

Thames Tideway Tunnel
Thames Water Utilities Limited



Application for Development Consent

Application Reference Number: WWO10001

Design and Access Statement

Doc Ref: **7.04**

Part 2

Falconbrook Pumping Station

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

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January 2013

Thames
Tideway Tunnel 
Creating a cleaner, healthier River Thames

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Section 13

Falconbrook Pumping Station

13.1 Introduction

13.1.1 A worksite is required to connect the Falconbrook Pumping Station CSO to the main tunnel. The proposed development site is known as Falconbrook Pumping Station, which is located in the London Borough of Wandsworth.

13.1.2 We have agreed with the London Borough of Wandsworth that some elements of the detailed design proposals would be drawn up at a later stage. The detailed designs would be submitted to the local authority for approval in the form of a DCO requirement. Therefore, the majority of the images and plans in this section are for illustrative purposes only. The proposed landscape design is indicative, except for the layout of the above-ground structures, which is illustrative.



Figure 13.1: Aerial photograph of the existing Falconbrook Pumping Station site with LLAU indicated

13.2 Existing site context

13.2.1 The site itself comprises part of the Thames Water operational Falconbrook Pumping Station compound, a disused toilet block to the southwest of the pumping station and part of an area of public realm adjacent to the York Gardens Library and Community Centre.

13.2.2 The site falls within York Gardens Site of Importance for Nature Conservation (local importance) and lies within 200m of the River Thames and Tidal Tributaries Site of Importance for Nature Conservation (metropolitan importance) on the opposite side York Road. It also falls within the Wandsworth Archaeological Priority Area.

13.2.3 The site does not contain any listed buildings and it does not fall within a conservation area.

13.2.4 The site is bounded to the north by York Gardens and Adventure Playground. York Gardens surrounds the site to the east and south, and it is bounded to the west by York Road. The York Gardens Library and Community Centre is located to the south.

13.2.5 The area to the north of the site features residential and commercial uses and the pattern of residential development continues to the east and south. The closest residential development is located approximately 45m to the east.

13.2.6 Clapham Junction Conservation Area lies 500m to the southeast of the site. St Peter's Church Hall 150m to the south of the site and the nearby South East Tower of the Church of St Peter and St Paul are Grade II listed buildings.

13.2.7 The area to the west is mixed residential, commercial and industrial, including retail outlets and the Heliport Industrial Estate.

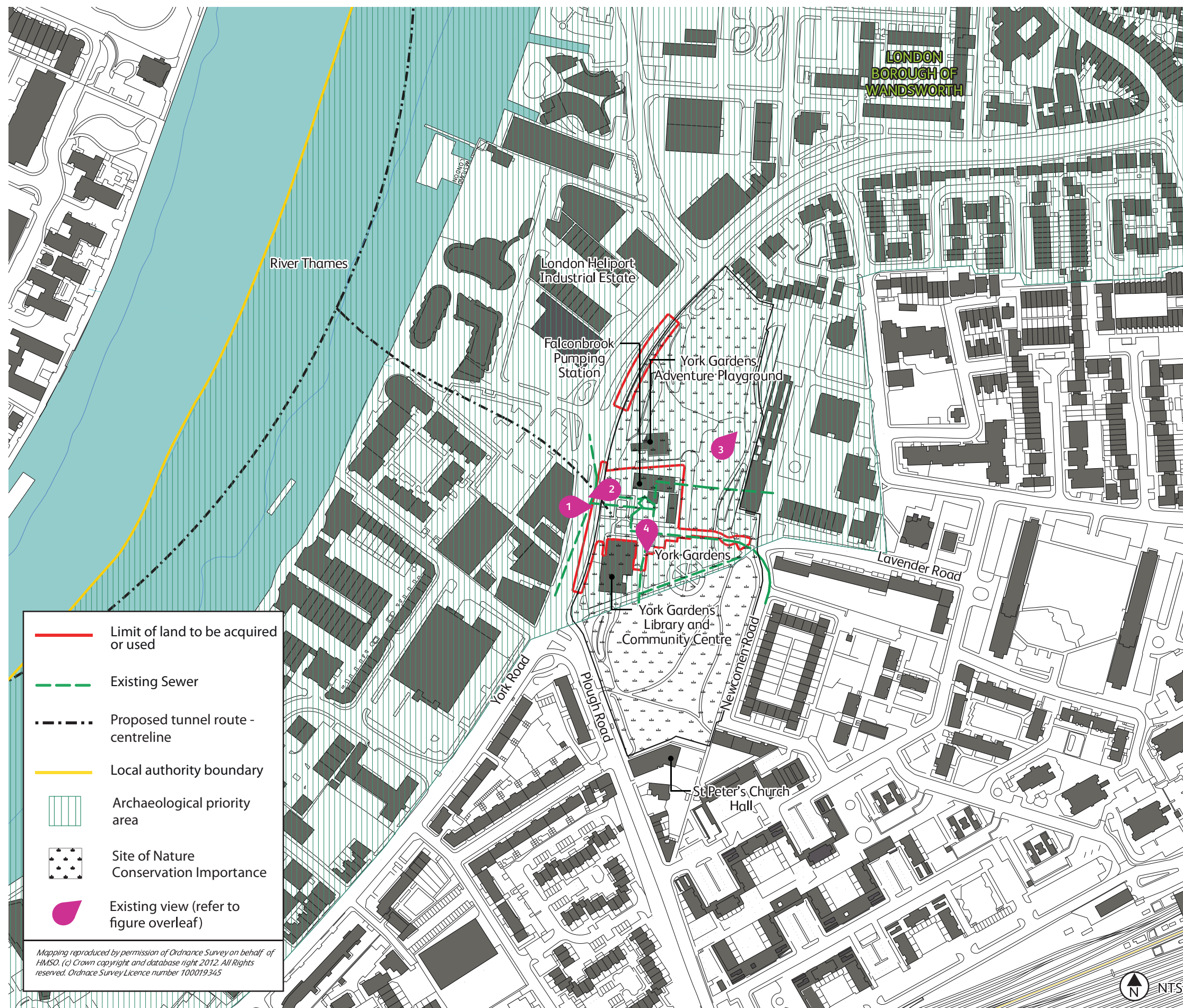


Figure 13.2: Existing site plan



Figure 13.3: Falconbrook Pumping Station from York Way



Figure 13.5: York Gardens looking northeast



Figure 13.4: Existing concrete ventilation building and cobbled paving



Figure 13.6: York Gardens Library and Community Centre

Existing site access and movement

13.2.8 The existing access to Falconbrook Pumping Station is from Newcomen Road/Lavender Road and via a short access road through York Gardens.

Highways

13.2.9 York Road (A3205) is a four lane carriageway with two lanes in each direction, separated by a central reservation, with a 30mph speed limit. It forms part of the Transport for London Road Network. Cycle Superhighway route CS8 runs along both sides of the carriageway.

13.2.10 The site is otherwise surrounded by residential roads.

Car parking

13.2.11 No parking is available along York Road. On-street parking is available on the residential streets to the east of the site, the majority of which is not subject to a Controlled Parking Zone and is predominantly used by local residents.

13.2.12 Unrestricted parking is available on the un-named access road to the existing pumping station, the York Gardens Library and Community Centre, and the York Gardens Adventure Playground. There is one allocated Blue Badge parking bay outside the community centre. There is also a parking area opposite the adventure playground.

Public transport

13.2.13 Eight day-time buses and two night bus routes operate within 640m of the site. The closest bus stop is located adjacent to the site on York Road; however, no bus lane is provided.

13.2.14 The nearest London Underground station is Fulham Broadway, which is approximately 2.9km from the site, to the north of the River Thames.

