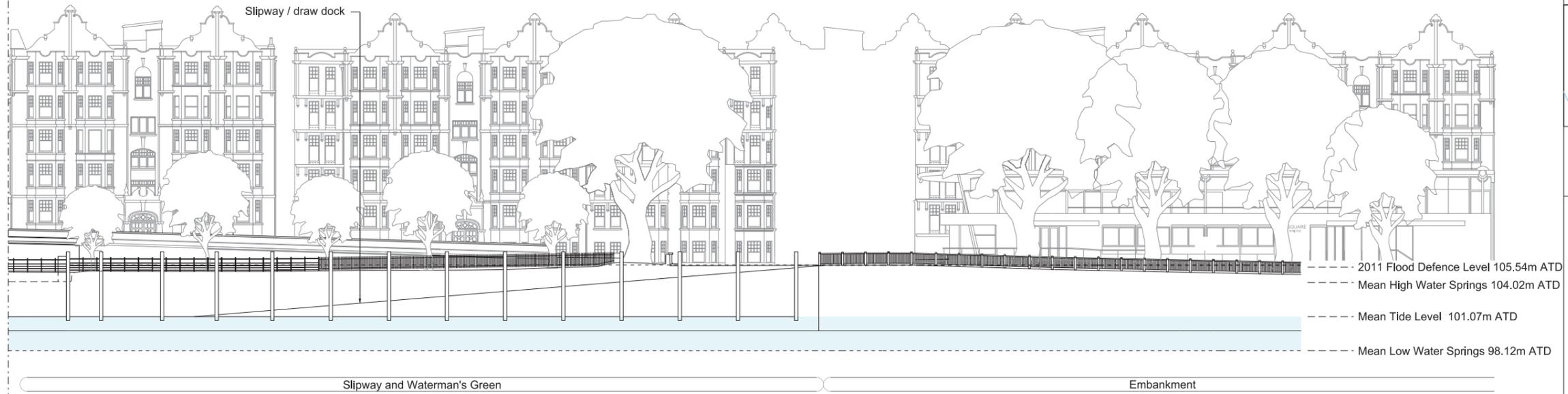
Keyplan:



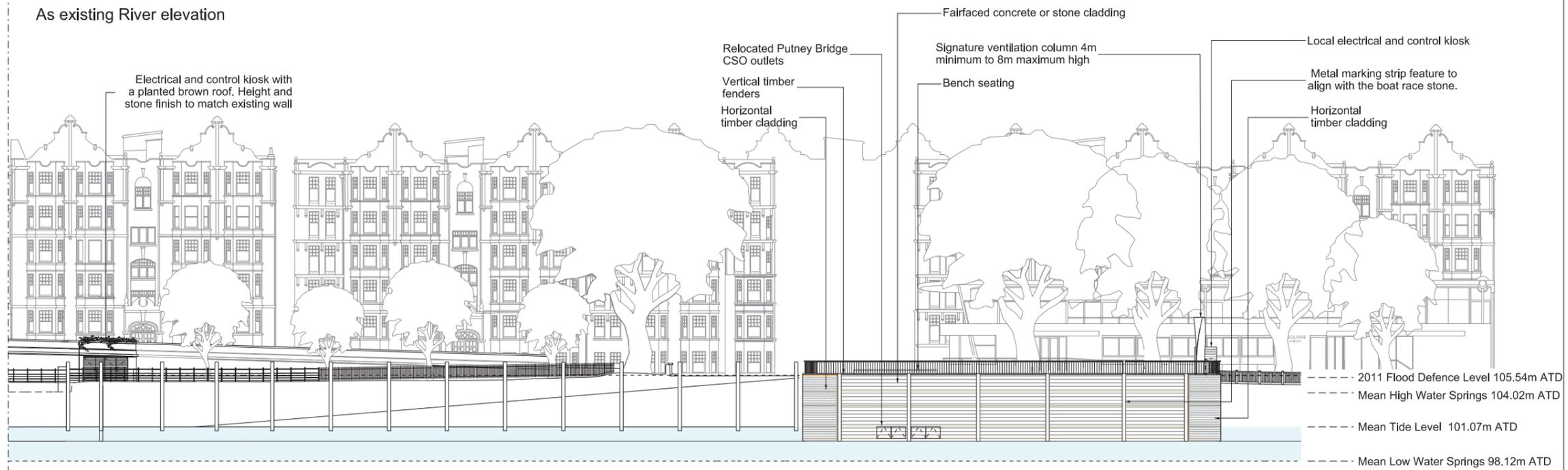
Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Notes:

1. All dimensions and levels are approximate.

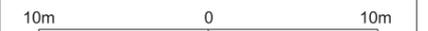


As existing River elevation



For continuation see sheet 1

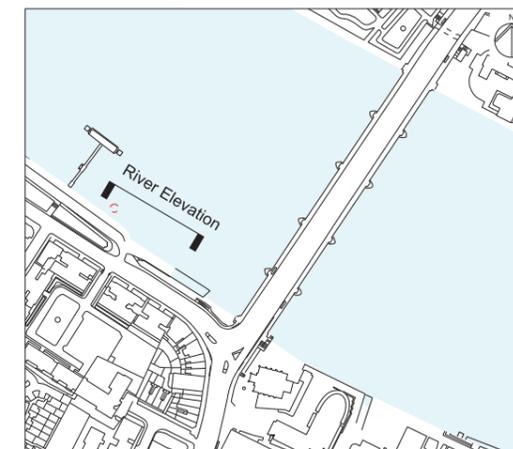
Sheet layout



Scale 1:200 at A1  
1:400 if reproduced at A3

**ILLUSTRATIVE**

Proposed River elevation



**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent

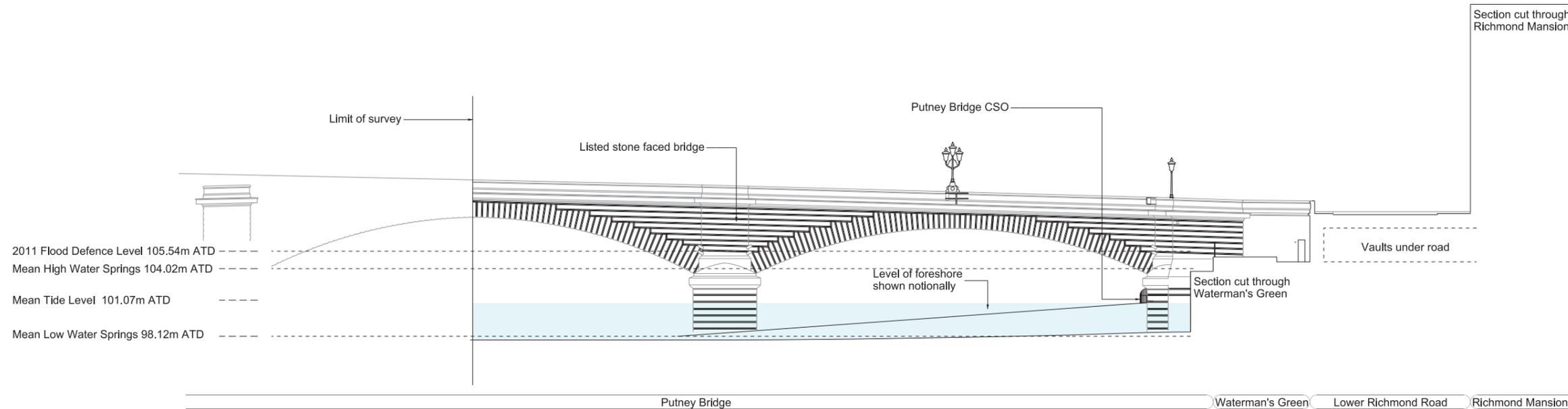
As existing and proposed  
River elevation sheet 2 of 2  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080019  
January 2013

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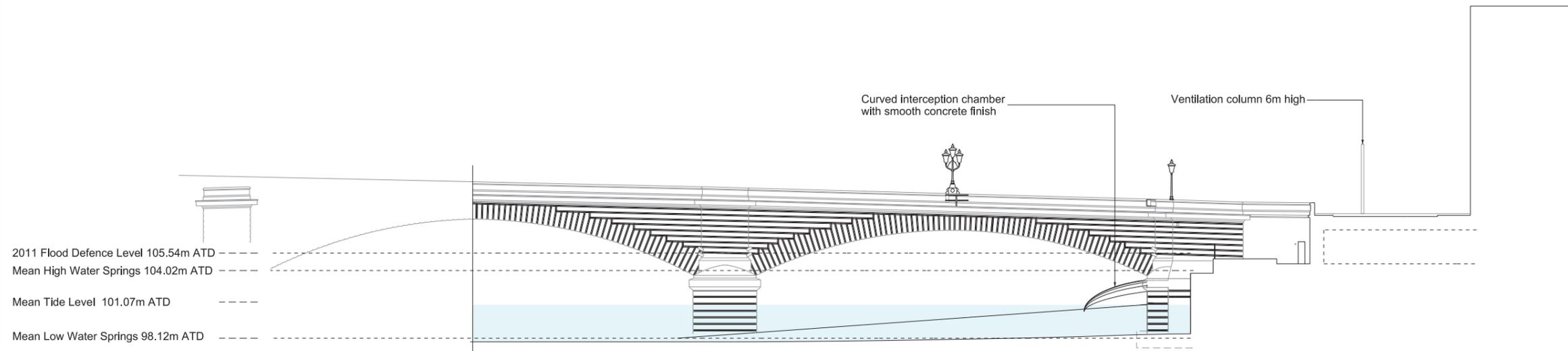


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

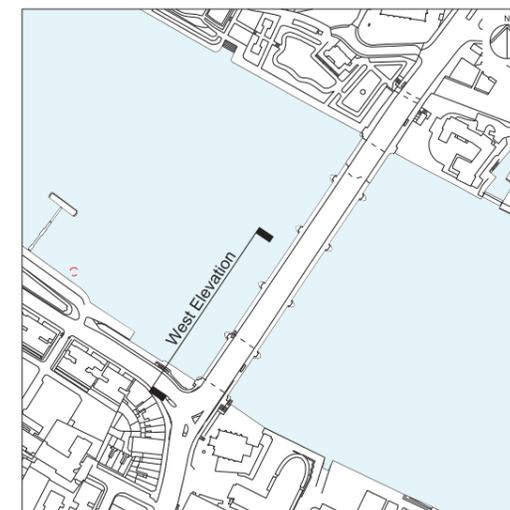
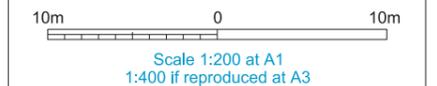
Notes:  
1. All dimensions and levels are approximate.



