

NORTHUMBERLAND DEVELOPMENT PROJECT **HOTEL**

S73 APPLICATION

UTILITIES PLANNING REPORT ADDENDUM

Northumberland Development Project Hotel S73 Application

Utilities Statement

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Glossary

Term	Definition
DEN	District Energy Network
LBH	London Borough of Haringey
TW	Thames Water
UKPN	UK Power Networks

Introduction

Background

This Utilities Statement report has been prepared by Buro Happold on behalf of Tottenham Hotspur Property Company Limited ("THFC") ("the Applicant") in support of an application for minor material amendments to the London Borough of Haringey ("LBH") made under Section 73 ("S73") ("S73 Application") of the Town and Country Planning Act 1990 (as amended), following the grant of planning permission for the Northumberland Park Development Project ("NDP") ("the Site") on 15 April 2016 (LPA ref HGY/2015/3000). This report will review and discuss the following:

- Review of the existing utility networks
- Proposals for the connection of the new development to the relevant utility network

This report is informed by the following data:

- Utility records, provided by Groundwise Searches
- Proposed development plans produced by F3 Architects
- Building services strategy prepared by Buro Happold

The strategies outlined in this report for the diversion, abandonment or connection to any existing utility networks are subject to confirmation by the operator of the network and the local planning authority. It should also be ensured that the detailed design of any new utility infrastructure takes existing site constraints into account, such as unforeseen ground conditions or tree root protection zones.

Site Description

The proposed development is located within the London Borough of Haringey (LBH) and is formed of the following site, hereafter referred to as 'the Site',

- Tottenham Hotspur Stadium, 748 High Road, Tottenham, London, N17 0AP

The Site is currently occupied by a basement car park, and public realm area around the THFC stadium which was constructed as part of the NDP. The NDP Hotel site is at the south west corner of the NDP site at the junction with Park Lane to the south and High Road to the west. According to the British Geological Survey, nearby historic boreholes suggest that the underlying ground conditions consist of London Clay.

Proposed Development

Planning Permission was granted for the NDP on 15 April 2016 (LPA ref HGY/2015/3000)¹. This 'Hybrid Consent' gave full planning permission for Plot 1 (The Stadium), Plot 2 (The Tottenham Experience) and Plot 3 (Hotel) and outline planning permission for Plot 4 (The Extreme Sports Building), Plot 5 (The Residential Buildings and Flexible B1/D1 Space) and Plot 6 (The Community Health Building).

Plots 1 and 2 have been built out and various reserved matters have been approved for other plots.

This application is to bring forward revised proposals for the hotel building (originally approved in full). The revisions are intended to enhance the deliverability of the proposals and help them to better respond to the revised future context in the local area.

Application under Section 73 of the Town and Country Planning Act for variations to Condition A4 (Approved Plans) and (Condition A7) of the hybrid planning permission HGY/2015/3000 (as amended) for the proposed demolition and comprehensive redevelopment of the Northumberland Park Development Project (the amendments consist of a revisions to the design, height and maximum floorspace at Plot 3 Hotel and other changes)‘.

The site boundary and a summary of the development are provided in Figure 0-1 and (NDP Application boundary in red, NDP Hotel Application boundary in blue)

Table 0-1 below.

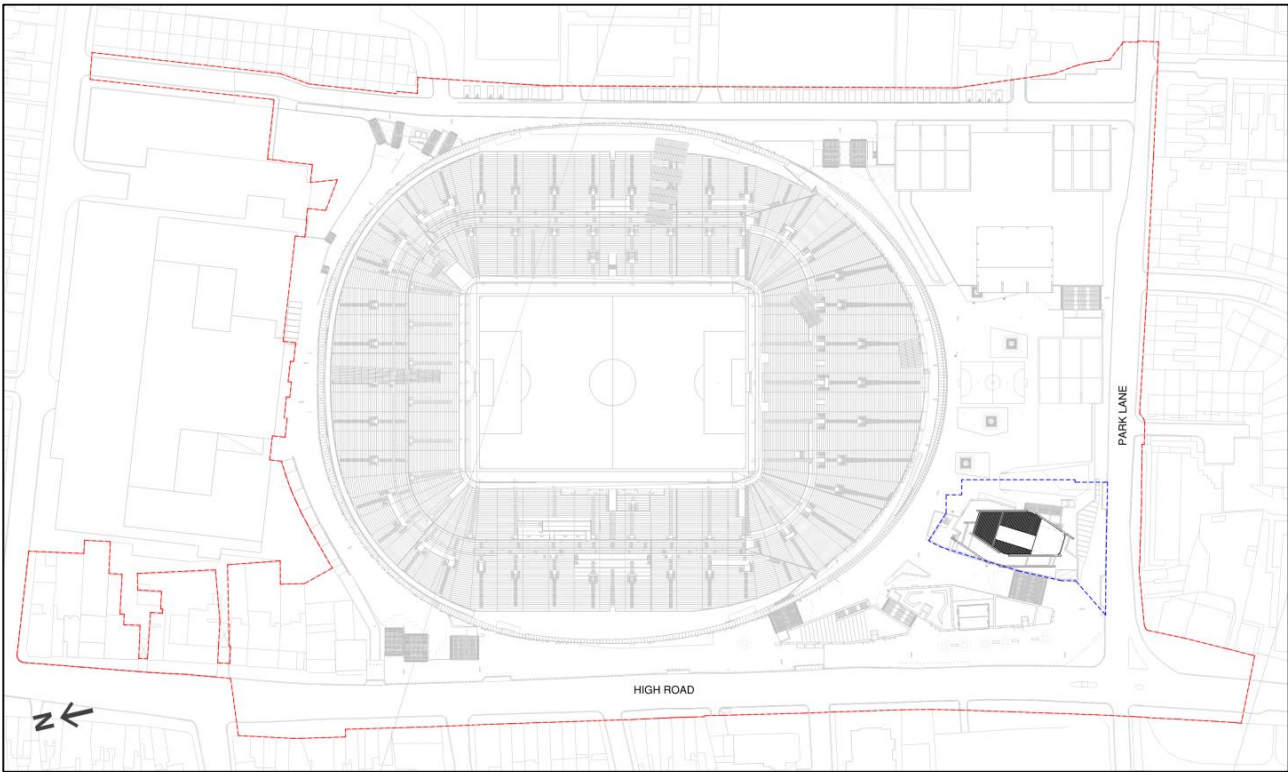


Figure 0-1 - Site Plan (NDP Application boundary in red, NDP Hotel Application boundary in blue)

Table 0-1 - Summary of the proposed development

Use	Floorspace (m²) (GIA)	Hotel Rooms / Units
Hotel	16,132 (incl Commercial)	180
Commercial (Bar, Restaurant, Club)	2,652	-
Residential	11,246	49

Existing Utilities on Site

Overview

Table 0-1 below gives a brief overview of the utilities with existing infrastructure in the NDP Hotel site, as well as some utilities that are directly adjacent to the development. All of these utilities will be further investigated individually in later sections.