13.2.15 Clapham Junction Railway Station, which provides National Rail and London Overground services, is located approximately 800m to the southeast of the site.

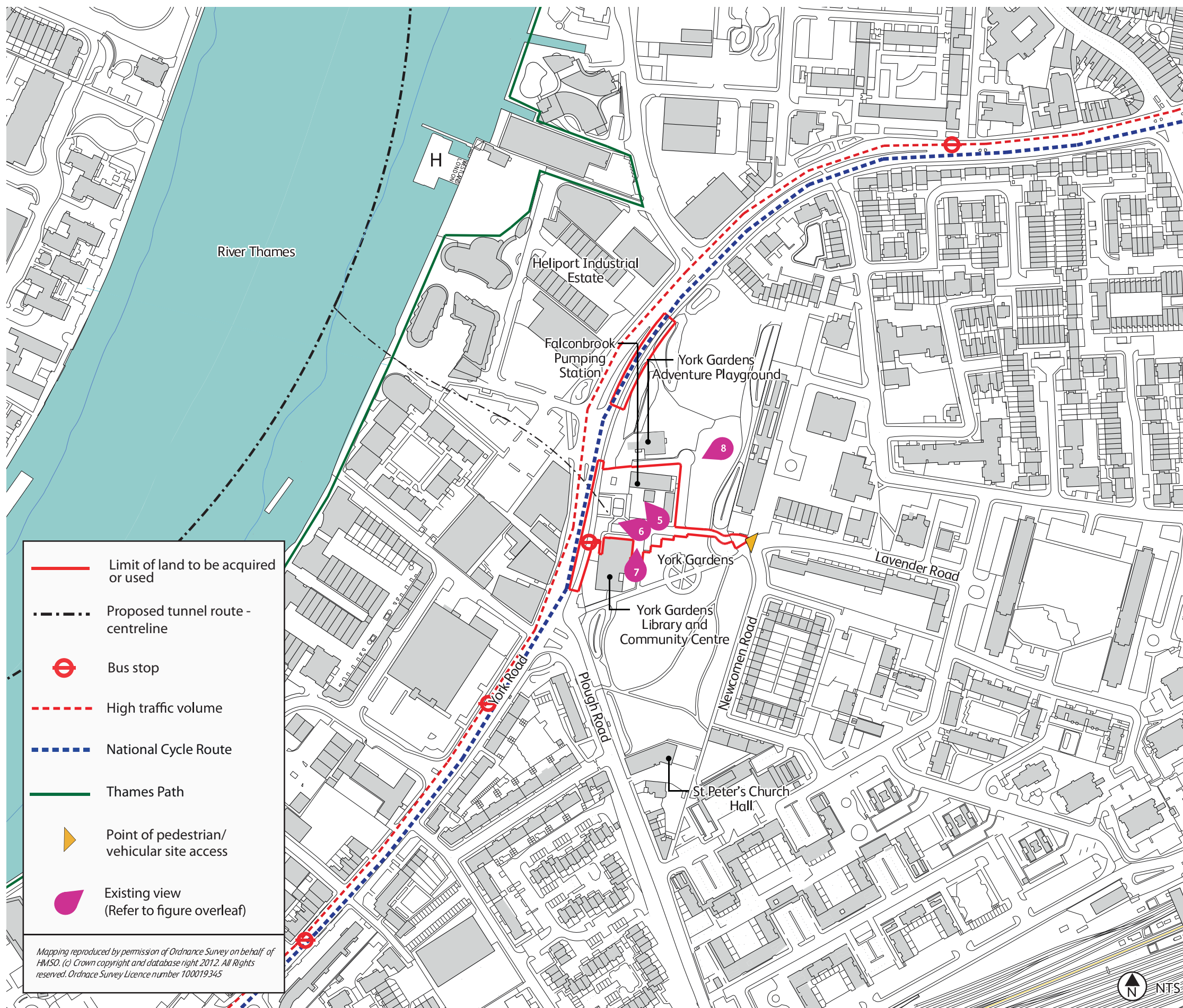


Figure 13.7: Existing site analysis plan



Figure 13.8: Falconbrook Pumping Station from within the compound



Figure 13.10: Disused toilet block



Figure 13.9: Falconbrook Pumping Station and library entrance



Figure 13.11: Falconbrook Pumping station from York Gardens

Cycle routes

13.2.16 Cycle Superhighway route CS8 between Ram Street in Wandsworth and Millbank in Westminster runs past the site along York Road. Advance cycle stop lanes are provided at the junctions of York Road/Plough Road and York Road/ Bridges Court.

Pedestrian routes

13.2.17 There is direct pedestrian access to the pumping station and the York Gardens Library and Community Centre via two access points from York Road.

13.2.18 There are more pedestrian accesses to York Gardens to the south of the pumping station, which provide routes to and from York Road and Plough Road. Lavender Road provides access from the gardens to the residential area to the east.

13.2.19 The Thames Path Public Right of Way runs approximately 40m to the northwest of the site.

Historical context

13.2.20 The site lies 195m to the east of the River Thames and immediately to the south of the subterranean course of Battersea Creek, which was formerly known as Falcon Brook.

13.2.21 Throughout the prehistoric (700,000 BC to AD 43) and Roman (AD 43 to 410) periods, Falcon Brook and the River Thames were rich in natural resources, and the higher terrace of land nearby provided a suitable location for settlement. However, the area became increasingly marshy due to rising water levels. The central and southern parts of the site comprised dry land; however, the northern part lay within or on the banks of Falcon Brook and was prone to flooding. During the Roman period, the site was part of a rural landscape of open fields and scattered farmsteads.

13.2.22 There is no recorded evidence of activity in the assessment area during the early medieval (Saxon) period (AD 410 to 1066). The first known settlement of the area took place in the later medieval period (AD 1066 to 1485), when the site lay within, or immediately outside, the hamlet of Bridges.

13.2.23 Maps from the mid-18th century onwards indicate that the site remained open fields until the mid to late 19th century, by which time the site had been built up with rows of terraced houses that ran east-west along Creek Road.

13.2.24 In 1905, a pumping station was constructed on the western part of the site, with a deep basement and culverts to link it to the Sir Joseph Bazalgette's Victorian sewer, which runs along the line of York Road to the west. Additional pumping machinery was added in 1913.

13.2.25 During the 1960s, the terraced housing on the site was cleared. York Gardens was established in the 1970s. At this time, the original pumping station was demolished and its basement partially filled in. The existing Falconbrook Pumping Station was constructed immediately to the northeast of the original structure. It comprises a reinforced concrete-framed building on the northern part of the site, a smaller two-storey structure to the south, and a single-storey concrete-framed building on the eastern boundary of the site. A small, late 20th century lavatory block is situated on the footprint of the former pumping station in the southwestern corner.

