

The Printworks, High Road West

Utilities Statement

HRW-BHE-PW-XX-RP-CI-09000

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16 August 2023

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author

Marc Jones

date

16/08/23

approved

Les Johnson

signature



date

16/08/23

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Glossary

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

1 Introduction

1.1 Background

This Utilities Statement report has been prepared by Buro Happold to support the full planning application for the development known as Printworks, High Road West. 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.

1.2 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',

- 819-829 High Road, Tottenham, N17 8ER (The Printworks)

The Site is currently occupied by a number of retail units with residential units above and a private commercial events space. The Printworks is bounded on multiple sides by transport routes: High Road to the east, Brunswick Square to the north, and Peacock Estate to the west. According to the British Geological Survey, nearby historic boreholes suggest that the underlying ground conditions consist of London Clay.

1.3 Proposed Development

Full planning application for the demolition of existing buildings and structures to the rear of 819-829 High Road; the demolition of 829 High Road; and redevelopment for purpose-built student accommodation (Sui Generis) and supporting flexible commercial, business and service uses (Class E), hard and soft landscaping, parking, and associated works. To include the change of use of 819-827 High Road to student accommodation (Sui Generis) and commercial, business and service (Class E) uses.

The site boundary and a summary of the development are provided in Figure 1-1 and Table 1-1 below.

