

Thames Tideway Tunnel
Thames Water Utilities Limited



Application for Development Consent

Application Reference Number: WWO10001

Heritage Statement

Doc Ref: **5.3**

Appendix K

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

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January 2013

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Thames Tideway Tunnel

Heritage Statement Appendix K: Shad Thames Pumping Station

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Appendix K: Shad Thames Pumping Station

K.1 Site location and context

- K.1.1 The proposed development site is located in the London Borough of Southwark. It comprises the early 20th century Thames Water operational Shad Thames Pumping Station, the length of Maguire Street and its intersection with Gainsford Street. To the rear of the pumping station is a narrow yard that contains a number of ancillary buildings, including a facilities building. The facilities building is largely unused except for some toilet facilities and a meeting room.
- K.1.2 The site falls within the Tower Bridge Conservation Area, which is characterised by high density development arranged around narrow streets. The site also lies within the Borough, Bermondsey and River Archaeological Priority Zone and the Thames Policy Area.
- K.1.3 The site falls within Flood Zone 3a (high probability) associated with the River Thames and is protected by flood defences.
- K.1.4 The site is bounded to the north by the Grade II listed Wheat Wharf residential conversion, to the east by the Design Museum and Clove Building along Maguire Street, to the south by Tamarind Court, and to the west by a courtyard car park associated with Vanilla and Sesame Court.
- K.1.5 The surrounding area mainly comprises former mid-rise warehouses (four to six storeys high) and buildings associated with the riverside docks between Tower Bridge and St Saviours Dock. The character of the townscape is consistent in terms of the scale of the buildings and the configuration of the narrow streets. The land use comprises residential development within converted or new buildings mixed with commercial uses, particularly at street level.
- K.1.6 The Shad Thames Pumping Station CSO is located on the foreshore of the River Thames approximately 50m to the north of the site.
- K.1.7 The Design Museum to the east of the site is a key land use in the area. The St Saviours Dock Conservation Area lies approximately 40m to the east of the site. St Saviours Dock lies approximately 70m from the site at the confluence of the 'lost' River Neckinger and the River Thames. A footbridge that forms part of the Thames Path links the western bank of the River Neckinger to the eastern bank.
- K.1.8 To the south and west, the townscape is arranged in a grid formation parallel to the River Neckinger (north-south) and the River Thames (east-west). The mixed-use and residential buildings range from four to five storeys in height and are predominantly organised around courtyard spaces. Further to the west lies Butler's Wharf Pier and Tower Bridge beyond.

Historical context

- K.1.9 The site lies entirely on alluvium within the floodplain of the confluence of the River Thames and the River Neckinger, less than 100m to the northeast of an outcrop of Kempton Park Gravel.
- K.1.10 The site probably comprised dry ground suitable for cultivation and occupation in early prehistoric period (700,000 BC to AD 43); however, due to rising water levels, it became marshy and unsuitable for settlement by the later prehistoric period. There is some recorded evidence of Bronze Age and Iron Age activity 100m to the south of the site.
- K.1.11 During the Roman period (AD 43 to 410), the site remained in a low marshy area, 1km to the southeast of the Roman settlement around the Thames bridgehead at Southwark. A further rise in water levels in the later Roman period inundated outlying areas, and it is therefore unlikely that the site was settled or cultivated.
- K.1.12 The main settlement in the area during the medieval period (AD 410 to 1485) lay 1km to the northwest at Southwark. In the 13th century, the marshy site was situated on the edge of a large open common known as Horsleydown, which was owned by the Order of St John of Jerusalem (the Hospitallers). A medieval manor known as 'Knight's Manor' and described as "*the towered hall of the Knights of St John*" lay 25m to the south of the site. In the early 14th century, the riverfront was embanked and used as a landing for boats, which probably attracted associated activity and settlement.
- K.1.13 Development grew up along the edge of the River Thames to the north and the River Neckinger to the east, which was eventually canalised to form St Saviours Dock. By the mid-17th century, the riverfront and 'Savory Dock' (St Saviours Dock) were lined with buildings and the site lay in the open garden plots and orchards behind them.
- K.1.14 Maps from the late 18th century indicate that industrial development in the area increased. The site appeared to contain small, probably domestic buildings.
- K.1.15 By the 19th century, the character of the waterside district was almost entirely industrial. The site continued to be occupied by small, probably domestic structures until the existing pumping station was built in the early 20th century.

K.2 Relevant local heritage policy and guidance

- K.2.1 As the 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.
- K.2.2 The London Borough of Southwark's *Local Development Framework* comprises the *Core Strategy* (April 2011), the saved policies from the

- Southwark Plan* (adopted 2007), and guidance in the *Tower Bridge Conservation Area Appraisal*.
- K.2.3 Section 4 of the *Core Strategy* (Spatial planning to improve places) states that: *“We will encourage developments to focus on the strengths of places that make the different areas of the borough distinctive and respect local and historic context”*.
- K.2.4 *Core Strategy* Policy 12 (Design and conservation) states that: *“Development will achieve the highest possible standards of design for buildings and public spaces to help create attractive and distinctive places”*.
- K.2.5 It also stated (p. 105) that developments within the Thames Policy Area *“will be expected to be carefully designed to protect and enhance the River environment and the important contribution it makes to both local people and all of London. This includes its contribution to the history of Southwark and London”*.
- K.2.6 *Southwark Plan* saved Policy 3.15 (Conservation of the Historic Environment) states that: *“Development should preserve or enhance the special interest or historic character or appearance of buildings or areas of historical or architectural significance. Planning proposals that have an adverse effect on the historic environment will not be permitted. The character and appearance of Conservation Areas should be recognised and respected in any new development within these areas”*.
- K.2.7 *Southwark Plan* saved Policy 3.16 (Conservation Areas) states that: *“Within Conservation Areas, development should preserve or enhance the character or appearance of the area [...] Planning permission will be granted for new development, including the extension or alteration of existing buildings provided that the proposals:*
- i “Respect the context of the Conservation Area, having regard to the content of Conservation Area Appraisals and other adopted Supplementary Planning Guidance Documents, and*
 - ii “Use high quality materials that complement and enhance the Conservation Area; and*
 - iii “Do not involve the loss of existing traditional features of interest which make a positive contribution to the character or appearance of the Conservation Area; and*
 - iv “Do not introduce design details or features that are out of character with the area, such as the use of windows and doors made of aluminium, uPVC or other non-traditional materials. Where appropriate development in Conservation Areas may include the use of modern materials or innovative techniques only where it can be demonstrated in a design and access statement that this will preserve or enhance the character or appearance of the Conservation Area.*
- K.2.8 Concerning demolition within conservation areas, it also states that: *“there will be a general presumption in favour of retaining buildings that contribute positively to the character or appearance of the Conservation*

Area. Planning permission will not be granted for proposals that involve the demolition or substantial demolition of a building that contributes positively to the character or appearance of the Conservation Area, unless, in accordance with PPG15 or any subsequent amendments, it can be demonstrated that:

- i “The costs of repairs and maintenance would not be justified, when assessed against the importance of the building and the value derived from its continued use, providing that the building has not been deliberately neglected; and*
- ii “Real efforts have been made to continue the current use or find a viable alternative use for the building; and*
- iii “There will be substantial planning benefits for the community from redevelopment which would decisively outweigh loss from the resulting demolition; and*
- iv “The replacement development will preserve or enhance the character or appearance of the conservation area and has been granted planning permission. Implementation Submission of details demonstrating that a contract for the construction of the replacement development has been let will be required prior to implementation of the development.*

“The council is keen to encourage a high quality of design in Conservation Areas. This may include the use of modern materials or innovative techniques on new developments as they can preserve or enhance the character or appearance of the area”.

K.2.9 *Southwark Plan saved Policy 3.17 (Listed Buildings) states that: “Development proposals involving a listed building should preserve the building and its features of special architectural or historic interest.*

“Alterations and extensions: Planning permission for proposals which involve an alteration or extension to a listed building will only be permitted where:

- i. “There is no loss of important historic fabric; and*
- ii. “The development is not detrimental to the special architectural or historic interest of the building; and*
- iii. “The development relates sensitively and respects the period, style, detailing and context of the listed building or later alterations of architectural or historic interest; and*
- iv. “Existing detailing and important later additional features of the building are preserved, repaired or, if missing, replaced”.*

K.2.10 *Southwark Plan saved Policy 3.18 (Setting of Listed Buildings, Conservation Areas and World Heritage Sites) states that: “Permission will not be granted for developments that would not preserve or enhance:*

- i. The immediate or wider setting of a listed building; or*
- ii. An important view(s) of a listed building; or*

- iii. *The setting of the Conservation Area; or*
- iv. *Views into or out of a Conservation Area; or*
- v. *The setting of a World Heritage Site; or*
- vi. *Important views of /or from a World Heritage Site”.*

K.3 Description of heritage assets and significance summary

K.3.1 The site contains no listed buildings; however, it falls within a conservation area and there are a number of heritage assets (as defined in the NPS, para. 4.10.2) nearby. The heritage assets are illustrated in 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 19, Appendix E.1). The gazetteer is provided at the end of this appendix.

- K.3.2 The heritage assets include:
- a. Shad Thames Pumping Station
 - b. the Grade II listed Wheat Wharf
 - c. Tower Bridge Conservation Area
 - d. the Grade II listed Anise Warehouse
 - e. archaeological potential.

Shad Thames Pumping Station and Superintendent's House

K.3.3 Shad Thames Pumping Station is a five-bay, tall single-storey, classical red brick industrial building with a deep basement that dates to circa 1900 (refer to Figure K.1). The pumping station is unlisted but it lies within Tower Bridge Conservation Area.

K.3.4 It is mostly built in dark red brick, but the lower part of the eastern and northern walls are built in contrasting brown glazed bricks with a projecting chamfered blue brick plinth that features a moulded chamfer. It has arched openings with a central double door flanked by two windows on each side. Moulded pink terracotta is used on the prominent keystones, and on a string course at the springing level of the arches. It is also used on the window sills and on the sign above the main entrance.

K.3.5 There is a tall parapet around the pitched roof, which is covered in slate. The roof sits on probably steel roof trusses. A louvered and glazed lantern runs along much of the roof and provides ventilation and light. The side gable is expressed as a pediment, with a central oculus.

K.3.6 A large part of the building is below ground level. The main doors provide access to an internal gangway that runs around a deep brick revetted pit, which contains the main operational equipment (refer to Figure K.2). Overhead, there is a travelling crane. Extensive vaults lie on the western

side of the building and historic drawings show that they also underlie much of the road and the rear yard.

- K.3.7 At the rear of the building to the north is an extension that was designed to be a separate, more domestic-style building, which formerly served as the Superintendent's House (refer to Figure K.3). The building is three storeys high and rises slightly higher than the rear of the main part of the pumping station. Its gable wall faces onto the courtyard car park and includes the scar of the lower gable of the building that formerly stood adjacent and to the west.
- K.3.8 The front of the house faces a narrow passage between the pumping station and Wheat Wharf. It features a central arch with terracotta sills and arches at ground-floor level with doors to either side. The windows are all plain sashes with large plate glazing. The house formerly comprised offices, lavatories and a store room on the ground floor, a kitchen and living room on the first floor, and bedrooms on the second floor.
- K.3.9 There is also a narrow yard, which includes 20th century extensions and two modern flat-roofed brick buildings, with a stock brick western boundary wall in poor condition . Historic plans show that the yard once contained a number of ancillary buildings including large above-ground water tanks. It has always been a functional, utilitarian space.
- K.3.10 Outside the boundary wall is the courtyard car park associated with Vanilla and Sesame Court, which are yellow brick, warehouse-style buildings. Most of the buildings facing onto the courtyard are either modern or have been substantially altered. The courtyard connects to Maguire Street, Gainsford Street and Shad Thames. Such courtyards are characteristic of the conservation area; however, this example has lost much of its historic character.

Figure K.1 View of the street frontage of Shad Thames Pumping Station from the northeast (standard lens)



Figure K.2 View of the below-ground levels of the pumping station interior (standard lens)



Figure K.3 View of the Superintendent's House and the gable of the pumping station (standard lens)



Wheat Wharf

- K.3.11 Wheat Wharf is a large Grade II listed, five-storey, 1850s brick warehouse with an internal timber frame located immediately to the north of the site. The most striking aspect of the building is the white brick gable end that fronts onto Maguire Street, which includes numerous windows, and its façade fronting Shad Thames. The plain rear elevation faces the site and features repetitive fenestration and added balconies; its character is of little significance.

Tower Bridge Conservation Area

- K.3.12 The Tower Bridge Conservation Area was designated by the London Borough of Southwark in order to preserve and enhance its character. It includes the southern half of Tower Bridge and numerous 19th and early 20th century warehouse buildings, which have been converted to modern residential apartments and retail units. The principal streets within the conservation area are Gainsford Street and the narrow Shad Thames. Most of the blocks within the area are set around courts and courtyards.
- K.3.13 The conservation area contains a large number of Grade II listed warehouses and other commercial buildings. These heritage assets have group historical, evidential and aesthetic value from their association with the former riverside docks, warehouses, and wharves of the port of London. They are relatively similar in terms of style, height, massing and materials. The group value of the warehouses is the central aspect of the character of this part of the conservation area.
- K.3.14 All the buildings in the immediate area surrounding the pumping station (including the pumping station itself) are identified in the conservation area appraisal and it is noted that they make a positive contribution. The pumping station's façade makes a particular contribution to the significance of Maguire Street. The conservation area and the listed buildings are heritage assets of high significance.

Anise Warehouse

- K.3.15 The Grade II listed Anise Warehouse dates from the early 19th century and its roof was reconstructed between 1830 and 1850. The building is four storeys high over its basement and is constructed with brick laid in Flemish Bond and the roof gable faces the street. It has five window bays and unglazed granary windows with original wooden shutters. To the centre left is a hoist bay. The majority of the building faces onto Shad Thames; it also has a rear access that opens onto Maguire Street.

Archaeology

- K.3.16 The site falls within an Archaeological Priority Area and there have been a number of archaeological investigations and finds within the vicinity (refer to the Historic environment features maps).
- K.3.17 The potential for structural remains from the 17th to 19th centuries has been identified in locations where no significant below-ground construction has taken place, such as the yard to the rear of the pumping station. Any finds are likely to be of low to medium significance.

Significance summary

- K.3.18 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 19). The assessment includes a full statement of significance for built heritage and buried archaeological assets at the site, which is summarised below in Table K.1.

Table K.1 Significance of heritage assets at Shad Thames Pumping Station

Heritage asset	Heritage significance	Reason for significance
Shad Thames Pumping Station	Medium	Significance derives from its age, distinctive architecture and contribution to the historic character of Maguire Street and the conservation area more generally. Retains some original fittings and machinery.
Wheat Wharf	High	Significance derives from its mid-19th century construction and good quality survival of characteristic architecture; it is a prominent feature within the conservation area.
Anise Warehouse	High	Significance derives from its mid-19th century construction and good quality survival of characteristic architecture; it is a prominent feature within the conservation area.
Tower Bridge Conservation Area	High	Significance derives from its characteristic 19th and 20th century landscape of warehouse and processing buildings that evidence London's historic role as a major hub of international trade.
Archaeology	Low to medium interest	Potential for archaeology related to 17th and 19th century structural remains.

K.4 Description of proposals and required heritage consents

- K.4.1 A summary of the proposed temporary and permanent works at Shad Thames Pumping Station is set out below.

Temporary construction works

- K.4.2 The temporary construction works to control the Shad Thames Pumping Station CSO would mobilise capacity in the existing upstream sewers.
- K.4.3 The majority of the works would be located within and directly behind the pumping station. Internal alterations would be required to install new machinery and infrastructure, which would involve extending the working areas and structures into the space occupied by the Superintendent's House. The house and the rear boundary wall would be demolished.
- K.4.4 Alterations would also be made to the existing sewerage network in Maguire Street and Gainsford Street that would necessitate periodic

closure of the streets behind hoardings and the use of cranes and other plant. Several trees at the northern end of Maguire Street would be removed in order to enable vehicular access and would be reinstated afterwards.