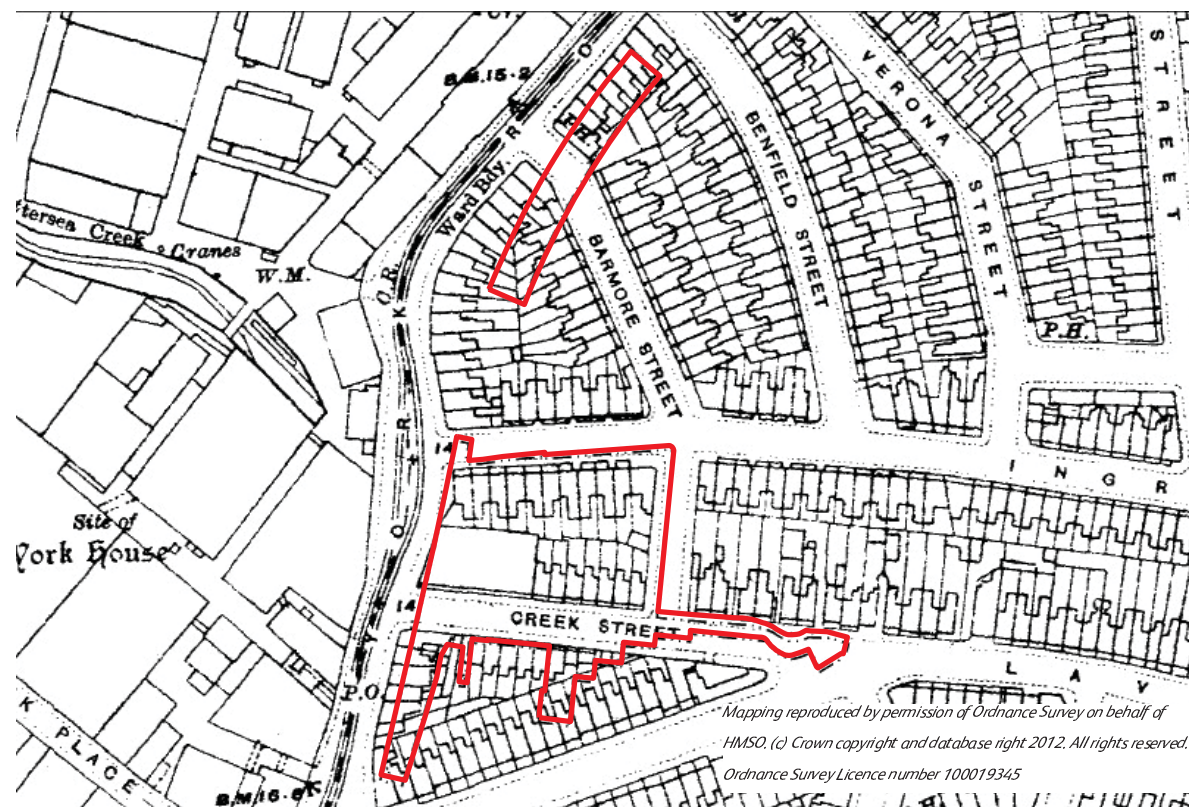


Figure 13.12: Historical map from 1916

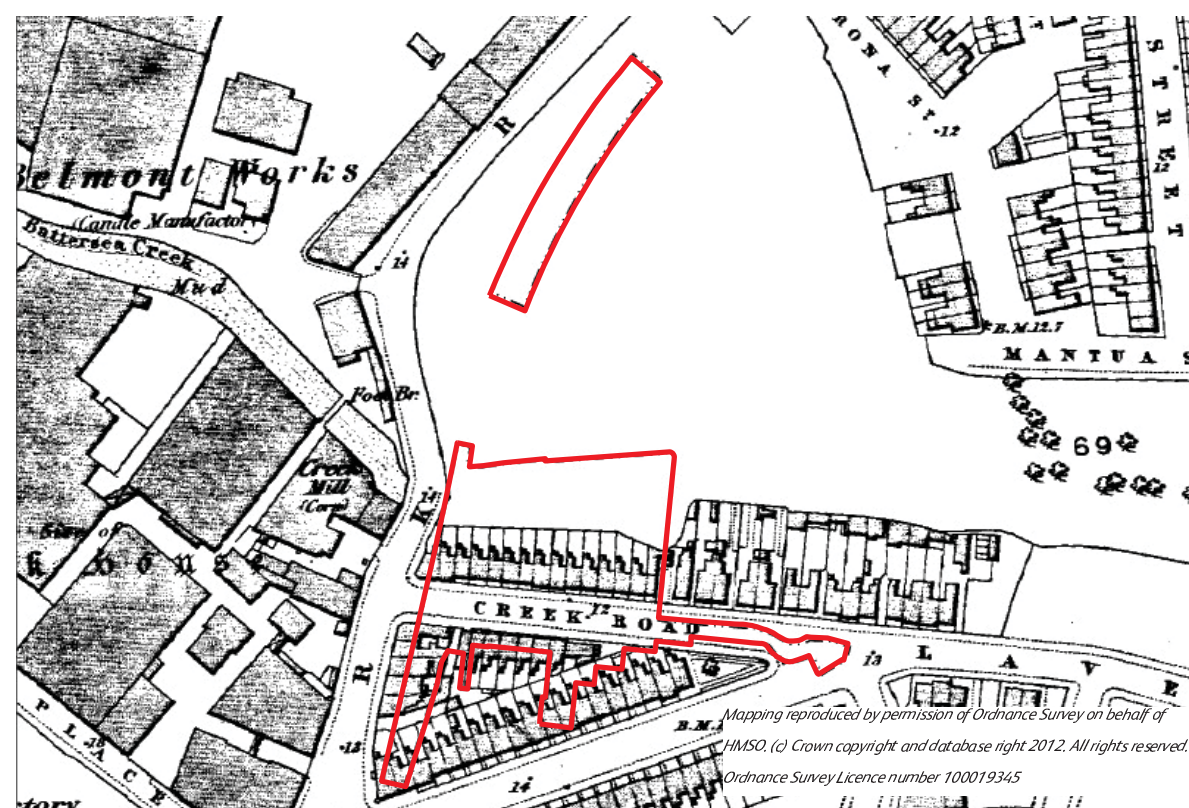


Figure 13.13: Historical map from 1869

Site analysis: Opportunities and constraints

The site-specific design opportunities included:

- a. Upgrade and enhance the existing area of public realm between Falconbrook Pumping Station and the York Gardens Library and Community Centre and the York Gardens Adventure Playground.
- b. Improve links through the site to/from York Gardens and York Road.
- c. Remove the existing disused toilet block.
- d. Rationalise the pedestrian access from York Road.
- e. Site the permanent above-ground structures on Thames Water operational land

The site-specific design constraints included:

- a. the proximity of existing sensitive receptors, including York Gardens, York Gardens Adventure Playground and the York Gardens Library and Community Centre
- b. the proximity of residential properties, the nearest of which are 100 York Road, and Pennethorne House and Arthur Newton House in the Winstanley Estate.



Figure 13.14: Existing site opportunities and constraints sketch

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13.3 Design evolution and alternatives

13.3.1 Most of the infrastructure for the project would be located below ground or within the existing pumping station. The key design objective of the permanent works was to integrate the functional components of the system into the pumping station. The site-specific design objective at Falconbrook Pumping Station was to successfully enhance the existing area of public realm around the pumping station and York Gardens Library and Community Centre.

13.3.2 The design of the Falconbrook Pumping Station site was also significantly influenced by an extensive process of stakeholder engagement and design review. In order to ensure design quality, the design team undertook a design review hosted by the Design Council CABE. We also held various pre-application meetings with the London Borough of Wandsworth and other strategic stakeholders. More information on our public consultation process is provided in the *Consultation Report*, which accompanies the application.