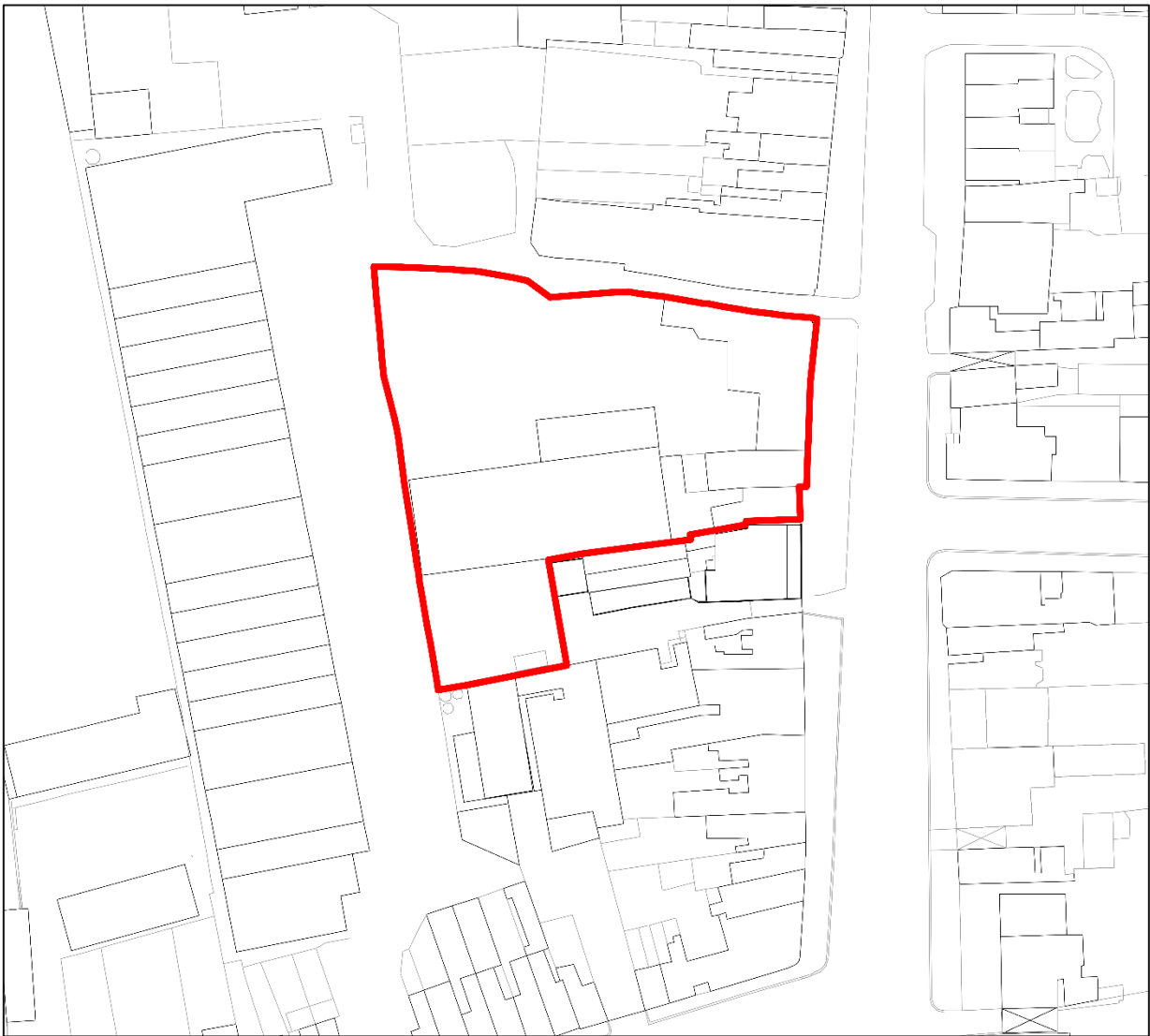


Figure 1-1 - Existing site plan with site boundary shown in red outline

Table 1-1 - Summary of the proposed development

	Units	Total
Total site area	m ²	3,598
Student bed spaces (ensuite + studios)		287
Commercial floorspace	m ²	216

2 Existing Utilities on Site

2.1 Overview

Table 2-1 below gives a brief overview of the utilities with existing infrastructure in the Printworks 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 2-1 - Utility networks present within, or in close proximity to, the Printworks site boundary

Provider	Utility Type	Present in the Printworks site?	Present in the adjacent areas?
UKPN	Electricity	Suspected	Yes
GTC	Electricity	No	Yes
Cadent	Gas	Yes	Yes
BT Openreach	Telecommunications	Yes	Yes
Virgin Media	Telecommunications	No	Yes
Vodafone	Telecommunications	No	Yes
Instalcom	Telecommunications	No	Yes
Thames Water	Sewers	Yes	Yes
Thames Water	Water Mains	Yes	Yes
Transport for London	Traffic Control	No	Yes
Transport for London	Transport - HV Cable	Yes	Yes
Network Rail	Transport - Railway	No	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.

2.2 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 2-1 indicate that there are UKPN cabling present under Brunswick Square, High Road, and Northumberland Park at the junction in close proximity to the site. HV cabling present particularly in High Road.

However, there is no UKPN infrastructure shown within the site boundary on these records. It is still assumed that there is a connection to the buildings on site from the UKPN network, so an additional investigative survey should be undertaken to find this connection as it will likely need to be diverted or abandoned.