Permanent works

- K.4.5 The Superintendent’s House would be replaced with a wide, two-storey, flat-fronted facilities and switchgear building and a ventilation column approximately 9.5m high would be connected to the adjoining wet well. A new door would be required in the pumping station’s southern bay to provide vehicular access to a separate internal area within its southern end. The existing arched window opening to the south would be enlarged by extending the sill down to ground level. The enlarged opening would be replaced with new glazing and doors to match the existing central door. A new boundary wall would be constructed.
- K.4.6 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 accompanies the application, to minimise the impact of the proposed works and structures on their surroundings, in line with relevant national, regional and local policies.
- K.4.7 The aspects of the proposed works that would affect the nearby heritage assets are set out below. The proposals that would normally require Listed Building Consent or Conservation Area Consent are also identified.
- K.4.8 Refer to the Historic environment features map, the Conservation areas map and the drawings listed in Table K.2 below. The 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 K.2 Drawings relating to heritage assets at Shad Thames Pumping Station

Drawing title	Drawings status
Location plan	For information
As existing roof plan	For information
Demolition and site clearance plan	For approval
Site works parameter plan	For approval
Permanent works layout	Illustrative
Proposed roof plan	For approval
Building ground floor layout plan	For information
Building first floor layout plan	For information
As existing and proposed west elevation	Indicative

Drawing title	Drawings status
As existing and proposed east elevation	Indicative
As existing north and south elevations	For information
Proposed north and south elevations and Section AA	For information
Construction phase 1: Pumping station modification works	Illustrative
Construction phase 2: Pumping station modification works	Illustrative
Construction phase 3: Pumping station modification works	Illustrative

The drawings are located in Section 20 of the *Book of Plans*

Shad Thames Pumping Station

- K.4.9 The construction works within Shad Thames Pumping Station would include the creation of a new door in the southernmost window opening on the front elevation and limited alterations to the rear of the pumping station (refer to the Construction phase 2: Pumping station modification works and Construction phase 3: Pumping station modification works drawings).
- K.4.10 An internal cross wall would be inserted towards the southern end of the pumping station to create a separately zoned area in the southernmost bay. Due to the construction processes and zoning within the building, there would be periods when air could not pass between the southern bay and the rest of the building; therefore, for safety reasons, a separate entrance is required (refer to the Permanent works layout and the As existing and proposed east elevation).
- K.4.11 Constructing the new door would involve removing the wall beneath the window including the glazed and moulded brickwork, terracotta window sill and plinth. The joinery, sill and glazing would be carefully removed with hand tools and stored in a secure environment during construction. A proportion of the bricks would be retained for repairs and to make good the brickwork on the new door jambs, which would replicate the style of central door's surround. It may be necessary to order specially manufactured bricks. A new set of doors would be made by suitably experienced joiners, modelled on the main doors in the central arch. A survey of the existing doors would inform and guide the production and installation of the new joinery.
- K.4.12 The construction works surrounding the pumping station in Maguire and Gainsford Streets would fall within its setting. The cranes and other construction activities would visually intrude on views of the pumping station from both ends of Maguire Street.
- K.4.13 All of the above-ground fabric of the Superintendent's House would be removed (refer to the Demolition and site clearance plan). A replacement building to house electrical, switchgear and control equipment would be constructed in the rear yard of the pumping station. The cellars of the Superintendent's House would not be filled and the new facilities and

switchgear building would be supported on piers above the footings of the cellars. It would occupy a larger footprint than the house.

- K.4.14 The new facilities and switchgear building would not physically impact on the pumping station; however, it would obscure part of its western elevation and extend beyond the northwestern window bay. Its façade would be set back from the northern gable elevation of the pumping station, but would extend further south within the rear yard. It would be two-storeys high, which is lower than the existing three-storey Superintendent’s House. Refer to the following drawings: Permanent works layout, Proposed roof plan, Building ground floor layout plan, Building ground floor and first floor layout plans, As existing and proposed elevations, Proposed north and south elevations and Section AA.
- K.4.15 It would be faced in dark red brick to match the existing brickwork of the pumping station, as far as practicable. It would be flat-fronted with a flat roof, the colour of which would harmonise with the character of the conservation area. Four steps would be added to the entrance to the new facilities and switchgear building on the northern elevation. The steps would enable access to the new building without impacting on the pumping station.
- K.4.16 The brick boundary wall in the rear yard would be demolished (refer to the Demolition and site clearance plan). The wall is in poor condition and is bowing; in places it has lost much of its pointing. The new wall would be built in yellow brick to harmonise with the surrounding buildings. It would maintain the line of the existing and preserve its form.
- K.4.17 The design principles for the final design of this site include the majority of the generic (project-wide) heritage design principles and the site-specific principles set out in Section 4.23 of the *Design Principles*. The principles that relate to the significance of Shad Thames Pumping Station include the following:

Reference	Site-specific design principles
SHTPS.01	The new annex shall be no higher than the former building.
SHTPS.02	The materials used shall be low-maintenance and durable. They shall preserve or enhance the character of the conservation area and the setting of the listed Wheat Wharf.
SHTPS.05	No brown roof shall be provided on the new building.

Wheat Wharf

- K.4.18 The demolition and construction works would take place in close proximity to the southern elevation of Wheat Wharf and fall within its setting (refer to the Construction phases drawings).
- K.4.19 No heritage consent would be required.

Anise Warehouse

- K.4.20 The demolition and construction works would take place in close proximity to the western elevation of Anise Warehouse and fall within its setting. The new door in the southern bay of the pumping station would also fall within its setting (refer to the Construction phases drawings and the As existing and proposed east elevation).
- K.4.21 No heritage consent would normally be required.

Tower Bridge Conservation Area

- K.4.22 The construction works and hoardings and the removal of trees at the northern end of Maguire Street would temporarily affect views north and south along the street. The reconstruction of the boundary wall and the demolition of the Superintendent's House would affect the character of the courtyard car park.
- K.4.23 The new facilities and switchgear building would introduce a new extension in the courtyard, but would otherwise have little effect on the overall historic character.
- K.4.24 The new door fronting onto Maguire Street would affect the historic character of the streetscape and the wider conservation area.
- K.4.25 Refer to the Demolition and site clearance plan and the Construction phases drawings.

Works normally requiring Conservation Area Consent

- K.4.26 The works normally requiring Conservation Area Consent would include:
- a. the substantial demolitions affecting the external appearance of the pumping station and the replacement structures
 - b. the works to the Superintendent's House and boundary wall
 - c. the temporary removal of trees on Maguire Street.

Archaeology

- K.4.27 The proposed demolitions would require some excavation of buried elements of existing structures (refer to the Demolition and site clearance plan). Historic plans show that the majority of the area is underlain by works associated with the pumping station, including sewers, vaulted rooms, cellars and tanks. Some localised site stripping and service diversion may truncate localised buried 17th to 19th century structural remains. Any other surviving archaeological deposits on the site are likely to be severely truncated.
- K.4.28 The alterations to the existing sewerage network would require excavation in Maguire Street which, for the purposes of this assessment, was assumed to be to a depth of up to 5.6m below street level. This excavation would remove any localised buried heritage assets outside the footprint of the existing sewer construction cut.
- K.4.29 Construction of the new facilities and switchgear building would have no below-ground impacts.

K.5 Heritage design considerations

- K.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 Shad Thames Pumping Station was to successfully integrate the works into the existing infrastructure of the pumping station, while taking account of existing below-ground infrastructure, nearby heritage assets and the conservation area.
- K.5.2 The design of the Shad Thames site was also extensively influenced by a process of stakeholder engagement and design review (refer to the *Design and Access Statement*).
- K.5.3 In response to engagement, the profile of the new facilities and switchgear building was lowered to be of equal or lesser height than the Superintendent's House to ensure that it would be subordinate to the main part of the pumping station. It was designed to be flat-fronted and unobtrusive to harmonise with the flat-fronted buildings of the courtyard car park. The neutral flat roof covering would also harmonise with the surrounding roofscape in views from the balconies of Wheat Wharf and the upper floors of the buildings around the courtyard.
- K.5.4 In response to comments from the London Borough of Southwark and English Heritage, the materials for the new facilities and switchgear building were changed from yellow stock brick to red brick to better harmonise with the pumping station. The windows were moved to minimise the impact on existing housing. This would also make the building unobtrusive and ensure the visual primacy of the main part of the pumping station. Yellow brick was also proposed for the boundary wall to harmonise with the conservation area.
- K.5.5 The design of the new door was developed to replicate the style and detail of the existing door and its surround.

K.6 Mitigation measures

- K.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* (2011), the saved policies of the *Southwark Plan*, and the *Tower Bridge Conservation Area Appraisal*.
- K.6.2 The demolition of the Superintendent's House and alterations to the pumping station would be mitigated by an English Heritage Level 2 programme of recording to ensure that their significance can be appreciated by future generations. The whole site would also be recorded at English Heritage Level 1.

- K.6.3 The visual impact of the new facilities and switchgear building and the alterations to the pumping station would be mitigated by the design, which was developed to be sensitive to the varying character of the conservation area and nearby listed buildings; in particular, the selection of different materials and colours for the various altered elements and the design of the elevations.
- K.6.1 No highly significant archaeology that would merit preservation *in situ* is anticipated due to extensive modern truncation. A watching brief during site preparation and construction should constitute sufficient mitigation. Targeted investigations could be carried out as the works proceed, if necessary, in accordance with the *Overarching Archaeological Written Scheme of Investigation*, which accompanies the application.
- K.6.2 A suitable programme of investigation would ensure ‘preservation by record’. It would advance understanding of the significance of any finds, which would be disseminated via the usual channels. This would satisfy the requirement in the NPS (para. 4.10.18) to record any unavoidable losses.
- K.6.3 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 of the *Code of Construction Practice Part A*, which also states the following:
- a. Archaeological works shall be undertaken in accordance with a *Site-specific Archaeological Written Scheme of Investigation*, which could include protection of archaeological resources.
 - b. Original materials shall be retained and re-used where possible.
- K.6.4 A further site-specific measure included in Section 12 of the *Code of Construction Practice Part B* is a requirement to re-use bricks from below the southern window opening in creating the new door, where possible.

K.7 Assessment of potential effects

- K.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 significant effects having regard to the criteria in the NPS. The summary assessment is based on the significance of the heritage assets identified in Section J.3, the impacts identified in Section J.4, and the mitigation measures described in Section J.6.

Shad Thames Pumping Station

- K.7.2 The demolition and replacement of the Superintendent’s House and alterations to the front fenestration of Shad Thames Pumping Station would introduce a slight asymmetry to its front façade. This would represent a medium to high level of change and have a moderate negative effect. This would amount to less than substantial harm as the most significant parts of the building would not be substantially altered; the alterations would mainly be located in the basement and the rear

extensions. The alterations would extend the life of the pumping station, in line with its original purpose.

Wheat Wharf

- K.7.3 The demolition and temporary construction works would only slightly affect the setting and views of the principal façade of Wheat Wharf on Shad Thames. The immediate setting of the white brick elevation on Maguire Street would remain visible during the works, but would be affected by the road closure and construction activities. The rear elevation, where the works would cause the greatest change, is less significant and visible. It has already been considerably altered by the balconies that were added during the residential conversion in the late 1990s.
- K.7.4 The construction works in Wheat Wharf's setting would represent a medium change and have a moderate negative effect. This would constitute less than substantial harm as the loss of significance would not be permanent. Its significance and the contribution of its setting to its significance would remain legible throughout the works.
- K.7.5 The permanent alterations to the southern window opening would negligibly change the views of Wheat Wharf along Maguire Street.
- K.7.6 The new facilities and switchgear building would have a minor negative effect on its setting. Its façade would face Wheat Wharf across the rear yard and the two buildings would be visible together from the adjoining courtyard car park. Its northern elevation would be close to Wheat Wharf's rear southern elevation and its façade would not generally be visible from many of Wheat Wharf's windows or from the surrounding streets. These low-level changes would have a minor negative effect on Wheat Wharf's significance. This would amount to less than substantial harm as its significance would be preserved.

Anise Warehouse

- K.7.7 The construction works would have a minor temporary negative effect on the significance of Anise Warehouse as most of the works would take place inside Shad Thames Pumping Station. The warehouse's main five-bay façade faces east onto Shad Thames, away from the pumping station and Maguire Street. The setting of the rear three-bay elevation is less sensitive. The significance of the building would not be substantially compromised and suffer less than substantial temporary harm. The change in symmetry of the pumping station's Maguire Street façade would have a negligible effect on its setting.

Tower Bridge Conservation Area

- K.7.8 The construction works would temporarily affect the character and appearance of the conservation area by altering views north and south along Maguire Street and the courtyard car park, which makes a minor contribution to its character and appearance. There would be only limited change and a minor adverse effect on the conservation area as a whole amounting to less than substantial harm.

- K.7.9 The asymmetry of the pumping station façade would permanently alter the character of Maguire Street; however, this would be a low magnitude of change.
- K.7.10 The character of the courtyard would be altered, although the new rear boundary wall would enhance its appearance. The unobtrusive new facilities and switchgear building would constitute a medium change to the courtyard, but a low level of change to the conservation area as a whole.
- K.7.11 There would therefore be a minor permanent negative effect on the conservation area as a whole, amounting to less than substantial harm to its significance.

Archaeology

- K.7.12 Some localised site stripping and diversion of utilities might truncate buried 17th to 19th century structural remains of low to medium significance, which would constitute a medium change and a minor negative effect. It might also impact on early 20th century sewer infrastructure of low significance, which would constitute a minor negative effect. Site set-up is not expected to have any further effects on buried heritage assets.
- K.7.13 A compensatory programme of investigation and recording would enable the significance of any archaeology to be fully understood. Any information gathered would be disseminated via the usual channels to increase public appreciation of the heritage of the site and its significance.

Assessment in relation to policy

- K.7.14 The significance and setting of Shad Thames Pumping Station, Wheat Wharf and Anise Warehouse would be largely preserved by the proposed works as the outward-facing elements of the works were designed to respond to the setting. The character of the Tower Bridge Conservation Area would be preserved and the appearance of the courtyard car park enhanced as a result of the new boundary wall. The sensitive use of materials for the new facilities and switchgear building, the boundary wall, and the new door demonstrates an understanding of the significance and sensitivities of the heritage assets. The design team sought to minimise conflict between the preservation of significance and the functional requirements, which satisfies para. 4.10.11 of the NPS. The proposals would cause less than substantial harm to the significance of the heritage assets therefore the thresholds set in para. 4.10.14 would not apply. The settings of Anise Warehouse and Wheat Wharf would be largely preserved, which satisfies para.4.10.17. These policies are also reflected in *London Plan* Policy 7.8, Section 4 and Policy 12 of the *Core Strategy*, and *Southwark Plan* Policies 3.15 and 3.16.
- K.7.15 Attenuation measures embedded in the design focussed on the scale, height, alignment and materials used for the proposed new facilities and switchgear building and the ventilation column. As a result, the setting of the surrounding heritage assets and the character of the conservation area would be preserved while making a contribution to the local distinctiveness of the historic environment. This satisfies paras. 4.10.12

and 4.10.17 of the NPS, which reflect *London Plan* Policy 7.8 and *Southwark Plan* Policies 3.16 and 3.18.

- K.7.16 It is unlikely that there would be any archaeological finds of sufficient significance to require preservation *in situ*. The works would be mitigated by the programme of investigation and recording, which satisfies the requirements of paras. 4.10.18 to 4.10.20 of the NPS, which reflect *London Plan* Policy 7.8.
- K.7.17 Although the ability to record archaeology that would be removed should not be a factor in any decision to grant development consent (NPS para. 4.10.19), English Heritage has agreed that archaeological recording and dissemination of findings would constitute partial mitigation for any archaeological impacts (Vol 2, Appendix E.1 of the *Environmental Statement*).
- K.7.18 The programme of investigation and recording would be compensatory and enable advanced understanding of the significance of any lost archaeological resources. The information gathered would be disseminated to increase public appreciation of the heritage of the site. These mitigation measures are proportionate to the likely significance of the archaeology. Therefore, the potential impact of the works would be acceptable in line with para. 4.10.18 of the NPS, which reflects *London Plan* Policy 7.8.