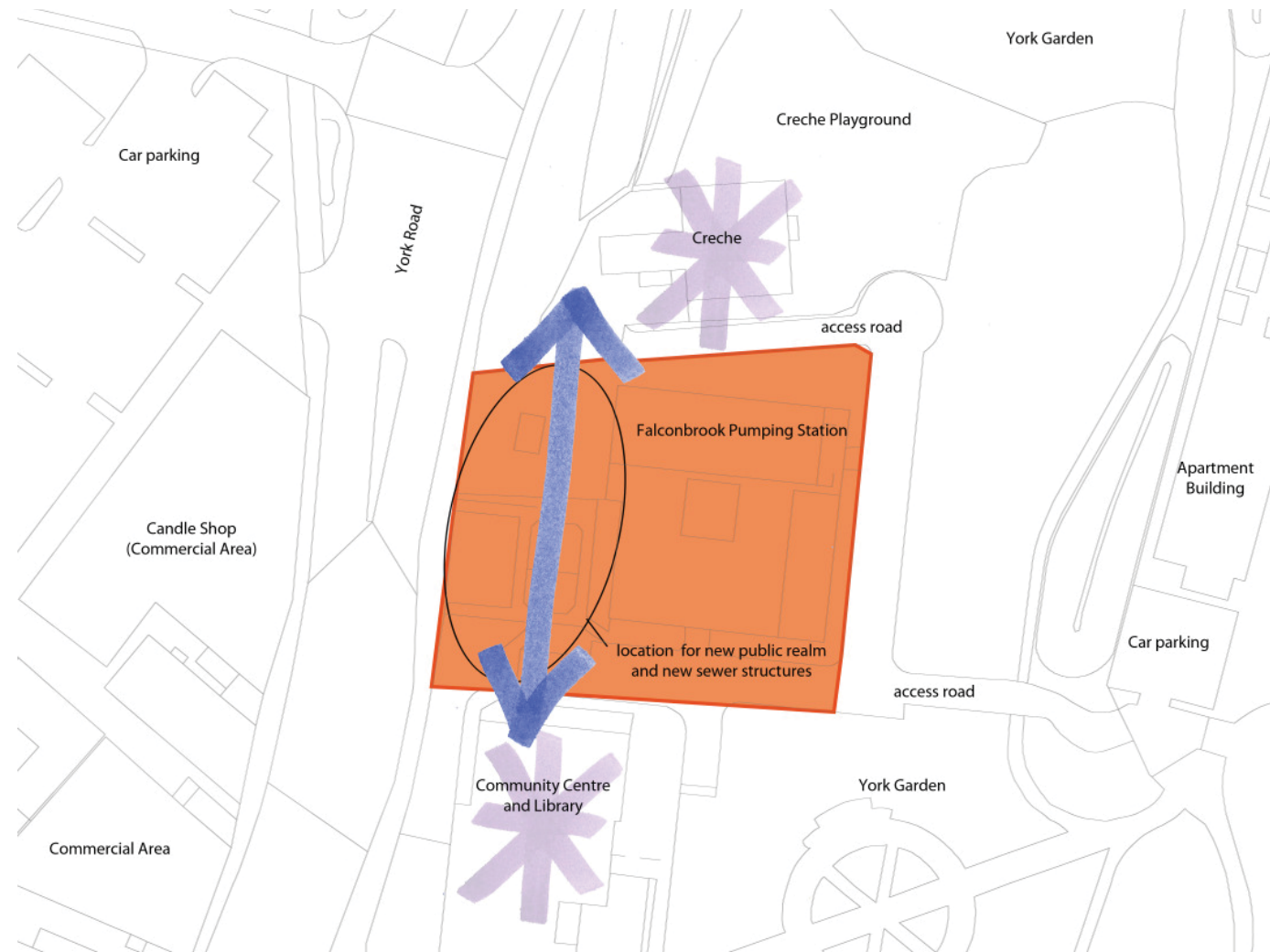


Figure 13.15: Design development diagram

October 2010

Phase one consultation

13.3.3 Our preferred site at phase one consultation was known as Bridges Court Car Park. The key concerns raised related to:

- the potential effects on residential amenity
- the potential loss of car parking availability
- potential effects on business amenity and operations.

13.3.4 We also learnt that the site had been identified for residential use in the London Borough of Wandsworth's *Site Specific Allocation Development Plan Document*.

13.3.5 Having considered the phase one consultation feedback and further technical work, we undertook a site selection back-check and identified the Falconbrook Pumping Station site as a potential development site. See the *Final Report on Site Selection Process* (part of the application), Volume 10, which accompanies the application, for details.

13.3.6 Following phase one consultation, we explored the following design considerations:

- enhancing and upgrading the existing area of public realm between Falconbrook Pumping Station and York Gardens Library and Community Centre
- demolishing the existing disused toilet block
- improving the external appearance of the existing Venturi building.



Figure 13.16: Proposed view from phase one consultation

May 2011

CABE sketch review

13.3.7 We held a sketch review based on an initial assessment and sketched ideas for the site with the Design Council CABE in May 2011.

13.3.8 The Design Council CABE panel considered that the scheme responded to the functional context and generally supported the proposals. However, the panel recommended defining an appropriate level of separation from York Road. It also recommended defining a clear concept for integrating the site into the surroundings and allowing the community a sense of ownership over the space.

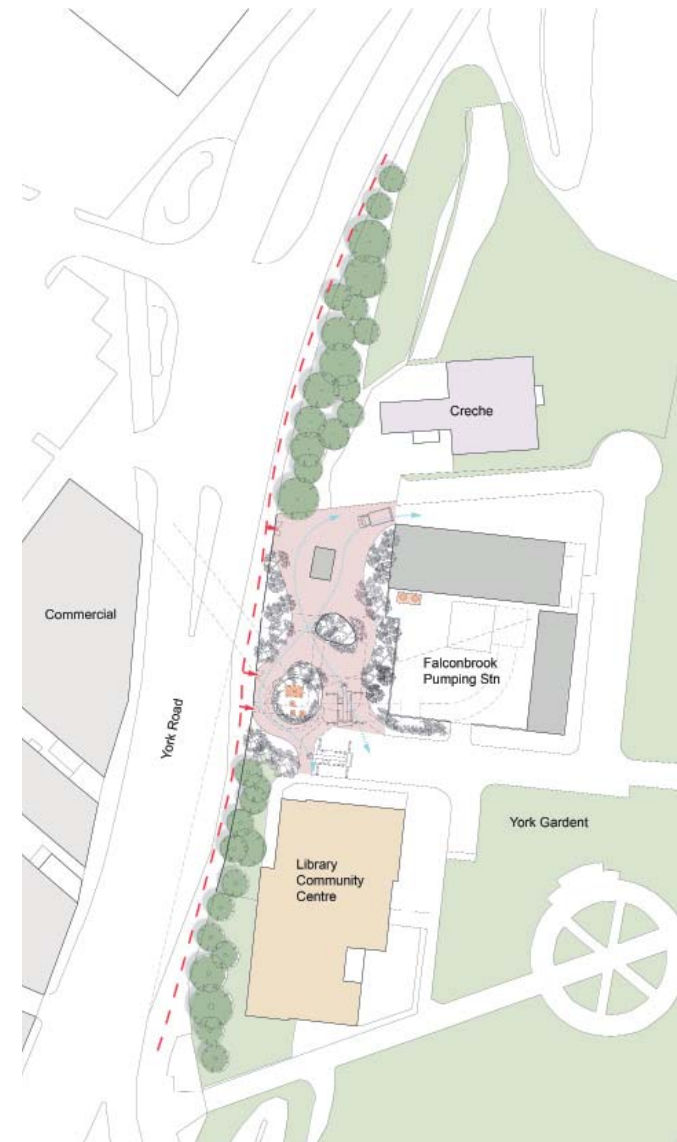


Figure 13.17: Proposed sketch plan from Design Council CABE sketch review

June 2011

Interim engagement

13.3.9 We held an interim engagement event in June 2011 to inform the local community of the potential use of the site as an alternative to Bridges Court Car Park. We also gathered views on local issues that we should take account of in developing our proposals.