As existing West elevation



Proposed West elevation



ILLUSTRATIVE

Location  
**Putney Embankment Foreshore**  
London Borough of Wandsworth

Document Information  
**Application for Development Consent**  
As existing and proposed  
West elevation  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080020  
January 2013



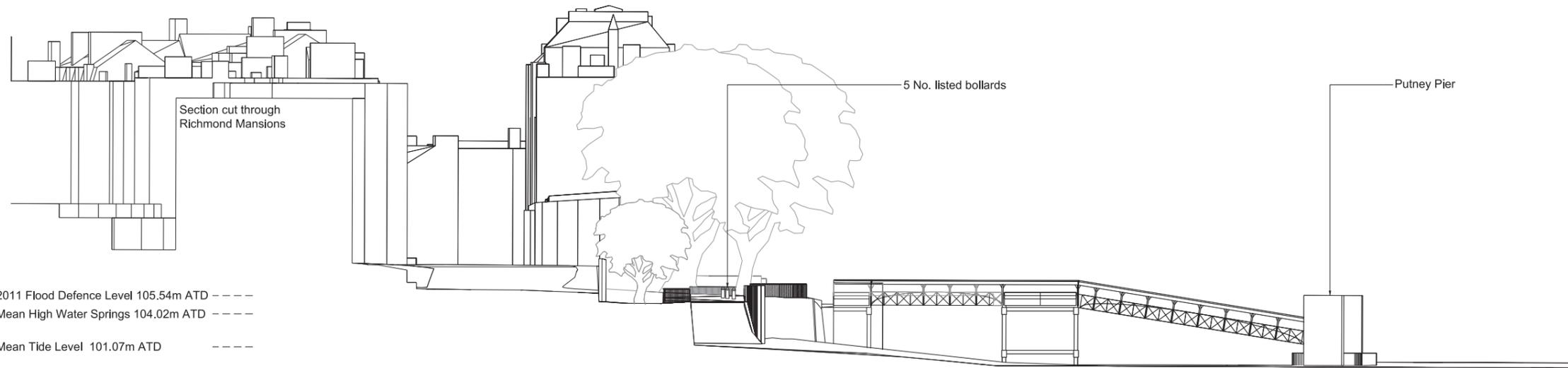
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Notes:**

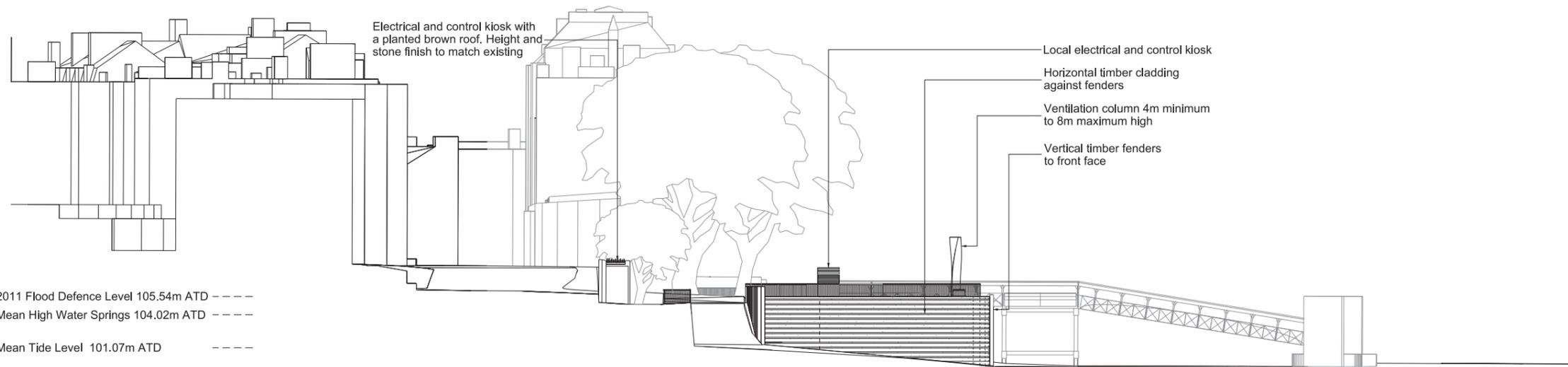
1. All dimensions and levels are approximate.
2. House boats omitted for clarity



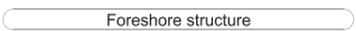
2011 Flood Defence Level 105.54m ATD -----  
 Mean High Water Springs 104.02m ATD -----  
 Mean Tide Level 101.07m ATD -----  
 Mean Low Water Springs 98.12m ATD -----



As existing East elevation



2011 Flood Defence Level 105.54m ATD -----  
 Mean High Water Springs 104.02m ATD -----  
 Mean Tide Level 101.07m ATD -----  
 Mean Low Water Springs 98.12m ATD -----



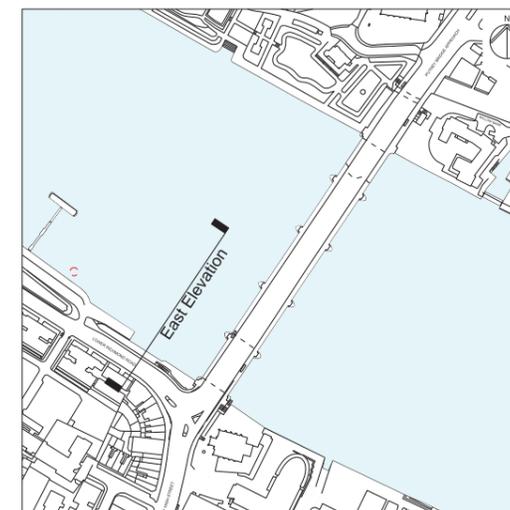
Proposed East elevation

10m                      0                      10m  
 Scale 1:200 at A1  
 1:400 if reproduced at A3

**ILLUSTRATIVE**

**Location**  
 Putney Embankment Foreshore  
 London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
 As existing and proposed  
 East elevation  
 Book of plans - section 8  
 DCO-PP-05X-PUTEF-080021  
 January 2013

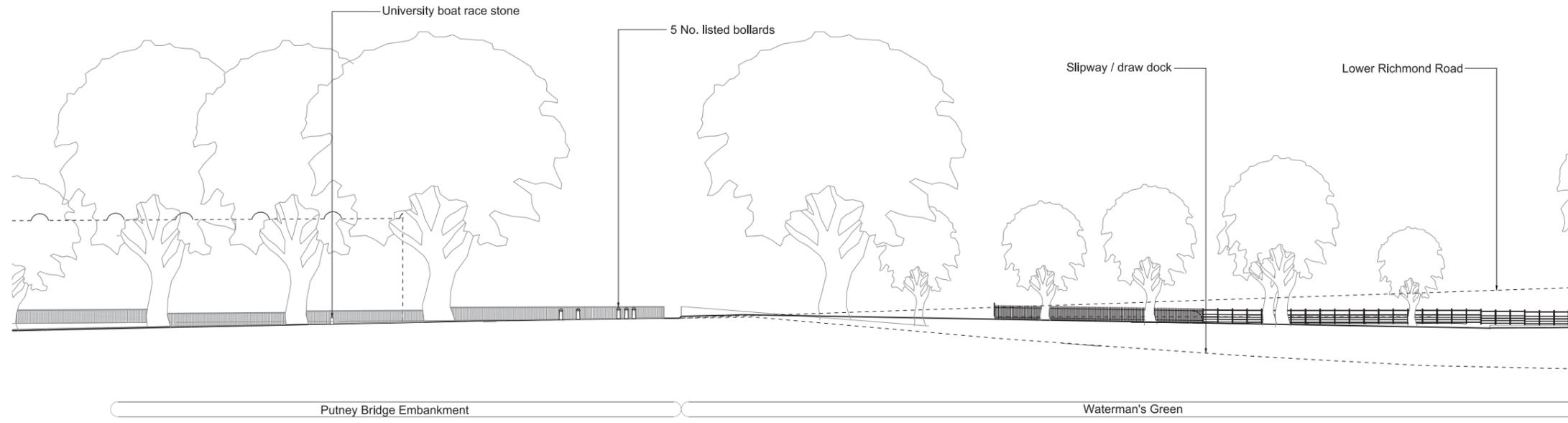


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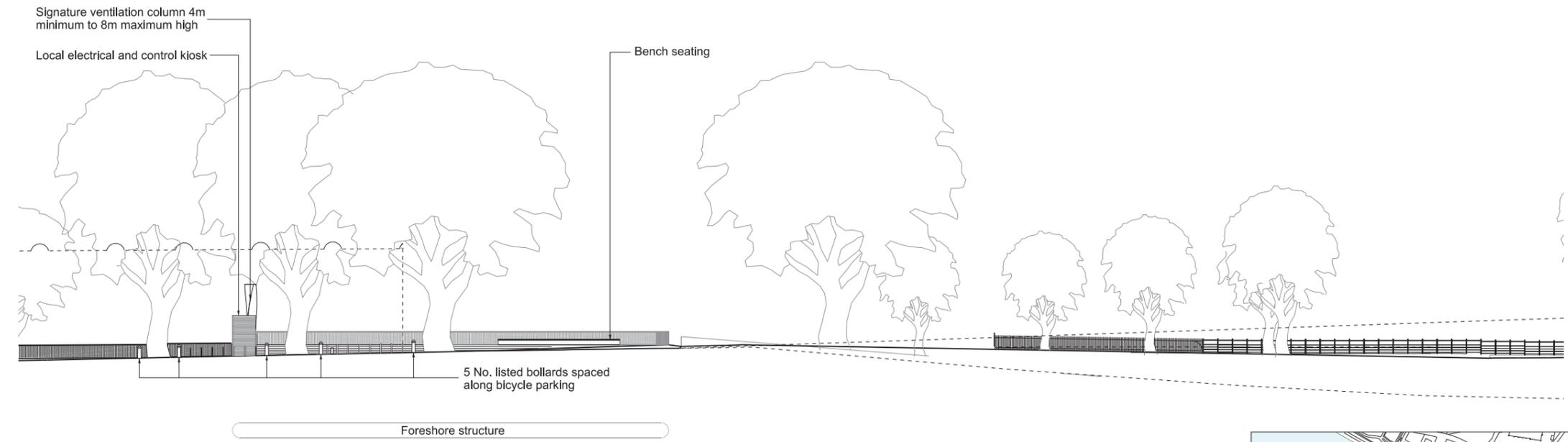


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

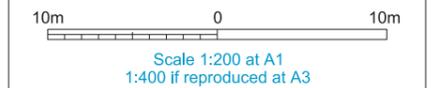
Notes:  
1. All dimensions and levels are approximate.



As existing South elevation



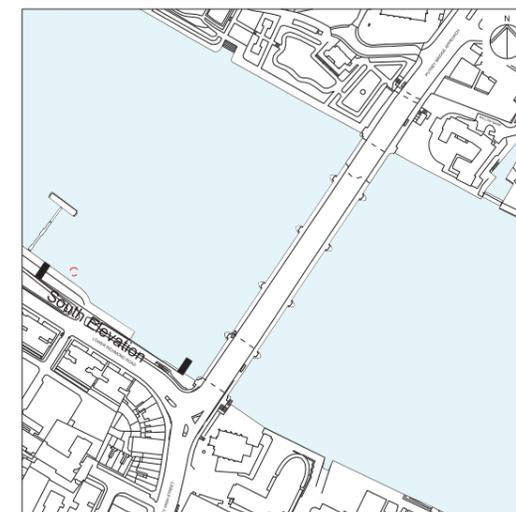
Proposed South elevation



ILLUSTRATIVE

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
As existing and proposed  
South elevation  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080022  
January 2013