K.8 Conclusion

- K.8.1 The main heritage impact would be on the Tower Bridge Conservation Area and the setting of the Grade II listed Wheat Wharf and Anise Warehouse. This impact would be minimised by the discreet location, massing and materials of the new facilities and switchgear building. The sensitive design and the range of mitigation measures would preserve the character of the the conservation area and the setting of the listed buildings.
- K.8.2 Impacts on buried archaeological deposits would be minimal or negligible. The temporary construction works would amount to less than substantial harm.
- K.8.3 In summary, the quality and sensitivity of the design would minimise the negative effects on the fabric and settings of nearby heritage assets, in line with the requirements of the NPS, the *London Plan*, the *Core Strategy*, saved policies of the *Southwark Plan* and the *Tower Bridge Conservation Area Appraisal*. The proposals would cause no substantial harm to any of the heritage assets on or around the site.

Gazetteer of known heritage assets

Details of known heritage assets within the assessment area are provided in Table K.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 19, Appendix E.1.

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

HEA Ref.	Description	Site code/ HER ref/ List Entry Number
1A	Shad Thames Pumping Station: Early 20th century structure in glazed brick and terracotta, of a single storey above ground with a basement level (this partly extends beneath the courtyard and superintendent's accommodation at the rear of the building). Three-storey superintendent's residence to rear (on the northwestern side of the building). Brick boundary wall also to rear. The building is not statutorily or locally listed.	-
1B	Drains and sewers: Below ground elements of the Southwark and Bermondsey Storm Relief Sewer and the Great St John Sluice. The precise date of construction of these post-medieval assets is unknown but they are likely to be of 19th/20th century date in current form.	-
2	Anise Warehouse, 15, Shad Thames. Grade II listed: Warehouse c. 1813. Roof reconstructed between 1830 and 1850. Brick in Flemish Bond, parapeted roof with gable facing. 4 storeys over basement. 5-window range to gable-facing elevation, unglazed granary windows with original wooden shutters. All windows segmental-arched, except for round window in gable. Another round window to basement entrance at right party wall. To centre left is a hoist bay.	1385893
3	Cayenne Building, Butler's Wharf. In 1998 a Pre-Construct Archaeology (PCA) evaluation revealed natural sand, overlaid by alluvium that was cut by a number of ditches of 17th-18th century date, indicating an attempt to drain what would have been a wet marginal area. During the 18th century the area was reclaimed by means of considerable dumped material. The walls, ditches and dumps indicate that there was domestic activity on the site which continued into the 19th century. By the end of the century the site was occupied by a warehouse founded on substantial concrete footings that truncated much of the site.	BTW98
4	Wheat Wharf, 29 Shad Thames. Grade II listed: Grain warehouse of the early to mid-19th century. White Suffolk brick front re-facing to stock brick walls, pitched slate roof. Four storeys (5 to central bay),	1385895

HEA Ref.	Description	Site code/ HER ref/ List Entry Number
	near symmetrical front of 12 bays (an extra bay to right section); stepped brick eaves cornice raised in low broad gable over centre 5 bays. Column of hatch ranks in outer bays of this central section. Ground-floor openings altered, some with concrete lintels. Tripartite windows with timber frames and segmental header brick arches. 6 bay gable end to Maguire Street. Rear elevation has 2 flat-roofed dormer hatches with simple timber beam hoists; small 2-light windows with cambered brick arches and Portland stone sills.	
5	Butlers Grinders and Operators Warehouse, 11, Shad Thames. Grade II listed: Warehouse and mill of the mid-19th century. Brick in Flemish bond. Roof parapeted; to rear in slate. Five -storeys and six-window range, ranges 2 and 4 hoist bays and 1st-floor of range 5. Entrances to 1st- and 4th-window ranges. All openings segmental-arched unless otherwise noted. 2-storey annexe to north, one-window range, stepping down to single-storey shed of 2-window range before terminating in gap to yard. South return of 3-window range, the 2nd and 3rd floors of centre range blocked. North-facing elevation to yard has a gable with segmental-arched hoist bay to east face; north elevation of same has a hoist bay. 4-storey range projects furthest north, its west return of 2-window range with hoist bay; hoist bay to right on gabled 4-storey wing to rear or west of site.	1385890
6	Possible site of a medieval hermitage recorded on the Greater London Historic Environment Record (GLHER)	090752
7	Site of the medieval towered hall of the Knights of St John recorded on the GLHER.	090756
8	Butler's Wharf: Grinder's and Operator's Site (Site 5) and G Potton & Son (Site 6) Gainsford Street. In 1997, Pre-Construct Archaeology (PCA) conducted an archaeological evaluation comprising 22 archaeological prospecting pits and three evaluation trenches. Alluvial clay was recorded at 102.7m above tunnel datum (ATD) within which possible prehistoric peat deposits were observed. In the 17th century the ground to the northeast was consolidated by a crushed chalk dump. In the late 17th century ground raising dumps were deposited across the area. By the late 18th century domestic buildings were in evidence, initially to the north and then west of the site, with a sequence of external yard surfaces to the east dating from this time. During the mid to late 19th century further building took place, the yard area continuing in use. In the 20th century earlier buildings were demolished and the land levelled.	GFD97
9	The Department of Greater London Archaeology (DGLA) carried out trial excavations to the north and south of Queen Elizabeth Street in 1988. The investigations to the south revealed a scatter of worked Neolithic flints and some prehistoric pottery shards indicating early occupation on the Horsleydown Eyot (gravel island). A recut drainage ditch of Roman date ran across the site. Substantial remains were found of features relating to the extensive post-medieval tanning industry of north Southwark, including a horncore-lined circular pit and channels. The investigations to the north revealed that this part of the	QESS88 091135 QEN88 091132– 091134

HEA Ref.	Description	Site code/ HER ref/ List Entry Number
	site lay north of the Horsleydown Eyot. An early channel with gently sloping sides was examined and found to have been recut. Into it had been inserted two pegged timbers, one a horizontal beam and the other a pine plank standing on its edge, possibly intended to create a water reservoir for a post-medieval tannery. The channel had silted up and been filled in, to be replaced by a timber drain formed of a bored elm trunk into which was inserted a square-sectioned pipe made of four elm planks nailed together. Four pits, apparently of the same date as the drain, were lined with pine planking and served either as handling or soaking pits for the tannery.	
10	A chance findspot of Roman iron needles and part of an undated flute.	090352
11	An archaeological evaluation by Museum of London Archaeology (MOLA) on the northern side at 283 Tooley Street in 1993 showed this area was part of Horselydown Eyot, a sand and gravel bank deposited when the Thames slowed down during the fall in river levels in the early prehistoric period. Here the sand was overlain by peat and silt deposits, the earliest containing Mesolithic flints, whilst Late Iron Age and Roman pottery was found in the later deposits. In another trench the sand was cut by features, including pits, postholes, stake holes and a ditch, which contained Iron Age and Roman pottery. A slow build-up of alluvial deposits occurred from the late Iron Age to 16th/17th century when a series of channels were cut, probably for drainage. In the 18th century large scale industrial redevelopment was represented by dumps of domestic and industrial waste for reclamation, and by brick foundations with associated cess pits and drains. A fine assemblage of finds was recovered from the cess pits and dumps.	TOS 93 MLO59439 MLO59446 MLO59447
12	A chance find of prehistoric tooled red deer antler.	090198
13	Butlers Court, Curlew Street. A DGLA excavation in 1988 revealed a sequence of Bronze Age peat.	BUT88 091932
14	54 Gainsford Street: In 1993, Museum of London Archaeology Service (MoLAS, now MOLA) conducted an archaeological evaluation. Evidence was found of two prehistoric transgressions of the Thames, separated by a period of regression, represented by a layer of organic clay or peat, elsewhere attributed to the Bronze Age. The upper layer was cut by a watercourse which sealed by levelling both dating to the 19th century. These were cut by an 18th/19th century cellar.	GFS93 091645– 091648 092157– 092160
15	Spice Quay, Shad Thames. In 1996, a PCA archaeological evaluation recorded a sequence of natural alluvial deposits previously noted in geo-archaeological boreholes. Excavations revealed that they were overlain by foreshore deposits dating from 1550–1650, which very probably represent rubbish dumped over the contemporary river wall. To the west of the site excavations revealed re-deposited foreshore deposits consolidated with a layer of chalk, dating to the late 17th to early 18th century associated with a wharf. By the late 18th century the rest of the site had been reclaimed and the area divided into different properties. Also at this time a warehouse was constructed at the west	SES96

HEA Ref.	Description	Site code/ HER ref/ List Entry Number
	end of site, which had an external area fronting onto the river. In the 19th century more warehouses were built, the existing west warehouse was enlarged and extended towards the river front and a dry dock was constructed in the middle of the site. By the end of the 19th century the entire site was used for warehousing.	
16	The Cardamom Building, Shad Thames. Grade II listed. Warehouse range. Dating to 1884–86 and 1891–92. This landward warehouse range has a crucial relationship with the Butler's Wharf riverside block, forming the longest group of surviving bridged warehouses in the Docklands.	1385908
17	Eagle Wharf, Shad Thames. Grade II listed.	1385898
18	Butler's Wharf Building, Butler's Wharf West. Grade II listed.	1385896
19	24 Shad Thames, St Saviour's Dock. Excavation by DGLA in 1988 revealed evidence of the slow accumulation of waterlain alluvial clays until the 16th century. The presence of imported material, such as Spanish olive jars and German jettons, indicates that much of the earliest activity was related to the dock. A large timber frame was constructed, probably in the 17th century, perhaps to form a dockside wharf. The southern half of the site was composed of dumped layers dating from the mid-17th to the late 18th centuries.	SSD88 091951– 091954
20	Java Wharf, 16, Shad Thames. Grade II listed: Warehouse dating to c.1860–70, partly rebuilt in 20th century. Much destroyed by fire and rebuilt behind facade as flats with similar dockside elevation. The beginning of a particularly good surviving sequence of warehouses between Shad Thames and St Saviour's Dock.	1385894
21	Crown Wharf, Shad Thames. Grade II listed: Warehouse dating to c.1840. Much destroyed by fire and rebuilt behind (partly rebuilt) facade late 20th century with similar dockside elevation rebuilt as replica of original. Backs onto St Saviour's Dock; good group value with other warehouses between St Saviour's Dock and Shad Thames.	1385897
22	St Andrew's Wharf "B" Warehouse, 12, Shad Thames. Grade II listed: Warehouse of c.1850, with elevations partly rebuilt in 20th century. Backs onto St Saviour's Wharf; good group value with other warehouses between St Saviour's Dock and Shad Thames.	1385892
23	St Andrew's Wharf "A" Warehouse, 12, Shad Thames. Grade II listed: Warehouse of c.1850–60, rebuilt in 20th century. Fire-gutted and rebuilt behind (partly rebuilt) facade with similar dockside elevation, rebuilt as replica of original. Backs onto St Saviour's Wharf and has good group value with other warehouses between St Saviour's Dock and Shad Thames.	1385891
24	St Saviour's Warehouse, 8, Shad Thames. Grade II listed: Pair of warehouses of c. 1850, rebuilt in 20th century. Good group value with other warehouses between St Saviour's Dock and Shad Thames	1385889
25	St George's Wharf, Christians. Grade II listed.	1385888

HEA Ref.	Description	Site code/ HER ref/ List Entry Number
26	Shuter's Wharf. Grade II listed.	1385907
27	Dockhead Wharf, St Saviour's Wharf. Grade II listed.	1385886
28	Unity Wharf. Grade II listed.	1385711
29	Vogan's Mill, south-west warehouse. Grade II listed.	1385706
30	Vogan's Mill. Grade II listed.	1385695
31	Vogan's Mill, north-east block. Grade II listed.	1385696
32	St Saviour's Wharf. Grade II listed.	1385707
33	New Concordia Wharf, south block. Grade II listed.	1385710
34	Possibly an original medieval moated site, later known as Jacob's Island, mentioned in 'Oliver Twist'. There were tide mills here owned by Bermondsey Abbey, hence the adjacent Mill Street. The moats or streams were built over in 1850 after a cholera outbreak	090755
35	New Concordia Wharf, St Saviour's Dock range. Grade II listed.	1385708
36	A post-medieval dockyard site at Mill St	213192
37	New Concordia Wharf, north-east block with water tower and chimney, St Saviour's Dock range. Grade II listed.	1385709
38	China Wharf: Dump and Revetment dated to the medieval/post medieval period.	092316 092317
39	Thames Foreshore survey undertaken by LARF, 1996; survey zone FSW01, Alpha no. A168 is timber dolphin of 19th century or 20th century date.	092539
40	Thames Archaeological Survey recorded a moored pontoon and moored barge	FSW01 A151; A152
41	In the West Courtyard of Wheat Wharf, Butler's Wharf Estate, an archaeological evaluation in 1996 by PCA comprised the excavation of five prospecting test pits and two evaluation trenches. Natural alluvial sand was recorded at 100.3m ATD; covered by a thin layer of sandy gravel containing burnt flint. The sandy gravel was sealed by alluvial sand the top of which may have formed a ground surface, although no features or artefacts were observed. Later deposits contained burnt flint and two cut features containing struck flint and prehistoric pottery. The prehistoric deposits were sealed by alluvial clays and silts. These layers were cut by a water channel that had been re-cut in the 17th century and later. A row of stake holes to the east of this probably represents a fence line. A bank in the north of the site may represent post-medieval river defences. The ground level in part of the site had been raised and into these dump deposits a row of postholes and a ditch had been cut. During the late 18th century further dumping levelled the ground to the south of the bank, whilst to the north the ditch was re-cut. 18th century walls and a well were recorded to the south of the bank.	WCW96

HEA Ref.	Description	Site code/ HER ref/ List Entry Number
42	Portable Antiquities Scheme (PAS) findspot - post-medieval coin	LON- 6B4A04
43	PAS findspot - Early medieval coin.	LON- 925C32
44	PAS findspot - Post-medieval toy.	LON- BEFBF5
45	PAS findspot - Undated knife, medieval furniture fitting, post-medieval coin weight, post-medieval coin.	WILT- 206254 WILT- F91C84 WILT- F89697 SUR- 35D324
46	PAS findspot - undated pendant; Roman finger ring; and an undated earring.	LON- 4DFB95 LON- 4DE2B2 LON- 4DB183

