

3.2 Existing Drainage and Utilities

A below ground CCTV survey has confirmed that the surface and foul water drainage from the site is combined within the site and discharges into the existing combined Thames Water sewer system along Bayham Place, Bayham Street and Crowndale Road.

It is understood that the existing surface and foul water drainage is taken out of the buildings at their lowest level (ground, basement or sub-basement).

There are a series of 4no. linked underground sump chambers within the sub-basement of KOKO. These run in a southwest-northeast direction. A pump discharges from the northernmost sump and is understood to connect with the Thames Water sewer network below Bayham Place. It is understood that the sumps are used to deal with high (perched) groundwater levels within the existing sub-basement. The BGS geological maps noted worked ground beneath/close to the site. The high (perched) groundwater table beneath KOKO may therefore be a residual effect from the perched water collecting within the disturbed/worked ground.

3.3 Existing Hydrogeology and Hydrology

RSK have carried out an assessment of the existing hydrogeology and hydrology which can be found in Appendix E. In summary:

The hydrogeology of the site is likely to be characterised by the presence of an aquitard comprising the London Clay Formation. Confined by the London Clay Formation is a deep aquifer, comprising a sequence of deposits consisting of the lower part of the Lambeth Group and Thanet Sands (Basal Sands) and the White Chalk. These units are expected to be in hydraulic continuity.

Based on the BGS borehole records and nearby site investigations, the anticipated depth to the groundwater table is in the order of 22.50m below ground level.

The EA status report issued in 2015 'Management of the London Basin Chalk Aquifer' indicates that the potentiometric surface of the groundwater in the deep aquifer in the site area in January 2015 was at approximately -36.00m AOD, i.e. approximately 58.80m below ground level.

The soils beneath the site are classified as having no leaching potential.

In view of the recorded depth to groundwater in the deep aquifer beneath the site the risk of rising groundwater to the proposed development is considered low.

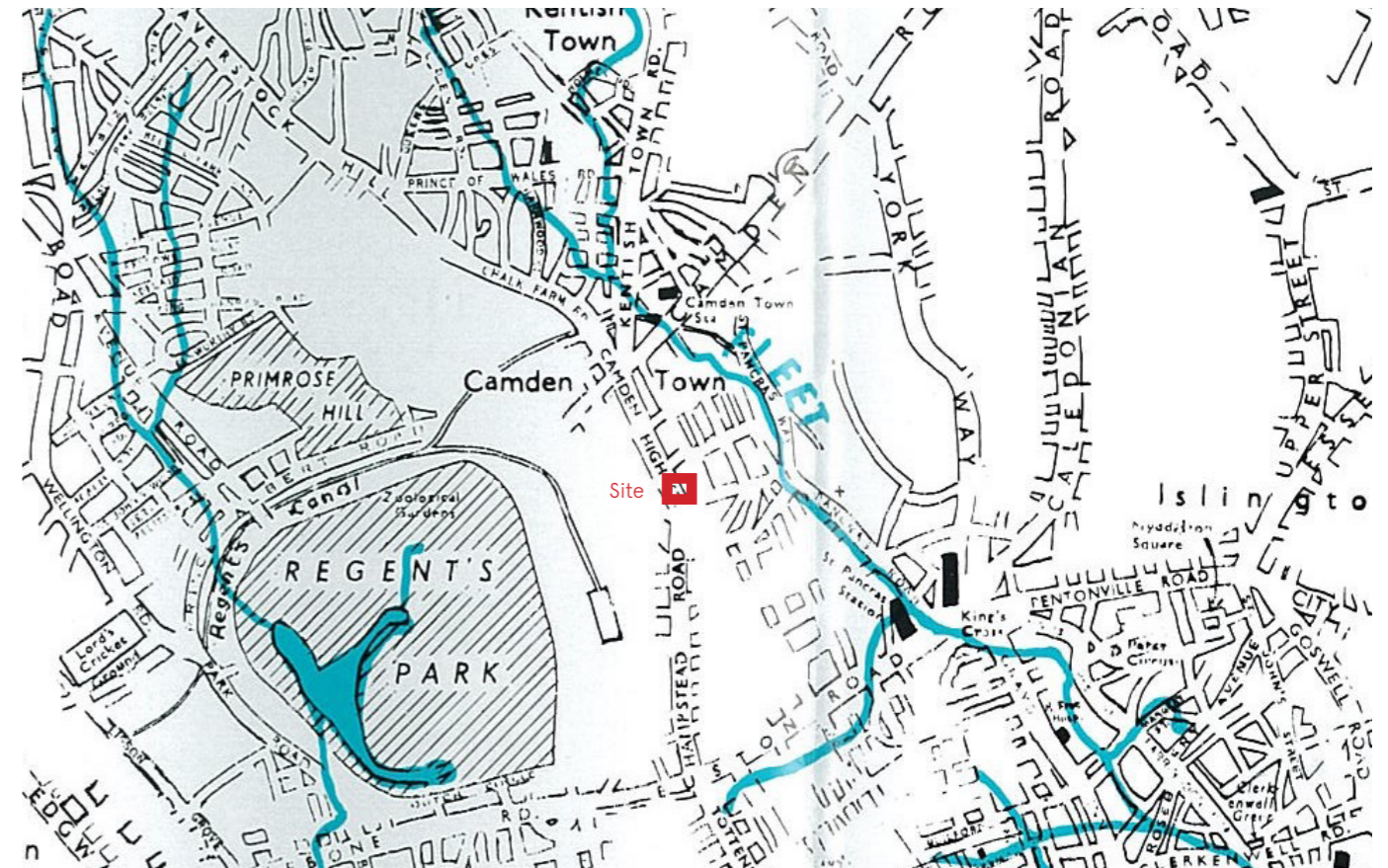
Information available on the EA website indicates that the site does not lie within a currently designated groundwater Source Protection Zone.