Table 0-1 - Utility networks present within, or in close proximity to, the NDP Hotel site boundary

Provider	Utility Type	Present in the NDP Hotel site?	Present in the adjacent areas?
UKPN	Electricity	Yes	Yes
Cadent	Gas	Yes	Yes
BT Openreach	Telecommunications	Yes	Yes
Virgin Media	Telecommunications	Yes	Yes
Vodafone	Telecommunications	No	Yes
Instalcom	Telecommunications	No	Yes
Thames Water	Sewers	No	Yes
Thames Water	Water Mains	Yes	Yes
Transport for London	Traffic Control	No	Yes
Transport for London	Transport - HV Cable	Yes	Yes

All of the utility information contained below is correct to the plans provided by each utility company. Where there are concerns over the accuracy of these plans, an additional survey should be conducted to confirm.

Existing Electricity Network

UK Power Networks (UKPN) is the incumbent owner and operator of the electrical network around the site. Information obtained from UKPN records shown in Figure 0-1 indicate that there is a significant amount of UKPN cabling present in Park Lane to the south of the development site and at the High Road junction in close proximity to the site.

According to UKPN record information, 11kv HV and LV assets are shown within the site boundary along the northern footpath on Park Lane. A connection to the existing buildings on site from the UKPN network may exist, so an additional investigative survey should be undertaken to identify if these if any. In the even that a connection exists this is likely to require abandonment as an existing connection is unlikely to have the capacity to serve the proposed hotel.

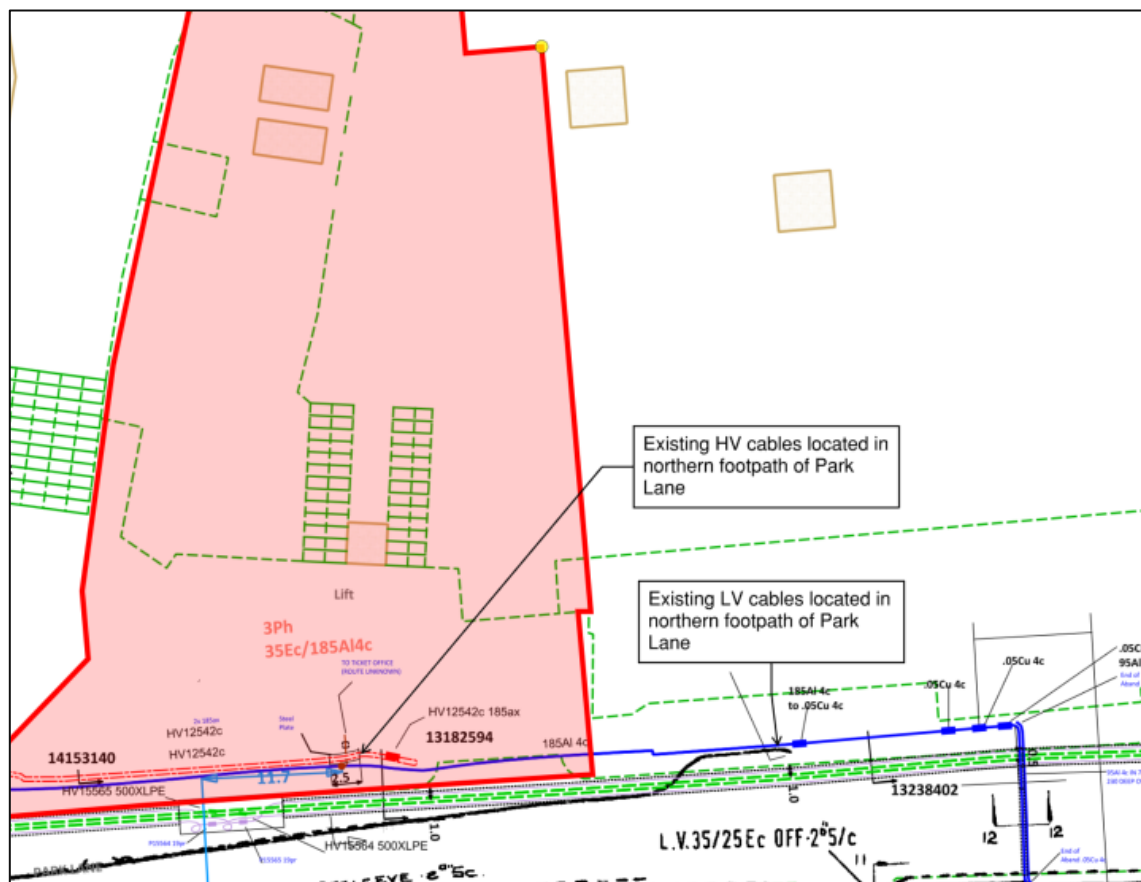


Figure 0-1 - UKPN electricity network layout with site boundary shown with red overlay

Following a detailed underground survey, it may be required to divert the existing HV cabling which is located along the south of the site. The existing cabling may required diversion to allow for sufficient space for a proposed surface water attenuation tank in this approximate location. UKPN have been contacted to request a budget estimate for the diversion of this asset.

Existing District Energy Network

There is currently no district energy network (DEN) infrastructure within the area of the site. The network is already under construction by Energetik however this is currently proposed to terminate approximately 700m north of the site at the junction between High Road and Langhedge Lane which is due to be completed in 2023. Energetik have plans to expand the network further as part of the wider strategic vision for Haringey's Energy Master Plan.

Existing Gas Network

Cadent is the sole operator of the natural gas network in the site boundary, with 90mm Low Pressure (LP) gas infrastructure present that is serving the existing buildings on the NDP Hotel site, as can be seen in Figure 0-2.

Park Lane along the southern perimeter of the development contains a much larger 12" LP gas mains. To the west of the site there is an 18" diameter LP gas main running along High Road.

It needs to be established whether the existing 90mm LP gas main supplied off the larger 12" main in Park Lane serves any other existing buildings as part of the NDP development or whether this asset can be abandoned and removed.