Table K.4 List of drawings in order

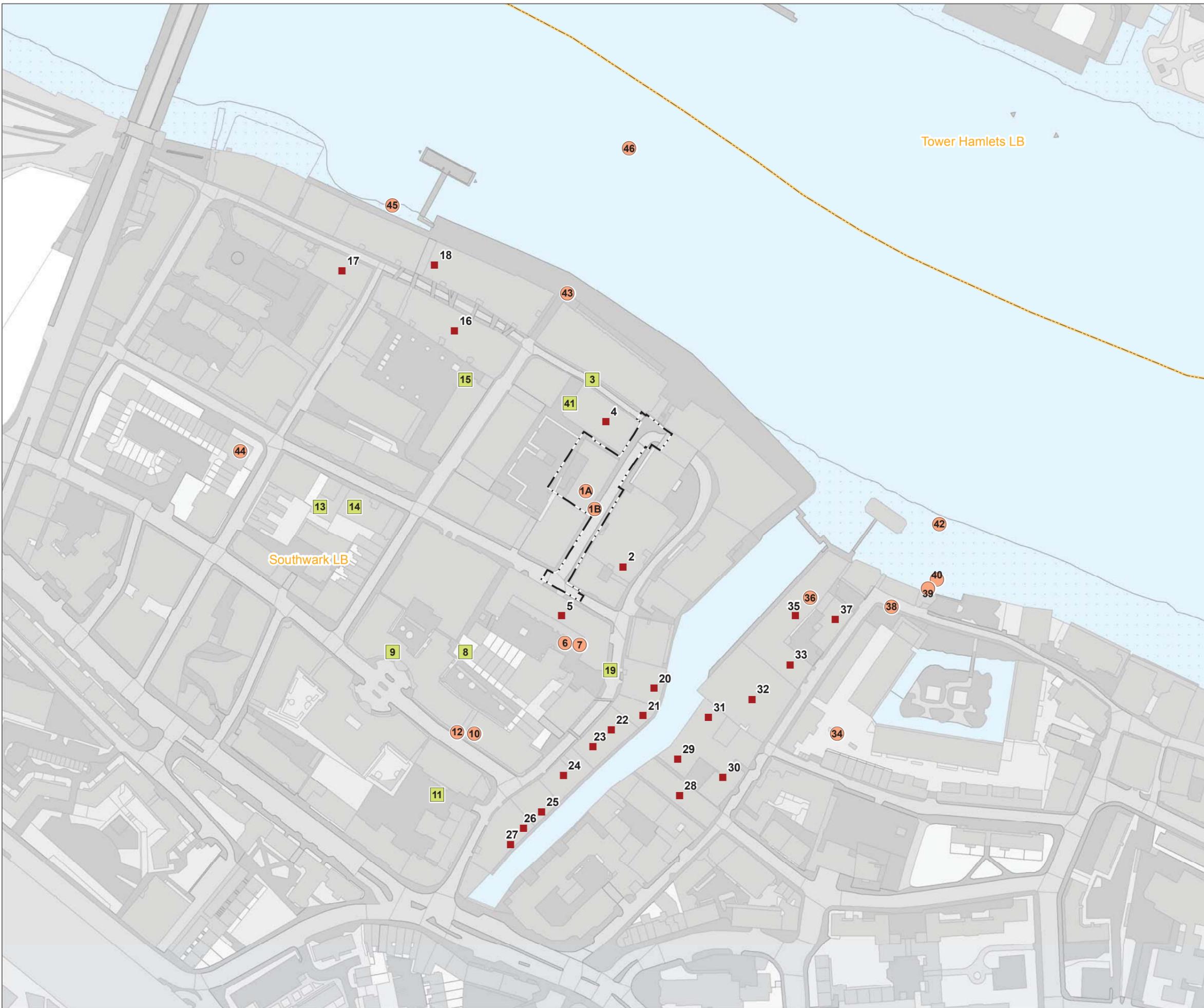
Drawing title
Historic environment features map
Conservation areas map
Location plan
As existing roof plan
Demolition and site clearance plan
Site works parameter plan
Permanent works layout
Proposed roof plan
Building ground floor layout plan
Building first floor layout plan
As existing and proposed west elevation
As existing and proposed east elevation
As existing north and south elevations
Proposed north and south elevations and Section AA
Construction phase 1: Pumping station modification works
Construction phase 2: Pumping station modification works
Construction phase 3: Pumping station modification works

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- Key
- Limits of Land to be Acquired or Used
 - Local Authority Boundary
 - Heritage Feature/Findspot
 - Statutorily Listed Building
 - Past Investigation



The reference number for historic environment features correspond to the descriptions in the 'Gazetteer of known heritage assets' in Environmental Statement Vol. 19 Appendix E.1



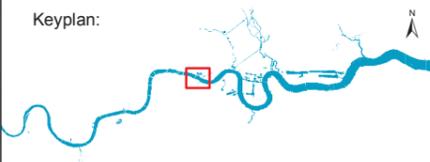
FOR INFORMATION

Location
Shad Thames Pumping Station
London Borough of Southwark

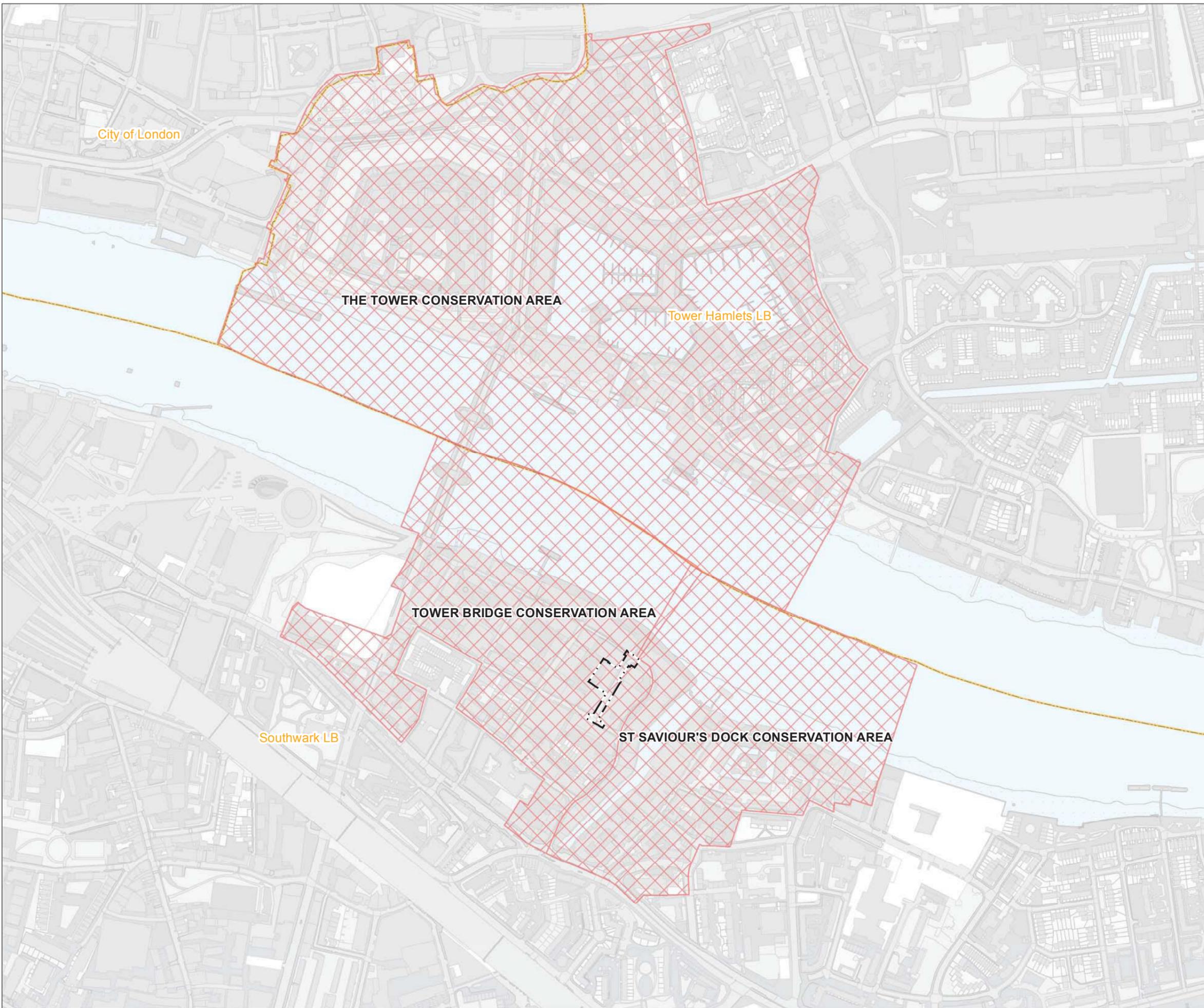
Document Information
Heritage Statement
Historic environment features map

1PL03-HE-65231
January 2013





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



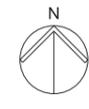
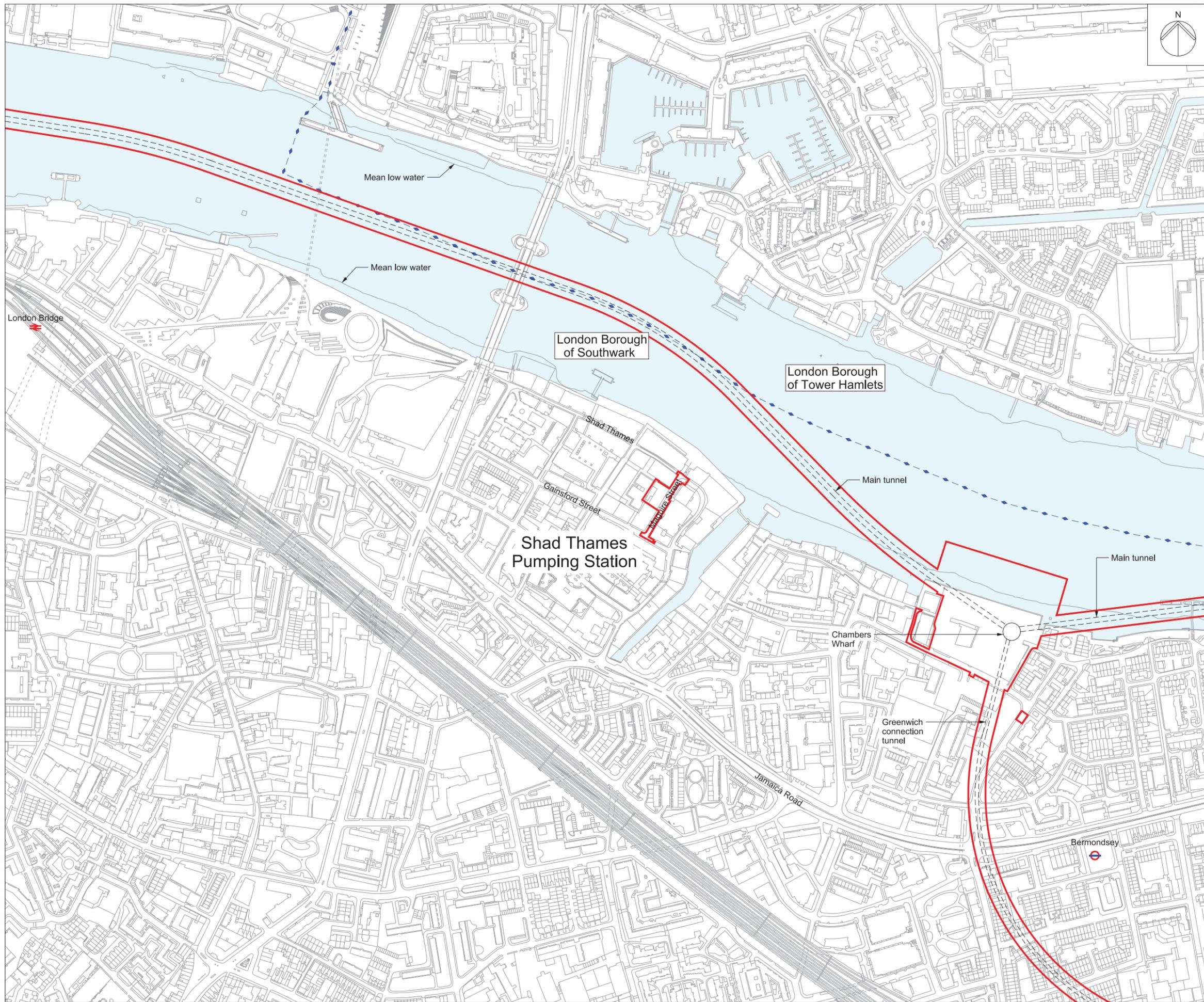
FOR INFORMATION

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Heritage Statement
Conservation areas map

PL03-HE-65248
January 2013





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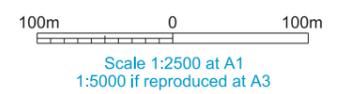


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

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

Notes:

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



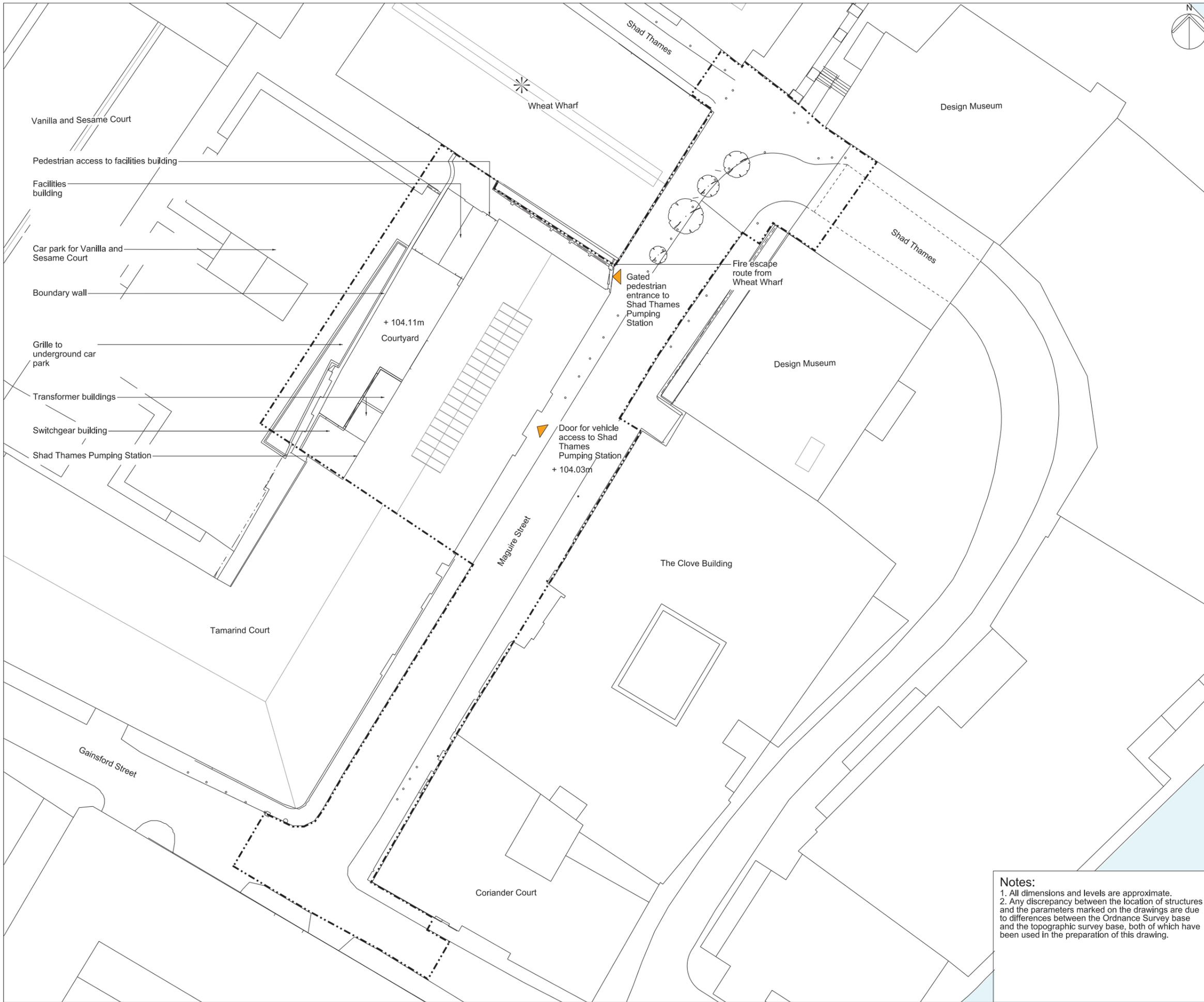
FOR INFORMATION

Location
 Shad Thames Pumping Station
 London Borough of Southwark

Document Information
 Application for Development Consent
 Location plan

Book of plans - section 20
 DCO-PP-18X-SHTPS-200001
 January 2013



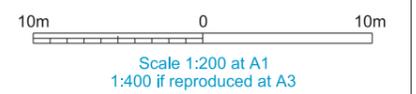


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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