13.3.10 The key comment in relation to design was that our proposals would improve the local area in the long term.

13.3.11 Two applications for large mixed-use developments at the site have been submitted to the local authority. However, both were refused.

November 2011

Phase two consultation

13.3.12 At phase two consultation, the key design-related comment was that we should relocate the ventilation column within the pumping station compound.

13.3.13 The London Borough of Wandsworth’s specific design-related comments included:

- a. The current proposals are a welcome change from the earlier scheme.
- b. The existing site is not perceived as safe and would benefit from re-design.
- c. A Landscape Management Strategy should be explored for the York Gardens site to transform the pedestrian entrance to the park into a space that can be celebrated for its beauty and provide facilities to engage the local community.
- d. The CSO drop shaft should be incorporated into an overall design.
- e. York Gardens is a Site of Local Importance for Nature Conservation. The proposals for planting any new native

trees are welcomed subject to the principles outlined in the Mayor of London’s *London Trees & Woodland Framework. Right Place, Right Tree initiative.*

f. All trees should be of southeastern England provenance. Any herbaceous or shrub planting should seek to provide maximum biodiversity value as foraging habitat or for nesting.

g. Revise the landscape strategy for the area around the pumping station, including the advanced planting proposals for York Gardens, which should be compatible with the London Borough of Wandsworth’s *Landscape Management Strategy.*

13.3.14 In response to this feedback, we moved the ventilation column into the Thames Water compound.

13.3.15 Following phase two consultation, we continued to liaise with the London Borough of Wandsworth to develop the design and design principles for the site to accommodate their aspirations for the area. There were no further significant design developments at this site after this stage.



Figure 13.18: Proposed view from phase two consultation



Figure 13.19: Proposed view from phase two consultation

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13.4 Proposed design

13.4.1 This section describes the amount, layout and scale of the proposed development and how the functional components would be integrated into the existing site. Details of the proposed landscaping and appearance of the site are also embedded in the description where relevant.

Fixed principles

13.4.2 The Site works parameter plan defines the zones in which the proposed works would take place. The plan indicates the general location of the CSO drop shaft and the ventilation columns. It also indicates the maximum and minimum height of the proposed structures (where applicable). Figure 13.20 illustrates the indicative landscape plan for the enhanced area of public realm.

13.4.3 The site-specific design principles are included in the *Design Principles* document which accompanies this application. These principles establish the parameters for the above ground structures and landscaping on the site and have, where possible, been developed in consultation with the local authority. The site-specific principles should be read in conjunction with the project-wide design principles.

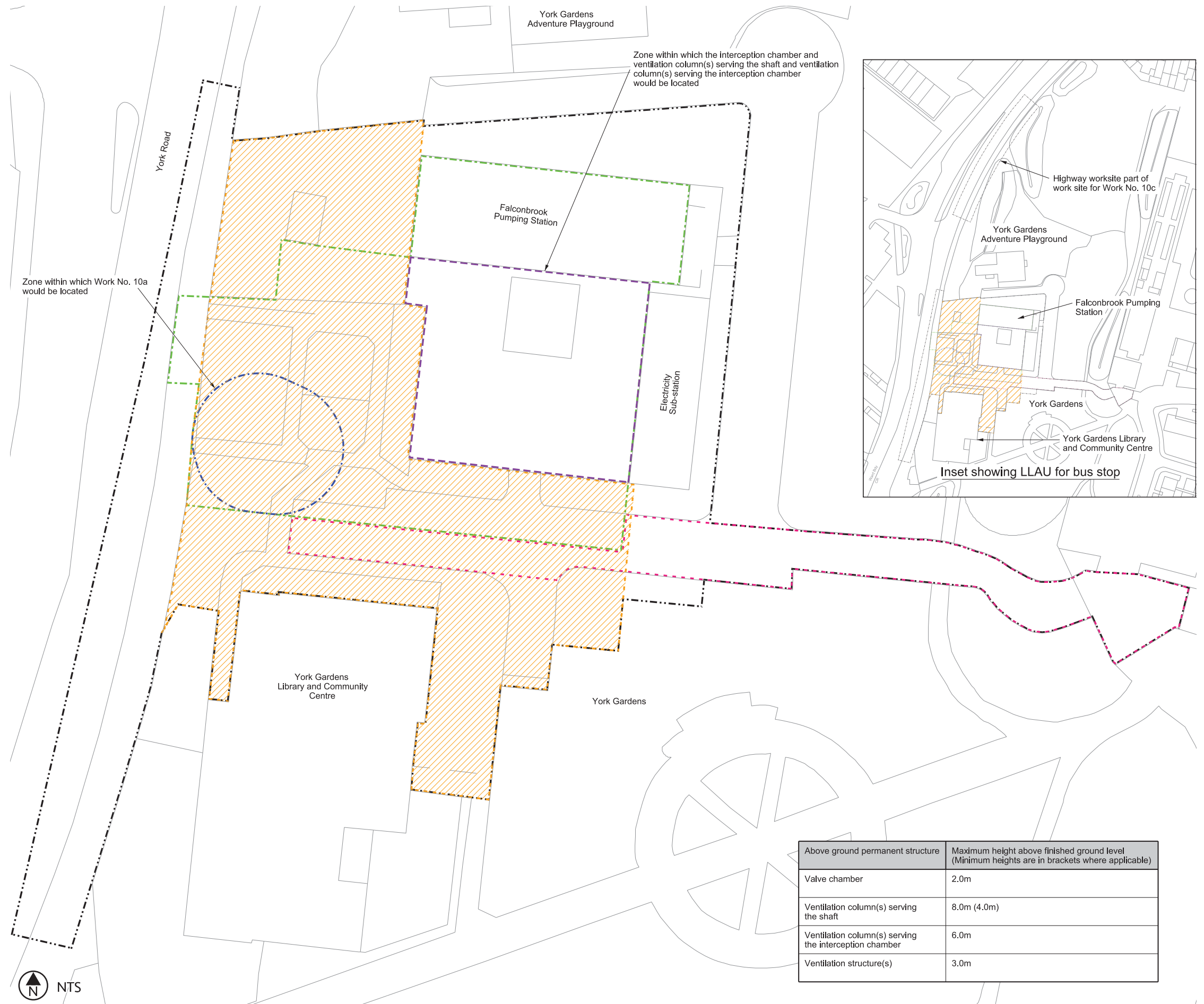


Figure 13.20: Site works parameter plan - refer to Site works parameter plan in the *Book of Plans*

Design objectives

13.4.4 Where possible we positioned the above-ground structures within the existing Thames Water compound. However, it was not possible to accommodate the CSO drop shaft. The main driver behind the development of the design for this space was to explore ways in which this structure could fit in with and contribute positively to its environment. We also had regard to *Core Strategy Policy IS3* and the London Borough of Wandsworth's *Development Management Policies Document Policy DMS 1*, which seek to ensure that new development contributes positively to the local environment, helping to create places, streets and spaces that are attractive, safe, accessible, sustainable, functional and that meet the needs of users. Our other objectives included:

- a. Create pedestrian links through the site to the York Gardens Adventure Playground, and the York Gardens Library and Community Centre by means of paving, vegetation corridors and lighting.
- b. Enable passive surveillance from neighbouring facilities by limiting the number of vertical structures, implementing a lighting scheme and managing the height of vegetation.
- c. Implement vegetation corridors for bats and birds to create an area that has ecological value.
- d. Implement screening between the site and York Road to protect it from the noise and visual appearance of the highway.
- e. Enhance the character of the site and create an attractive, transitional area for social interaction.

