



Application for Development Consent

Application Reference Number: WWO10001

Planning Statement

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Appendix R

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

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January 2013

**Thames
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Creating a cleaner, healthier River Thames

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Thames Tideway Tunnel

Planning Statement

Appendix R: Shad Thames Pumping Station

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Appendix R: Shad Thames Pumping Station

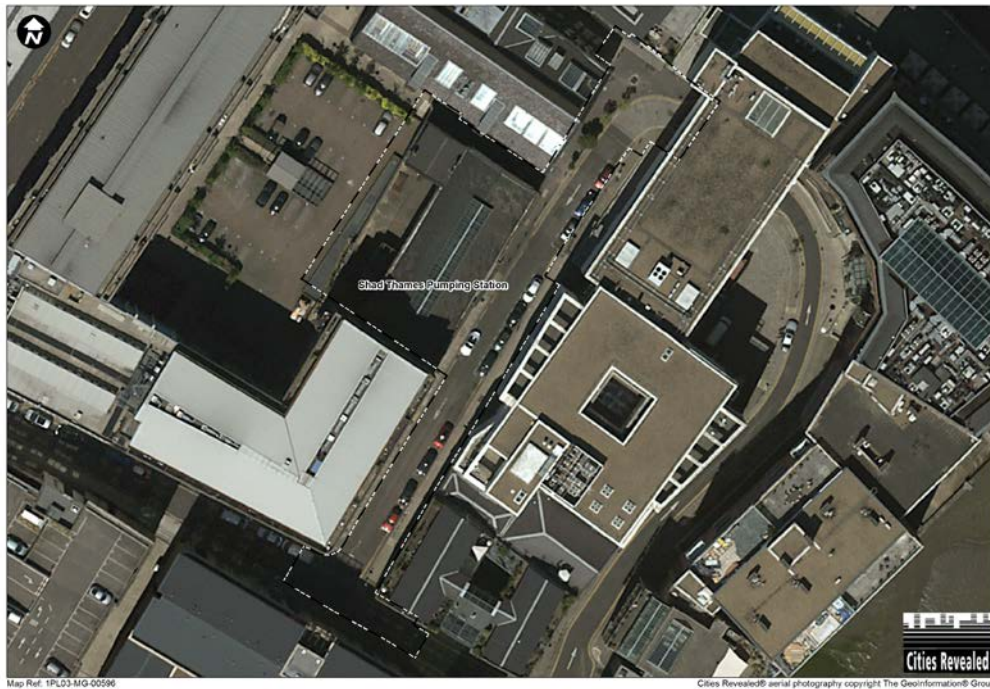
R.1 Introduction

- R.1.1 In an average year, the Shad Thames Pumping Station combined sewer overflow (CSO) discharges approximately 92,000m³ of untreated sewage into the tidal Thames in front of Shad Thames, in the London Borough of Southwark. On the basis that litter tonnages are proportional to discharge volumes, approximately 23 tonnes of sewage derived litter is also discharged from the CSO in an average year. The Environment Agency identified the Shad Thames Pumping Station CSO as a CSO that needs to be controlled.
- R.1.2 A worksite is required to control the Shad Thames Pumping Station CSO. Modifications and additions to the existing infrastructure at the pumping station are proposed to provide capacity within the existing sewers for the storage of combined sewage. The CSO at this site would be controlled by the proposed works, but would not require connection to the main tunnel.
- R.1.3 The extent of the project site is shown in the location plan, contained within Annex R of this report and within the *Book of Plans*, which accompanies the application.
- R.1.4 This assessment is structured as follows:
- a. Section R.2 provides a brief description of the Shad Thames Pumping Station site.
 - b. Section R.3 sets out the planning context for works in this location.
 - c. Section R.4 describes the site-specific development for which consent is sought and the way in which the proposals evolved in response to consultation.
 - d. Section R.5 provides an analysis of the principal site-specific planning considerations and how the proposals comply with relevant planning policy.
 - e. Section R.6 provides an overall conclusion of the site-specific assessment for the proposed works at the site.

R.2 Site description

- R.2.1 The site itself comprises Thames Water's operational Shad Thames Pumping Station, fronting onto Maguire Street and includes the road extending to the Gainsford Street intersection. To the rear of the pumping station building is a narrow yard which contains a number of ancillary buildings, including a three-storey facilities building which formerly accommodated the site superintendent and offices at its north end. The CSO is located on the foreshore of the River Thames approximately 50m north of the site. An aerial photograph of the site is provided in Figure R.1 below.

Figure R.1 Aerial photograph of Shad Thames Pumping Station



- R.2.2 Existing vehicular access to the site is via double doors located on Maguire Street. Pedestrian access is via a gated passage along the northern boundary of the site off Maguire Street (see Figure R.2).
- R.2.3 The site is bounded to the north by residential Grade II listed Wheat Wharf, to the east by Maguire Street, the Clove Building and Design Museum to the south by the residential blocks of Tamarind Court and Coriander Court, which are located on opposite sides of Maguire street.
- R.2.4 The site is bounded to the west by a courtyard car park associated with residential block Vanilla and Sesame Court which is accessed from Gainsford Street. Below this courtyard in the basement is a privately run car park not directly associated with the residential properties, which is accessed from Curlew Street.
- R.2.5 The Existing roof plan is provided in Annex R and in the *Book of Plans*.

Figure R.2 Existing doors to Shad Thames Pumping Station on Maguire Street



R.3 Planning context

- R.3.1 As set out in Section 7, the proposed works will be assessed against the requirements of the National Policy Statement for Waste Water (the 'NPS'). In developing the proposals and mitigation measures for the development at Shad Thames Pumping Station, Thames Water¹ also had regard to the local development plan where it is relevant to the application.
- R.3.2 In this case the local development plan comprises the *London Plan* (2011), the London Borough of Southwark's *Core Strategy 2011*, and saved policies from the Council's *Unitary Development Plan* (2007), which is expected to be fully replaced in early 2013.
- R.3.3 The site falls within the Tower Bridge Conservation Area and immediately to the west of the St Saviours Dock Conservation Area. The site also lies within the Borough, Bermondsey and River Archaeological Priority Zone.
- R.3.4 The main flood risk to the site is from the tidal River Thames. The site lies within the 'high probability' flood zone, Flood Zone 3a associated with the tidal Thames, although it is protected by flood defences.
- R.3.5 No planning applications for the site have been submitted within the last five years.

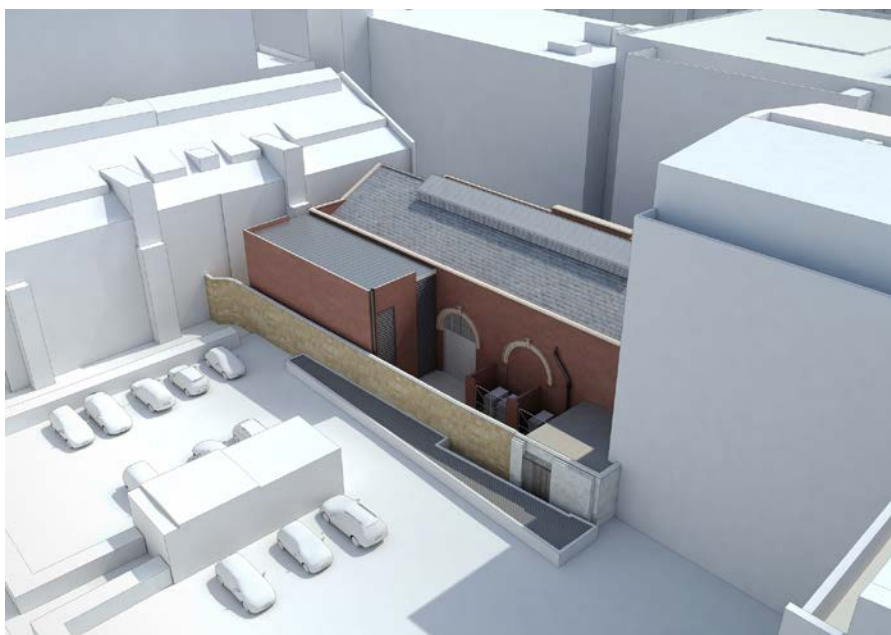
¹ Thames Water Utilities Ltd (TWUL). The Draft Development Consent Order (DCO) contains an ability for TWUL to transfer powers to an Infrastructure Provider (as defined in article 2(1) of the DCO) and/or, with the consent of the Secretary of State, another body

R.4 Description of development

Overview

- R.4.1 The proposal at this site is to modify the existing pumping station, in order to control Shad Thames Pumping Station CSO.
- R.4.2 The proposed works comprise modifications to the pumps and internal pipe work, the provision of additional new pumps and a pump sump, demolition of the existing three-storey facilities building and construction of a new building to accommodate electrical switchgear equipment. The works would also involve modification of existing sewers in Maguire Street and Gainsford Street.
- R.4.3 The broad locations (within parameters) and size thresholds of the above and below ground works required to control the CSO are submitted for approval as part of the application. A parameter sets the height of the new electrical switchgear building at a maximum of 9.5m. The proposed roof plan details areas of hardstanding, rebuilding of the boundary wall and reinstatement of trees, which is also for approval. These works would be contained within the relevant zones as indicated on the Site works parameter plan contained within the *Book of Plans*.
- R.4.4 Indicative plans detailing the internal layout of the electrical switchgear building and proposed elevations for works at the site are also submitted as part of this application to show the proposed designs once construction works are complete. The indicative plans are not submitted for approval.
- R.4.5 The *Draft DCO* includes a requirement to submit detailed plans for approval of the final detailed designs including finishes at a later date. The elements to be submitted for detailed approval must be consistent with the generic and site-specific design principles which are set out in the *Design Principles* document, which accompanies the application.