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



FOR INFORMATION

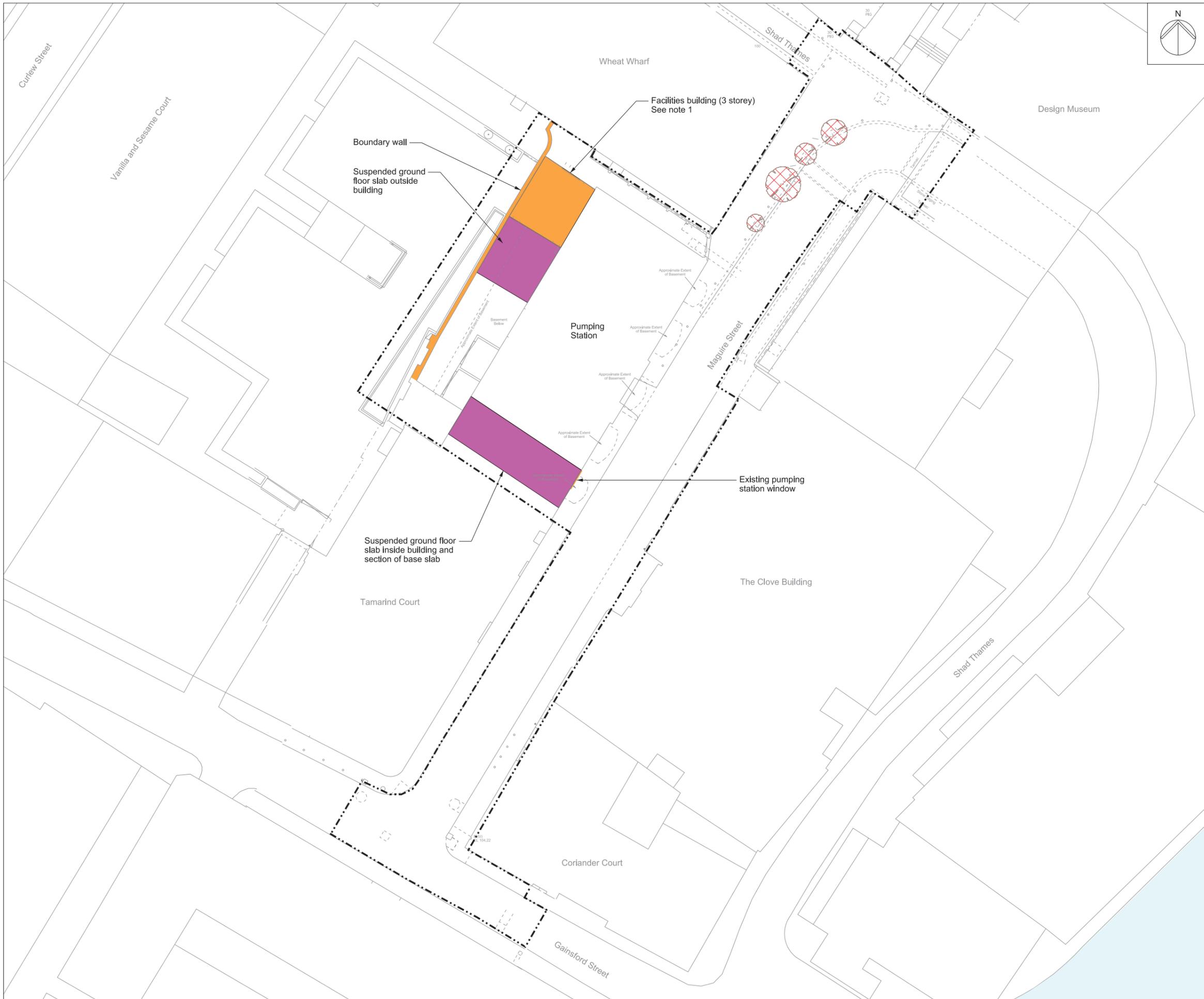
Location
Shad Thames Pumping Station
 London Borough of Southwark

Document Information
Application for Development Consent

As existing
 Roof plan
 Book of plans - section 20
 DCO-PP-18X-SHTPS-200002
 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.



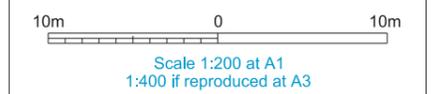
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
- Limits of land to be acquired or used (LLAU)
 - Trees to be removed
 - Above ground structures to be removed
 - Below ground structures to be removed or infilled

- Notes:**
1. Demolition of facilities building to include breaking out of suspended base slab.
 2. Minor items to be removed (e.g. barriers, bollards etc.) are not shown.
 3. General activities of site clearance such as removal of hardstanding and foundations, stripping of topsoil and clearance of minor vegetation not shown.



FOR APPROVAL

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent
Demolition and site clearance

Book of plans - section 20
DCO-PP-18X-SHTPS-200004
January 2013



Table 1

Above ground permanent structure	Maximum height above finished ground level (Minimum heights are in brackets where applicable)
Electrical switchgear and facilities building	9.5m



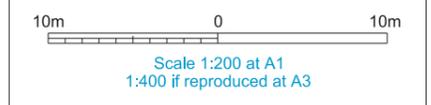
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
- Limits of land to be acquired or used (LLAU)
 - Zone within which all permanent site structures would be located
 - Zone within which permanent above ground structures would be located (those listed in Table 1)

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

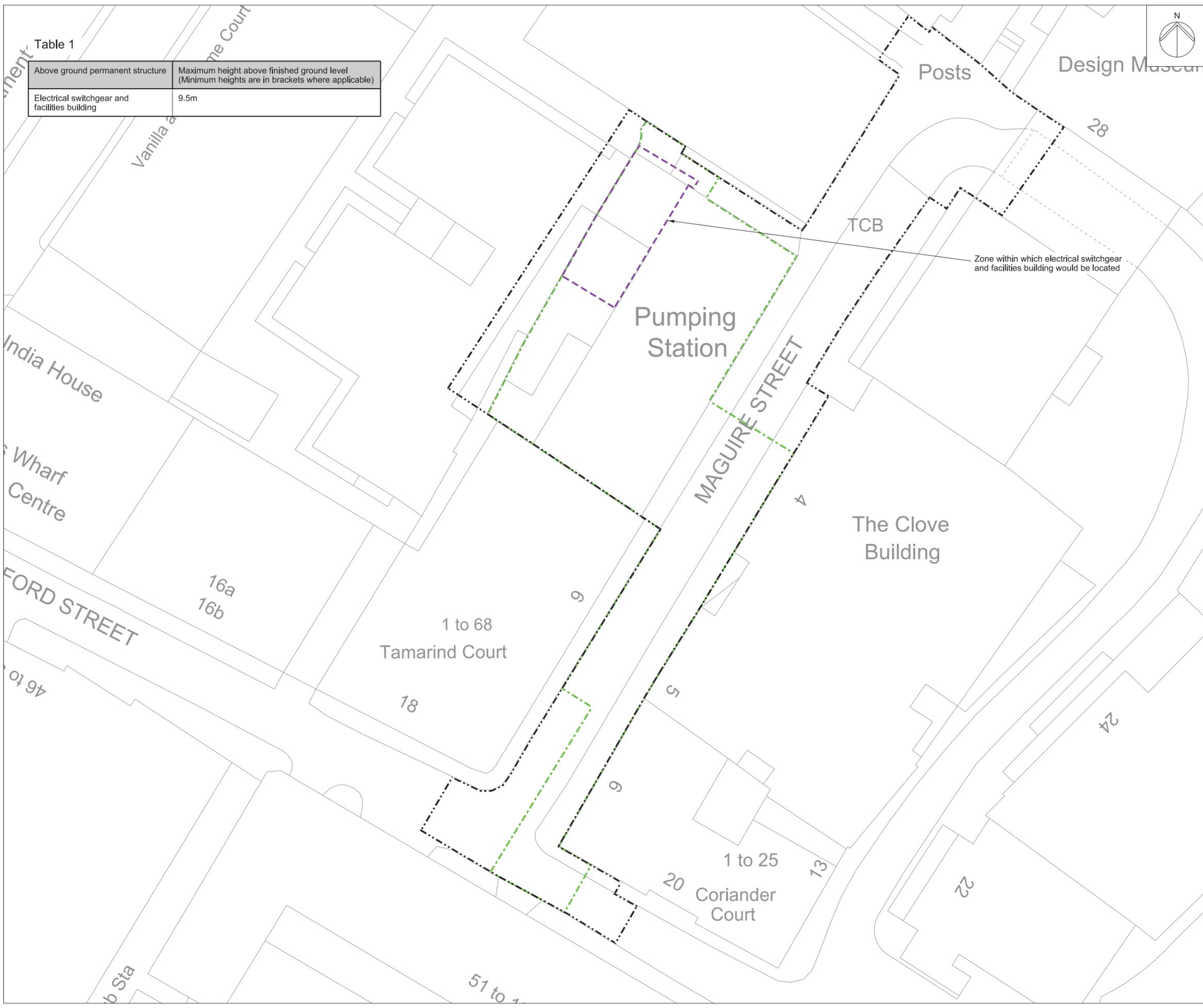


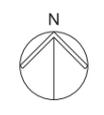
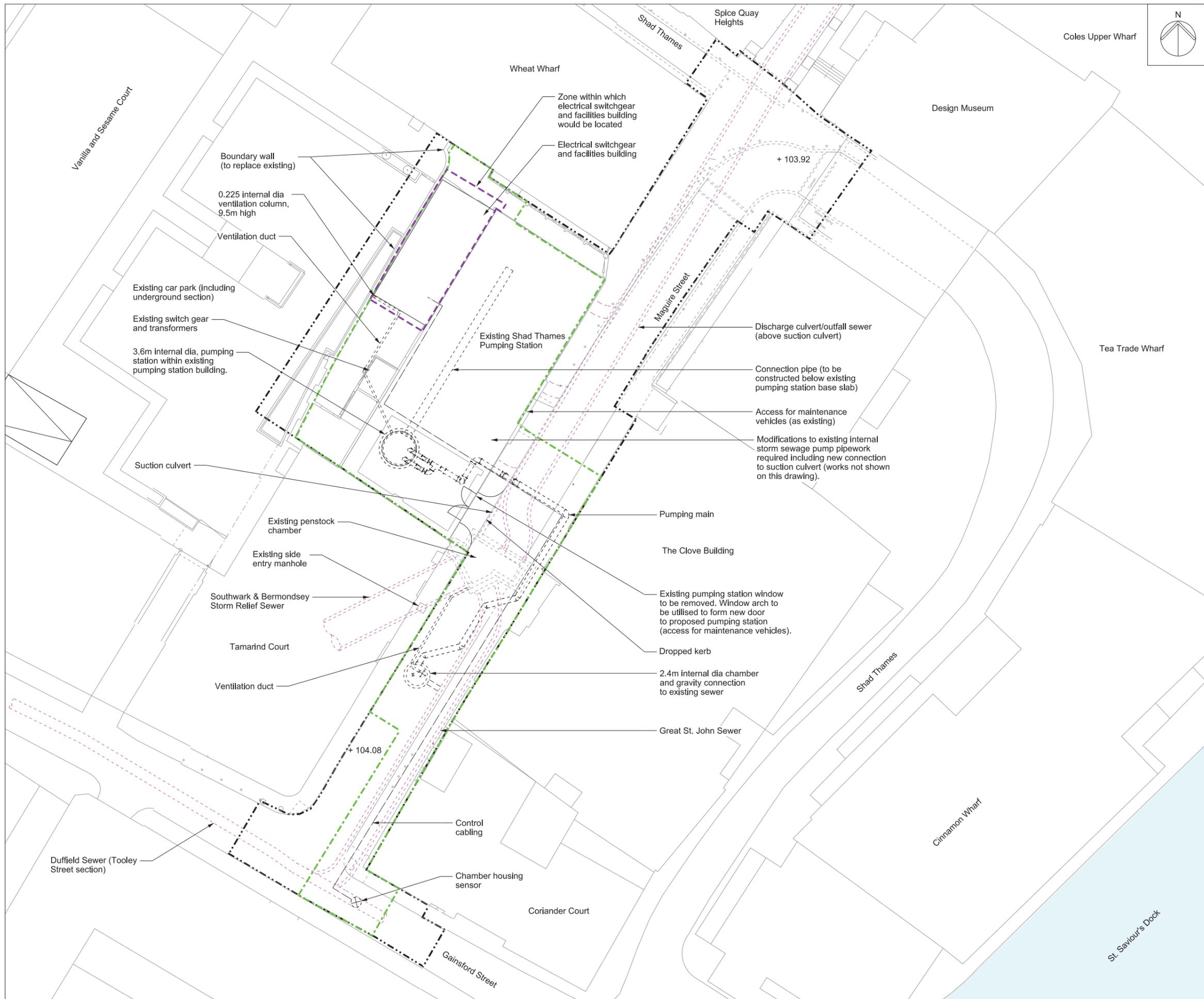
FOR APPROVAL

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent
Site works parameter plan

Book of plans - section 20
DCO-PP-18X-SHTPS-200005
January 2013





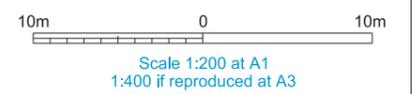
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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
- Limits of land to be acquired or used (LLAU)
 - Existing sewers
 - Proposed access cover
 - + 104.10m Existing Level (shown in metres above tunnel datum)
 - 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.



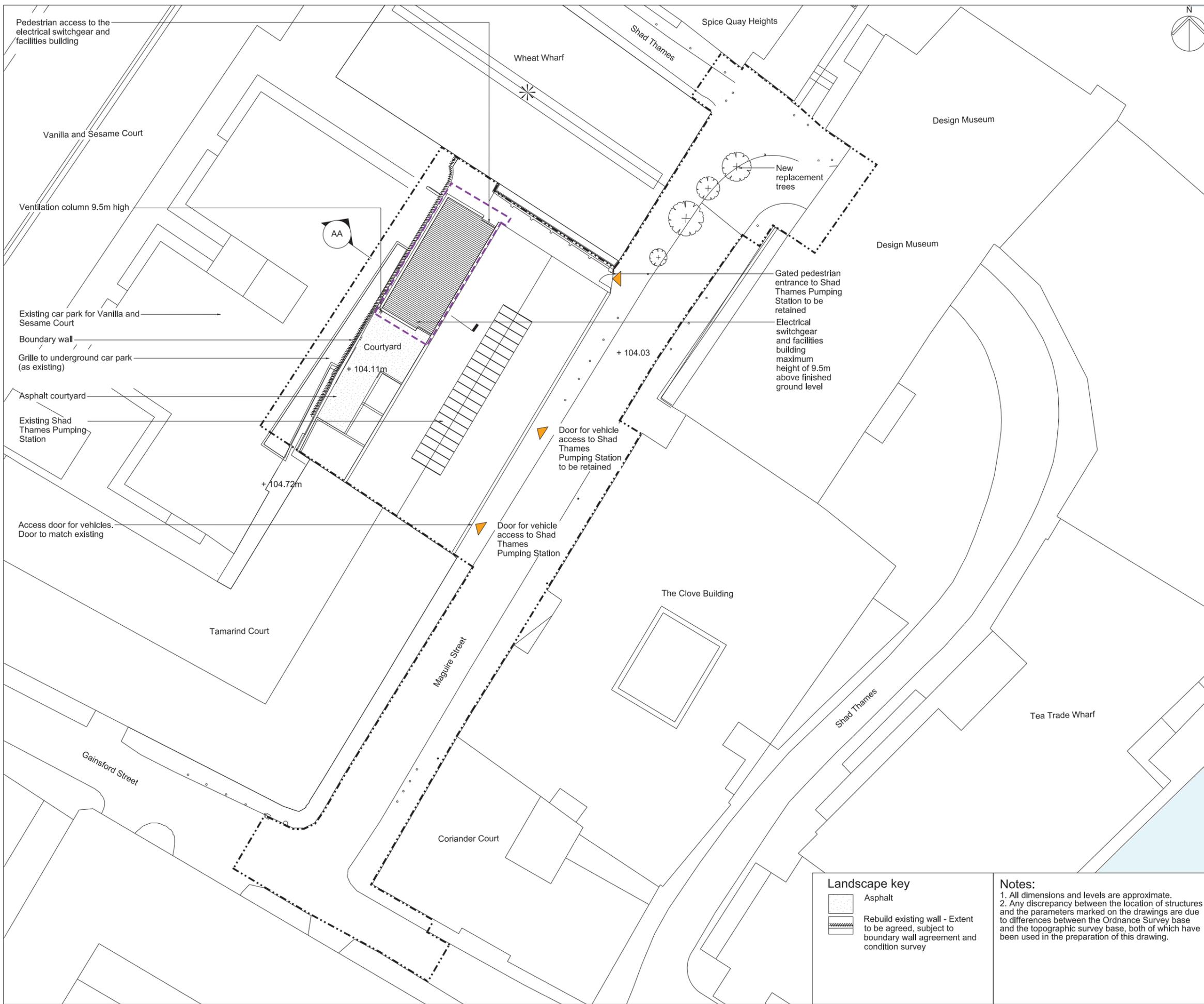
ILLUSTRATIVE

Location
Shad Thames Pumping Station
London Borough of Southwark

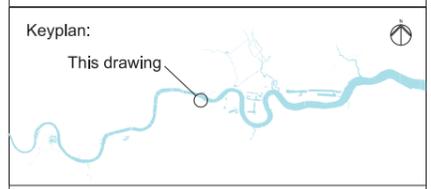
Document Information
Application for Development Consent
Permanent works layout