Use and programme

13.4.5 Thames Water currently uses Falconbrook Pumping Station for operational purposes. This use would remain the same following construction of the project. However, the area around the CSO drop shaft would be landscaped to create an improved area of public realm.

13.4.6 The space is and would remain a transitional space between York Road and York Gardens. We propose to maintain and enhance the routes across the space.

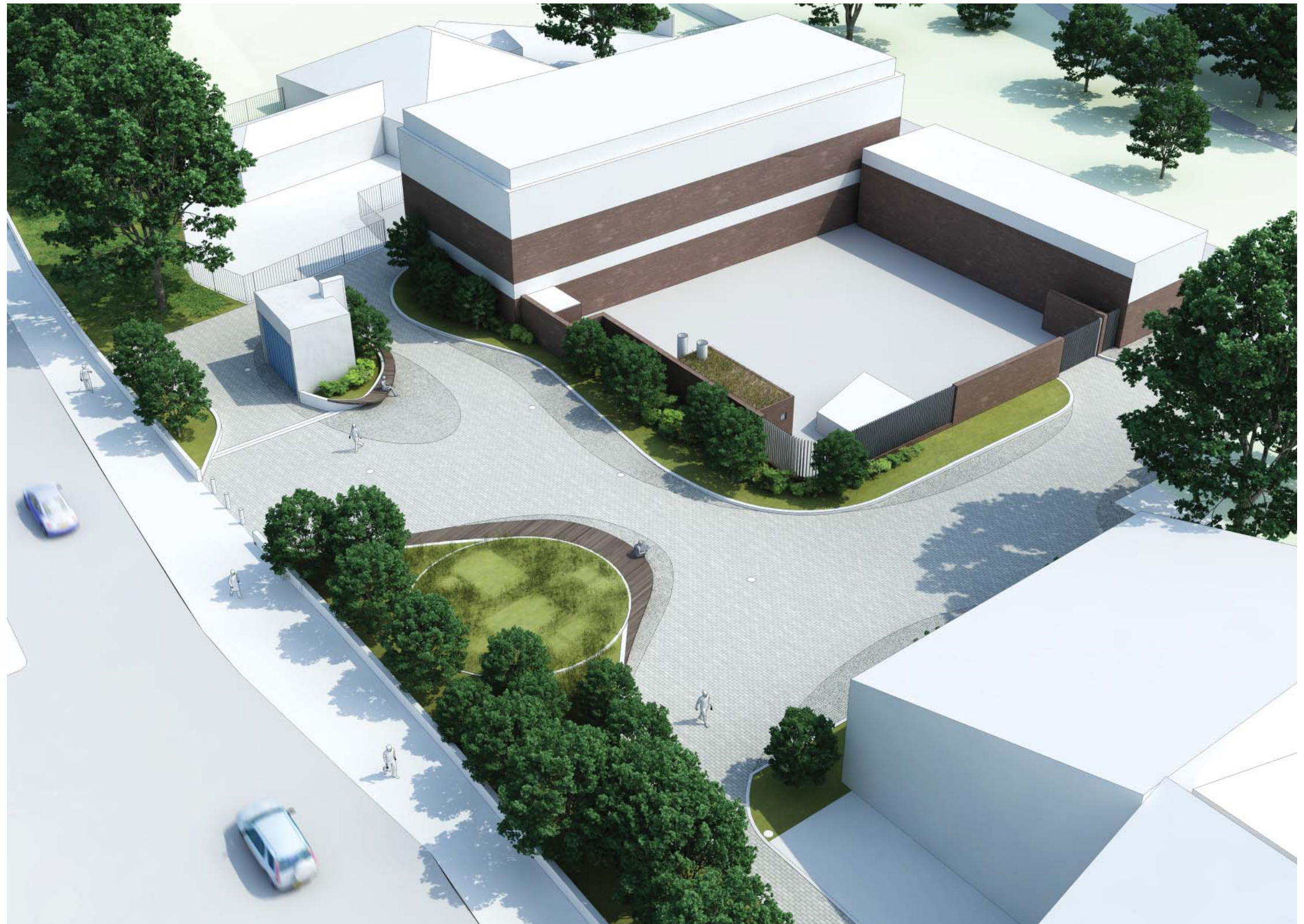


Figure 13.21: Proposed aerial view



Figure 13.22: Proposed view of design

Detailed description

13.4.8 The general parameters for the design at this site were kept broad to enable it to better respond to future master planning work by others for York Gardens as a whole.

13.4.9 In order to promote pedestrian movements and views across the site as a means of passive surveillance, we sought to keep the space as open as possible while softening its edges with appropriate planting.

13.4.10 The final selection of the size and type of planting on the western boundary with York Road would seek to strike a balance between screening the noise of the busy road, and promoting a sense of openness and accessibility.

13.4.11 The CSO drop shaft would be raised approximately 1m above the surrounding ground level and would form part of the western boundary of the space. It could be incorporated into a raised 'planter'. It would not be possible to plant over the access covers on top of the shaft; however, the surrounding vegetation should shield them from view. In our visualisations of the site we suggest positioning a solid timber bench at the edge of the raised planter. The bench would break up the mass of the planter wall and provide seating for people passing through the space or waiting for others to exit adjacent buildings.

13.4.12 The existing brick boundary wall to the pumping station would be removed during construction. The wall would be replaced with a similar wall. It would be necessary to ensure a line of sight between the CSO drop shaft and other equipment located within the Thames Water compound for maintenance purposes. Therefore we introduced a low, curved wall to the southwestern corner of the compound. The wall would be topped with railings to enable views into the compound. We defined zones for proposed planting to soften and screen the southern and western edges of the pumping station and around the Venturi building.

13.4.13 The proposed permanent layout and design of the site requires the removal of the disused public toilet block. The area of public realm that would link the York Gardens Library and Community Centre and the York Gardens Adventure Playground would be landscaped as part of our works.

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13.4.14 We propose to include a new paving treatment that would extend from the York Gardens Adventure Playground in the north, to the entrance to the York Gardens Library and Community Centre in the south. This treatment would unify the space and visually link the two buildings. The finish would be robust and attractive similar to the existing granite cobbles used in the area around the Venturi building. The existing cobbles could be re-used on the site where they would not compromise accessibility.

13.4.15 A lighting design for the public spaces would be agreed in consultation with the London Borough of Wandsworth at a later stage.

Advanced planting

13.4.16 We agreed with the London Borough of Wandsworth to undertake some advanced tree planting in York Gardens prior to construction. The exact layout and tree species would be agreed with the Local Authority Tree Officer. However, it should be noted that these trees do not form part of our application and they are illustrated on our plans for information only.

13.4.17 We would also implement advanced planting on the perimeter of the compound in order to visually screen the pumping station and the existing electrical sub-station. Species would include native deciduous trees and other shrubs to provide seasonal variety.

Lighting design

13.4.18 A new lighting scheme for the area of public realm would be provided as part of the permanent works as the area outside the compound would be publicly accessible at night.



Figure 13.23: Proposed illustrative landscape plan

Integration of the functional components

13.4.19 The majority of the proposed works are below-ground structures, including:

- a CSO drop shaft
- a connection tunnel
- a CSO interception chamber
- a connection culvert
- a valve chamber structure
- an air treatment chamber
- associated hydraulic structures, culverts, pipes and ducts.

13.4.20 Post construction, the following structures would be visible on the site:

- one ventilation column to serve the CSO drop shaft
- one ventilation column integrated into the above-ground ventilation structure.

CSO drop shaft

13.4.21 The CSO drop shaft would be approximately 9m in internal diameter and raised approximately 1m above ground level. It would sit in the area of public space between Falconbrook Pumping Station and York Road. It would be connected to the main tunnel via a short connection tunnel.