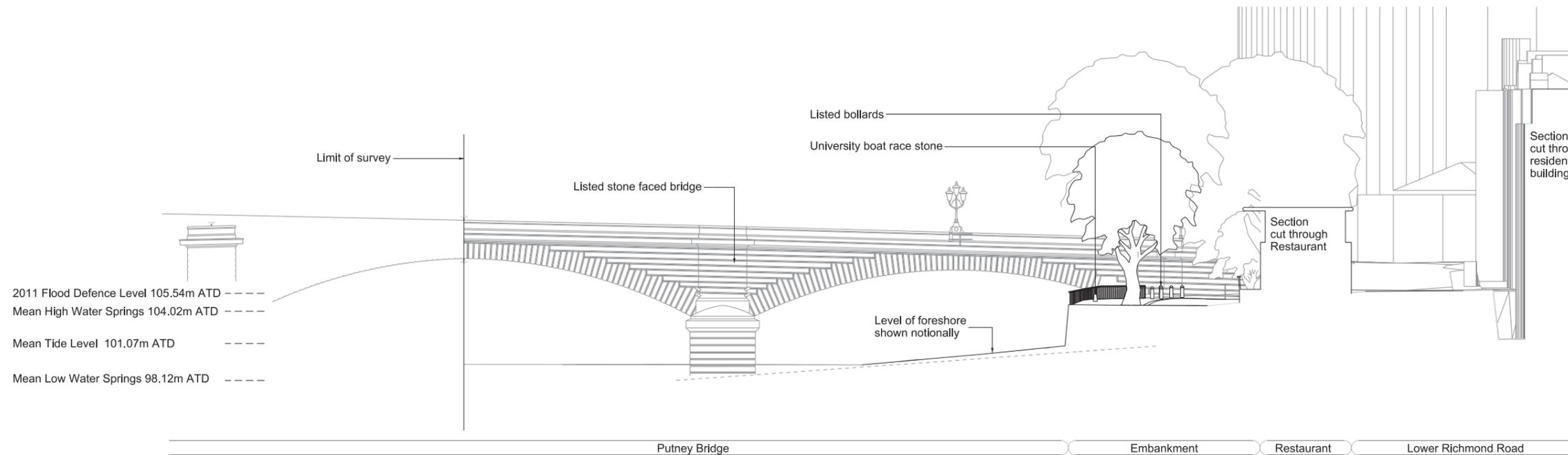
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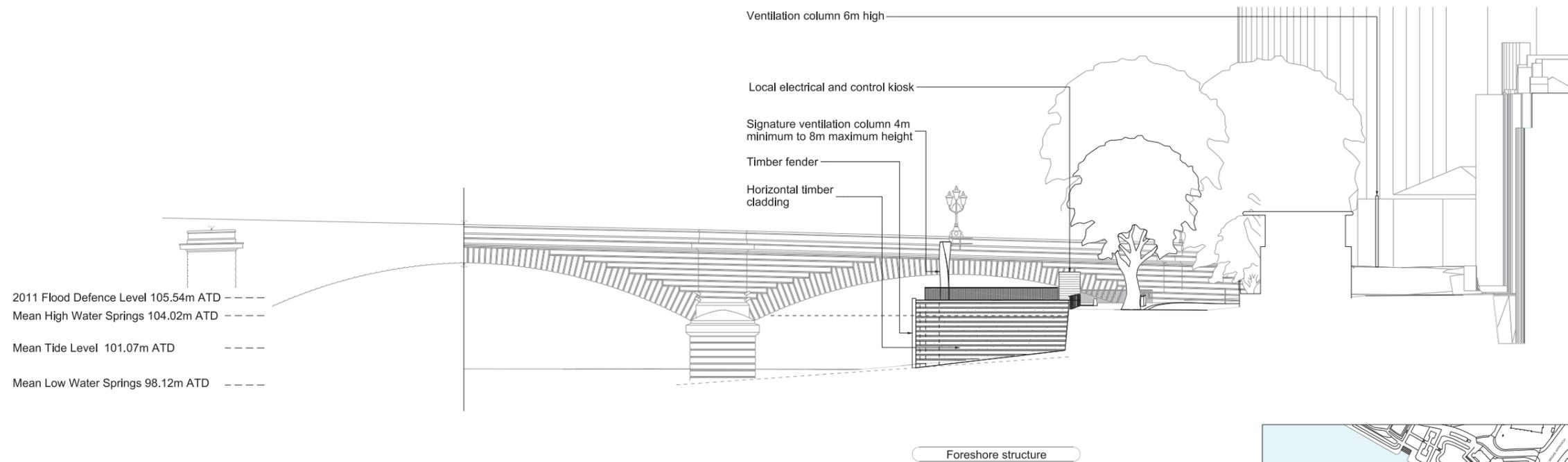
Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Notes:**

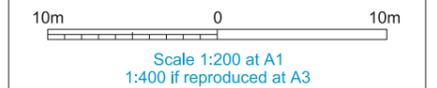
1. All dimensions and levels are approximate.



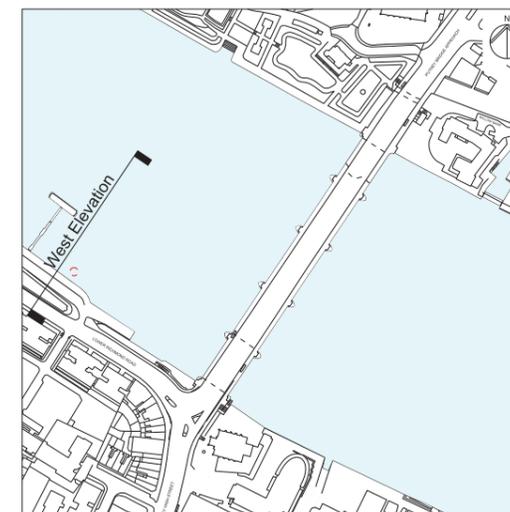
As existing West elevation (at foreshore structure location).



Proposed foreshore structure West elevation



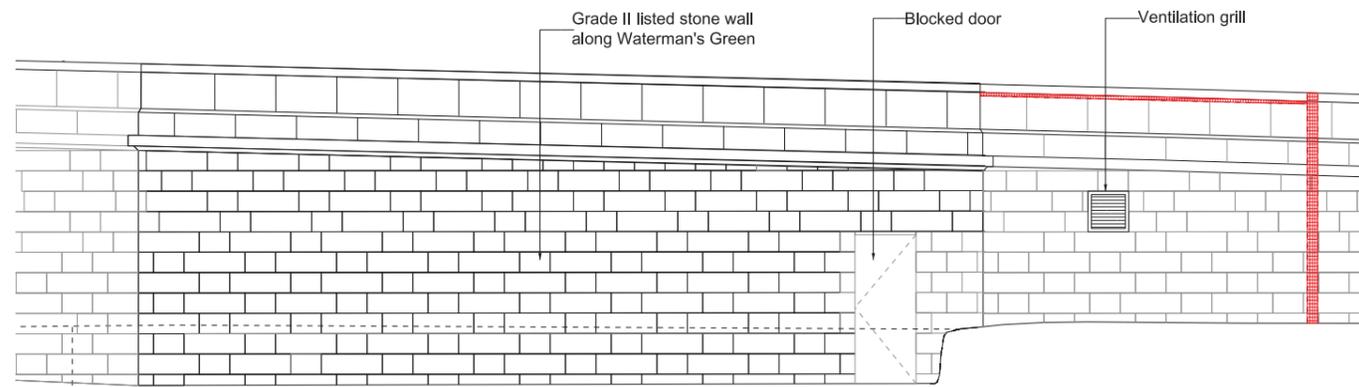
**ILLUSTRATIVE**



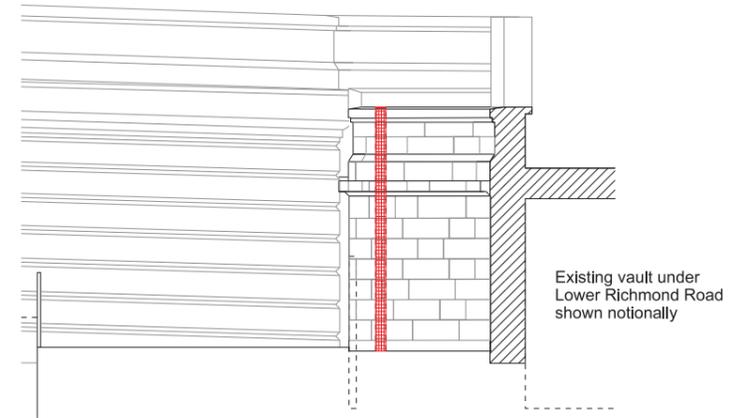
**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
As existing and proposed  
Foreshore structure west elevation  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080023  
January 2013

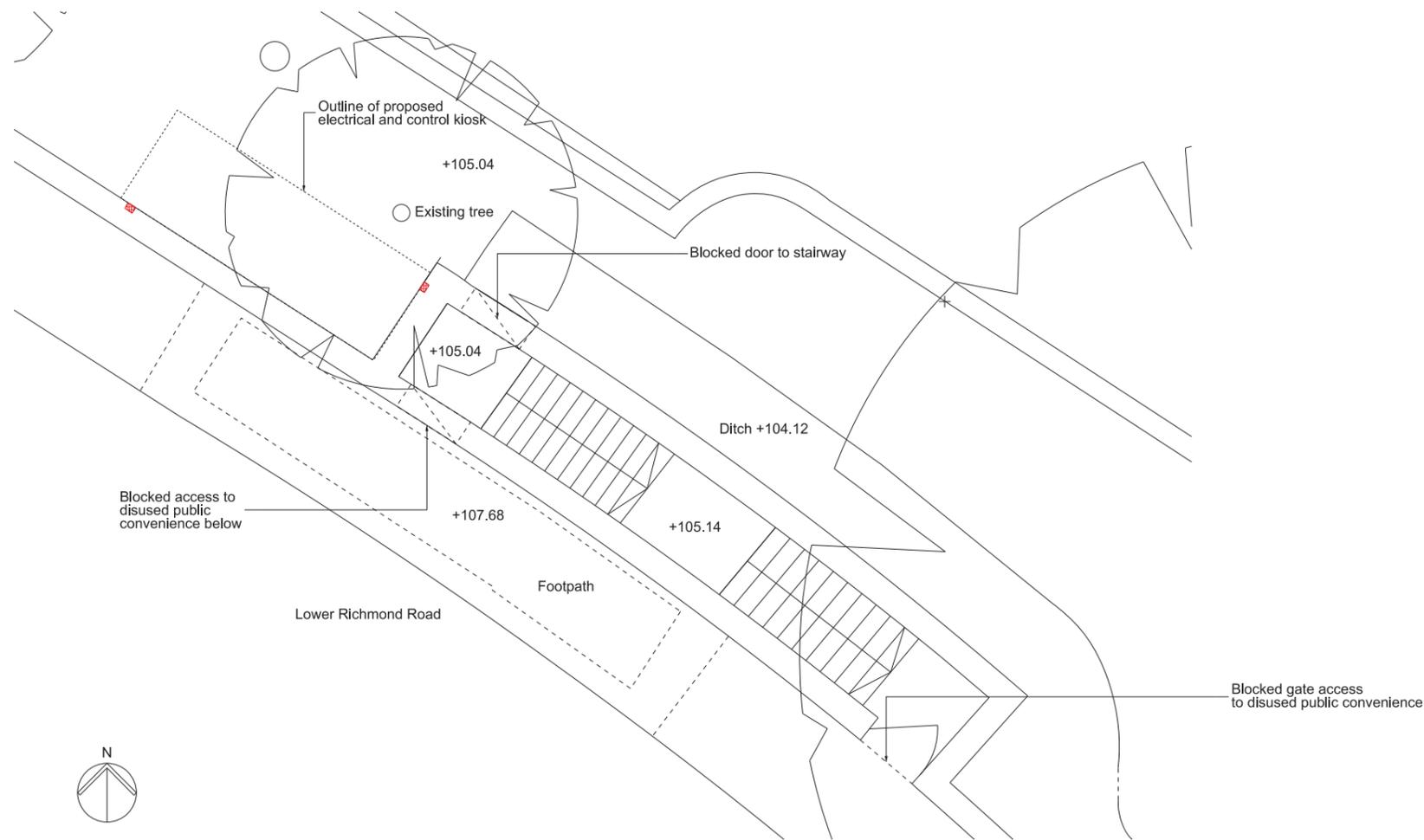




As Existing: Waterman's Green wall elevation showing extent of loss



As Existing: Waterman's Green side elevation



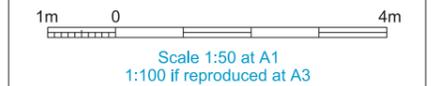
As Existing: Waterman's Green plan showing extent of loss



Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Key:**  
 Maximum permanent extent of loss of listed buildings / structures

**Notes:**  
 1. All dimensions and levels are approximate.  
 2. Drawing is based on as-constructed drawings and topographical survey and not on heritage survey.