Book of plans - section 20
DCO-PP-18X-SHTPS-200006
January 2013

Creating a cleaner, healthier River Thames

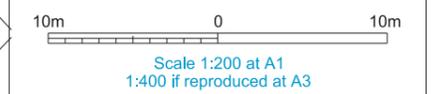


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Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

- Key:**
- 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
 - Proposed trees
 - Thames Water access



FOR APPROVAL

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent

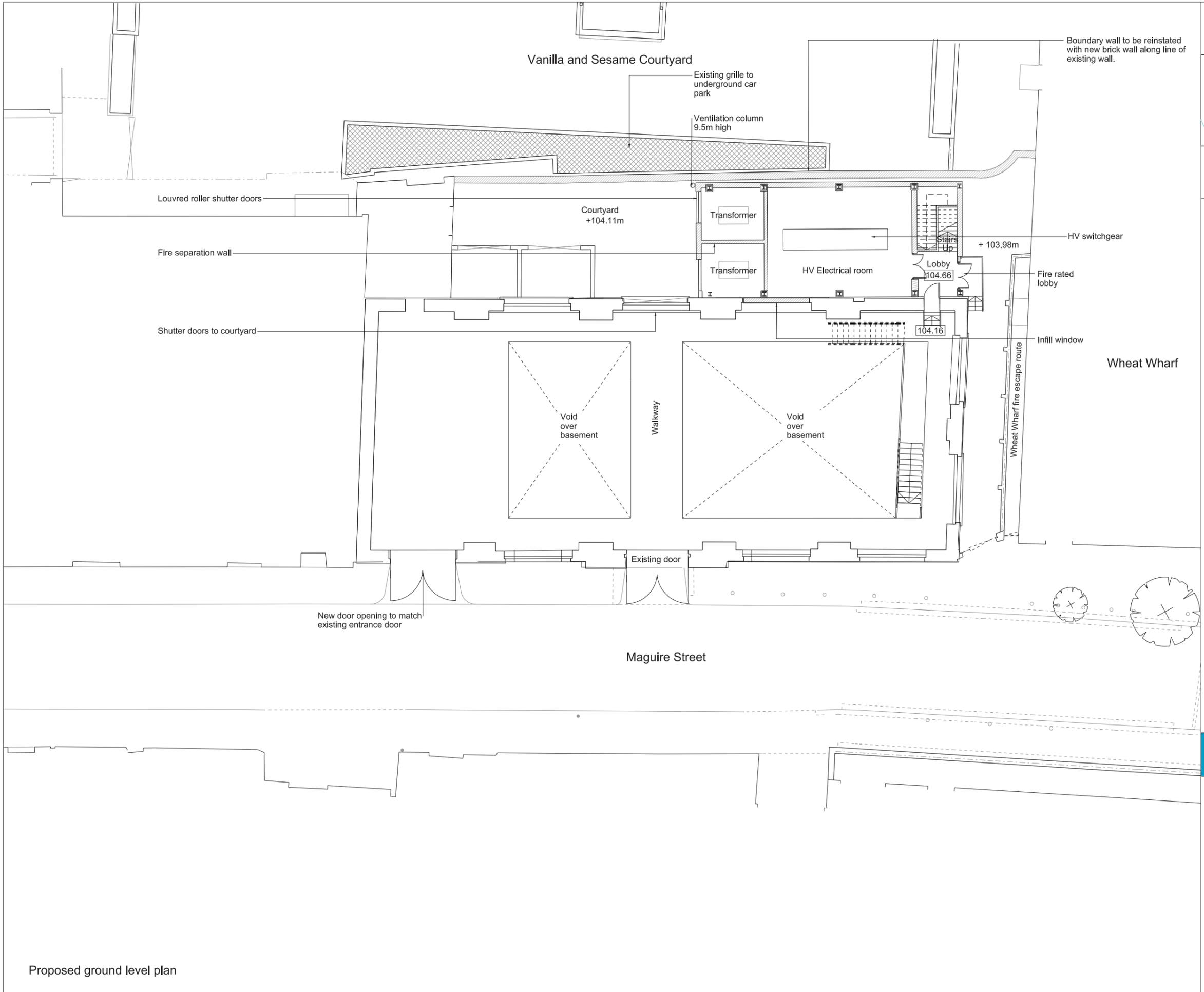
Proposed
Roof plan
Book of plans - section 20
DCO-PP-18X-SHTPS-200007
January 2013



- Landscape key**
- Asphalt
 - Rebuild existing wall - Extent to be agreed, subject to boundary wall agreement and condition survey

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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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:**
- + 105.40m Existing levels (shown in metres above tunnel datum)
 - 105.40 Proposed levels (shown in metres above tunnel datum)
 - ⊕ Proposed trees
 - ▨ New Structure

1m 0 10m
 Scale 1:100 at A1
 1:200 if reproduced at A3

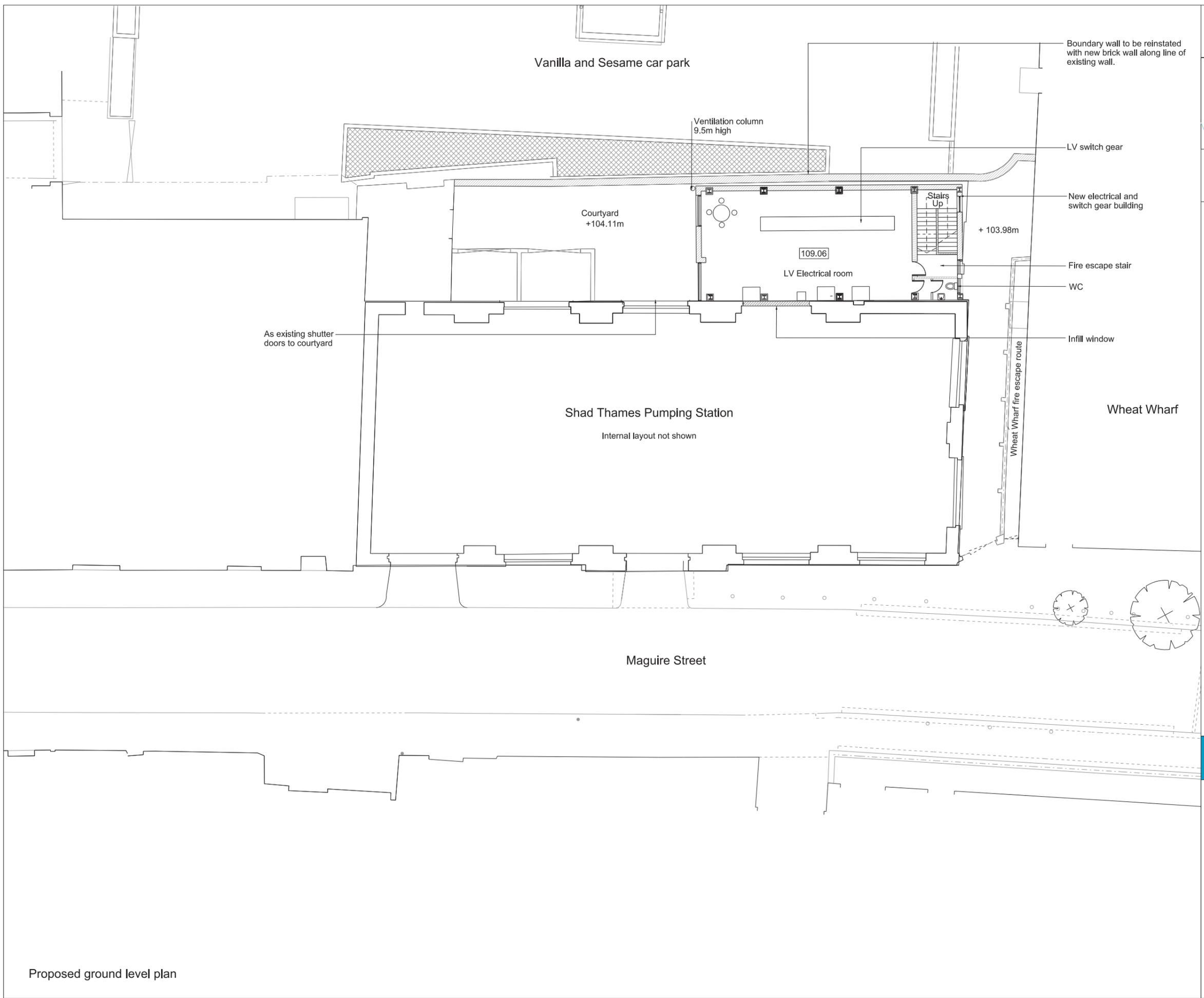
FOR INFORMATION

Location
 Shad Thames Pumping Station
 London Borough of Southwark

Document Information
 Application for Development Consent
 Building ground floor
 Layout plan
 Book of plans - section 20
 DCO-PP-18X-SHTPS-200008
 January 2013



Proposed ground level plan



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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:**
- + 105.40m Existing levels (shown in metres above tunnel datum)
 - 105.40 Proposed levels (shown in metres above tunnel datum)
 - Proposed trees
 - New Structure



FOR INFORMATION

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent
Building first floor
Layout plan
Book of plans - section 20
DCO-PP-18X-SHTPS-200009
January 2013



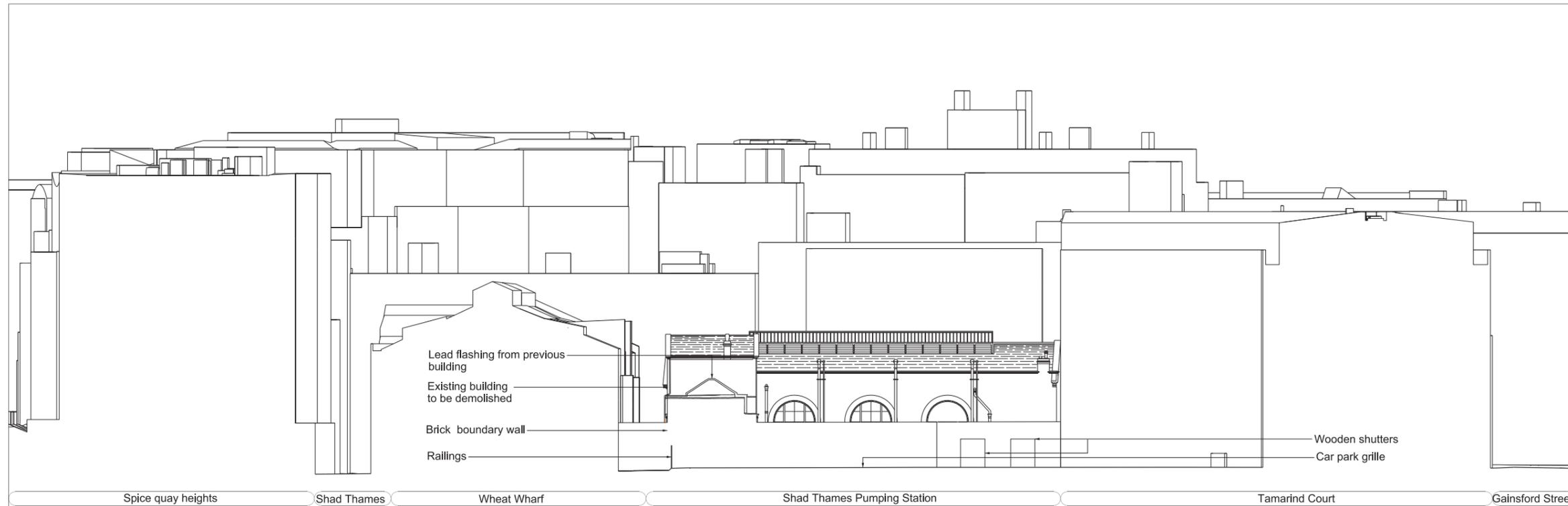
Proposed ground level plan

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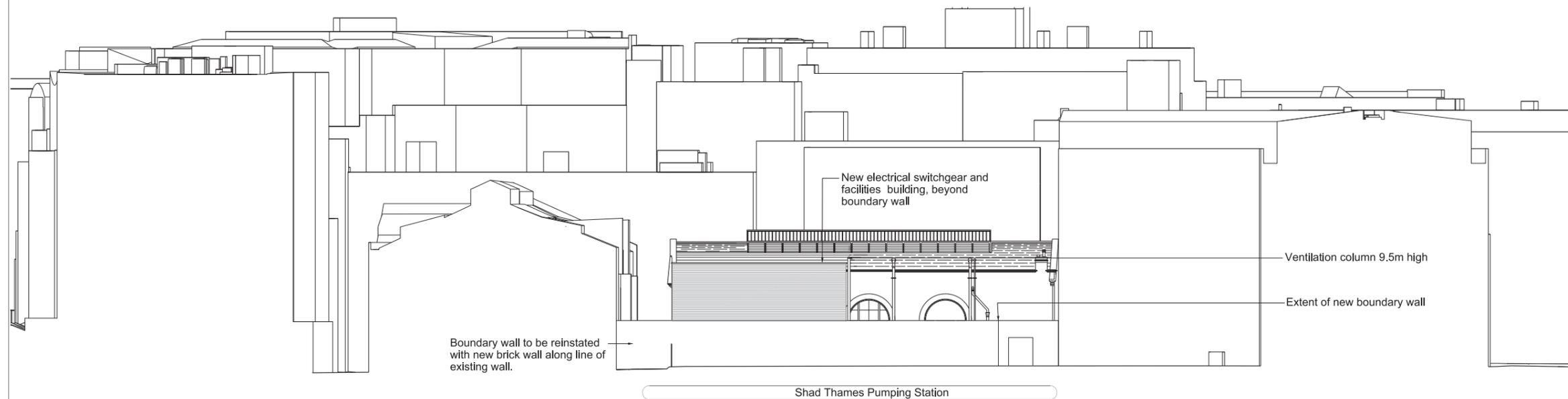


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

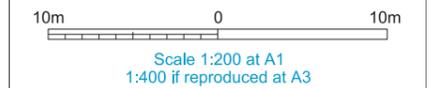
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1. All dimensions and levels are approximate.