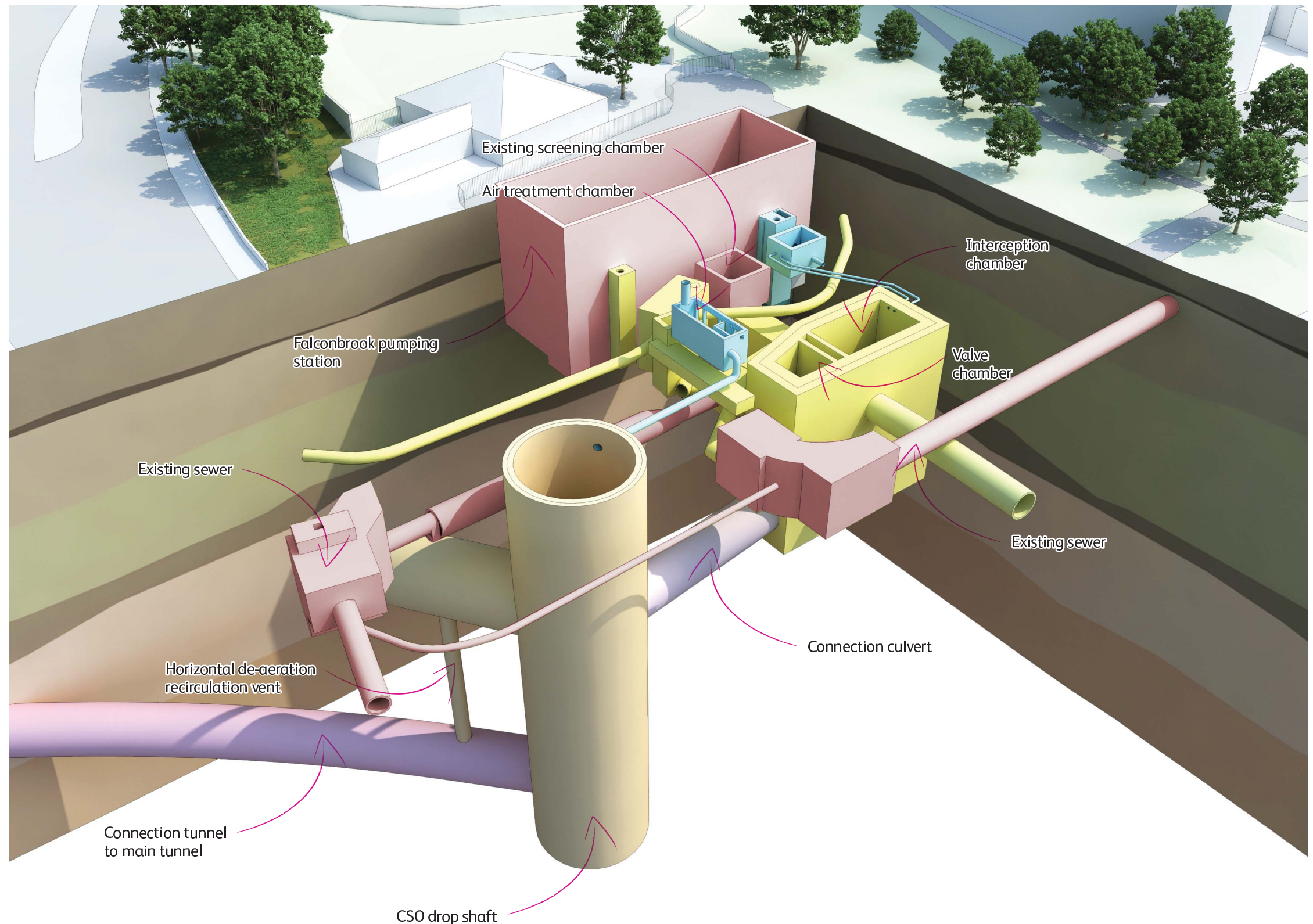


Figure 13.24: Proposed functional components diagram : below ground view

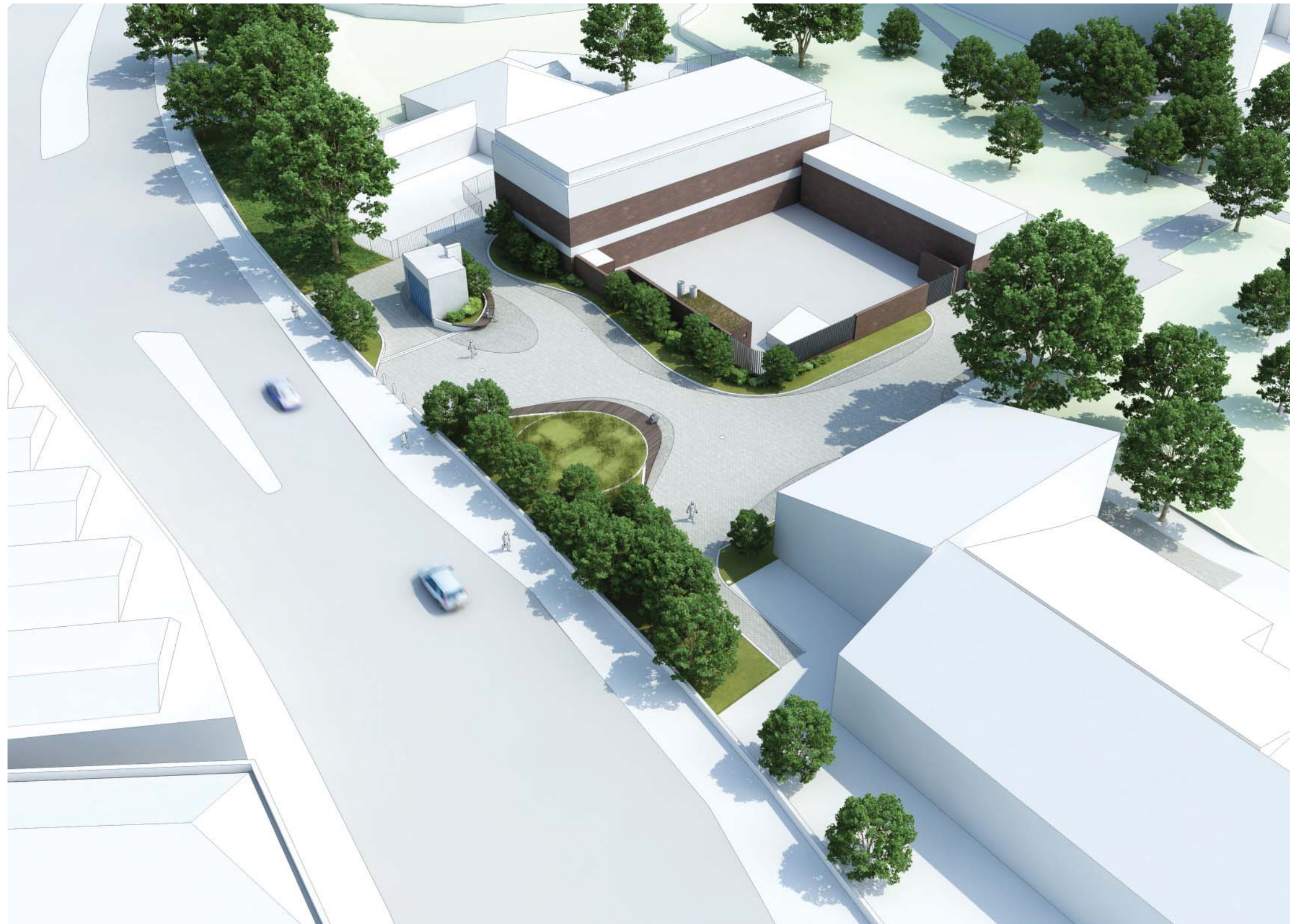


Figure 13.25: Proposed functional components diagram : above ground view

Works within Falconbrook Pumping Station

13.4.22 The CSO interception chamber would be incorporated within the pumping station compound. It would be connected to the drop shaft via a connection culvert. The associated structures and chambers would also be accommodated within the compound.