**FOR INFORMATION**  
 Save for maximum extent of loss of listed structures which is for approval

**Location**  
 Putney Embankment Foreshore  
 London Borough of Wandsworth

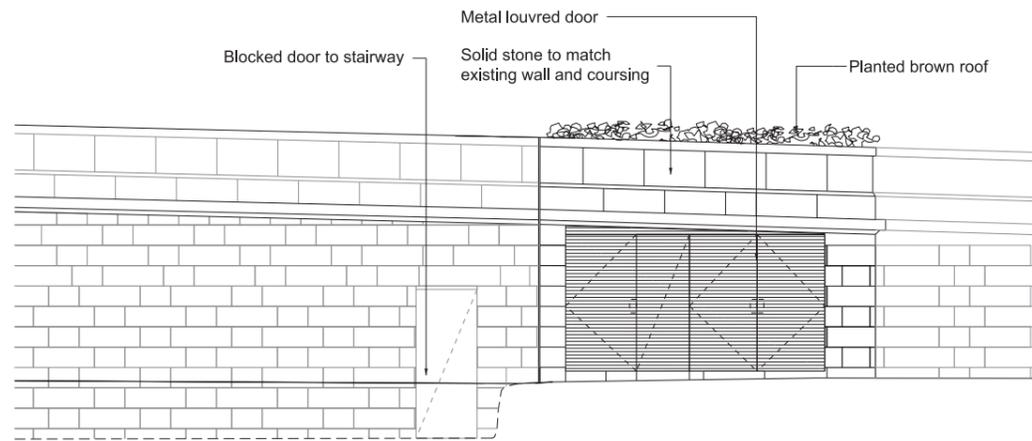
**Document Information**  
**Application for Development Consent**  
 As existing listed structure interface - Kiosk  
 Book of plans - section 8  
 DCO-PP-05X-PUTEF-080024  
 January 2013



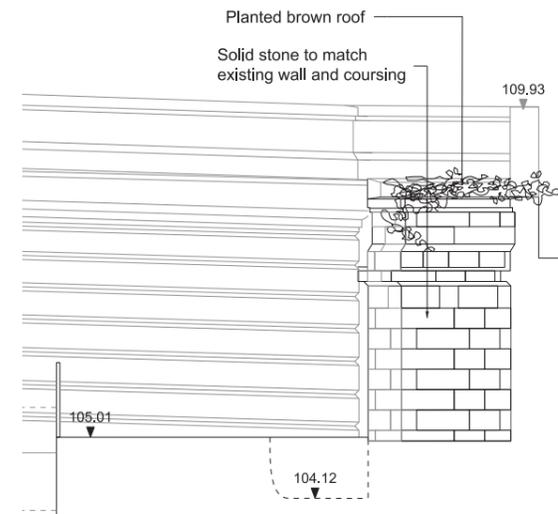


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

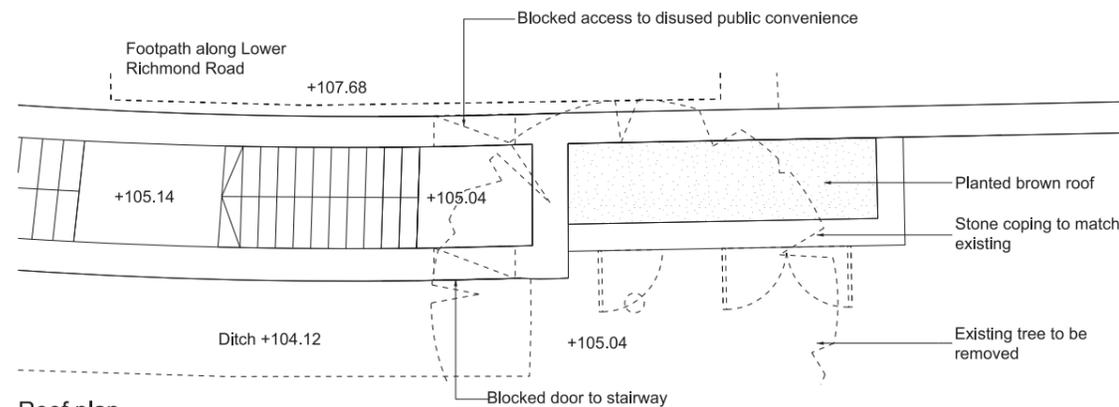
- Notes:**
1. All dimensions and levels are approximate.
  2. Drawing is based on as-constructed drawings and topographical survey and not on heritage survey.



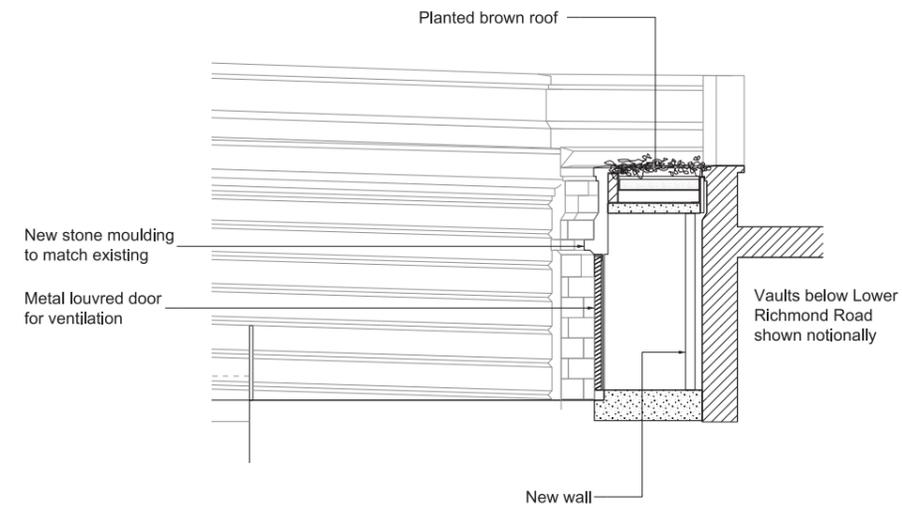
Front wall elevation



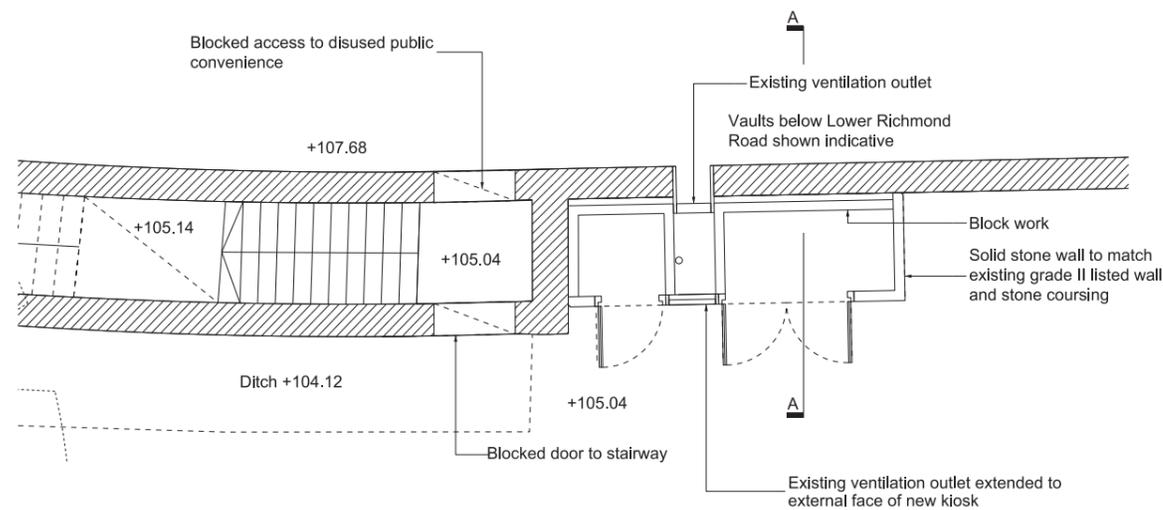
Side elevation



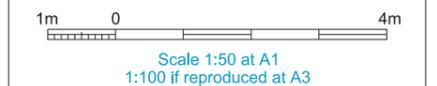
Roof plan



Section AA



Floor plan



**INDICATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

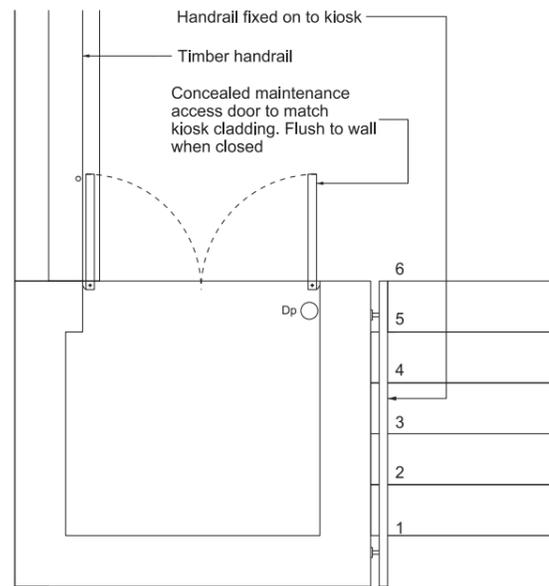
**Document Information**  
**Application for Development Consent**  
Proposed listed structure interface -  
Kiosk  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080025  
January 2013



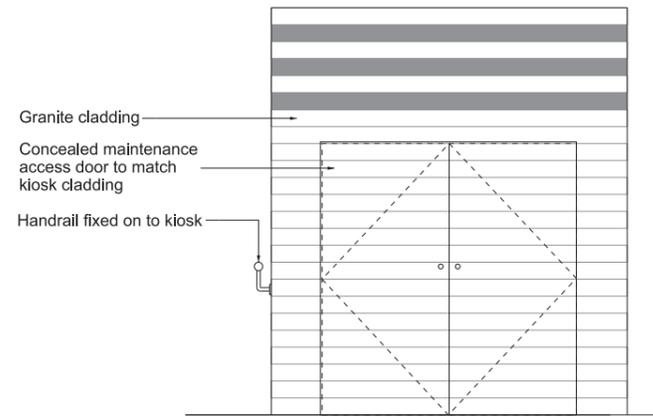


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

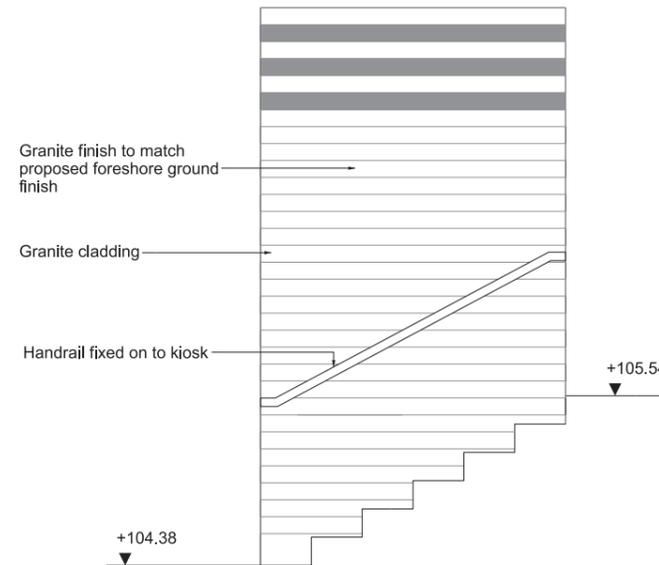
**Notes:**  
1. All dimensions and levels are approximate.