Figure R.3 Visualisation of Shad Thames Pumping Station



Application for development consent

R.4.6 The geographic extent of the proposals for which development consent is sought, is defined by the limits of land to be acquired or used.

R.4.7 Table R.1 below lists the application plans relevant to this site and their status.

Table R.1 Shad Thames Pumping Station: Drawings that define the proposed development

Drawing title	Status	Location
Proposed schedule of works	For approval	Schedule 1 to the <i>Draft Thames Water Utilities Limited (Thames Tideway Tunnel) Development Consent Order (the 'Draft DCO')</i> and extracts below)
Access plan	For approval	<i>Book of Plans</i> , Section 20
Demolition and site clearance plan	For approval	<i>Book of Plans</i> , Section 20
Site works parameter plan	For approval	<i>Book of Plans</i> , Section 20
Permanent works layout	Illustrative	<i>Book of Plans</i> , Section 20
Proposed roof plan	For approval	<i>Book of Plans</i> , Section 20
Building floor layout plan (various)	For information	<i>Book of Plans</i> , Section 20
As existing and proposed elevation (various)	Indicative	<i>Book of Plans</i> , Section 20
As existing north and south elevations	For information	<i>Book of Plans</i> , Section 20
Proposed north and south elevation and Section AA	For information	<i>Book of Plans</i> , Section 20
Construction phases plans	Illustrative	<i>Book of Plans</i> , Section 20
Highway layout during construction (phases)	Illustrative	<i>Transport Assessment Shad Thames Pumping Station Figures</i>
Permanent highway layout	Illustrative	<i>Transport Assessment Shad Thames Pumping Station Figures</i>

R.4.8 The works at this site do not fall under the Nationally Significant Infrastructure Project (NSIP); rather, they comprise 'associated development'. The proposed structures and works at Shad Thames Pumping Station fall under 'associated development' (Works No. 18) and comprise the demolition of the existing three-storey facilities building and boundary wall and construction of a new electrical switchgear and facilities building and a new ventilation column. Works also include modifications to existing sewers and the provision of new pumping main within Maguire Street and Gainsford Street. The full description of the proposed development can be found in the *Draft DCO*. Further details of temporary construction works and permanent operational structures are contained

below and an extended description can also be found in the *Environmental Statement* (Vol 19), which accompanies the application.

- R.4.9 At this site, approval is sought for the works shown on the Works plan showing the modifications to Shad Thames Pumping Station (Work no. 18) and the Site works parameter plan which shows the relevant zones and limits of land to be acquired or used in which the associated development works would be undertaken, Access plans, and Demolition and site clearance plans. The plans for approval are contained in the *Book of Plans* along with other plans showing the construction phasing and permanent works plans relevant to this site. These other plans are marked either for approval, for information, indicative or illustrative depending on the level of detail they are providing. Section 5 of this document explains in more detail the overall approach to the level of detail and how the plans for approval were developed.

Construction

- R.4.10 Construction at Shad Thames Pumping Station is anticipated to take approximately one and a half years and would involve the following phases (with some overlaps):
- a. site set-up and demolition (approximately seven months)
 - b. main construction (chambers, buildings, pipework and reinstatement) (approximately 12 months).
- R.4.11 Connection of utilities and diversion of utilities may be conducted in advance of the main activities listed above.
- R.4.12 This site would operate to the standard working hours for various phases and activities as set out in the *Code of Construction Practice (CoCP)* Part A and B, which accompanies the application.
- R.4.13 Construction traffic would access the site from Jamaica Road (A200), Shad Thames and Maguire Street. Traffic leaving the site would turn right from Maguire Street onto Gainsford Street, left into Lafone Street and left onto Tooley Street (A200).
- R.4.14 Suspension of parking bays, parking restrictions and footpath diversions would be required on Maguire Street and Gainsford Street. Traffic management would be required on Shad Thames to temporarily allow two-way traffic and a short duration road closure of part of Gainsford Street would also be required.
- R.4.15 It is anticipated that an average of three heavy goods vehicles (HGVs) would access the site per day for the majority of the construction period. This would rise to approximately seven HGVs per day over an estimated period of one month during post contract enabling (demolition) works when material would be removed from site by road. There may be additional periods during key construction activities when these HGV numbers would need to be exceeded. Further details regarding the number and breakdown of anticipated HGVs accessing the site per day is contained within the *Transport Strategy*, which accompanies the application.

- R.4.16 Potential layouts of the construction site are shown on the construction phases plan contained within Annex R and in the *Book of Plans*. It should be noted that these layouts are indicative only. The contractor may arrange the site in a different way, depending on the chosen construction method, provided that any environmental effects are appropriately managed.

Site set-up and demolition

- R.4.17 Prior to any works commencing, the site boundary would be established and secured. The new boundary in front of the pumping station would be an open mesh fence or concrete vehicle barriers with close boarded plywood fence above. The boundary would be to the heights specified in the *CoCP*. The existing footpath would be diverted to the opposite side of the road where existing parking bays opposite would be suspended. Welfare and office facilities would also be set up with utility and power connections completed as necessary. Traffic management and access works would be undertaken.
- R.4.18 The approach to any land remediation that might be required cannot be defined at this stage. However it is assumed that any remediation that is required would occur within this earliest phase of construction and that any associated lorry movements would be substantially lower than the subsequent peak during the main construction phases.
- R.4.19 An existing three storey masonry structure that is part of the Shad Thames Pumping Station complex would be demolished to allow construction of a new electrical switchgear and facilities building. Demolition would be undertaken by small excavators and breakers and by hand due to restricted access. Scaffolding and sheeting would be required.

Main construction works

- R.4.20 New switch gear, control panels and cabling would be installed in the new electrical switchgear and facilities building and the existing storm sewage pumps re-commissioned. The removal of the suspended floor slab on which the existing switchgear stood would then facilitate the construction of the new drain down pumping station wet well.
- R.4.21 From basement level an approximately 3.6m internal diameter chamber would be sunk using precast concrete segmental shaft linings within the London Clay strata. This would be by underpinning and may require some local ground treatment immediately beneath the existing basement slab if any water pathways exist. A tunnelled heading would be constructed from the shaft beneath the existing pumping station sumps.
- R.4.22 Due to the restricted area the chamber and tunnel would be constructed using a mini excavator and by hand. A small crawler crane or gantry crane would be used for access with excavated material removed by small skips to a suitable transit location for loading onto vehicles that have Hiab type grabs.
- R.4.23 Construction of the pumping main and connection chamber (with connection to the existing Great St John sewer), a level sensor chamber, and ductwork would also be carried out. The discharge and flow level

monitoring chambers may be reinforced concrete structures with manhole access to the surface.

- R.4.24 These works would involve standard road utility construction methods including excavators, dumpers and trench support equipment. The discharge chamber and subsequent connection to the sewer would require some local ground treatment to stabilise the gravels through which they would be constructed. The sheet piles or caisson would be founded in the clay to achieve water cut-off.

Completion of works and site restoration

- R.4.25 On completion of the construction works, the permanent works area would be finished in accordance with any relevant requirements.

Typical maintenance regime

- R.4.26 Once the project is operational, it is anticipated that Thames Water personnel would undertake maintenance inspection works of the infrastructure as part of the existing maintenance regime at the pumping station. This would likely be every one to three months and would likely involve a visit by personnel in a light commercial vehicle during normal working hours and may take several hours.
- R.4.27 Thames Water may also need to visit the site for unplanned maintenance or repairs, for example, in the event of a blockage or equipment failure. Such a visit may require the use of mobile cranes and vans.

Scheme development

- R.4.28 The proposals to effectively control the Shad Thames Pumping Station CSO were subject to over eighteen months of extensive consultation and on-going engagement. This site featured during phase two consultation, and a period of pre-application publicity. Throughout this period the scheme evolved in response to consultation, through engagement with key stakeholders, and design development. The *Consultation Report*, which accompanies the application, contains detailed information on the consultation process.
- R.4.29 At phase one consultation, which ran from September 2010 to January 2011, it was proposed that the Shad Thames Pumping Station CSO would be intercepted and connected to the main tunnel. The preferred worksite for this work was Druid Street (St John's Playground). The Druid Street connection tunnel was proposed to transfer flows from the CSO interception point at Druid Street to the main tunnel at King's Stairs Gardens.
- R.4.30 At phase one consultation there was significant objection to the proposed use of the Druid Street site. The objections largely centred on the temporary loss of St John's Playground during construction and the impacts of construction works on residential amenity at nearby properties.
- R.4.31 Further technical work undertaken following phase one consultation established there was no longer a need to connect the Shad Thames Pumping Station CSO to the main tunnel. Instead, it was determined that storm flows could be effectively managed by utilising existing storage in

the sewers upstream of the pumping station and implementing works at Shad Thames Pumping Station to facilitate this.

R.4.32 The following site-specific characteristics were relevant in arriving at the decision to utilise Shad Thames Pumping Station as a system modification site:

- a. Modification and upgrading of the existing system removed the need to intercept the storm relief sewer and connect it to the main tunnel.
- b. Utilisation of the existing pumping station removed the need to use Druid Street's St John's Playground as a worksite.
- c. Thames Water could maximise use of an existing waste water asset.

R.4.33 Following extensive analysis and design development, the proposed improvement works at Shad Thames Pumping Station became the preferred site to control the CSO at phase two consultation which ran from November 2011 to February 2012.

R.4.34 The proposed works at Shad Thames Pumping Station continued to evolve in response to consultation responses received and on-going engagement. Following further improvements and the identification of mitigation measures where possible, use of Shad Thames Pumping Station as a system modification site continued to be identified as the most suitable option, and was publicised as Thames Water's proposed site at Section 48 publicity, which ran from July 2012 to October 2012 and is the selected CSO site for the application.