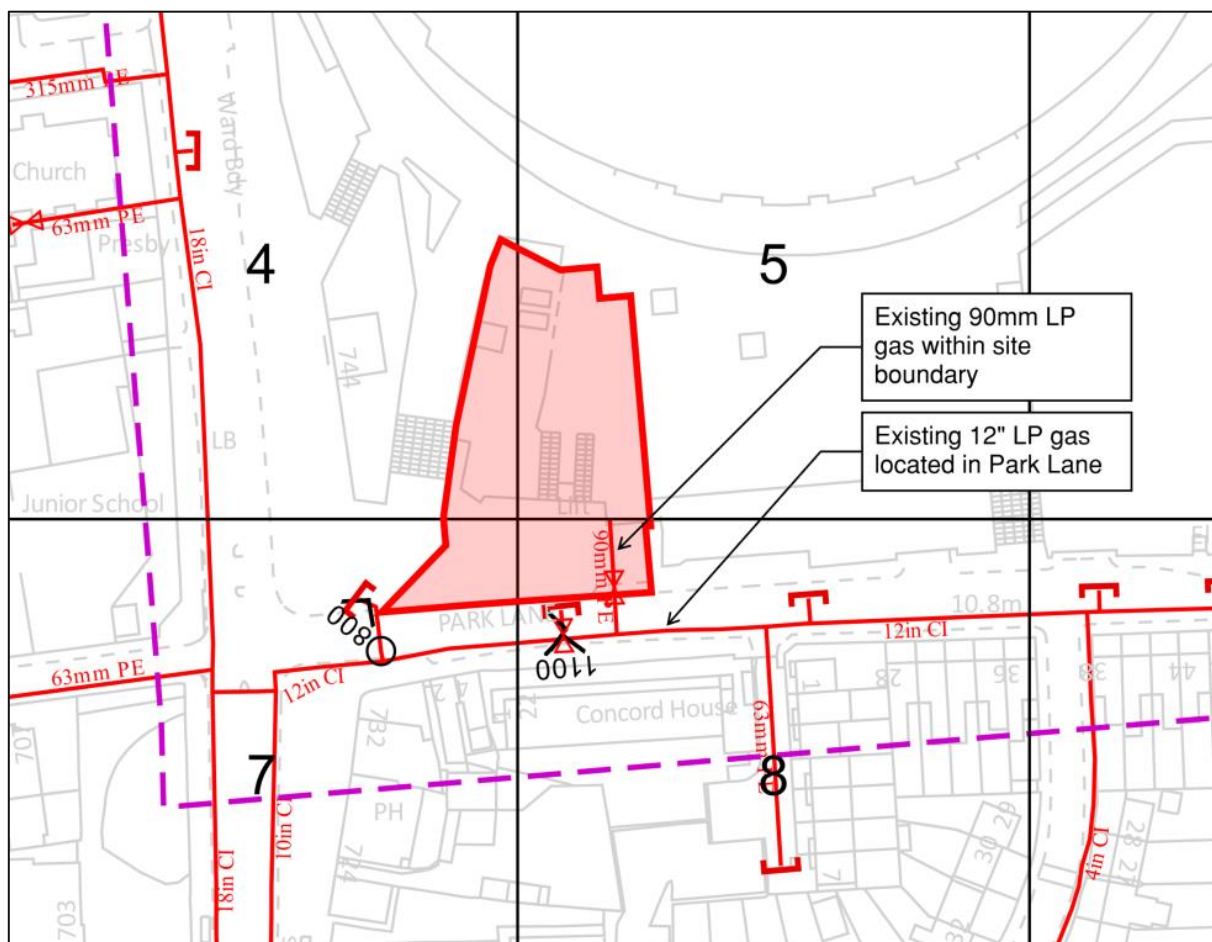


Figure 0-2 - Cadent gas network layout with Plot 3 boundary shown with red overlay

Existing Water Network

Thames Water is the incumbent potable water supplier for the area and have water mains running along Park Lane, and High Road. As shown by Figure 0-3, there is an existing 6" Cast Iron potable water main located in Park Lane with smaller legs off into the northern footpath to provide a combination of fire hydrant points adjacent to the THFC stadium and supply connections to existing buildings which were constructed as part of the wider NDP project.

An additional survey should be conducted to confirm if there are any small diameter services which require abandonment prior to construction of the NDP Hotel development.

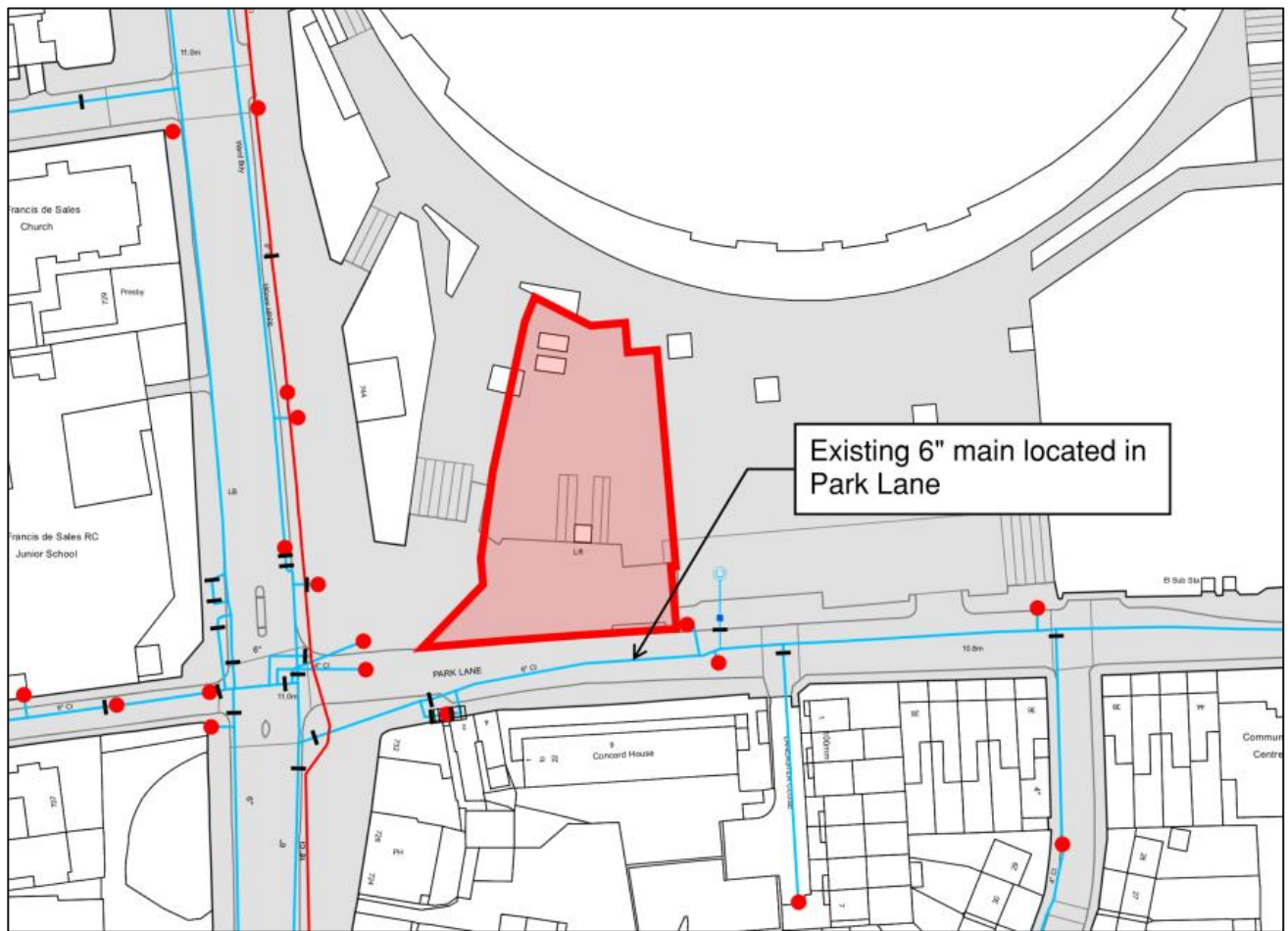


Figure 0-3 - Thames Water potable water mains network layout with Plot 3 boundary shown with red overlay

Existing Sewer Network

Thames Water also provides the foul and surface water drainage for the area. Figure 0-4 shows the fact that there are pipe runs and manholes present to the south of the site in Park Lane for both surface and foul water drainage. These both flow to the east towards Worcester Avenue. The records show that the diameter of the foul and surface water drainage pipes on site have diameters of 1000mm and 900mm respectively.

Connections to each individual building isn't shown on the Thames Water records. Therefore, as with the potable water network, an additional survey will be required to ascertain the location all existing foul and surface drainage infrastructure in the vicinity. Drainage connections were installed as part of the wider NDP development which could potentially be utilised to serve the proposed hotel.