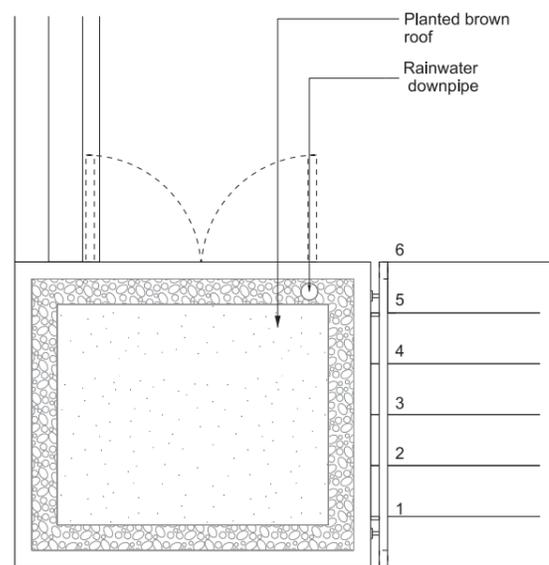
Plan



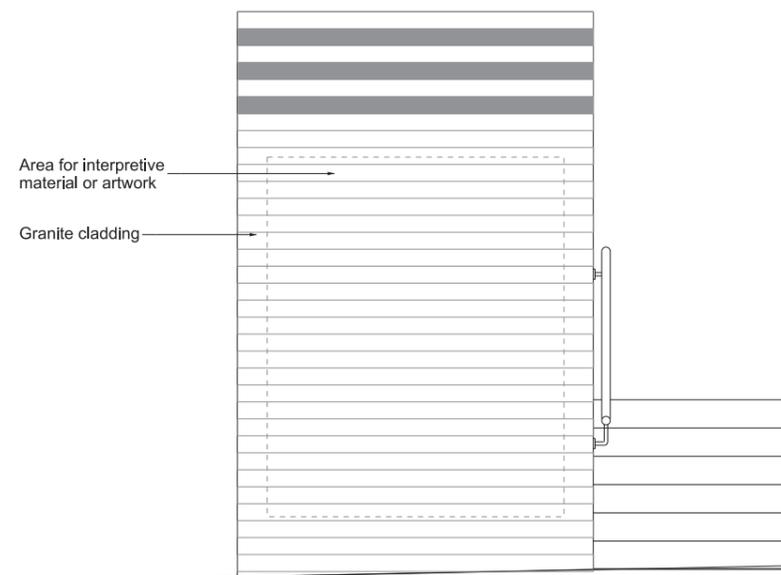
North elevation



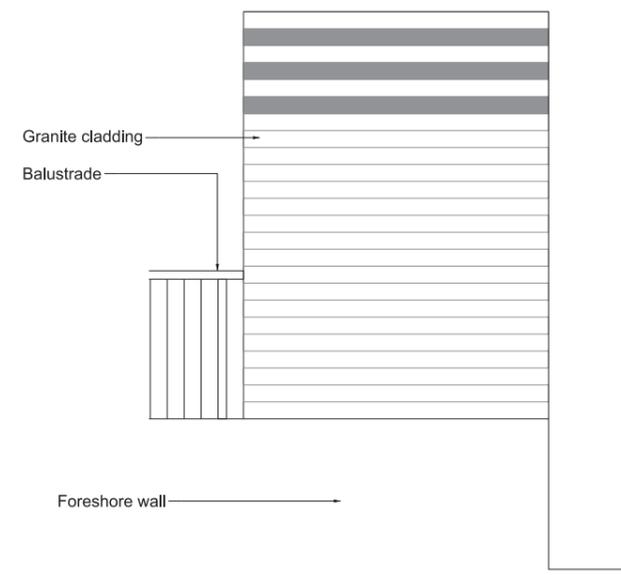
East elevation



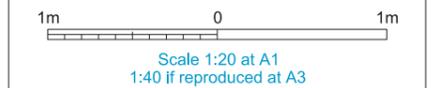
Roof plan



South elevation



West elevation



**INDICATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Foreshore kiosk design intent

Book of plans - section 8  
DCO-PP-05X-PUTEF-080026  
January 2013

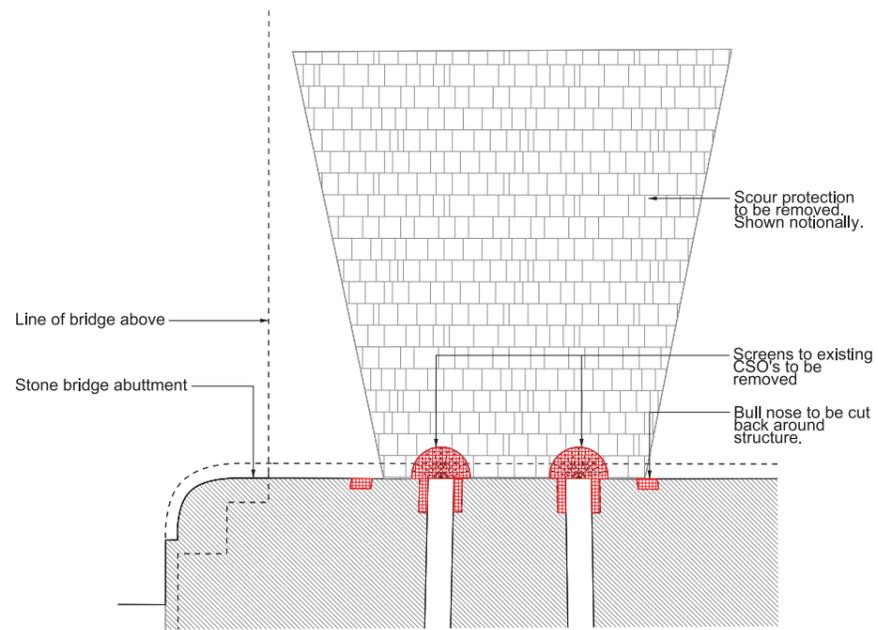




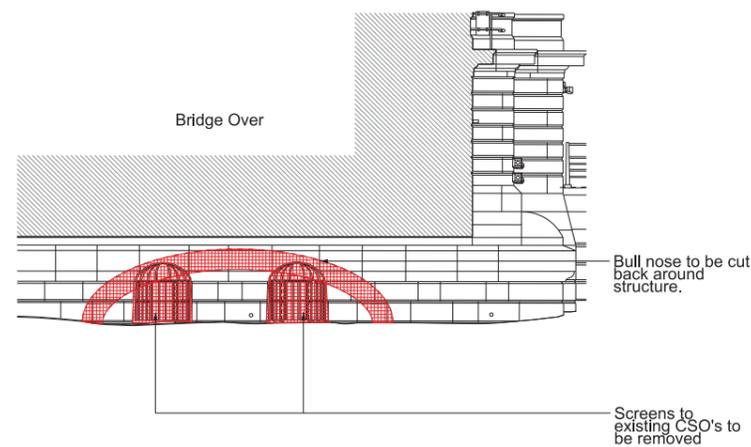
Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Key:**  
 Maximum permanent extent of loss of listed buildings / structures

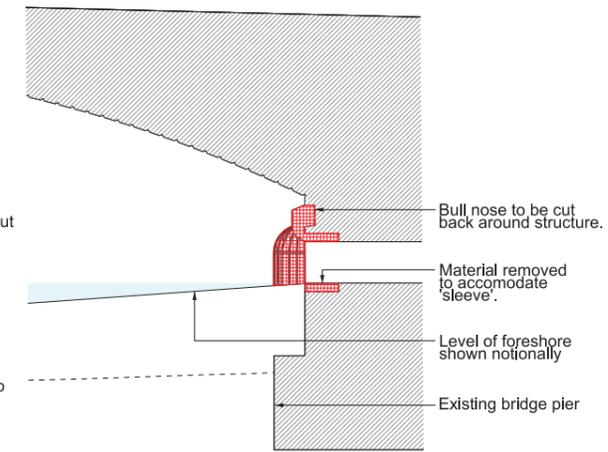
**Notes:**  
 1. All dimensions and levels are approximate.  
 2. Drawing is based on as-constructed drawings and topographical survey and not on heritage survey.