R.4.35 The principal issues that arose from pre-application consultation and Section 48 publicity for Shad Thames Pumping Station are identified below.

- a. Use of this site is supported as it addresses the CSO issue without the need to connect to the main tunnel: This issue is addressed in the Meeting the need subsection below.
- b. Compared to the phase one consultation option (interception at Druid Street), use of the Shad Thames Pumping Station site would be less effective than a full interception, with the result that more sewage would overflow into the tidal Thames: This issue is addressed in the Water quality and resources subsection below.
- c. The scale of construction effects on the local area, including noise and vibration, construction traffic and possible loss of car parking: This issue is addressed in the Noise and vibration, Traffic and transport subsections below.
- d. The height of permanent structures should be reduced to avoid impacts on residential amenity: This issue is addressed in the Good design and Landscape, townscape and visual impacts subsections below.
- e. The effect of construction activities on the historic environment, potential for ground movement during works and noise and vibration effects: This issue is addressed in the Historic environment subsection below.

- f. Specific suggested design amendments, including no windows on façade facing Wheat Wharf, use dark brickwork on Wheat Wharf side to minimise maintenance: This issue is addressed in the Good design subsection below.
- g. Effect on flood risk from surface water and general noise and vibration effects during operation of the tunnel: This issue is addressed in the Flood risk and Noise and vibration subsections below.

R.5 Site-specific planning considerations

- R.5.1 This section provides an analysis of the key planning considerations associated with the proposed works at Shad Thames Pumping Station, considering the issues and factors identified in the NPS and other issues relevant to the site.

Meeting the need

- R.5.2 The proposed works at Shad Thames Pumping Station would meet the need of effectively controlling the Shad Thames Pumping Station CSO by utilising additional in sewer storage capacity upstream of the pumping station. Modifying and improving the system at this location avoids interception and connection of the CSO to the main tunnel. The proposed modification works would make an important contribution to meeting the wider need for the project as identified in the NPS.
- R.5.3 Currently, in an average year, the Shad Thames Pumping Station CSO discharges approximately 93,000m³ of untreated sewage into the tidal Thames in front of Shad Thames. The CSO discharges approximately 15 times a year and releases 23 tonnes of sewage derived litter.
- R.5.4 The CSO was identified by the Environment Agency as requiring control. The CSO discharges have multiple impacts on water quality in this location, including a localised effect of rapidly dropping dissolved oxygen levels, the release of pollutants and the discharge of sewage derived litter.
- R.5.5 It is predicted that the CSO discharges will continue to worsen both in terms of volume and content. By the time the proposed works at Shad Thames Pumping Station are ready to become operational the CSO is predicted to discharge, in an average year, approximately 100,000m³ of untreated sewage, releasing 25 tonnes of sewage derived litter. The frequency of discharges is anticipated to remain at 15 times a year; however the volume of discharges is predicted to worsen.
- R.5.6 Modelling suggests that with the project in operation the number of spills would reduce from 15 to 4 per year, the discharges of untreated sewage in an average year would be reduced to 72,000m³. Sewage derived litter would be reduced to 18 tonnes. This reduction would have a beneficial effect on water quality.

Good design

- R.5.7 The amount, layout and scale of the proposed structures are primarily dictated by the function they need to perform in controlling the Shad Thames Pumping Station CSO and maintaining functionality of the

pumping station. The infrastructure on this site has been adapted, modified and extended since its original construction as part of the wider waste water infrastructure system in London. The proposed works would be the latest phase of the site's historical purpose and use. The proposed design reflects the site's historical function and would be both durable and adaptable in character with the existing infrastructure and buildings.

- R.5.8 Early site analysis and subsequent engagement identified that it was important for the design to respond to the following key opportunities and constraints.
- R.5.9 The site-specific design opportunities included:
- a. Utilise the form and function of the existing pumping station and operational site to incorporate the required works.
 - b. Provide a new vehicle access to the site.
 - c. Ensure that any new buildings and works to the existing pumping station are carefully designed to appropriately integrate with the surrounding site context and built form.
- R.5.10 The site-specific design constraints included:
- a. traffic management and access issues associated with the one-way configuration and layout of Maguire Street and a section of Shad Thames
 - b. the location of existing sewers and below-ground chambers within Maguire Street
 - c. the proximity to relatively high density commercial and residential development
 - d. the structural arrangement of the pumping station and the configuration of the existing facilities building
 - e. proximity of listed buildings and the location of the site within a conservation area.
- R.5.11 The design of the proposals for the site evolved through public consultation and on-going engagement with key stakeholders such as the Design Council CABE. The detail of the consultation process for the site is reported in the *Consultation Report* and Section 21 of the *Design and Access Statement*, which accompany the application. The design objectives arising from the analysis of site constraints and opportunities, and based on feedback from stakeholder consultations include:
- a. The height of permanent structures should be reduced as far as possible.
 - b. The new building should be visibly separate from the main pumping station.
 - c. Construction methods and materials ought to reflect the challenges of building in an infill site.

Height of permanent structures

- R.5.12 The functional design was adapted to respond to the operational nature of the site and its surrounding context within an environment of high density development.
- R.5.13 In order to accommodate the new drain-down pumping station within the existing pumping station, it is necessary to relocate some of the electrical switchgear equipment. The existing facilities building is not suitable for accommodating the necessary equipment, nor would it be possible to retrofit the required equipment within the existing building. It is therefore necessary to demolish the building and construct a new building to house this equipment. The main entrance to the new building would continue to be via the alleyway located off Maguire Street to the north of the site.
- R.5.14 The height and massing of the new building is largely determined by the space required to house equipment, as well as the location of below-ground structures and site limits. The design also evolved in light of consultation comments received which focused on ensuring impacts of the new building would not affect the amenity of neighbouring residential properties of the conservation area.
- R.5.15 As such the proposals endeavour to minimise the scale and bulk of the new building to ensure there are no greater impacts on adjoining residential properties than the existing arrangement. Careful consideration was given to keeping the height of the new building to a minimum and no higher than the existing facilities building, the main pumping station building or closer to the nearest adjacent residential properties than the existing building. In addition windows required in the northern elevation facing Wheat Wharf have fixed, obscure glazing to avoid any possible overlooking as shown on the indicative elevations and secured by design principle SHTPS.03. A ventilation column (0.225m internal diameter) is proposed to the courtyard elevation which is proposed as a simple pipe that terminates just above roof level and would have no design implications.

The new building should be visibly separate from the main pumping station

- R.5.16 The appearance and siting of the new building would provide a sensitive design response given the tight urban context. The design is supported by the Design Council CABE as it represents a well-considered, modest extension to the existing pumping station building that is visibly separate and subservient to the main pumping station building. The new building is also located to the rear of the site and would be generally obscured from Maguire Street ensuring it would not have any detrimental effects on the setting of the conservation area.
- R.5.17 The wall to the rear of the pumping station would be removed in order to facilitate the works and would be reinstated following construction. The reinstated wall would be built with similar bricks to ensure that it is sympathetic to the existing wall and surrounding conservation area (see Figure R.4).

- R.5.18 Through the use of good architecture the proposals respond sensitively to the characteristics of the site and its neighbours. The final detailed design would contribute positively to the character of the area.

Figure R.4 Visualisation of the reinstated rear wall



Water resources and flood risk

- R.5.19 The Shad Thames Pumping Station is located in Flood Zone 3a associated with the tidal Thames. The site is protected from flooding by the presence of flood defences.
- R.5.20 There are no licensed or known unlicensed abstractions from the River Terrace Deposits or upper aquifer within 1km of the site. Abstractions from the lower aquifer would be unaffected by the limited extent of the proposed construction. There are no Source Protection Zones or environmental designations relevant to groundwater in the vicinity of the Shad Thames Pumping Station site.
- R.5.21 A Flood Risk Assessment undertaken in accordance with Section 4.4 of the NPS is included within the *Environmental Statement*. This shows that the proposed development would be appropriate for the area as flood risk to the development would remain unchanged. Flood risk would be managed through appropriate design measures and the development would not lead to an increase in flood risk on the surrounding areas. Therefore, no significant flood risk effects are likely.
- R.5.22 In accordance with the *CoCP* (Section 8) all site drainage during construction would be drained and discharged to mains foul or combined sewers. Foul drainage from the site welfare facilities would be connected to the mains foul or combined sewer. These design measures would help manage the risk from this source during construction but would not reduce the level of risk associated with this flood source.
- R.5.23 The development is at residual risk of tidal flooding in the event of a breach in the local flood defence wall along the edge of the tidal Thames or overtopping of the defence wall as a result of a failure of the Thames Barrier. In the very unlikely event of a mechanical failure at the pumping

station, there is potential for sewage to back up within the system and surcharge through manholes and gullies. The consequence of a breach or failure of flood defences or a failure of the pumping station, would not compromise the long term operational function of the main tunnel and therefore no additional measures above those outlined in the *CoCP* are proposed.

- R.5.24 Part A of the *CoCP* includes a specific measure to incorporate permeable surfacing on temporary hardstanding as far as reasonably practicable. The surface water drainage commitment at this site is to reinstate site drainage as existing.
- R.5.25 Flood risk from all sources has been managed as far as possible through design and the measures incorporated in the *CoCP*, so the criteria in NPS para. 4.10 would be satisfied. No significant flood effects are likely from the proposed development.
- R.5.26 The site therefore meets the decision making principles set out in the NPS given the works are expected to improve water quality and would not affect water resources or flood risk.
- R.5.27 Once operational, the project would have a beneficial effect on water quality in the tidal Thames and contribute to the protection and enhancement of biodiversity of the Blue Ribbon Network.