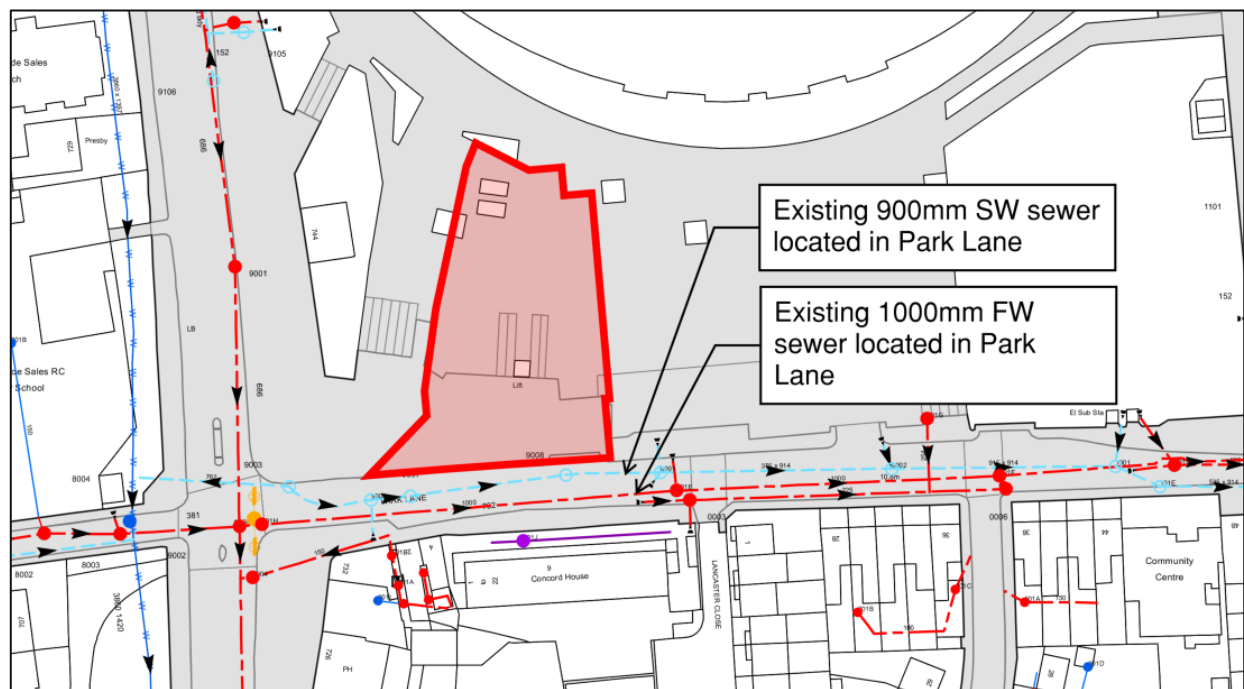


Figure 0-4 - Thames Water surface and foul water drainage network layouts with Plot 3 boundary shown with red overlay

Existing Telecommunications Network

BT Openreach have telecommunications infrastructure along the southern perimeter of the NDP Hotel site on Park Lane. Figure 0-5 shows that there is an existing BT box close to the NDP Hotel building. This infrastructure is served by cabling which connects to the primary network on the High Road which is in very close proximity to the site.

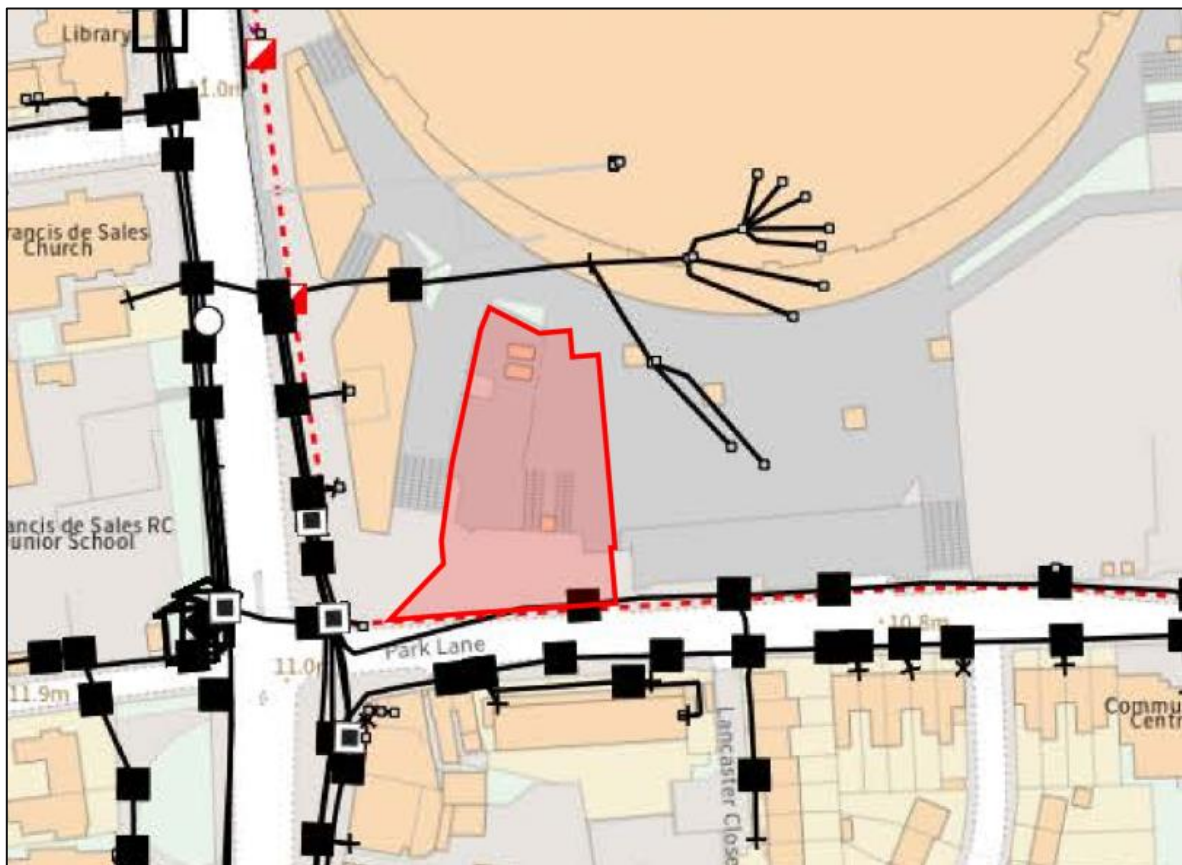


Figure 0-5 - BT Openreach telecommunications network layout with Plot 3 boundary shown with red overlay

There is also infrastructure operated by Virgin Media and Vodafone in the wider area. The Virgin Media infrastructure follows a similar routing to that of BT Openreach with telecommunication routing running along Park Lane and the High Road. Figure 0-6 below details the Virgin Media network in the vicinity of the site:

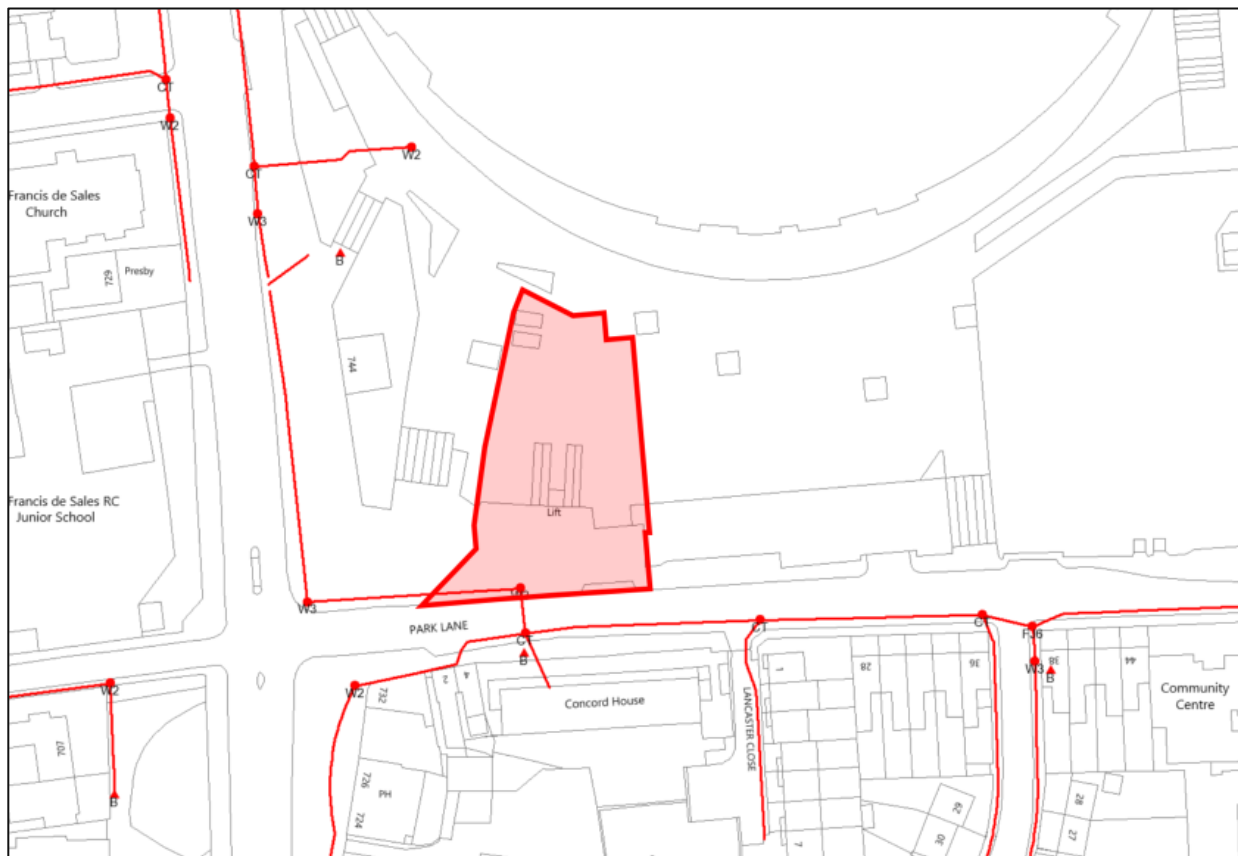


Figure 0-6 – Virgin Media telecommunications network layout with Plot 3 boundary shown with red overlay

The Vodafone network is only located in the wider area around the NDP development with infrastructure located further north in the High Road to the north west of the site and also in Worcester Avenue to the east of the site.

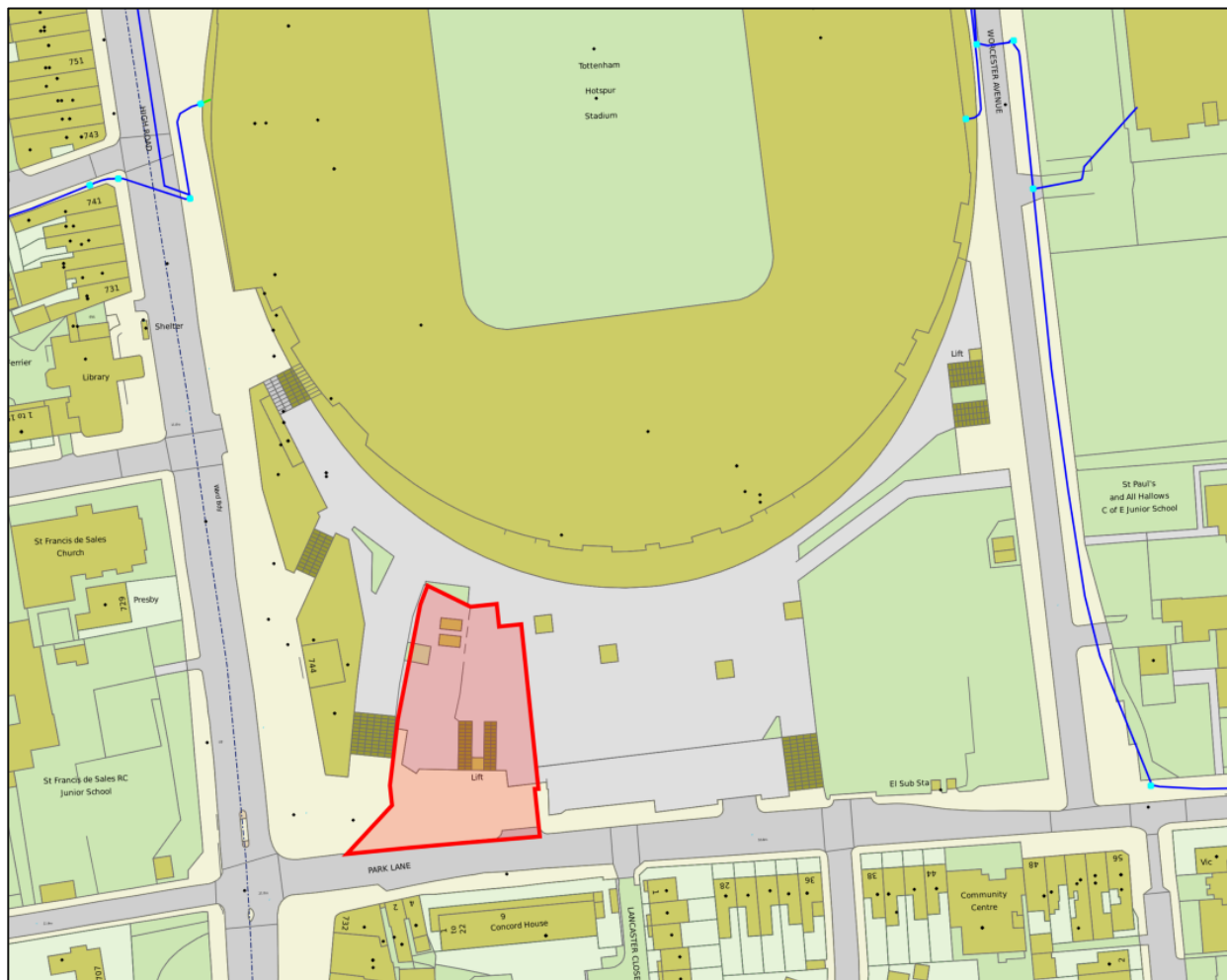


Figure 0-7 - Vodafone telecommunications network layout with Plot 3 boundary shown with red overlay

Existing Telecommunication Masts

There are several telecommunication masts within the vicinity of the site, which are likely to have been installed as part of the wider NDP development with the intention of serving large populations of people during events at the adjacent THFC Stadium.