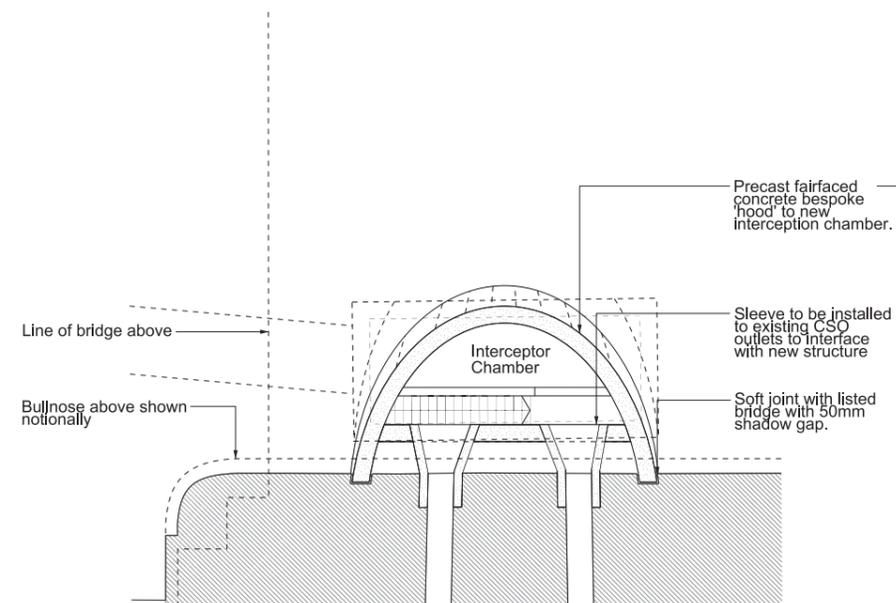
As Existing Plan



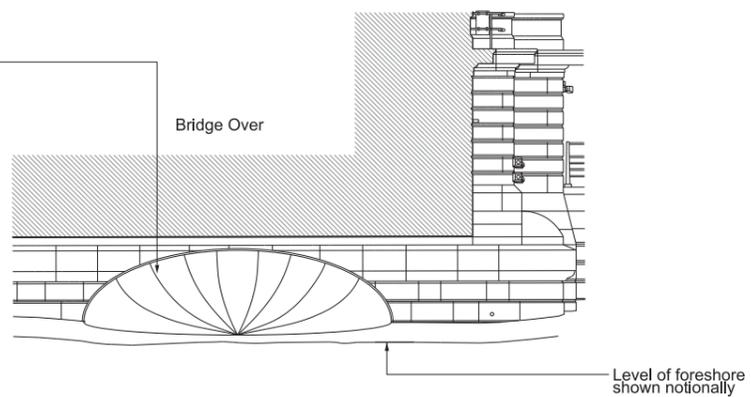
As Existing Front Elevation



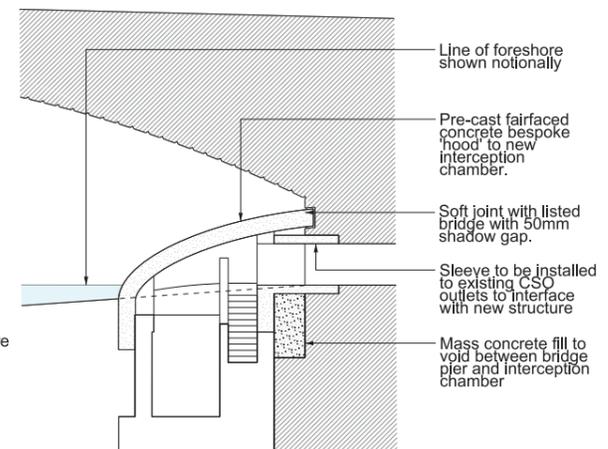
As Existing Section AA



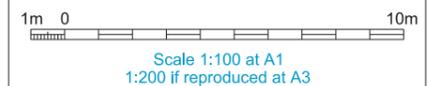
Proposed Plan



Proposed Front Elevation



Proposed Section AA

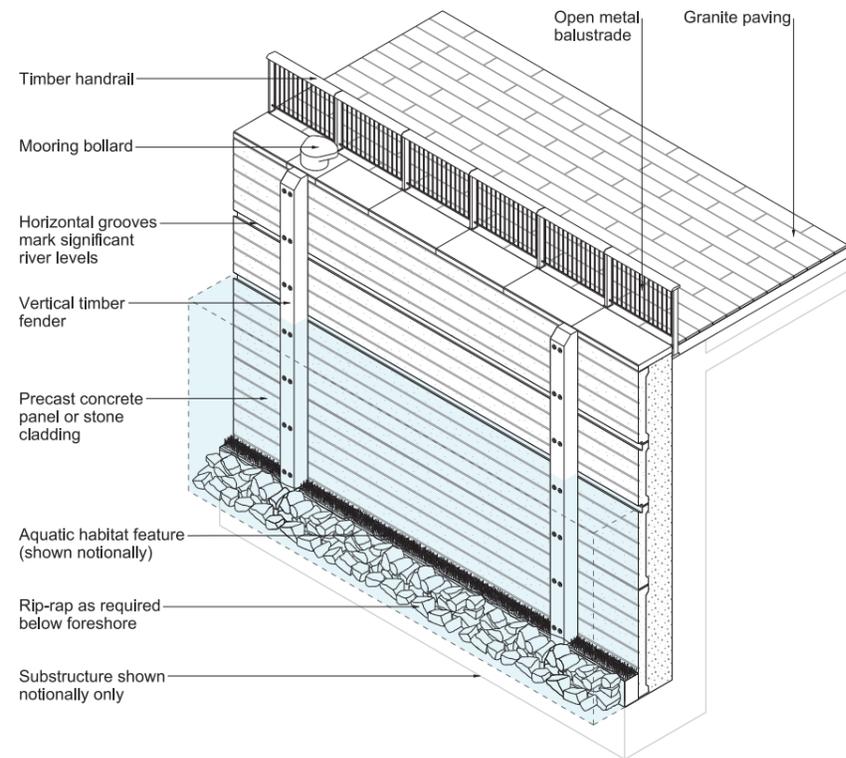


**INDICATIVE**  
 Save for maximum extent of loss of listed structures which is for approval

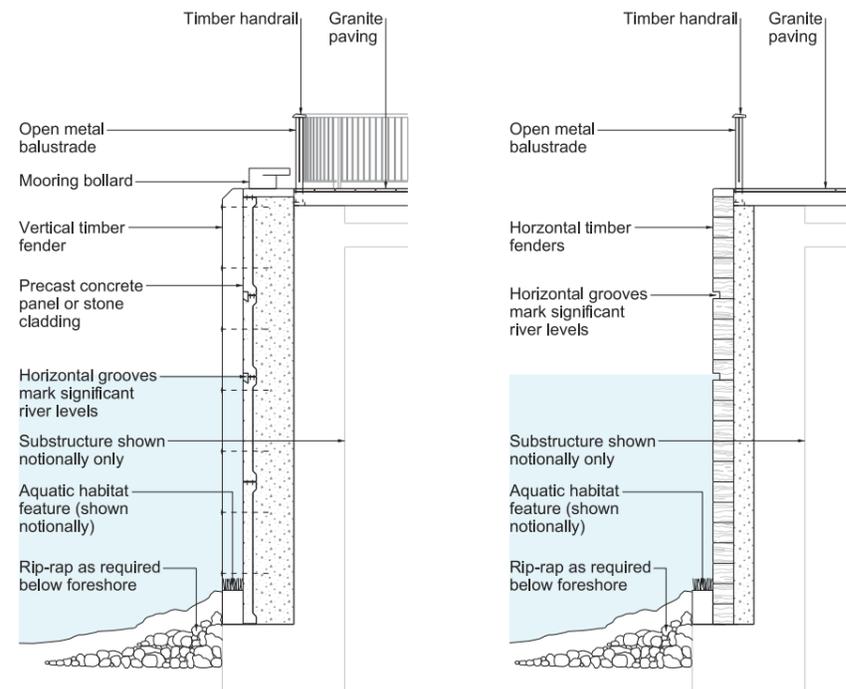
**Location**  
 Putney Embankment Foreshore  
 London Borough of Wandsworth

**Document Information**  
 Application for Development Consent  
 Proposed listed structure interface -  
 Interception chamber  
 Book of plans - section 8  
 DCO-PP-05X-PUTEF-080027  
 January 2013



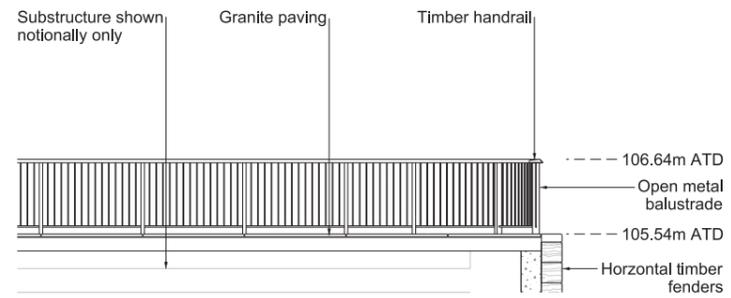


**Isometric**  
NTS

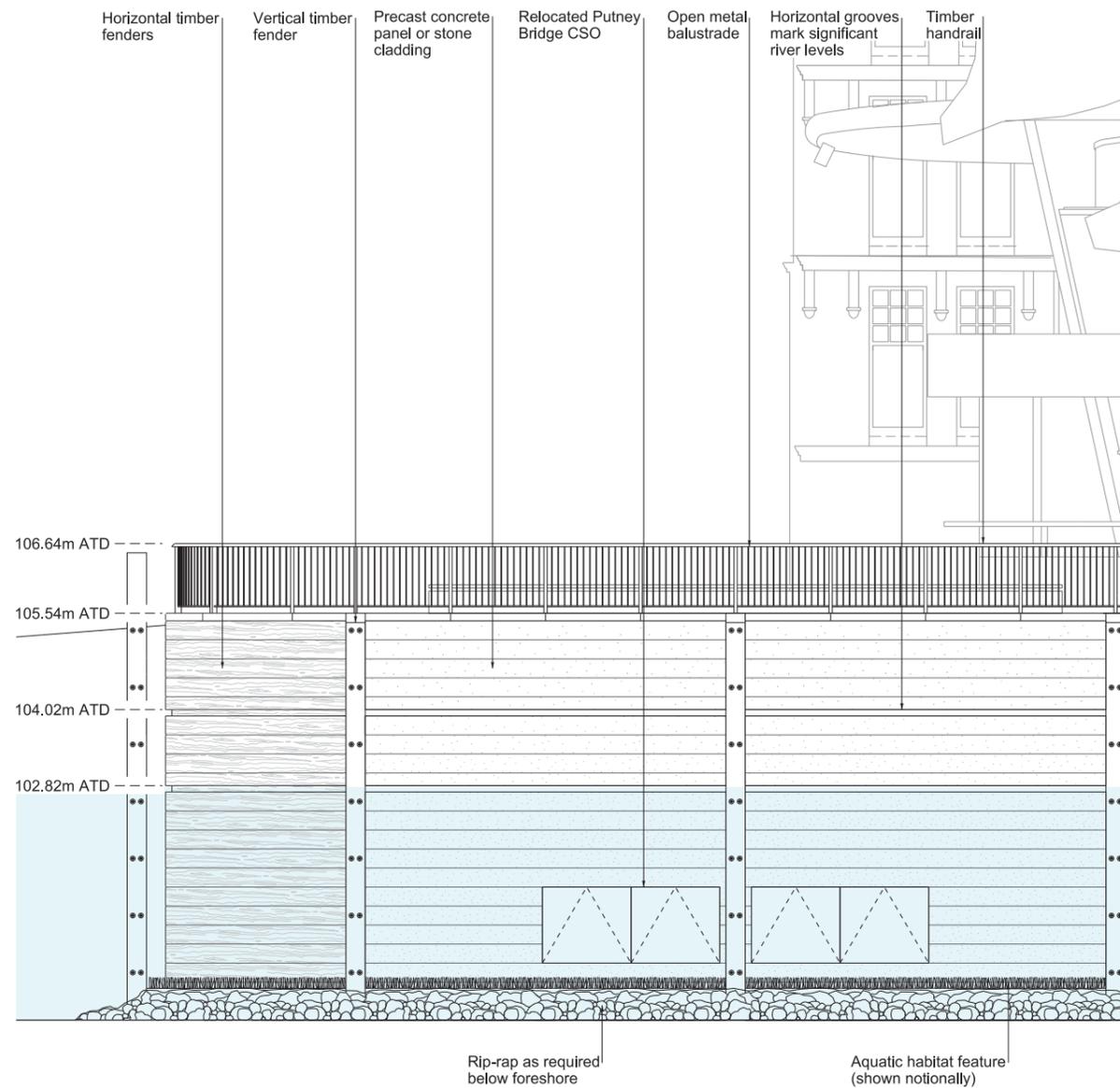


**Section CC**  
Scale 1:50

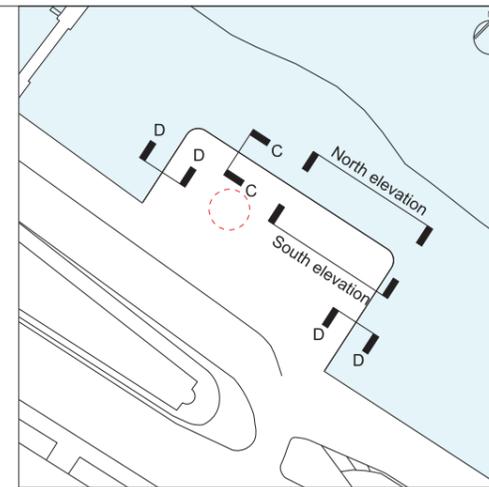
**Section DD**  
Scale 1:50



**South elevation**  
Scale 1:50



**North elevation**  
Scale 1:50



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Keyplan:

This drawing

Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Notes:

1. All dimensions and levels are approximate.



Scale 1:50 at A1  
1:100 if reproduced at A3

**INDICATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Typical river wall design intent

Book of plans - section 8  
DCO-PP-05X-PUTEF-080028  
January 2013



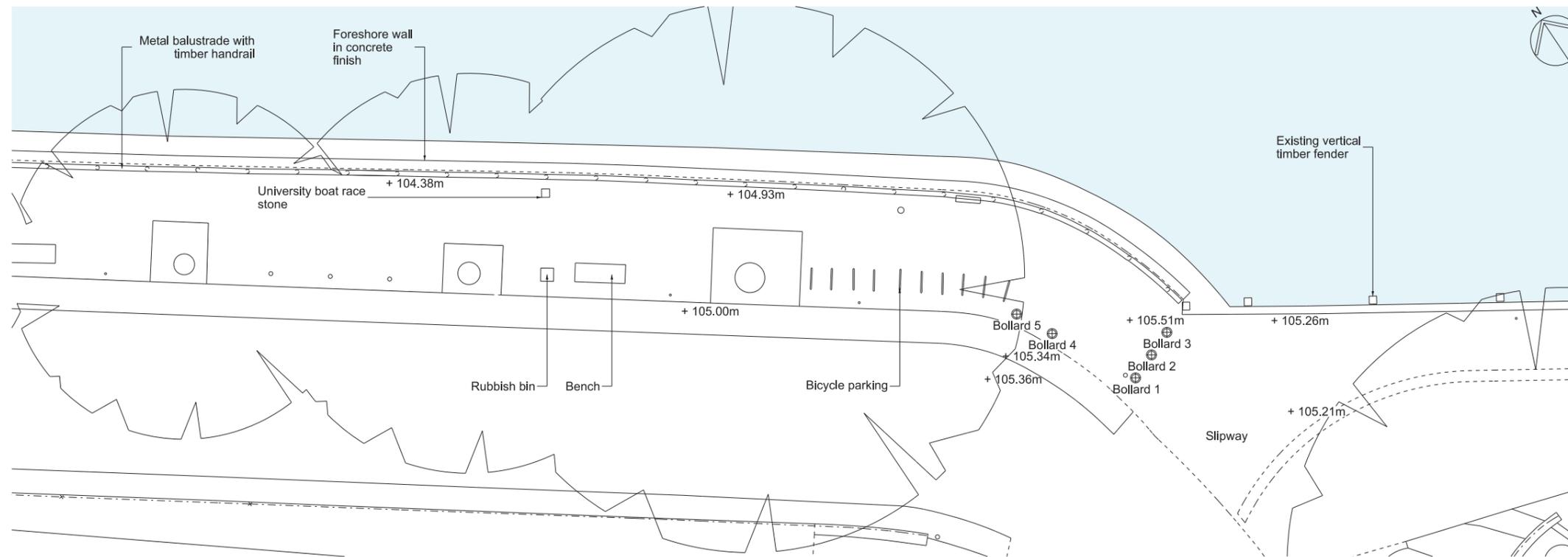
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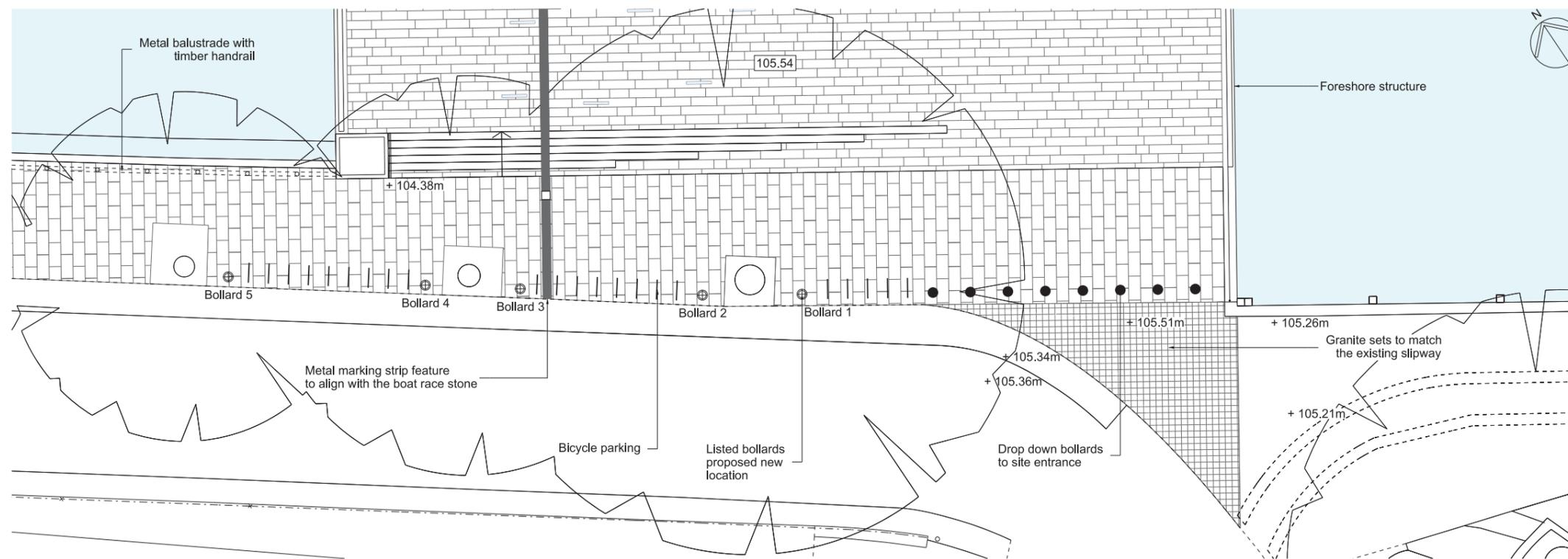
Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

**Notes:**

1. All dimensions and levels are approximate.
2. Any discrepancy between the location of structures and the parameters marked on the drawings are due to differences between the Ordnance Survey base and the topographic survey base, both of which have been used in the preparation of this drawing.
2. Drawing is based on as-constructed drawings and topographical survey and not on heritage survey.



As existing bollard location



Proposed bollard relocation



Scale 1:50 at A1  
1:100 if reproduced at A3

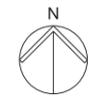
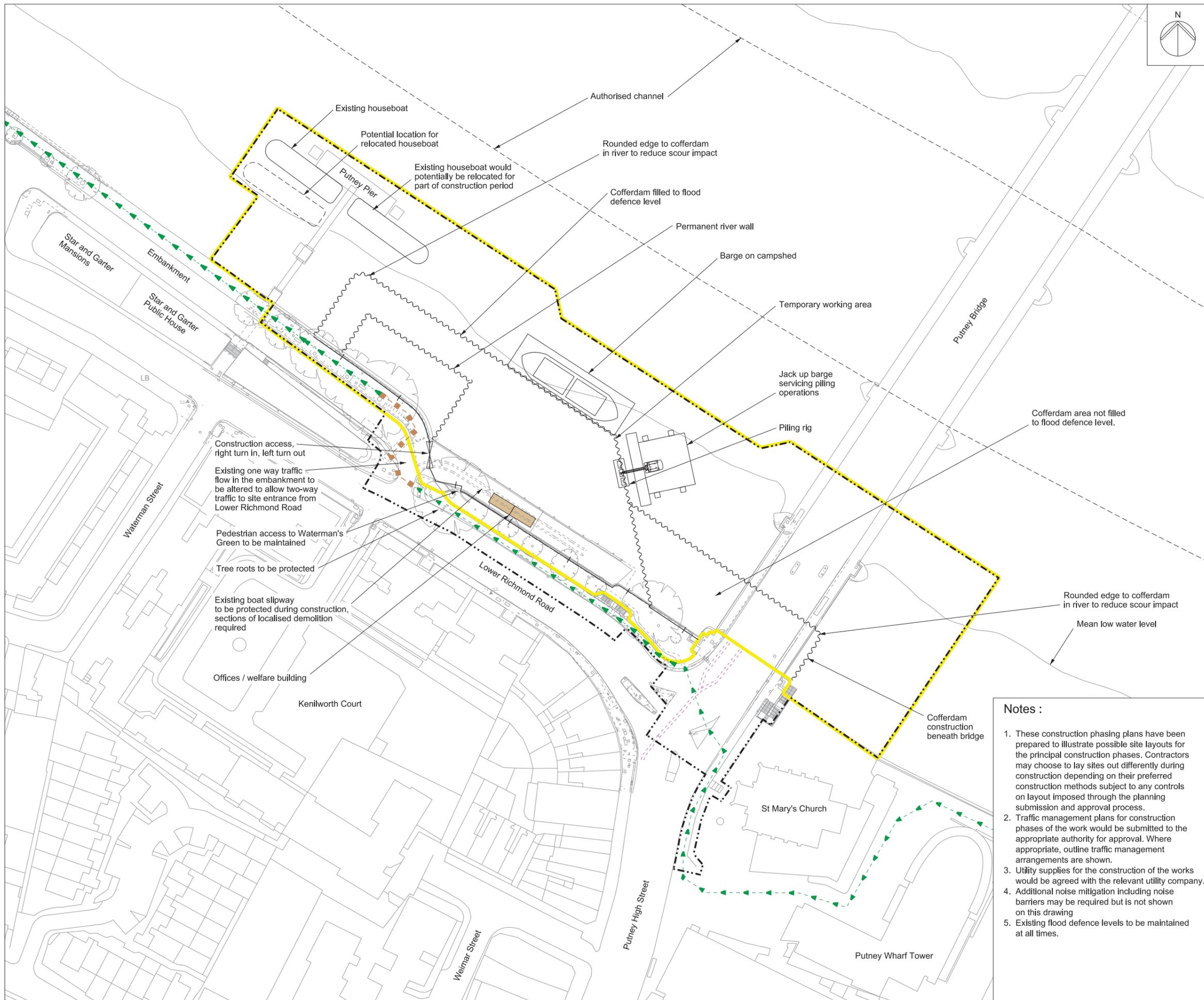
**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent

As existing and proposed  
Listed bollard location plan  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080029  
January 2013





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- Key:
- Limits of land to be acquired or used (LLAU)
  - Hoarding
  - Maximum extent of working area
  - Existing public right of way
  - Route of temporary diversion of right of way
  - Site access
  - Access / haul route
  - Existing sewers
  - Sheet piles



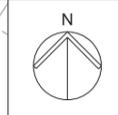
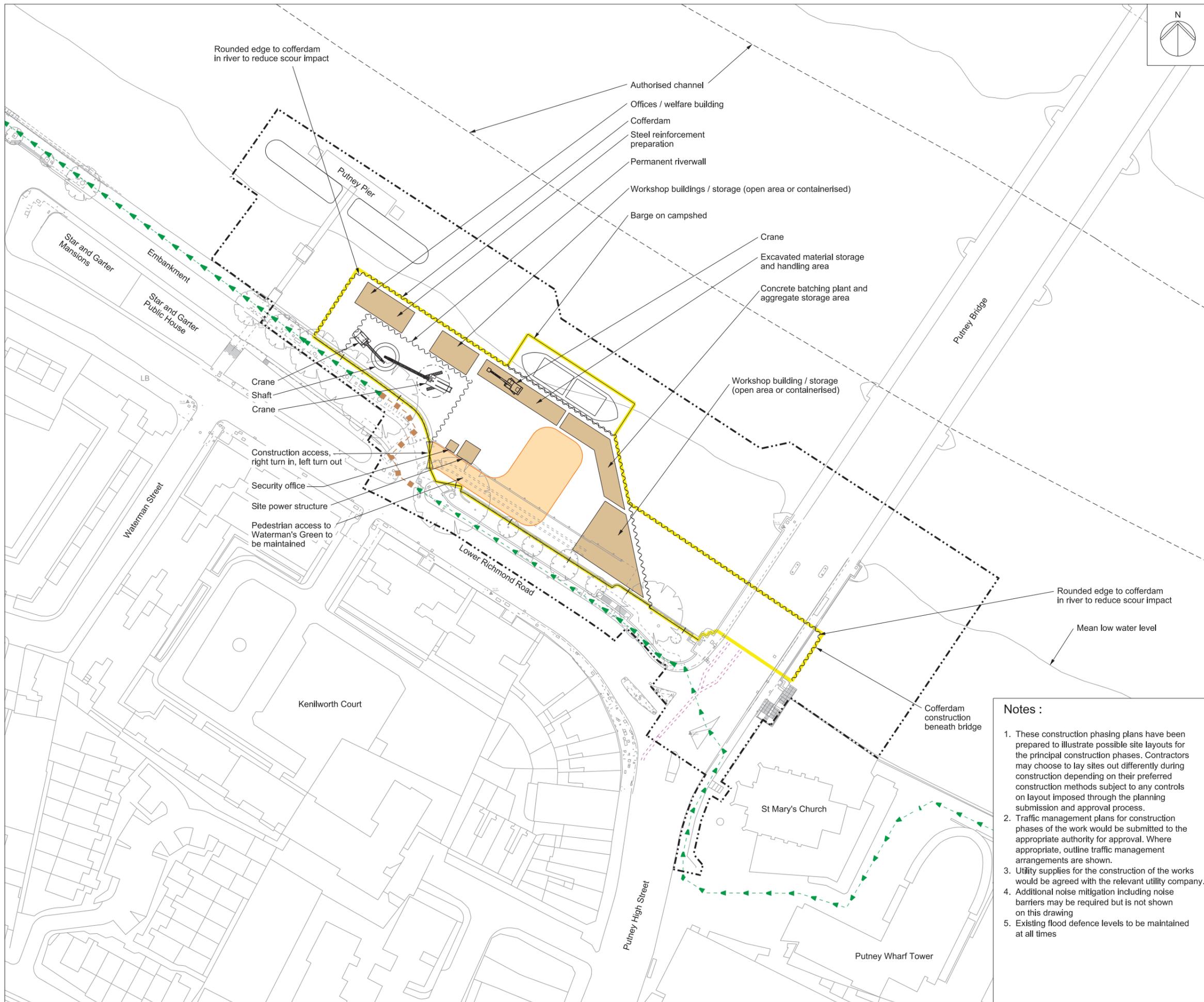
- Notes :
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing
  5. Existing flood defence levels to be maintained at all times.