Air quality, emissions, dust and odour

- R.5.28 As a result of previous exceedances of air quality objectives, London Borough of Southwark has declared an Air Quality Management Area across the northern part of the borough, which encompasses the site. Local monitoring data indicates that the air quality standards for nitrogen dioxide and particulate matter are regularly exceeded in the vicinity of the site.
- R.5.29 The closest sensitive receptors to the site are occupiers of the surrounding residential developments Wheat Wharf, Tamarind Court, Vanilla and Sesame Court and Clove Building, as well non-residential receptors including the Design Museum and recreational users of the Thames Path and the river.
- R.5.30 In accordance with the measures included in the *CoCP*, all reasonable steps would be taken to minimise detrimental impacts on air quality or amenity resulting from emissions and dust, as required by the NPS. With the implementation of the *CoCP* measures, the overall effect on local air quality from construction (ie, effects from construction road traffic and construction plant), would not be significant at any of the closest sensitive receptors.
- R.5.31 During operation the *Environmental Statement* does not identify any odour or dust issues at this site.
- R.5.32 The construction and operational effects with regard to air quality and odour would be consistent with NPS policy objectives to minimise detrimental impacts upon amenity and nuisance (NPS para. 4.12.1) at Shad Thames Pumping Station. Appropriate measures are proposed to ensure that the proposals would not lead to any substantial changes in air

quality, emissions, dust or odour or a significant loss of amenity during construction or operation.

Biodiversity and geological conservation

- R.5.33 The Shad Thames Pumping Station is within 250m of Hermitage Basin SINC which lies northeast of the site and St Katharine's Dock SINC which is north of the site.
- R.5.34 There would be no in-river works associated with this site therefore no significant effects are predicted on aquatic designations, habitats or species either during construction or operation.
- R.5.35 By undertaking works to control the CSO at this site, the project would improve river water quality in the area. This is predicted to lead to an increase in the diversity and abundance of invertebrates, the distribution of pollution-sensitive fish and invertebrate species, and improvements to the quality of foraging habitat throughout the tidal Thames.
- R.5.36 In respect of terrestrial ecology, the site and its surroundings currently comprise buildings and hardstanding. The site contains a small area of introduced shrub, which would require removal as part of site clearance. The shrubbery is classified as having no potential for protected or notable species. Four street trees would need to be removed to facilitate construction works, but would be replaced following construction.
- R.5.37 In accordance with the NPS (para. 4.5.17) the project sought to take advantage of opportunities to conserve and enhance biodiversity in the proposals for this location by ensuring street trees are replaced and contributing to water quality improvements.

Landscape and visual impacts

- R.5.38 The townscape surrounding the site is consistent in character through the scale of buildings and configuration of narrow streets. The landscape is dominated by converted mid-rise warehouses, predominantly four to six storeys with commercial uses at street level. The Design Museum opposite the site to the northeast is a dominant feature within the streetscape and in the context of the site and contains a mix of residential, office, gallery and retail uses.
- R.5.39 St Saviours Dock is located approximately 70m east of the site. The townscape in this area is arranged in a grid formation running parallel to the river. The mixed use and residential buildings range from four to five storeys in height and are largely organised around courtyard spaces.
- R.5.40 Despite the location of the site within the Tower Bridge Conservation Area, Shad Thames Pumping Station is not listed and, due to the enclosed nature of the pumping station building, does not form a key part of the setting of the conservation area. While construction equipment, plant and associated activities may alter the immediate setting temporarily around Maguire Street, the setting of the wider townscape would be largely unaffected. This is because the proposed new building is located to the rear of the site and is of an appropriate scale and form and the alterations to the façade of the pumping station are proposed to match the existing design and detailing. The proposed works at this site are consistent with

works that Thames Water would usually undertake to maintain and improve waste water infrastructure across London.

- R.5.41 The setting of the adjacent St Saviour's Dock Conservation Area would also remain unaffected as a result of the proposed works for the same reasons and its proximity further away from the site.
- R.5.42 Measures are incorporated in the *CoCP* to minimise potential effects associated with the construction activities on the site. Despite this, the construction works would be visible in the street due to the presence of hoardings and construction activity. As such no significant effects are anticipated on nearby sensitive receptors including residences at the northern and southern ends of Vanilla and Sesame Court.
- R.5.43 Given the limited changes to the operational nature of the site, no significant effects on landscape, visual and townscape components are anticipated. The proposed infrastructure would be contained within the existing operational site. The new building to the rear of the pumping station would be similar in size and character to the existing building and not generally visible from public vantage points on the local streets.
- R.5.44 The NPS recognises in para. 1.4.4 that NSIPs are likely to take place in mature urban environments with adverse townscape and visual effects within a built up environment, with many possible receptors. Large scale construction works are commonplace in London. The construction effects of the project are unavoidable and temporary and should be considered in this context.
- R.5.45 The scale of the building was carefully controlled to manage impacts on the surrounding area and the materials would need to be submitted to and agreed by the local planning authority. The proposal was designed to take careful account of the townscape characteristics of the area to ensure a consistent approach to massing, building line and materials.

Land use including open space, green infrastructure and green belt

- R.5.46 The development of the site is largely proposed on and under land owned by Thames Water. The majority of the Shad Thames Pumping Station site constitutes operational land as defined in the Town and Country Planning Act, as being land that is either specifically used or held for the purposes of carrying out Thames Water's statutory undertakings.
- R.5.47 The key land uses surrounding the site are identified in the land use plan within Annex R of this report.
- R.5.48 The impact of the proposals on land uses and designations were key considerations in the site selection process and on-going design development. The proposed works at this site do not affect designated open space.
- R.5.49 The proposed use of this site would extend the life and increase the efficiency of use of the existing facility and is not expected to give rise to significant land use effects during construction or operation.

- R.5.50 The proposed works would not prevent the beneficial continuation of surrounding land uses, either during construction or operation. Similarly, no extant planning permission, committed developments, or policy allocations for future development within the surrounding area would be adversely impacted as a result of the proposed works in this location.

Noise and vibration

- R.5.51 The current noise environment in the vicinity of the site is predominantly from road traffic noise. Ambient noise levels reflect the activity of a dense urban environment, within which the site is located. The nearest receptors that are sensitive to noise and vibration are adjacent mixed-use residential and commercial properties Vanilla and Sesame Court, Tamarind Court, Wheat Wharf, Coriander Court and the Clove Building opposite the site.
- R.5.52 Noise assessments undertaken for the site predict adverse noise and vibration effects arising from construction activities on adjacent residential properties. Modelling of the worst-case scenario predicted that at Tamarind Court (front façade) the potential significant noise criteria are predicted to be exceeded during the daytime for one month during the pumping station main works. The potential significant noise criteria would also be exceeded at Coriander Court (Maguire Street and Gainsford Street facades) during the daytime for one month during manhole works.
- R.5.53 The predicted effects would be temporary and are based on the highest anticipated exposures during the most intense vibration activities within the site. While some of the temporary noise and vibration effects are predicted to be significant, the effects would be similar to any construction noise impacts that arise in a dense urban environment.
- R.5.54 A significant vibration effect is predicted at Tamarind Court, Coriander Court and the Clove Building. The CoCP Part A seeks to ensure that piling methods which limit noise and vibration are selected where possible (CoCP Part A para 6.4.3d). If ground conditions at the Shad Thames Pumping Station site are such that these methods could be implemented, effects would not be significant. However as the specific ground conditions encountered would not be known until piling is underway; it cannot be guaranteed that these measures can be implemented. Therefore, in the worst case significant effects would arise from piling at this location.
- R.5.55 Project-wide design embedded measures include operating in accordance with best practice, selecting the quietest cost-effective plant available, optimising plant layout to minimise noise emissions and installation of site hoarding.
- R.5.56 Bespoke mitigation is incorporated in the CoCP Part B to manage noise and vibration effects during construction. Proposed site-specific measures include that during the construction of the manhole and sewer connection in Maguire Street suitable fencing would be used including insulation to minimise noise impacts on adjacent properties. The relevant adjacent properties would be monitored for vibration in advance and throughout the duration of the works.
- R.5.57 The NPS advises that in situations where other forms of noise mitigation have been exhausted, noise insulation to dwellings or, in extreme cases,

compulsory purchase of affected properties may be considered in order to gain consent for what might otherwise be an unacceptable development. In the case of the Thames Tideway Tunnel no extreme cases have been identified at the date of the submission of the application for development consent which would necessitate the compulsory acquisition of properties due to significant adverse effects. The *Thames Tideway Tunnel noise insulation and temporary re-housing policy* and the *Thames Tideway Tunnel project compensation programme* (included within Schedule 2 of the *Statement of Reasons*, which accompanies the application) have been developed to offset the effects arising from construction related disturbance. The noise insulation and temporary re-housing policy would be implemented where predicted or measured construction noise levels exceed published trigger levels. The compensation programme was established to address claims of exceptional hardship or disturbance. In relation to construction, eligible works would be directed towards mitigation or other required actions to reasonably reduce disturbance from noise or construction activities. Residential properties at Tamarind Court (front façade) and Coriander Court (Maguire Street and Gainsford Street) may be eligible for noise insulation as described under the policy, which, if taken up, would reduce the predicted noise effects to a non-significant level. If the identified mitigation measures for vibration cannot be implemented, properties at Tamarind Court, Coriander Court and the Clove Building may be eligible for compensation under the policy.

- R.5.58 No noise or vibration issues would arise from the proposals at Shad Thames Pumping Station during the operation phase.
- R.5.59 The NPS recognises that NSIPs are likely to take place in mature urban environments and in the short term lead to noise disturbance during construction. The mitigation measures put forward in the *CoCP* are appropriate to minimise as far as possible any adverse impacts on health and quality of life from noise. This is a relatively high density urban environment and some noise and vibration effects on neighbouring land uses are inevitable. The scale of the works proposed is not materially different from other large scale building projects in a mature urban environment and have been minimised as far as possible.