The nearest identified surface watercourse to the site is the Regent's Canal located approximately 540m to the northeast of the site. The canal starts to the west of the site, goes around the top of Regents Park, around 600m to the north of the site, before heading southeast/east.

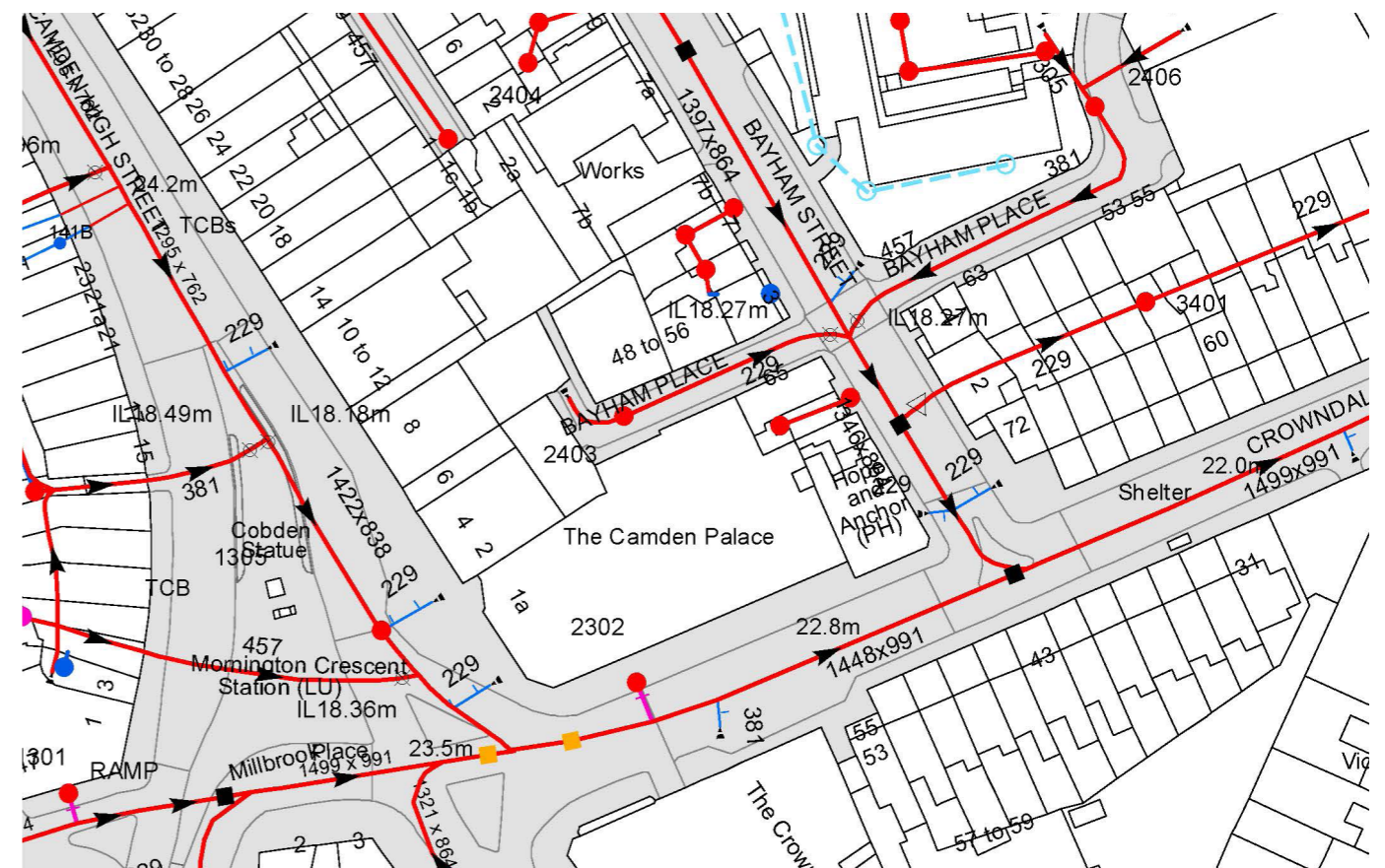
The Lost Rivers of London (Barton, 1992) show the course of the historical Fleet River, which flows southwards into the River Thames, to be located approximately 325m east of the site, near St Pancras Hospital. The river is now culverted.