Figure 0-8: Telecommunication masts in vicinity of proposed NDP Hotel development with Plot 3 boundary shown with red overlay

Existing Transport Network

London Underground records indicate that there is an existing road and track power cable is running alongside High Road, as shown in Figure 0-9. The location appears to be shown indicatively, despite this it is not anticipated that this asset will be impacted by the development given its relative proximity to the site.

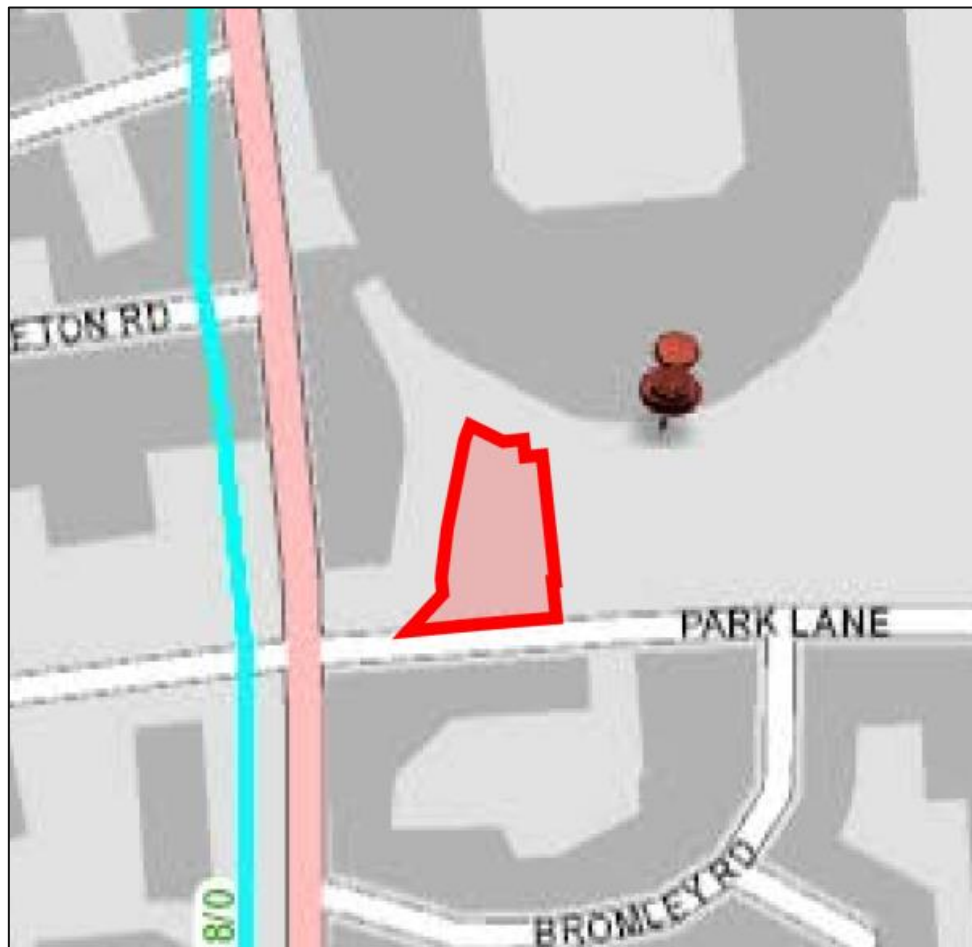


Figure 0-9 - Transport for London HV track and road cable network layout with the Plot 3 boundary shown with red overlay

Figure 0-10 shows a Transport for London drawing that shows traffic control equipment at the junction of High Road and Park Lane, which is in very close proximity to the site boundary. However, it would appear that there isn't any traffic control equipment within the site boundary itself.

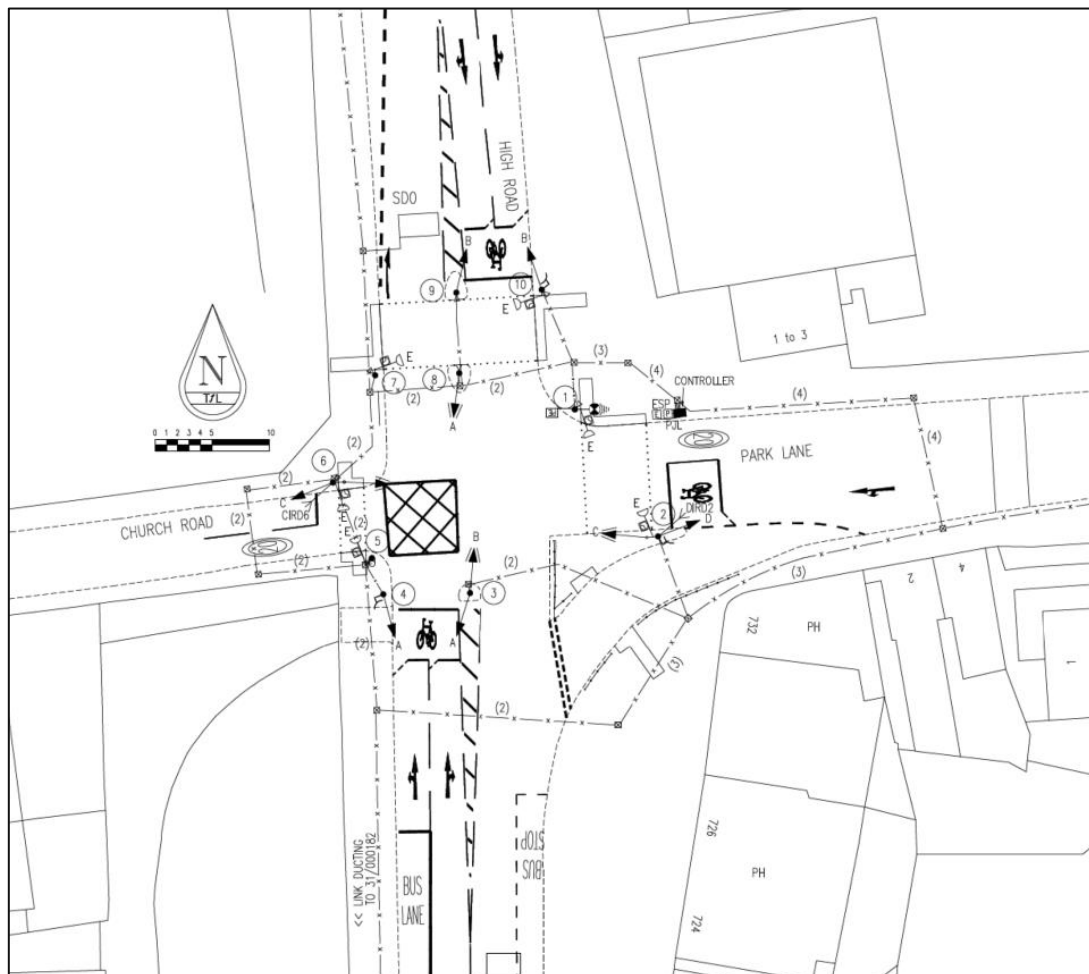


Figure 0-10 - Layout showing Transport for London traffic control equipment at the junction of Park Lane and High Road

Haringey Council were unable to provide plans showing the layout of street lighting in the area around the site, so an additional survey will be required to ascertain whether there is any street lighting infrastructure that will need to be diverted.