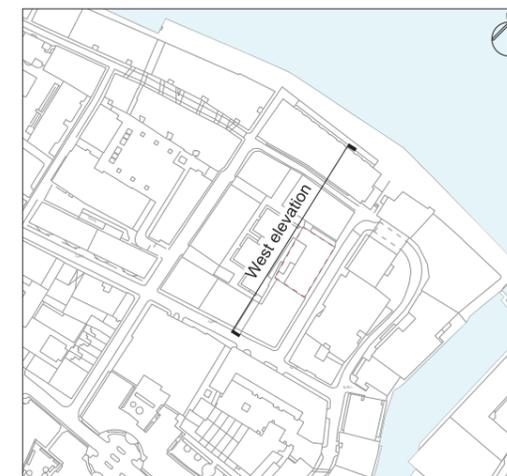
As existing West elevation



Proposed West elevation



INDICATIVE



Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent
As existing and proposed
West elevation
Book of plans - section 20
DCO-PP-18X-SHTPS-200010
January 2013

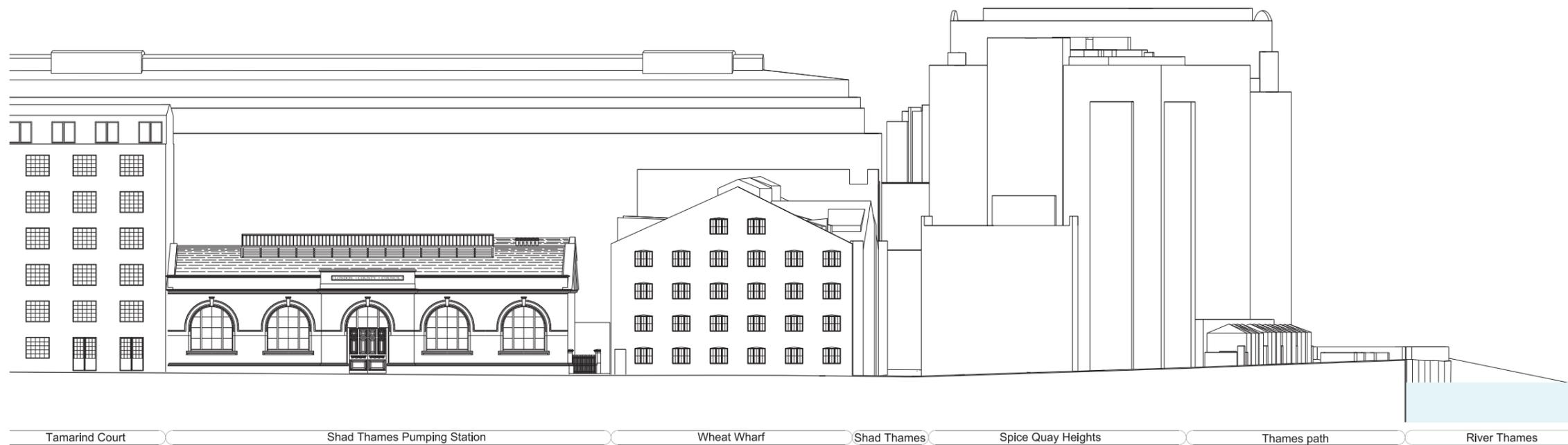


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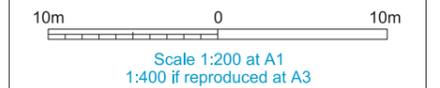
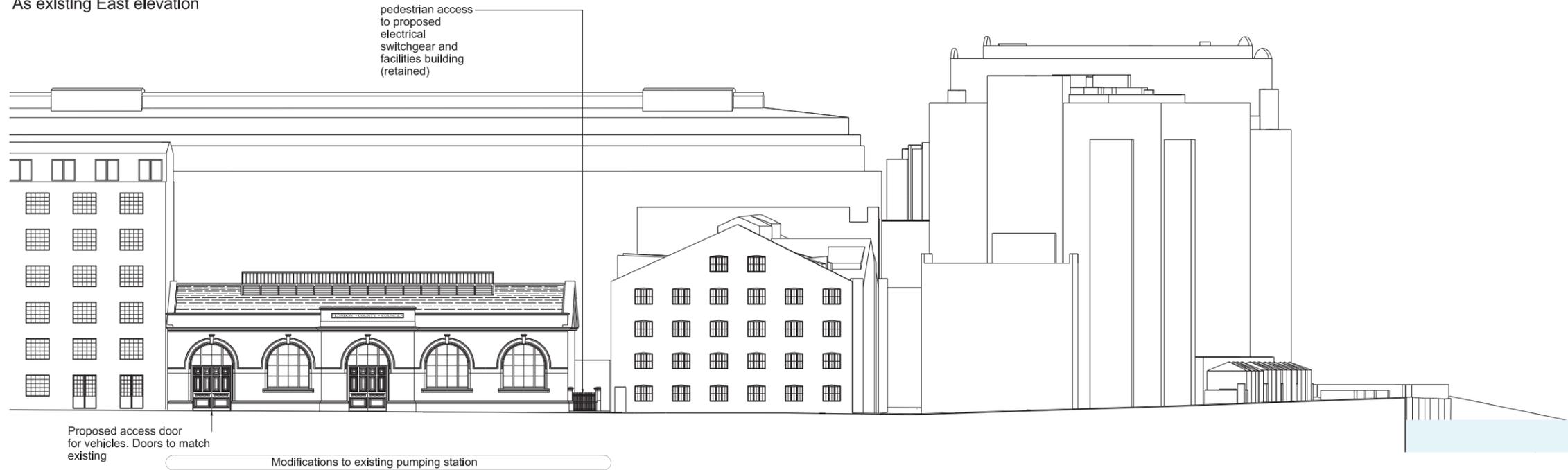


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

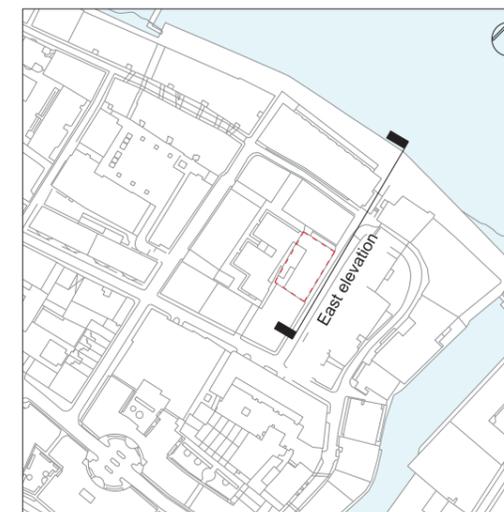
Notes:
1. All dimensions and levels are approximate.



As existing East elevation



Proposed East elevation



INDICATIVE

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent
As existing and proposed
East elevation
Book of plans - section 20
DCO-PP-18X-SHTPS-200011
January 2013



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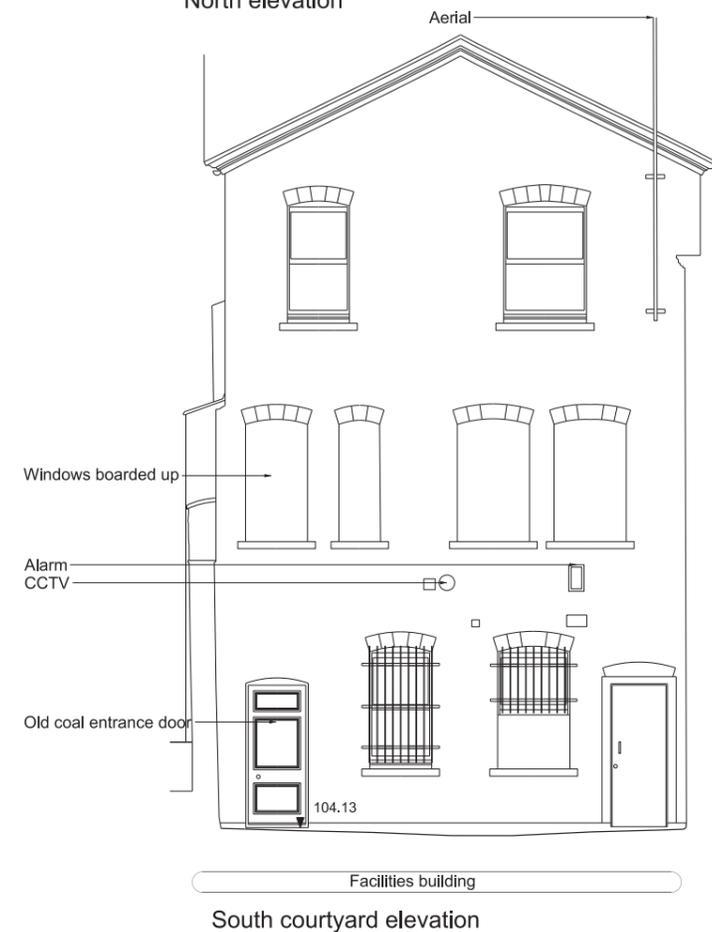


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

Note
This drawing has been based on survey information and does not show details beyond.



North elevation

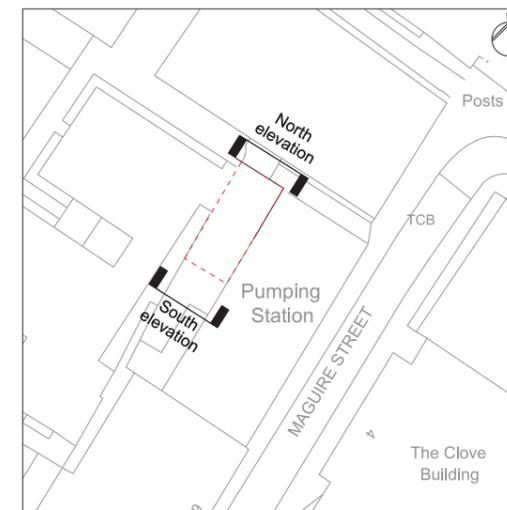


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Scale 1:50 at A1
1:100 if reproduced at A3

FOR INFORMATION

Location
Shad Thames Pumping Station
London Borough of Southwark

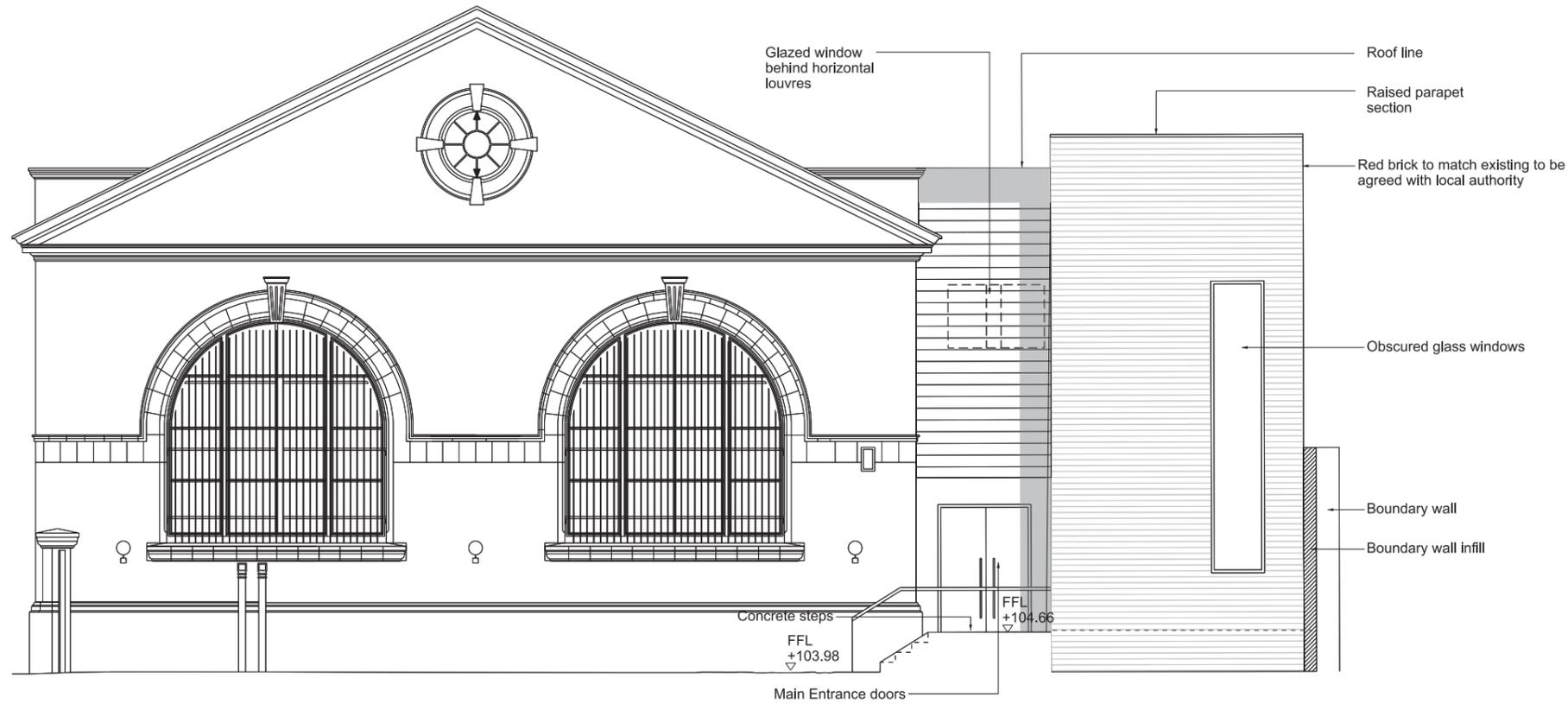
Document Information
Application for Development Consent
As existing
North and south elevations
Book of plans - section 20
DCO-PP-18X-SHTPS-200012
January 2013



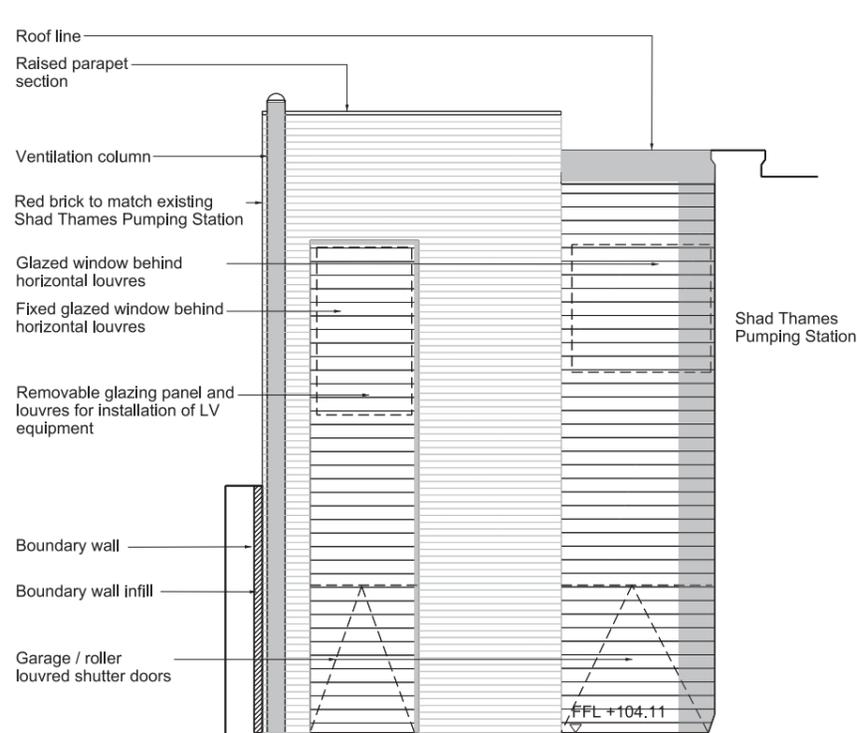
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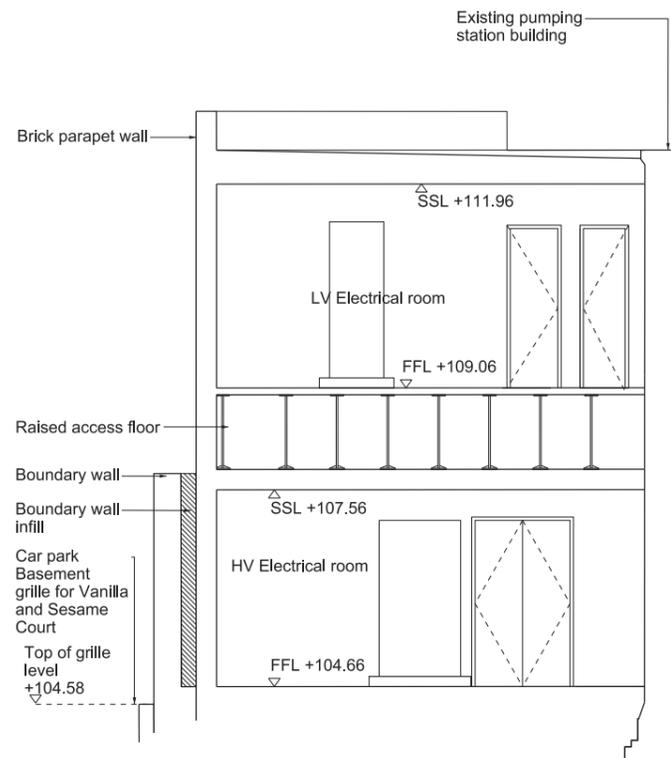
Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.