There are no licensed discharge consents within 500m of the site.

The indicative floodplain map for the area, published by the EA, shows that the site does not lie within the designated floodplain of the River Thames. The risk of flooding each year has been assessed by the EA as very low, i.e. 0.1% (1 in 1000) or less.



London Lost Rivers map



Thames Water asset map

3.4 Existing Building

The site consists of several existing buildings; KOKO, The Hope & Anchor Pub, 1 Bayham Street, 65 Bayham Place. A commentary of these buildings is described below.

3.4.1 KOKO

The existing Grade II listed building was built c.1900 by architect W.G.R. Sprague. The building was originally designed as a theatre and has since had a variety of uses including a cinema, BBC studio and is currently a live music venue. Having changed names several times during its history, the property reopened as KOKO in 2004.

Original drawings from the London Metropolitan Archives and site observations suggest that the building is constructed from loadbearing masonry walls on corbelled brick footings over mass concrete strip footings.

The existing floors appear to consist of both concrete slabs and concrete filler joist floors supported by the loadbearing walls.

The masonry walls appear to be of solid construction which vary in thickness throughout the building.

The roof structure over the main auditorium consists of a series of steel trusses spanning north-south and supported on loadbearing masonry walls. A concrete filler joist slab spans between the trusses and is concealed by the existing roof finishes. The existing decorative ceiling to the auditorium is supported by joinery fixed to the underside of the steel trusses. There is a fall in the existing roof from the Crowndale Road elevation towards Bayham Place. The roof also pitches at the Bayham Place elevation matching the profile of the existing roof trusses.

The archive drawings suggest the original auditorium roof may have consisted of trusses spanning east-west, taking support on the proscenium wall, indicating that the north-south trusses may not be original. A report by Sinclair Johnston Conservation Engineers from July 2017 (included in Appendix I) supports this view, concluding that neither the trusses nor the filler joist slab above would be a typical form of construction in 1899. In addition, a concrete filled opening in the proscenium wall is compatible with the original architect's drawings.