New Utility Connections

Demand Analysis

Preliminary utility demands for the site have been estimated by the Buro Happold MEP team and tabulated below in Table 0-1. For more information on how these estimates were calculated refer to the Building Services report (Ref: 0053214-BHE-ZZ-ZZ-RP-MEP-0001).

Table 0-1 - Utility demand estimates for the proposed development

	Units	NDP Hotel Demand
Electricity load	kVA	2638
Heating load	kW	1000
Cooling load	kW	800
Cold water consumption	litres/day	50,000
Foul drainage	litres/second	10.93
Storm water drainage	litres/second	4.4

Discussions with UKPN have been held over the effects that the electricity demands of the NDP Hotel will have on their network and a budget estimate has been submitted to UKPN to establish whether there is currently enough capacity within the network to supply the NDP Hotel development without additional network reinforcement costs.

Estimates are yet to be obtained from UKPN and Thames Water over the electricity network and the potable water and drainage networks respectively. It isn't anticipated that major off-site infrastructure will be required for the new connection to the telecommunications networks.

Proposed Electricity Network Connection

Two new substations are proposed within the hotel basement to serve both the Residential and Hotel.

There may be an opportunity to connect into the existing HV ring network serving the THFC stadium to the north of the hotel site. There is also existing HV cables which run along Park Lane which can potentially be routed to serve the hotel from the south.

A pre-planning application under reference 8500269344 has been submitted to UKPN for a connection off Park Lane. UKPN are yet to respond with their proposal for the connection to the NDP Hotel site from their existing network. It is assumed that an individual point of connection for the site from Park Lane will be required.

Proposed Potable Water Network Connection

As with the electricity network, the potable water network for the development is intended to be supplied via the existing 6" Thames Water main located in Park Lane provided it is capable of meeting the demand requirements for the new development. There is also a short leg off the 6" main of unknown diameter which currently serves a fire

hydrant, this is another potential connection point to the Thames Water network which would negate the need for road crossing provided the pipe is of sufficient diameter to serve the development. Thames Water have not yet provided a response to the pre-planning application submitted by Buro Happold, so it should be noted that the suitability of these is yet to be confirmed, and it is also not yet known whether the existing network will have to be reinforced to meet the demand of the new development.

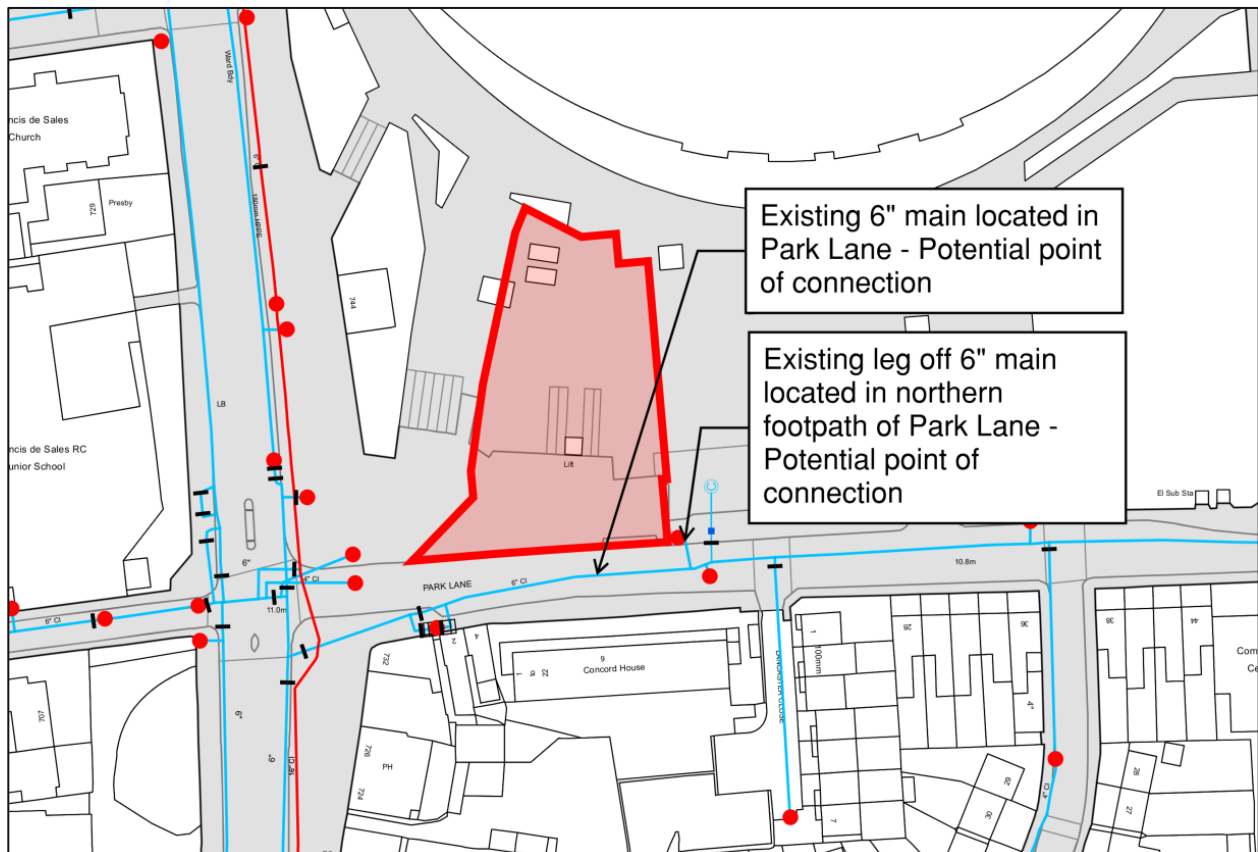


Figure 0-1 - Layout of proposed connection points for potable water supply from the existing Thames Water network

Proposed Drainage Network Connection

The surface water from the hotel building is proposed to be discharged via gravity to the existing 225mm TW surface water sewer located in Park Lane, as shown in Figure 0-2, which will be a new connection.

It is proposed that foul water from the proposed hotel building will discharge into the existing 1000mm foul sewer located on Park Lane, as can be seen in Figure 0-2.

Existing private drainage arrangements installed as part of the NDP project to serve the THFC Stadium and associated buildings are to be utilised to serve the hotel building development with modifications where necessary, see Drainage Strategy report (Ref: 0053214-BHE-XX-XX-RP-C-03000) for further details.