Historic environment

- R.5.60 The pumping station is an early 20th century structure in glazed brick and terracotta. It is classically-styled with a number of large arched windows. The site lies within the Tower Bridge Conservation Area, designated by the London Borough of Southwark in 1978 in order to preserve and enhance the historic character of the area. It includes the southern half of Tower Bridge, along with numerous 19th- and early 20th-century warehouse buildings, converted to modern residential apartments as well as retail and commercial units.
- R.5.61 While the pumping station is not statutorily or locally listed, the Tower Bridge Conservation Area appraisal document identifies it as a building that makes a positive contribution to the overall character of the conservation area. Accordingly, the *Heritage Statement*, which accompanies the application, concludes that the building is of medium

significance as a heritage asset due to its age, distinctive architecture and contribution to the historic character of Maguire Street.

- R.5.62 The nearest listed structures to the site are the Grade II listed Wheat Wharf, Anise warehouse at 15 Shad Thames, and Butler's Grinders' and Operators' warehouse at 11 Shad Thames. The assessment undertaken for the site indicates that proposed works would not have any significant adverse effects on the setting of nearby listed structures during construction and operation. Further, no effects resulting from ground movement are predicted on historic receptors in the vicinity of the site.
- R.5.63 Given that the proposed works would be undertaken within and to the rear of the existing pumping station, the character of the conservation area would not be detrimentally impacted. The proposed modification works to the front of the existing building to provide new access would be consistent with the appearance and fenestration of the existing façade. The heritage design principles and site-specific design principles are submitted for approval, which would ensure that the design would protect buildings and other elements of the historic environment, including listed buildings. Site-specific measures incorporated in the *CoCP* Part B includes re-use of bricks from beneath the existing window where practicable in completing the new doorway and ensuring the new door would be in keeping with the current door design.
- R.5.64 In accordance with NPS policy, an assessment was undertaken to determine the archaeological potential on the site. The site lies within the Borough, Bermondsey and River Archaeological Priority Zone and has a high potential for palaeoenvironmental remains. In addition there is potential for historic settlement areas on the gravel terraces and eyots ('islands' of higher gravel) adjacent to the floodplains. A compensatory programme of investigation and recording is proposed as a mitigation measure to manage potential effects on archaeology associated with construction activities. The measures incorporated in the *CoCP* Part A include preparation of a heritage management plan, which would indicate how a written scheme of investigation would be implemented across the project.
- R.5.65 The NPS recognises that NSIPs are likely to take place in mature urban environments and to have adverse effects on archaeology and culture heritage. The proposals were developed with the benefit of a thorough understanding of the significance of the site and the heritage status and characteristics of its neighbours. The design was developed to minimise adverse effects on the historic environment and to take opportunities to preserve the long term setting of nearby buildings.

Light

- R.5.66 Through the measures included within the *CoCP*, all reasonable steps were considered, and would be taken, to minimise detrimental impact on amenity resulting from artificial light.
- R.5.67 The *Daylight/Sunlight Assessment*, which accompanies the application, identifies that that the new electrical switchgear building would be smaller in scale and would be set no closer to sensitive receptors than the existing

facilities building. Therefore the permanent works would not result in any increased impacts.

R.5.68 Site lighting would have minimal spill into the wider area due to the measures set out in the *CoCP*, and the surrounding area is lit in the early evening by street lighting and by light spill from surrounding buildings.

R.5.69 No operational lighting is proposed at the Shad Thames Pumping Station site.

Traffic and transport

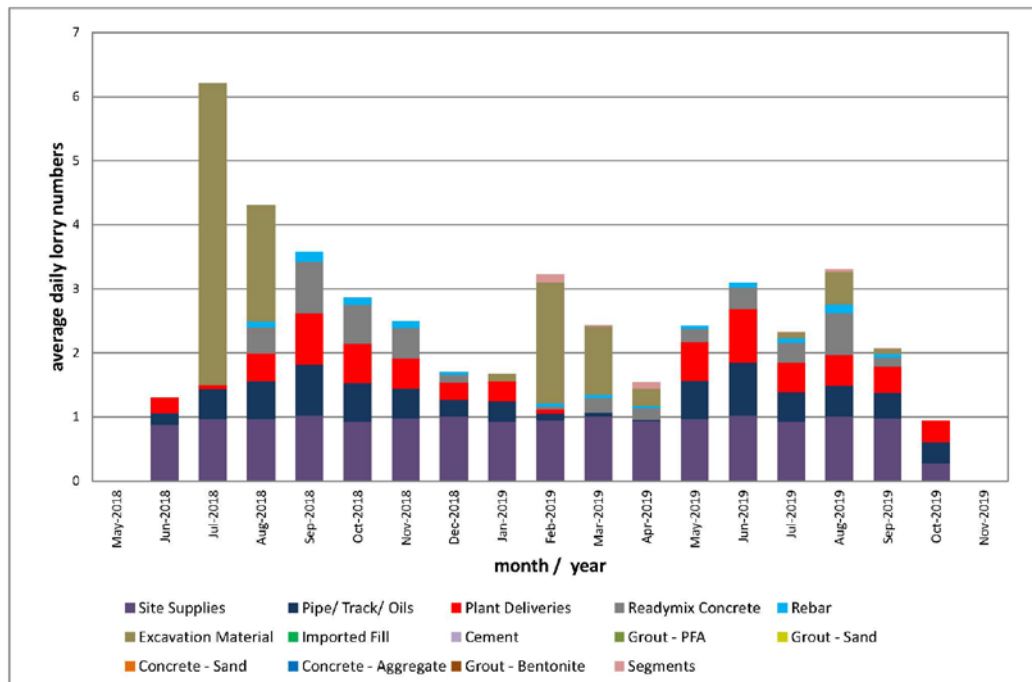
R.5.70 The Shad Thames Pumping Station site has moderate public transport accessibility. It is located in proximity to a number of bus routes, Bermondsey Underground Station (1.1km) and London Bridge Station (1.3km), which provides National Rail services.

R.5.71 During construction the site would use the existing and proposed new access/egress points on Maguire Street during the three construction phases. The construction works within and along Maguire Street and Gainsford Street would be carried out in different periods of the construction programme. Construction of the manhole/pumping main along Maguire Street would require a temporary closure of the road. During this period two-way operation on the northern part of Shad Thames would be implemented with associated traffic management to maintain access to properties. For the construction of the chamber in Gainsford Street, a section of the road would be closed and traffic diverted along Shad Thames onto Maguire Street and Gainsford Street.

R.5.72 In general, vehicle movements during construction would take place on weekdays between 8am and 6pm, with up to one hour before and after these hours for mobilisation and demobilisation processes. Mobilisation may include loading, unloading, the arrival and departure of staff onsite, and movement to and from the place of work.

R.5.73 It is anticipated that there would be one additional heavy vehicle movement along Jamaica Road (A200) and Shad Thames per hour as a result of the construction works at Shad Thames Pumping Station. Given the low number of additional vehicles, the impact of construction on road network delay would be negligible. Figure R.5 illustrates the estimated construction lorry profile at the site.

R.5.74 There would be a minor impact on pedestrians as a result of proposed diversions on Maguire Street and Gainsford Street. No adverse effects were identified with regard to other pedestrian routes, cycle routes and facilities, public transport routes and patronage, parking or the highway network.

Figure R.5 Estimated construction lorry profile

- R.5.75 Measures to reduce transport impacts included in the *CoCP* include HGV management and control measures such as designated routes to sites for construction vehicles. In addition to the general measures in the *CoCP* Part A, the following measures were incorporated into the *CoCP* Part B in relation to the Shad Thames Pumping Station site:
- Site access would be from Jamaica Road (A200), Shad Thames and Maguire Street. Traffic leaving the site would turn right from Maguire Street into Gainsford Street, left into Lafone Street and left onto Tooley Street (A200).
 - Gainsford Street and Maguire Street junction would be closed for approximately eight weeks the duration of the required manhole works.
 - Existing parking on Maguire Street opposite the Pumping Station shall be suspended.
 - The period of closure of Maguire Street for the construction of the manhole and sewer connection shall be minimised. Shad Thames to be made two-way during closure.
 - The closure of the footpath outside of the pumping station shall be clearly signed.
 - During the construction of the manhole and sewer connection in Maguire Street, pedestrian access to the existing building entrances shall be maintained at all times.
 - Liaison and consultation with London Borough of Southwark shall take place to agree details including notices, publicity and coordination with other potential works.

- R.5.76 During the operational phase access to the site would be from the existing and new access points on Maguire Street. Should access to below ground chambers in Maguire Street and Gainsford Street be required then traffic management, possibly including a temporary road closure, may be required. These works would be consistent with works that Thames Water would usually undertake to upgrade and maintain waste water infrastructure in London.
- R.5.77 Normal maintenance access would require a light commercial vehicle on a one to three monthly basis. Maintenance would be undertaken from within the Shad Thames Pumping Station site as part of the existing maintenance routine. The transport demands created by the development in the operational phase would be extremely low.

Waste management

- R.5.78 The Waste Strategy was developed to provide a framework for the management of materials and waste produced throughout the construction and operational phases of the project. This ensures that the requirements set out in the para. 4.14.6 of the NPS would be satisfied, and the Waste Strategy would be secured via a Requirement/obligation in accordance with para. 4.14.7 of the NPS.
- R.5.79 No particular site-specific waste issues arise that this site.