**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Construction phases - phase 1  
Site setup  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080030  
January 2013





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- Key:
- Limits of land to be acquired or used (LLAU)
  - Hoarding
  - Maximum extent of working area
  - Existing public right of way
  - Route of temporary diversion of right of way
  - Site access
  - Access / haul route
  - Existing sewers
  - Sheet piles



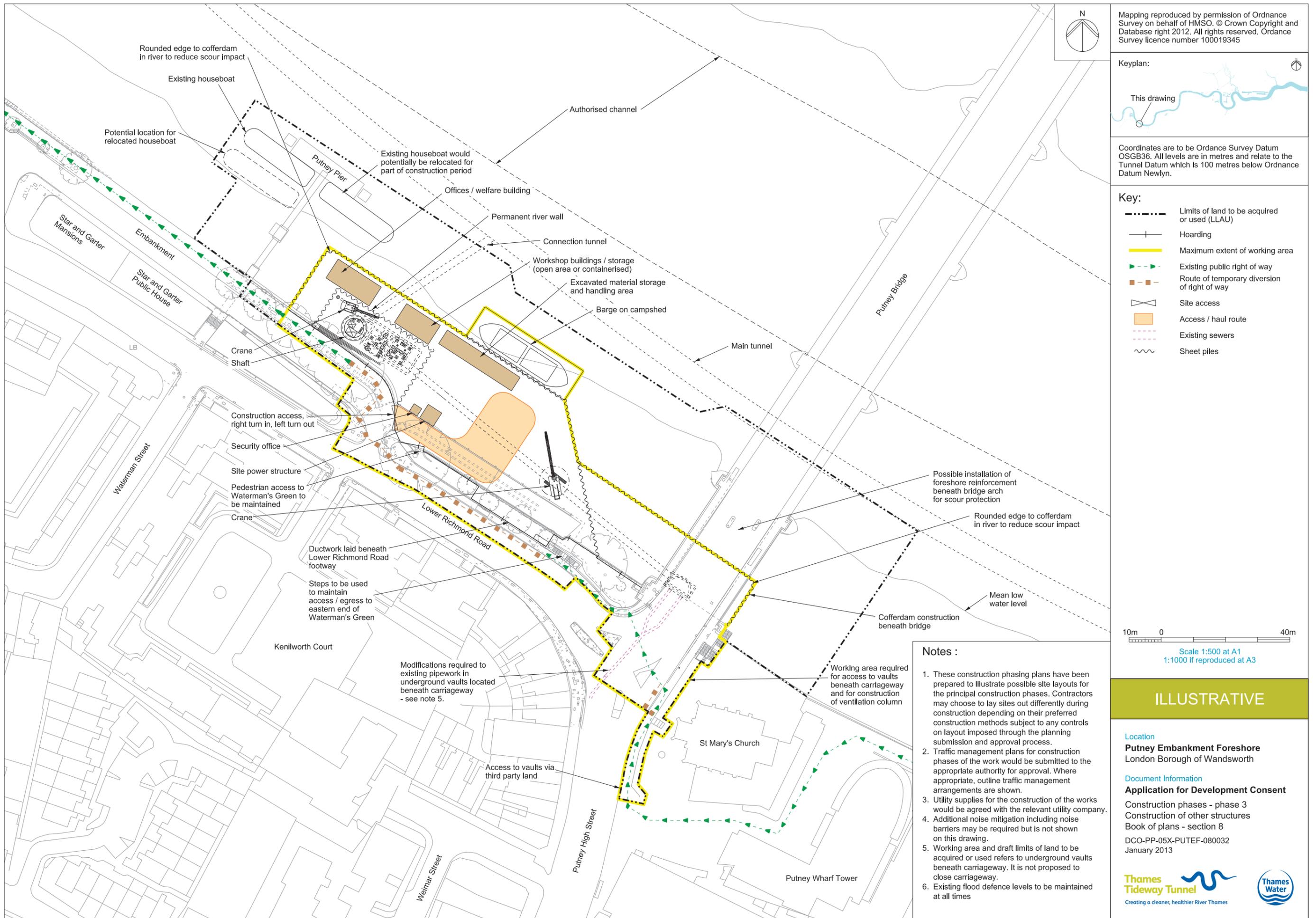
- Notes :
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing
  5. Existing flood defence levels to be maintained at all times

**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Construction phases - phase 2  
Shaft construction & tunnelling  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080031  
January 2013





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Keyplan:  
This drawing

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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Hoarding
  - Maximum extent of working area
  - Existing public right of way
  - Route of temporary diversion of right of way
  - Site access
  - Access / haul route
  - Existing sewers
  - ~ Sheet piles

10m 0 40m  
Scale 1:500 at A1  
1:1000 if reproduced at A3

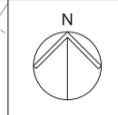
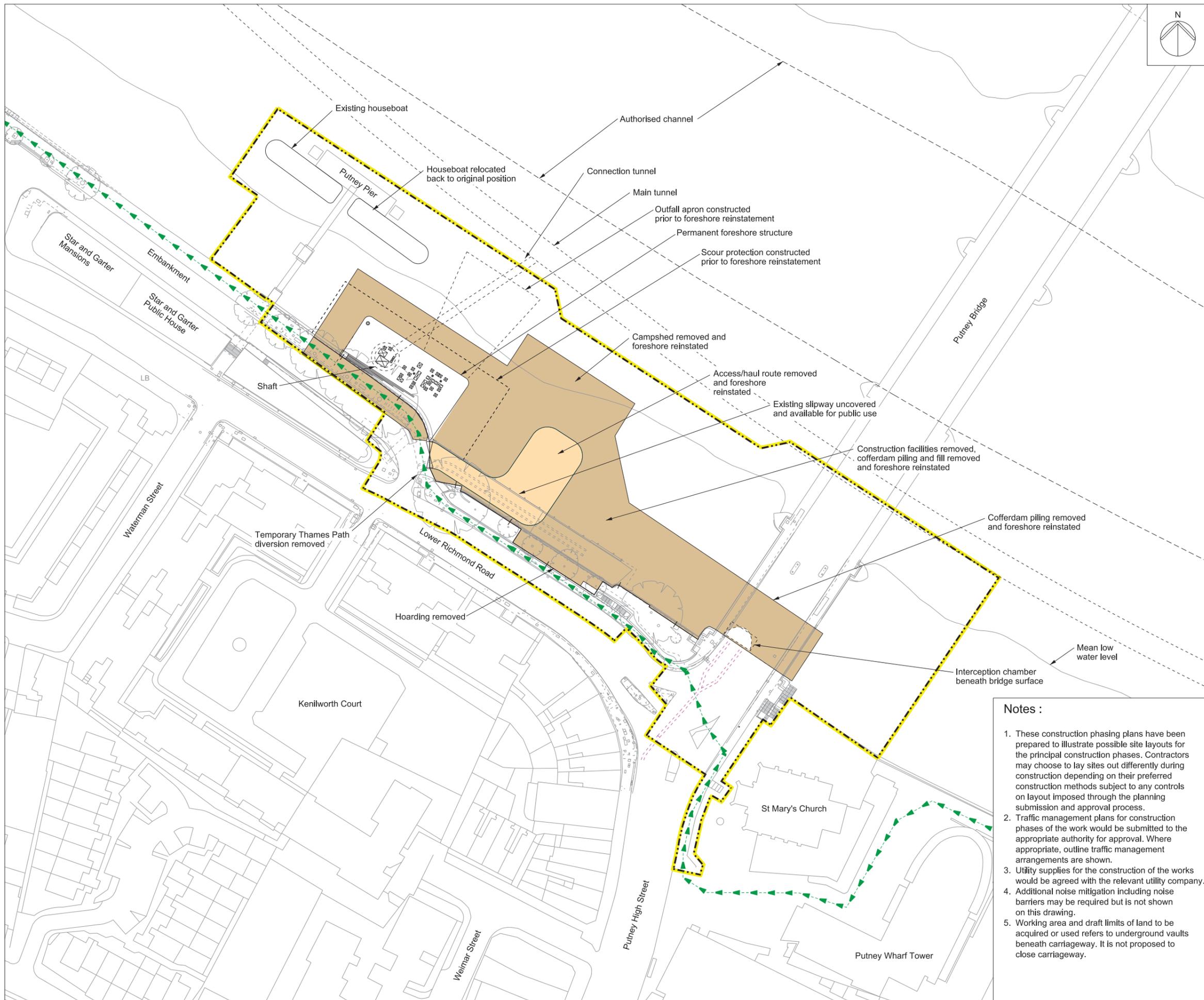
- Notes:**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing.
  5. Working area and draft limits of land to be acquired or used refers to underground vaults beneath carriageway. It is not proposed to close carriageway.
  6. Existing flood defence levels to be maintained at all times

**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
Application for Development Consent  
Construction phases - phase 3  
Construction of other structures  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080032  
January 2013



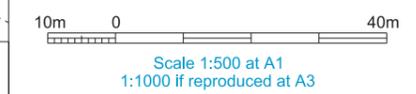


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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
- Limits of land to be acquired or used (LLAU)
  - Hoarding
  - Maximum extent of working area
  - Existing public right of way
  - Route of temporary diversion of right of way
  - Site access
  - Access / haul route
  - Existing sewers



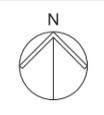
- Notes:**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing.
  5. Working area and draft limits of land to be acquired or used refers to underground vaults beneath carriageway. It is not proposed to close carriageway.

**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Construction phases - phase 4  
Site demobilisation  
Book of plans - section 8  
DCO-PP-05X-PUTEF-080033  
January 2013





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- Key:**
- Limits of land to be acquired or used (LLAU)
  - Hoarding
  - Maximum extent of working area
  - Existing public right of way
  - Route of temporary diversion of right of way
  - Site access
  - Access / haul route

- Notes :**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed through the planning submission and approval process.
  2. Traffic management plans for construction phases of the work would be submitted to the appropriate authority for approval. Where appropriate, outline traffic management arrangements are shown.
  3. Utility supplies for the construction of the works would be agreed with the relevant utility company.
  4. Additional noise mitigation including noise barriers may be required but is not shown on this drawing.



**ILLUSTRATIVE**

**Location**  
Putney Embankment Foreshore  
London Borough of Wandsworth

**Document Information**  
**Application for Development Consent**  
Construction phase - Temporary slipway

Book of plans - section 8  
DCO-PP-05X-PUTEF-080034  
January 2013



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