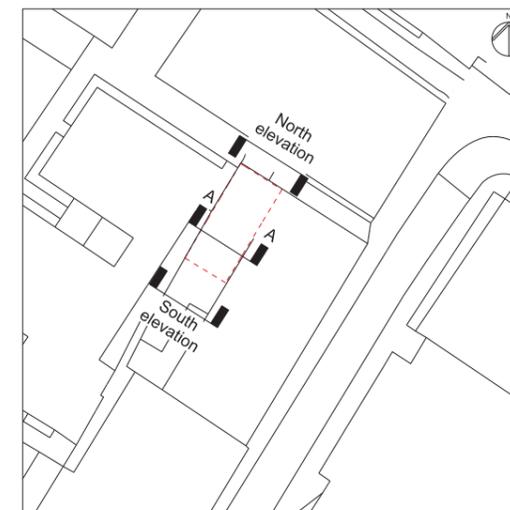
Proposed north elevation



Proposed south elevation



Section AA

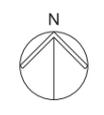
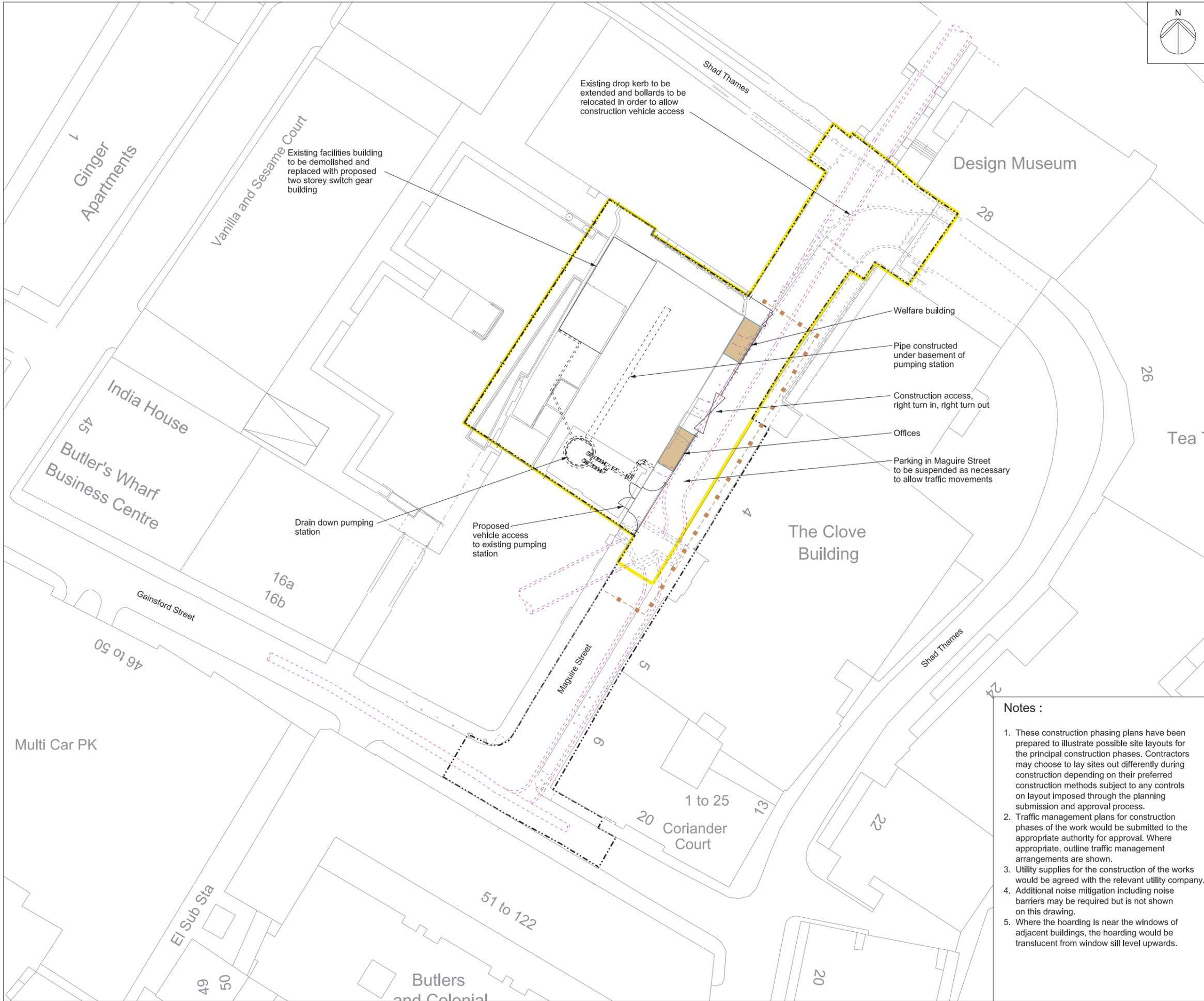


FOR INFORMATION

Location
 Shad Thames Pumping Station
 London Borough of Southwark

Document Information
 Application for Development Consent
 Proposed north and south elevations and Section AA
 Book of plans - section 20
 DCO-PP-18X-SHTPS-200013
 January 2013



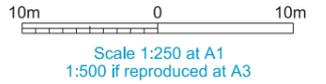


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- Key:**
- Limits of land to be acquired or used (LLAU)
 - +— Hoarding
 - Maximum extent of working area
 - Route of temporary diversion of footway
 - Site access
 - Existing sewers



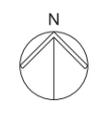
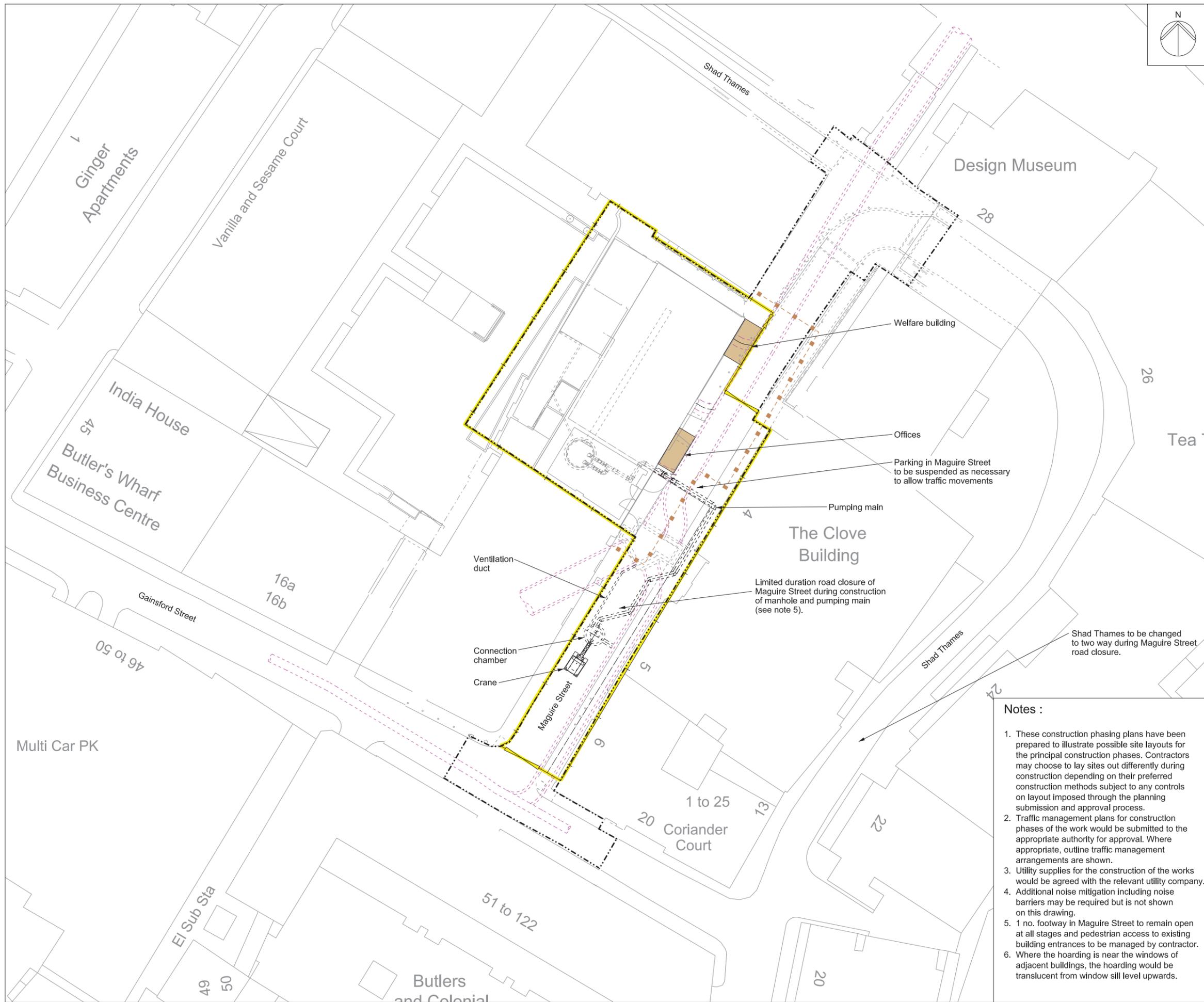
- Notes :**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed 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. Where the hoarding is near the windows of adjacent buildings, the hoarding would be translucent from window sill level upwards.

ILLUSTRATIVE

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Application for Development Consent
Construction phases - phase 1
Pumping station modification works
Book of plans - section 20
DCO-PP-18X-SHTPS-200014
January 2013





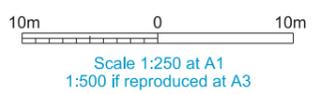
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Key:

	Limits of land to be acquired or used (LLAU)
	Hoarding
	Maximum extent of working area
	Route of temporary diversion of footway
	Site access
	Existing sewers



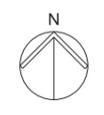
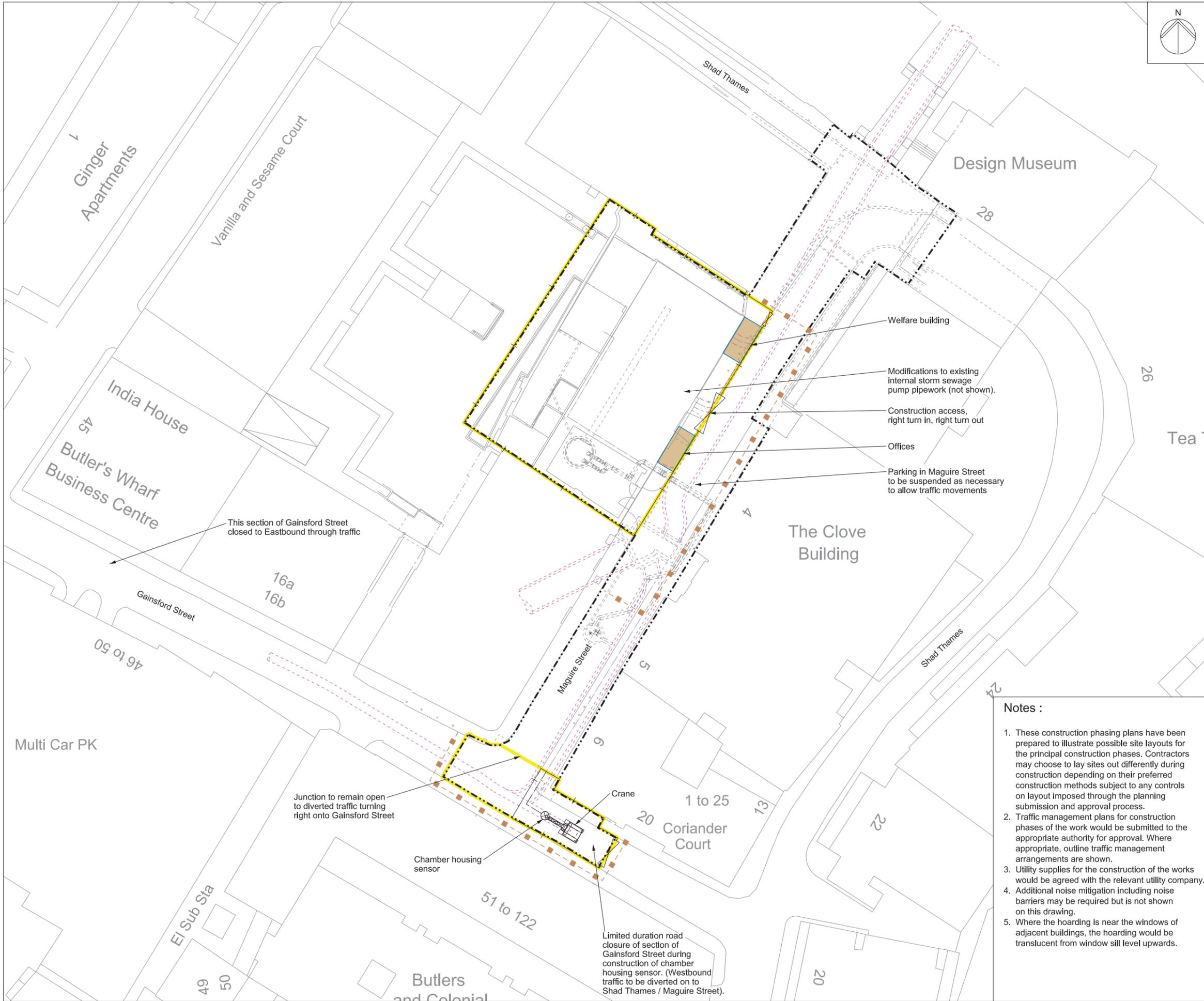
- Notes :**
1. These construction phasing plans have been prepared to illustrate possible site layouts for the principal construction phases. Contractors may choose to lay sites out differently during construction depending on their preferred construction methods subject to any controls on layout imposed 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. 1 no. footway in Maguire Street to remain open at all stages and pedestrian access to existing building entrances to be managed by contractor.
 6. Where the hoarding is near the windows of adjacent buildings, the hoarding would be translucent from window sill level upwards.

ILLUSTRATIVE

Location
 Shad Thames Pumping Station
 London Borough of Southwark

Document Information
 Application for Development Consent
 Construction phases - phase 2
 Pumping station modification works
 Book of plans - section 20
 DCO-PP-18X-SHTPS-200015
 January 2013



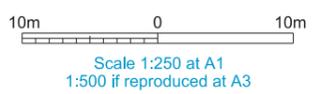


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- Key:
- Limits of land to be acquired or used (LLAU)
 - Hoarding
 - Maximum extent of working area
 - Route of temporary diversion of footway
 - Site access
 - Existing sewers



- 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. Where the hoarding is near the windows of adjacent buildings, the hoarding would be translucent from window sill level upwards.

ILLUSTRATIVE

Location
 Shad Thames Pumping Station
 London Borough of Southwark

Document Information
 Application for Development Consent
 Construction phases - phase 3
 Pumping station modification works
 Book of plans - section 20
 DCO-PP-18X-SHTPS-200016
 January 2013



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