Socio-economic

- R.5.80 The project-wide socio-economic issues and benefits of the project both during construction and operation are detailed in Section 8 of the *Planning Statement*.
- R.5.81 Construction and operational effects in relation to socio-economic considerations for this site were not assessed in the *Environmental Statement*. This is on the basis that the proposed works are minor, would be carried out within an existing Thames Water operational site and would be consistent with works that Thames Water would usually undertake to upgrade and maintain waste water infrastructure in London.
- R.5.82 No significant socio-economic effects are likely to arise from the construction or operation of the system modification works at Shad Thames Pumping Station.
- R.5.83 In accordance with the NPS, the *Equalities Impact Assessment* undertaken provides a description of the demographics of the area surrounding the site and assesses how equalities groups may be affected by the generic impacts associated with the project, including air emissions, flood risk, noise and vibration and the like.
- R.5.84 The *Equalities Impact Assessment* concluded that no equalities groups would be disproportionately impacted as a result of the proposed works.

R.6 Overall conclusions

- R.6.1 The need for the works at this site and for the project as a whole is established at the national level in the NPS. In an average year, the Shad Thames Pumping Station CSO discharges approximately 92,000m³ of untreated sewage into the tidal Thames. Controlling this CSO by mobilising storage capacity within existing sewers would substantially reduce the number of spills and amount of untreated sewage being discharged into the tidal Thames in this location to meet the identified need.
- R.6.2 Given the site's location within an operational Thames Water pumping station, and proximity to a number of sensitive receptors, there is likely to be some disturbance to surrounding properties during the one and half year construction period. While Thames Water sought to minimise potential disturbance through sensitive design and mitigation, some negative effects would likely remain. These principally relate to noise effects at surrounding residential properties during construction.
- R.6.3 The assessment above explained that the proposals incorporate measures to limit the effects of each of these impacts. For each of these effects, the project design was refined and all practicable mitigation identified and committed to, in accordance with the advice in the NPS. The residual impacts are an unavoidable consequence of controlling the CSO in a dense urban environment.
- R.6.4 The legacies that the project would leave in this location are significant. The proposals represent an ingenious solution to increase storage capacity within the existing network, thereby avoiding the need for a potentially more disruptive intervention at the point of the CSO outfall. Controlling the discharges from the Shad Pumping Station CSO would improve the water quality in the tidal Thames with associated benefits to ecology and amenity. It would also help reduce the health risks to river users and the quantity of sewage derived litter.
- R.6.5 The proposed works at the Shad Thames Pumping Station site and the mitigation measures developed and advanced as part of the application for development consent directly accord with the approach required by the NPS. Adverse effects have been minimised as far as possible and opportunities have been taken to enhance the local environment and to leave a positive legacy.
- R.6.6 Section 8 of the *Planning Statement* considers the implications of the local effects of the works at Shad Thames Pumping Station and the other sites, and describes the overall balance between impacts and benefits associated with the project as a whole, against the guidance in the NPS. It concludes that the works at Shad Thames Pumping Station, and the project as a whole, are compliant with the NPS and that development consent should be granted.

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Annex R: Drawings for Shad Thames Pumping Station

List of drawings

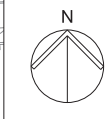
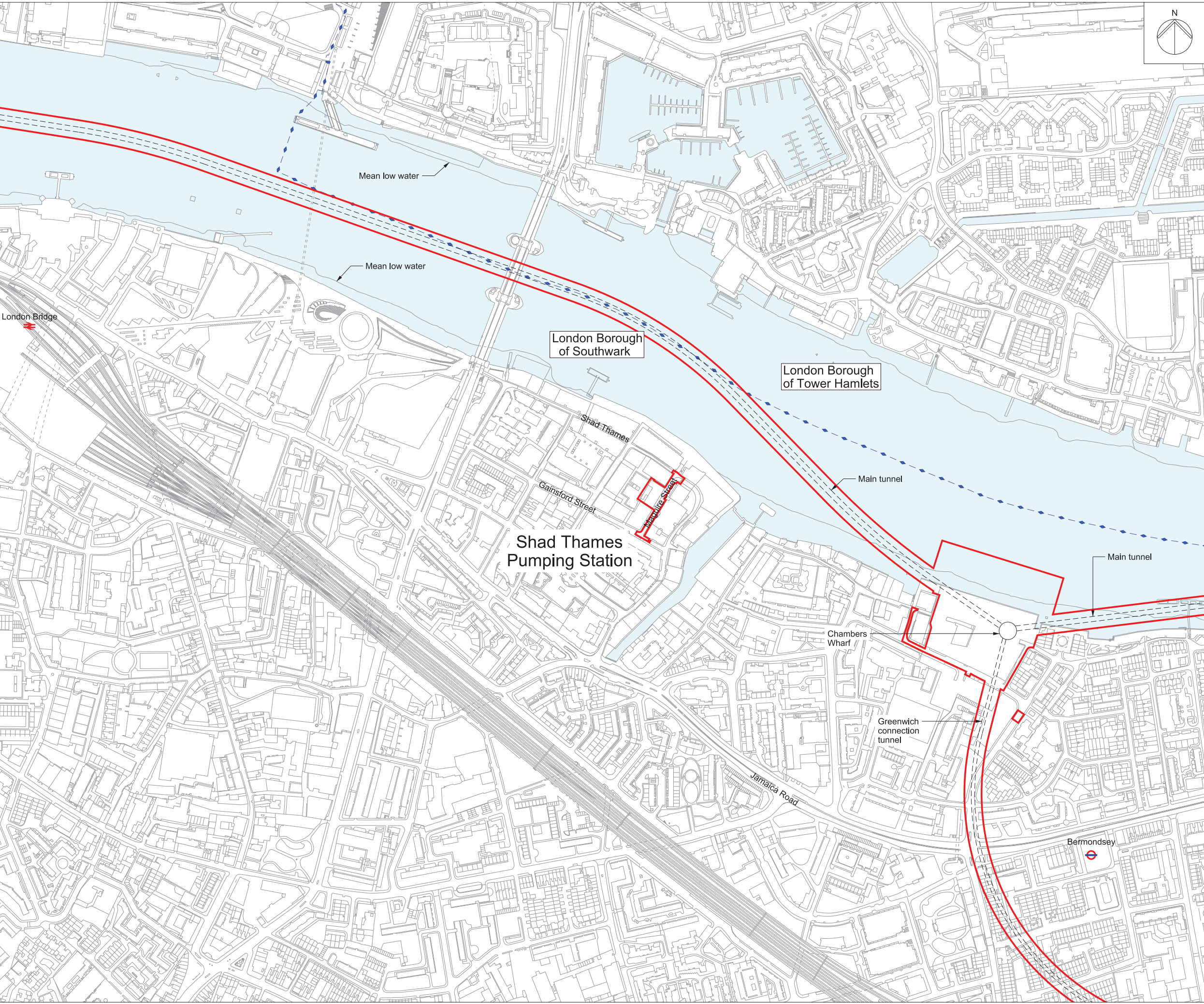
Shad Thames Pumping Station: Location plan

Shad Thames Pumping Station: Existing roof plan

Shad Thames Pumping Station: Construction phasing plans

Shad Thames Pumping Station: Land use plan

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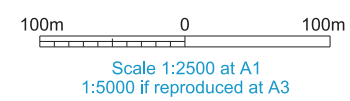


Coordinates are to be Ordnance Survey Datum OSGB36. All levels are in metres and relate to the Tunnel Datum which is 100 metres below Ordnance Datum Newlyn.

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

Notes:

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



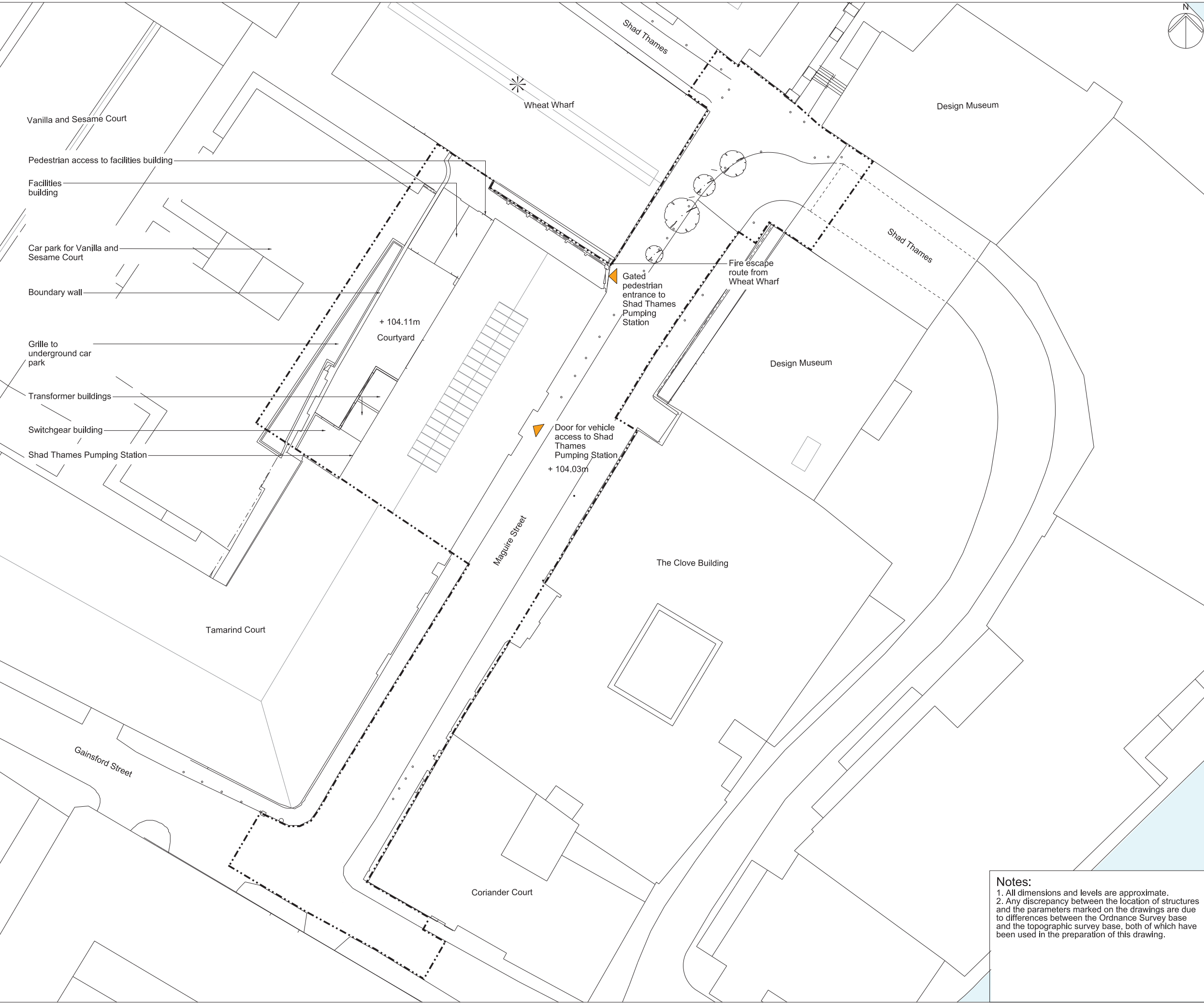
FOR INFORMATION

[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



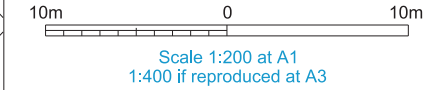


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- Key:**
- Limits of land to be acquired or used (LLAU)
 - + 105.40m Existing levels (shown in metres above tunnel datum)
 - * Listed buildings/structures
 - ⊙ Existing trees within surveyed area (trunk sizes vary)
 - ▶ Thames Water access



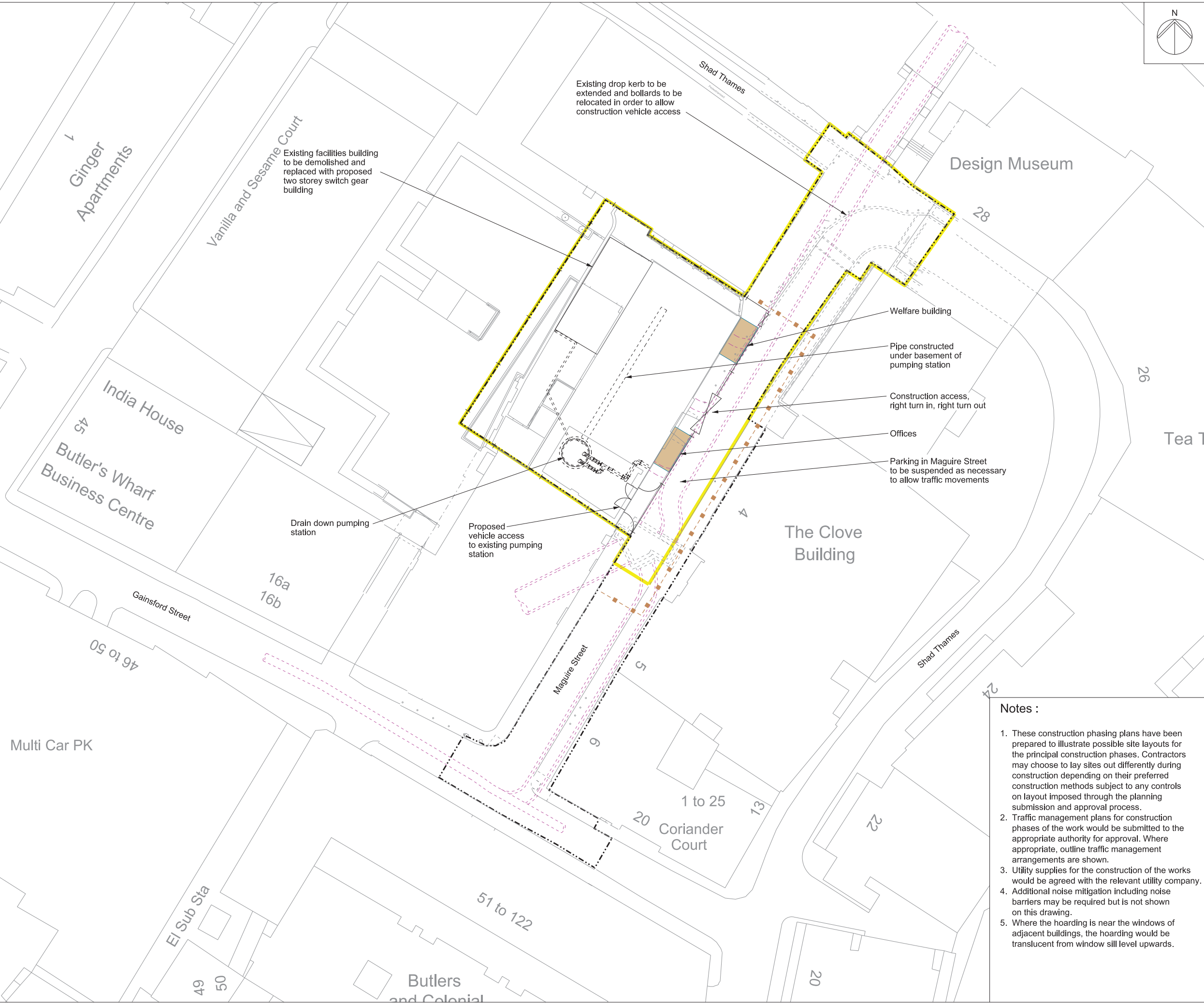
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Location
Shad Thames Pumping Station
London Borough of Southwark

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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Keyplan:

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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

10m 0 10m

Scale 1:250 at A1
1:500 if reproduced at A3

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
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January 2013

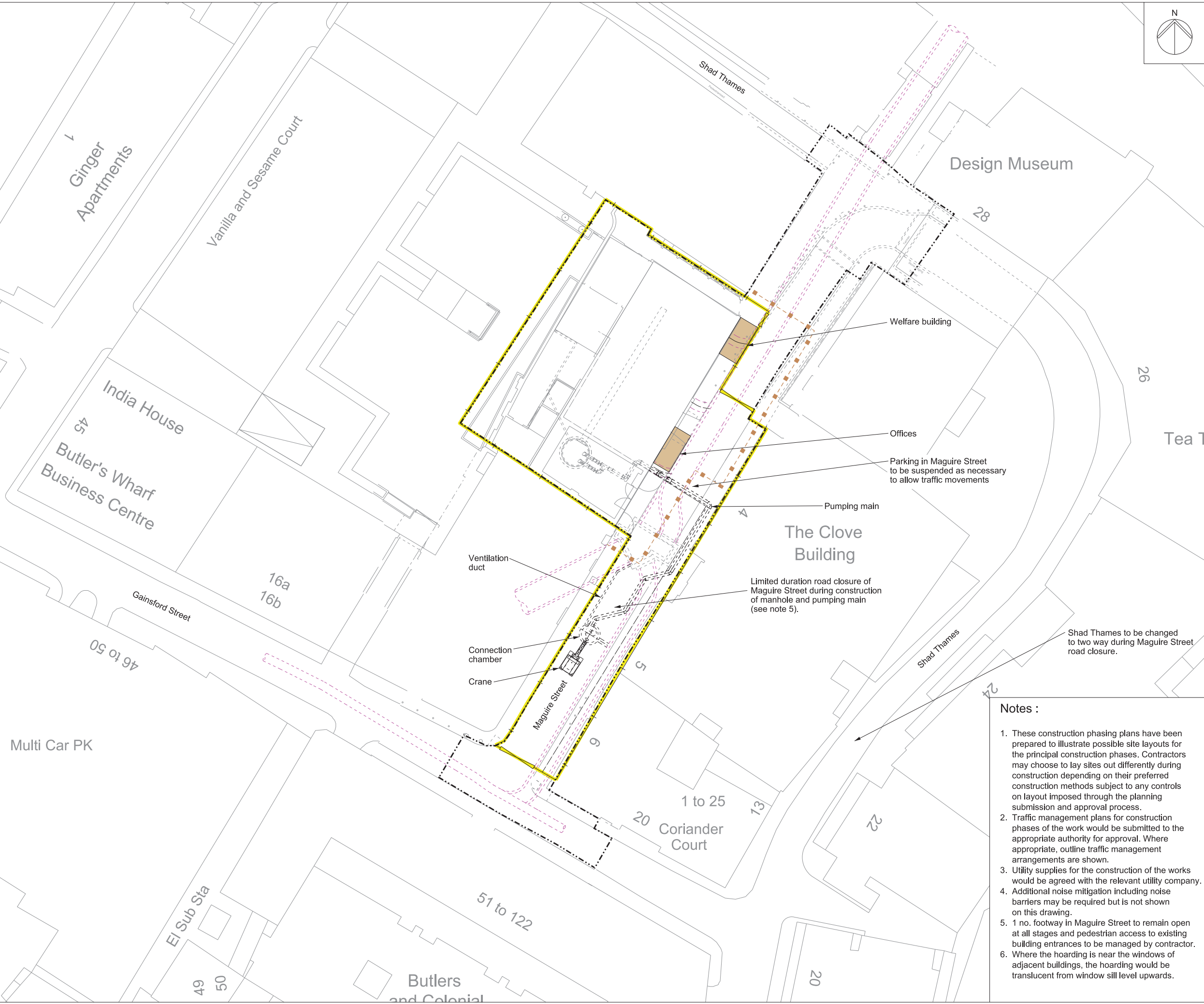
Thames Tideway Tunnel

Creating a cleaner, healthier River Thames

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.