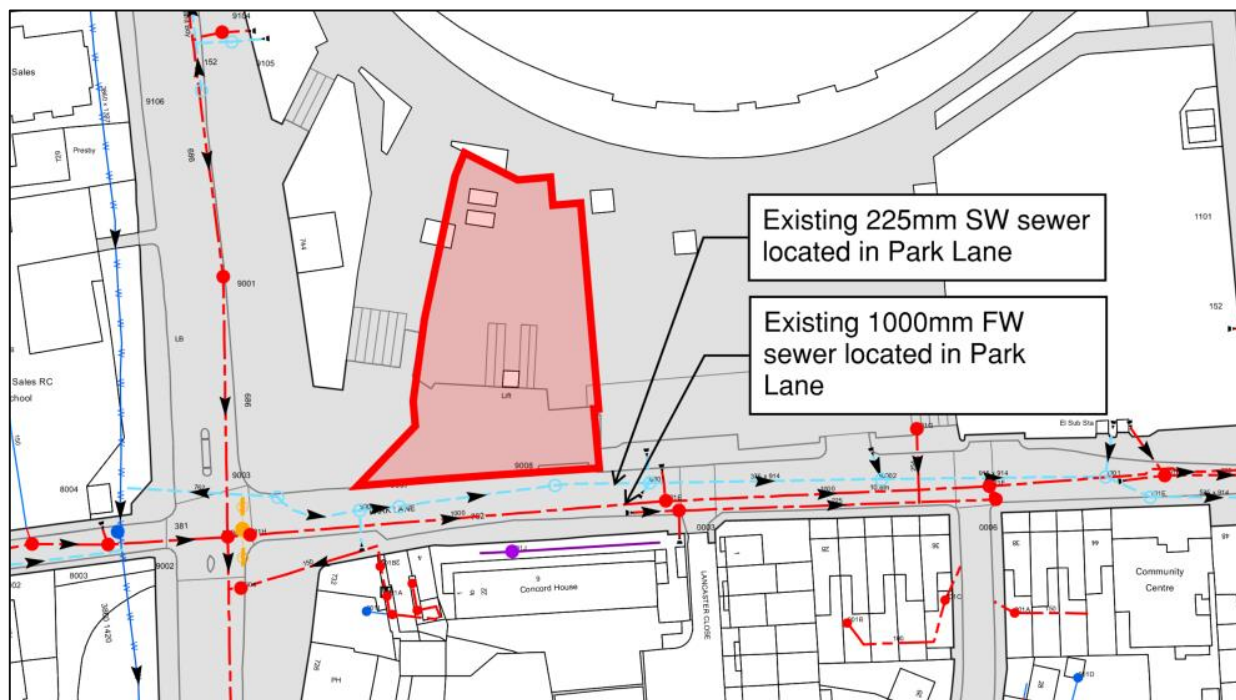


Figure 0-2 - Layout of proposed connection points for surface and foul water drainage to the existing Thames Water network

Proposed Telecommunications Connection

There are existing telecommunication networks available in the immediate vicinity of the site on Park Lane and High Road. There is no issue envisioned with supplying the hotel development from these existing networks. The intention is for these connection to be managed post planning.

Proposed District Energy Network

As previously stated in Section 0, there is not currently a district energy network in close proximity to the site, however Energetik are currently constructing a network in the area to connect to the new Meridian Water Energy Centre, which is around 2km to the north-east of the development.

This heat network is due to be completed in 2023, so it should be ready to connect to the development immediately, although it should be noted that it will initially run on gas before being decarbonised in 2026. The energy centre has a capacity of 70 MW, and during initial conversations with Buro Happold MEP, Energetik have indicated that the network will be capable of satisfying the peak demand of the development.

The closest part of the network to the hotel building development runs along Fore Street, with plans to extend this to within 800m of the development within 2023 to the junction between High Road and Langhedge Lane. This means that the required extension to connect to the DEN will be relatively short and can be placed in Fore Street/High Road, which is a main road with a wide carriageway, so there should be ample space for the extension infrastructure. This extension can be seen in Figure 0-3, where the DEN already under construction is shown in shades of blue, the current planned extension to Langhedge Lane in 2023 shown in orange and the proposed extension to the NDP Hotel development is shown in red:

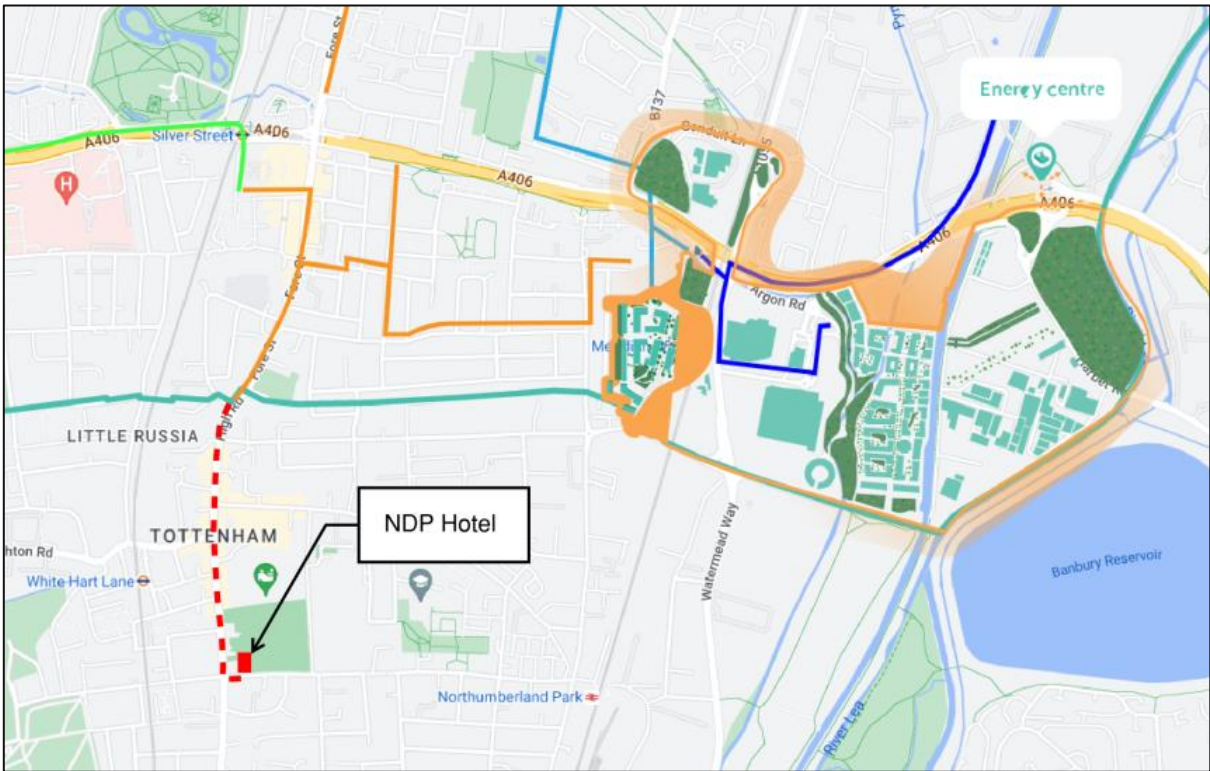


Figure 0-3 - Layout of Energetik district energy layout (blue) with current extension planned in 2023 (orange) and proposed extension to development (red)

Summary

There are a number of utilities with existing infrastructure in the vicinity of the NDP Hotel site boundary, namely UKPN, Cadent gas, BT Openreach telecommunications, and Thames Water drainage and potable water supply infrastructure.

Preliminary utility demands have been estimated for the new development and connections the existing infrastructure in Park Lane to the south of the development are proposed.

Pre-planning applications have been submitted to UKPN and Thames Water regarding their relevant statutory undertakings to provide budget estimates and point of connections for the new development. However, responses from UKPN and Thames Water have not been received at the time of writing this report.

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