13.4.23 The electrical and control equipment would be installed within the existing pumping station building.

Ventilation columns

13.4.24 The number and size of the ventilation columns is determined by the air management requirements for the site. At Falconbrook Pumping Station, we propose to include two ventilation columns: the first would serve the CSO drop shaft and the second would be integrated into the above ground ventilation structure. Both columns would stand 4m to 8m high.

Areas of hardstanding

13.4.25 Areas of hardstanding would be included to facilitate maintenance vehicle access and incorporate ground-level access covers to the below-ground infrastructure.

13.4.26 We would also remove an area of hardstanding within the pumping station in order to install the necessary electrical and control equipment, which would be reinstated after the works.

Landscaping and appearance

Hard landscape palette

13.4.27 The proposed hard landscaping materials and furniture palette would comprise good quality contemporary fittings that would stand the test of time. Street lights, bins and furniture would be robust and non-bespoke to facilitate management and maintenance. Hard surface materials would also be robust, fit-for-purpose and appropriate to the setting in order to maintain long-term quality.

13.4.28 The hard landscaping materials and furniture palette includes:

- a. paving
- b. a brick wall
- c. lighting
- d. seating
- e. gates and railings.

Soft landscape palette

13.4.29 The soft landscaping palette would promote biodiversity, provide habitat for birds and insects, and create visual interest. Elements may include:

- a. semi-mature deciduous trees
- b. a planted brown roof
- c. native and non-native shrub, perennial and grass species.



Figure 13.26: Example of planted brown roof



Figure 13.28: Example of raised planting



Figure 13.27: Example of deciduous trees



Figure 13.29: Example of fruit and tree planting to increase biodiversity

13.5 Access and movement

13.5.1 The area of public realm would be owned by Thames Water but would be publically accessible, except during maintenance activities.

13.5.2 The boundary wall of the Thames Water compound would be reinstated. The gated access point would be moved approximately 8m to the east. The western site perimeter along York Road would be reinstated and include an enhanced pedestrian access point.

13.5.3 The site is broadly flat and there are few constraints on designing a space that is accessible to all. In line with project-wide aspirations and good practice, landscaping treatments and materials would ensure that pedestrian routes meet the best standards of accessibility.

Thames Water access requirements

13.5.4 Permanent vehicular access to the site would be via Newcomen Road/Lavender Road.

13.5.5 Once the project is operational, it is anticipated that Thames Water personnel would visit the site approximately every three to six months to inspect and carry out maintenance of the electrical and control, ventilation and below-ground equipment. This would likely involve a visit by personnel in a small van during normal working hours and may take several hours. This would be in addition to maintenance visits associated with the existing pumping station.

13.5.6 It is anticipated that a major internal inspection of the tunnel system and underground structures would be required approximately once every ten years. This process would likely involve a small team of inspection staff and support crew and two mobile cranes to lower the team into the CSO drop shaft. The inspection would be carried out during normal working hours and would likely take several weeks. Temporary security fencing would be installed around the shaft during maintenance visits.

13.5.7 Thames Water may also need to visit the site for unplanned maintenance or repairs, for example, in the event of a blockage or an equipment failure. Such a visit may require the use of mobile cranes and vans.

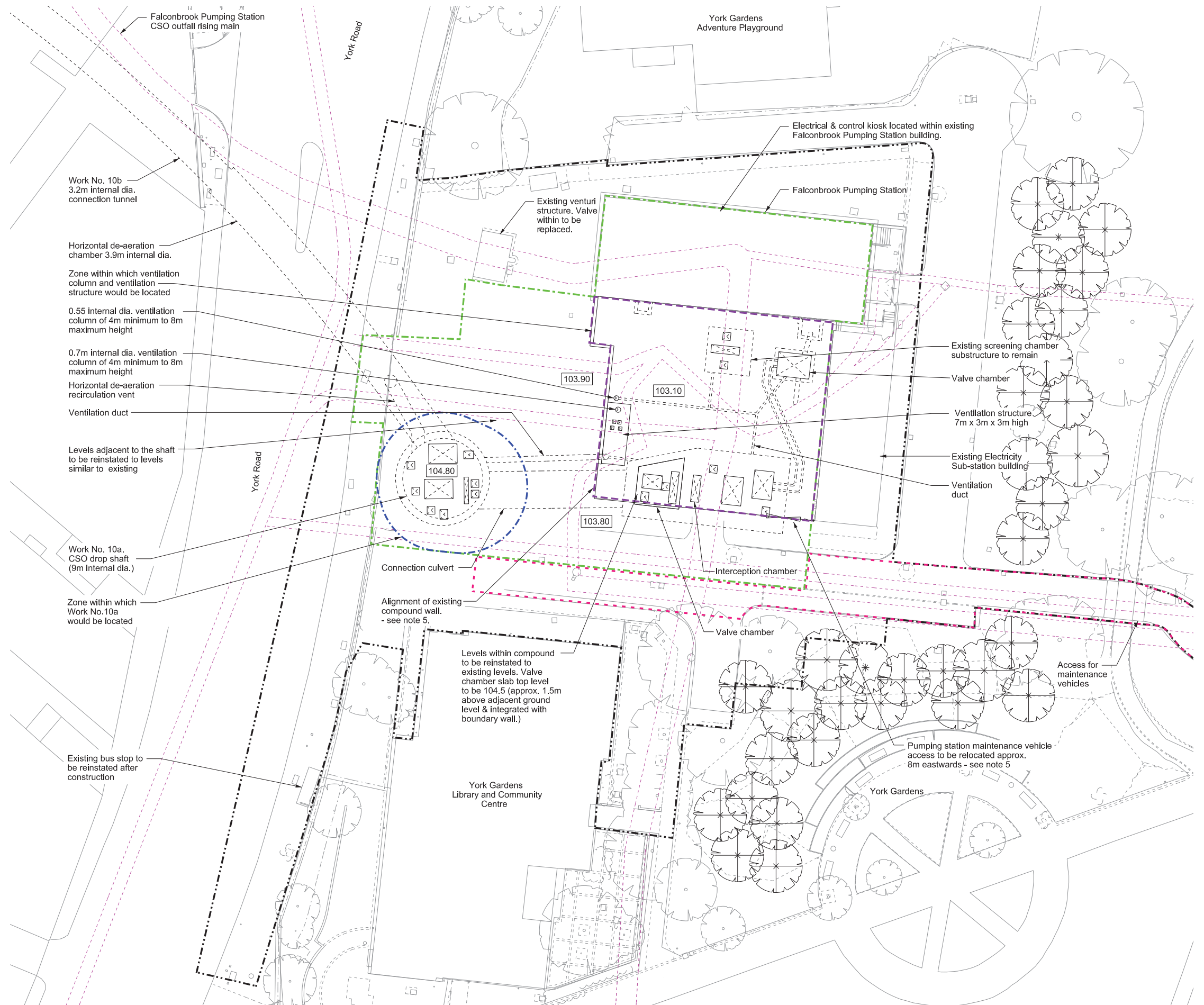


Figure 13.30: Permanent works layout - refer to Permanent works layout in the *Book of Plans*

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