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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
—+—	Route of temporary diversion of footway
⌂	Site access
- - - -	Existing sewers

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ILLUSTRATIVE

[Location](#)
Shad Thames Pumping Station
London Borough of Southwark

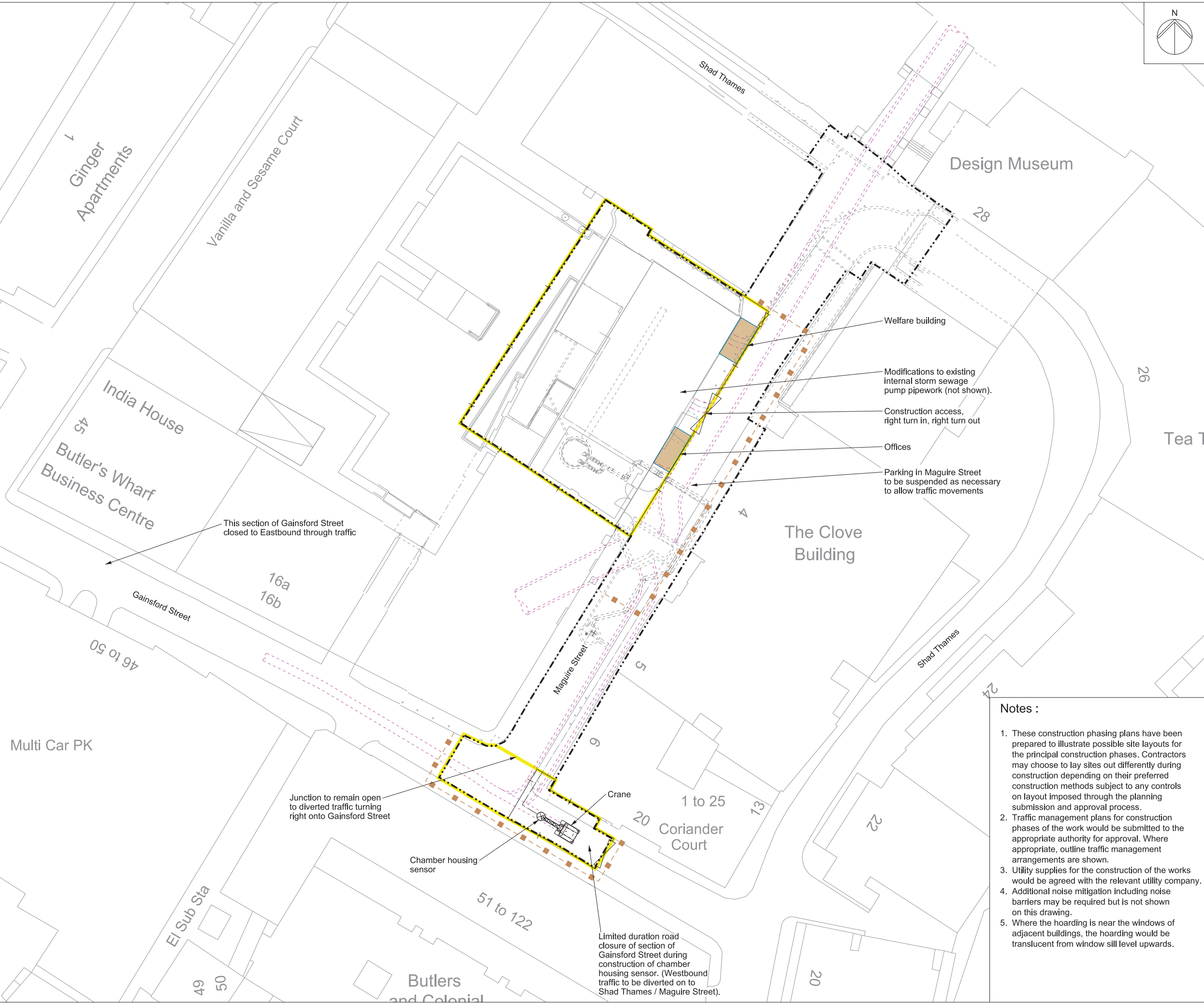
[Document Information](#)
Application for Development Consent
Construction phases - phase 2
Pumping station modification works
Book of plans - section 20
DCO-PP-18X-SHTPS-200015
January 2013

Thames Tideway Tunnel
Creating a cleaner, healthier River Thames

Thames Water

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.
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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.





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Keyplan:
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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



10m 0 10m
Scale 1:250 at A1
1:500 if reproduced at A3

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ILLUSTRATIVE

Location
Shad Thames Pumping Station
London Borough of Southwark

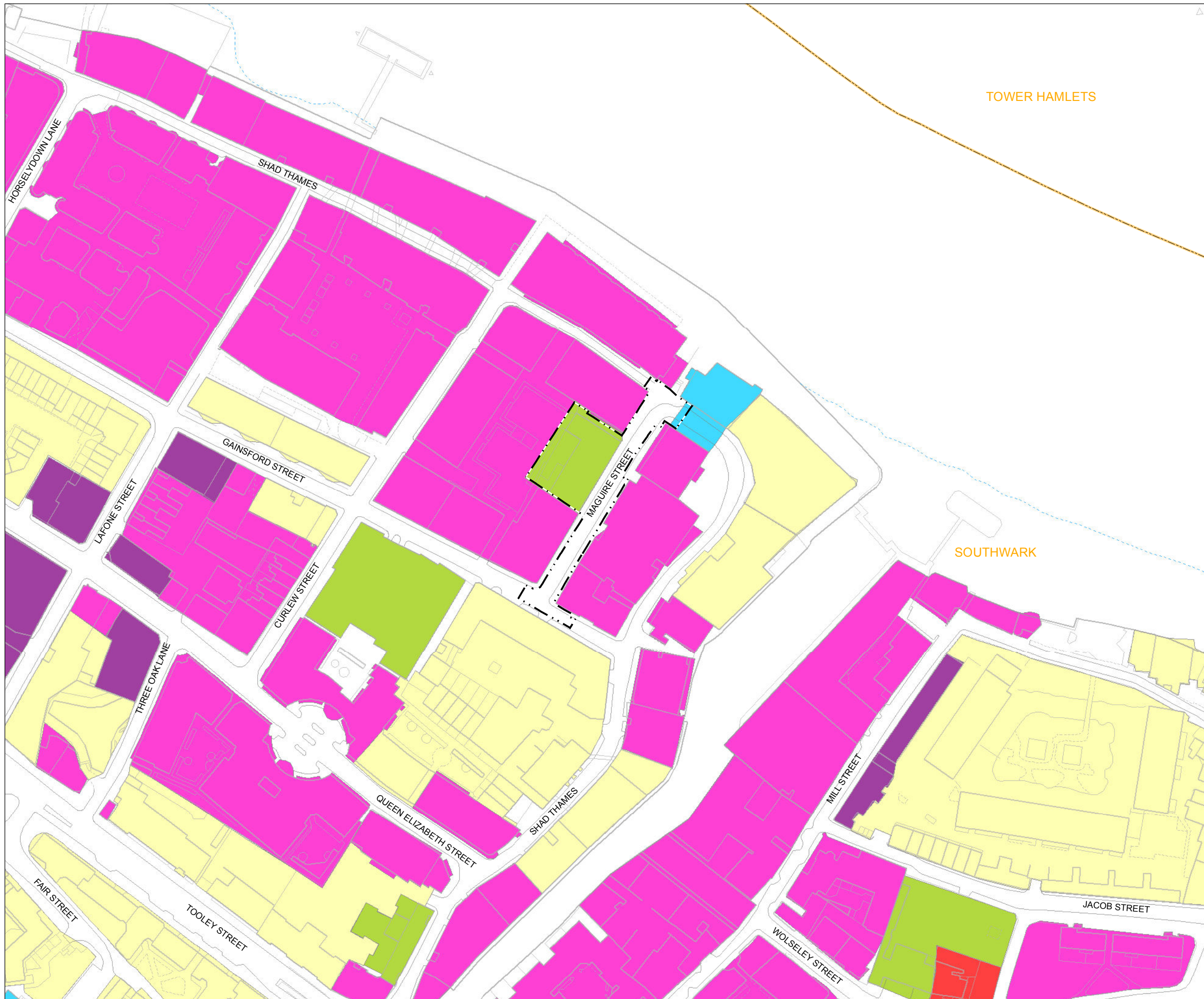
Document Information
Application for Development Consent
Construction phases - phase 3
Pumping station modification works
Book of plans - section 20
DCO-PP-18X-SHTPS-200016
January 2013



Thames Tideway Tunnel
Creating a cleaner, healthier River Thames



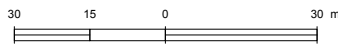
Thames Water



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- Key**
- Limits of Land to be Acquired or Used
 - Local Authority Boundary
- Land Use**
- Class A1-A5 (Shops, Financial & Professional Services, Restaurants, Drinking Establishments and Hot Food Takeaways)
 - Class B1 (Business (Offices except A2) Research and Development, Light Industry)
 - Class C3-C4 (Dwelling Houses)
 - Class D1-D2 (Non Residential Institutions (Community Facilities) and Assembly and Leisure)
 - Mixed Use
 - Other



Scale 1 : 1,500 at A3

FOR INFORMATION

Location
Shad Thames Pumping Station
London Borough of Southwark

Document Information
Planning Statement
Land use

1PL03-MG-00821
January 2013



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