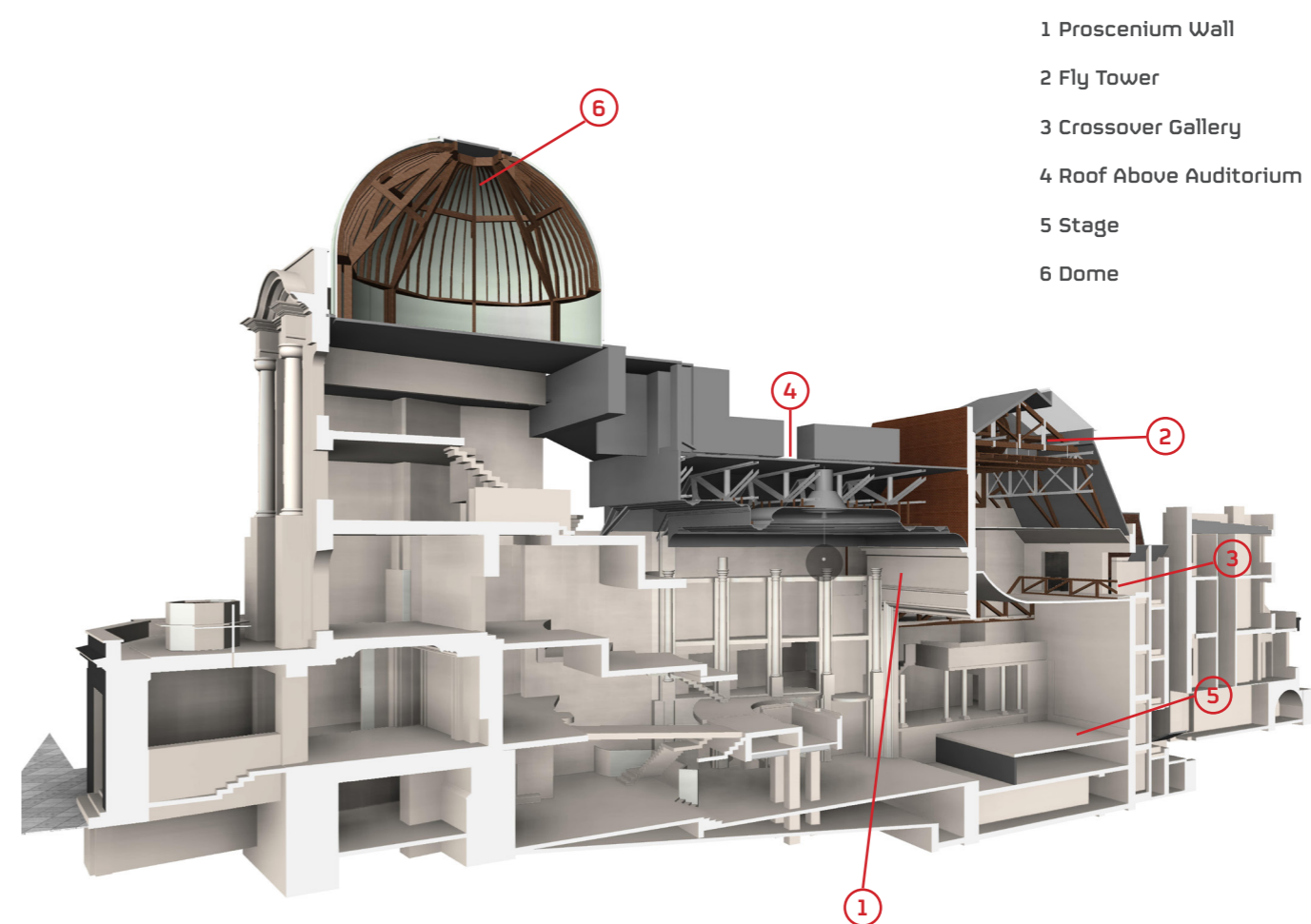
The fly tower galleries, located approximately 6 m above the main stage, consist of timber framed floors supported on timber trusses spanning between the masonry walls on the east and west elevations. An additional truss spanning between the two east-west trusses, supports another high level timber crossover gallery at the rear of the stage. Two steel framed galleries with checker plate floors also exist at approximately 3.5 m above the north and south side of the stage. The construction of these stage galleries indicates they are not original.

The existing dome roof above the front façade is of timber framed construction. The floor to the dome is a concrete filler joist slab supported on steel plate girders. The dome previously housed a number of water tanks.

The stage appears to be of concrete construction with the soffit visible from the sub-basement cellar.

The existing auditorium floor is of timber construction. Following review of the archive drawings, it is understood that the floor is suspended above the original sloping auditorium floor by approximately 700mm next to the stage.

The Bayham Place elevation consists of one or two storey structures, and provides back of house accommodation and staircases. The slabs and staircases appear to be of concrete construction with encased steel, and are supported on loadbearing masonry walls.



Existing long section view



Existing roof structure over KOKO auditorium



Photo of existing flytower roof structure

- 1 Proscenium Wall
- 2 Fly Tower
- 3 Crossover Gallery
- 4 Roof Above Auditorium
- 5 Stage
- 6 Dome