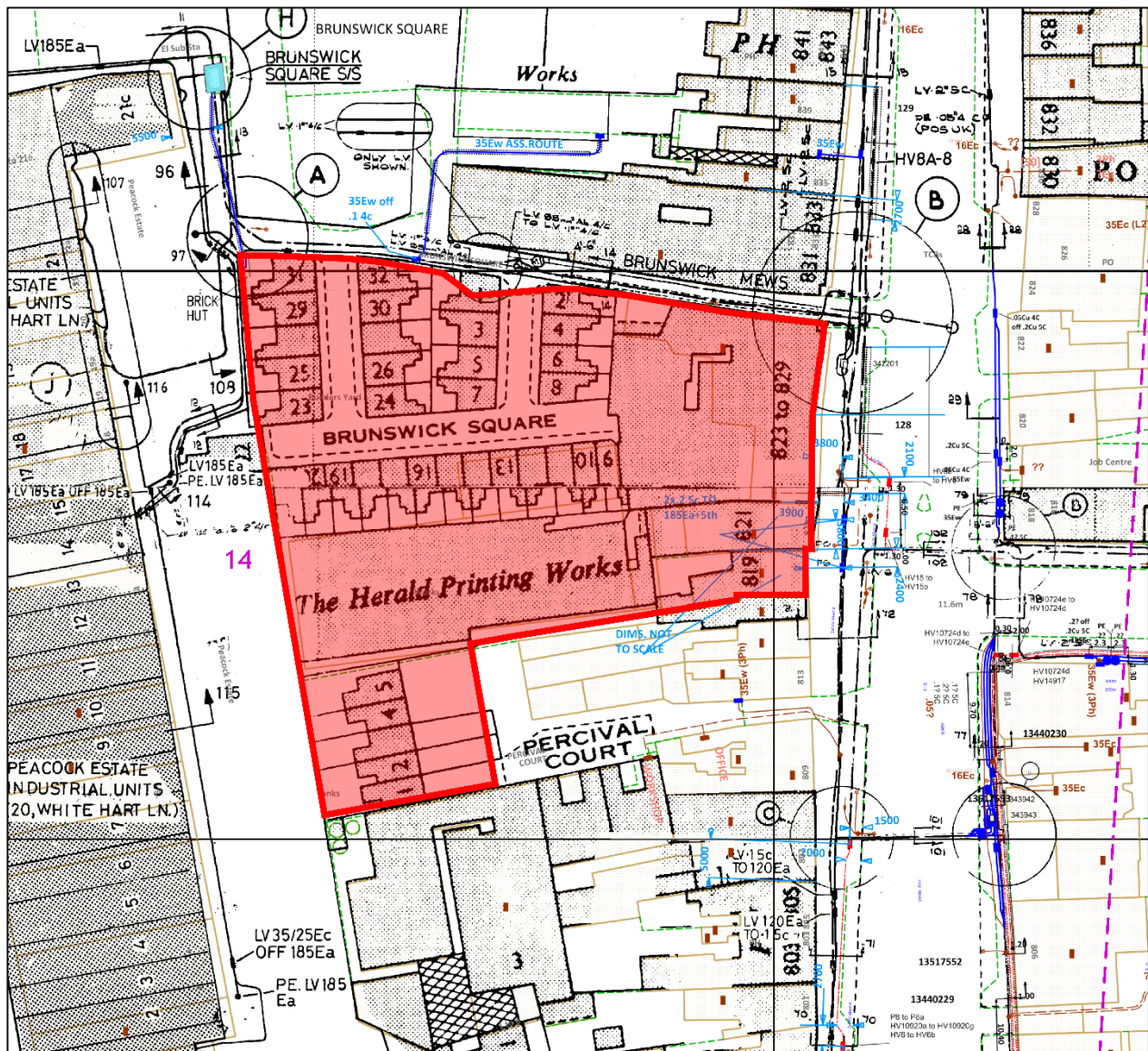


Figure 2-1 - UKPN electricity network layout with site boundary shown with red overlay

2.3 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 200m 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.

2.4 Existing Gas Network

Cadent is the sole operator of the natural gas network in the site boundary, with infrastructure present that is serving the existing buildings on the Printworks site, as can be seen in Figure 2-2.

The roads adjacent to the site contain much larger gas mains which should also be accounted for. To the north of the site there is an 8-inch diameter L/P gas main running along Brunswick Square. To the east of the site, High Road contains an 18-inch diameter L/P gas main, a 6-inch diameter L/P gas main, and an M/P gas main that varies in diameter between 315mm and 355mm. Also, to the east of the site, the western side of Northumberland Park contains a 63mm diameter L/P pipe, a 150mm diameter L/P pipe, and a 355mm diameter M/P main.

There are no pipe runs in the ground within the site boundary, however there are several connections from the main L/P network to the buildings on site that may require abandonment. These include two 4-inch diameter connections from Brunswick Square at the north of the site, a 63mm diameter pipe connecting to 821 High Road, and 90mm diameter pipe connecting to 819 High Road.

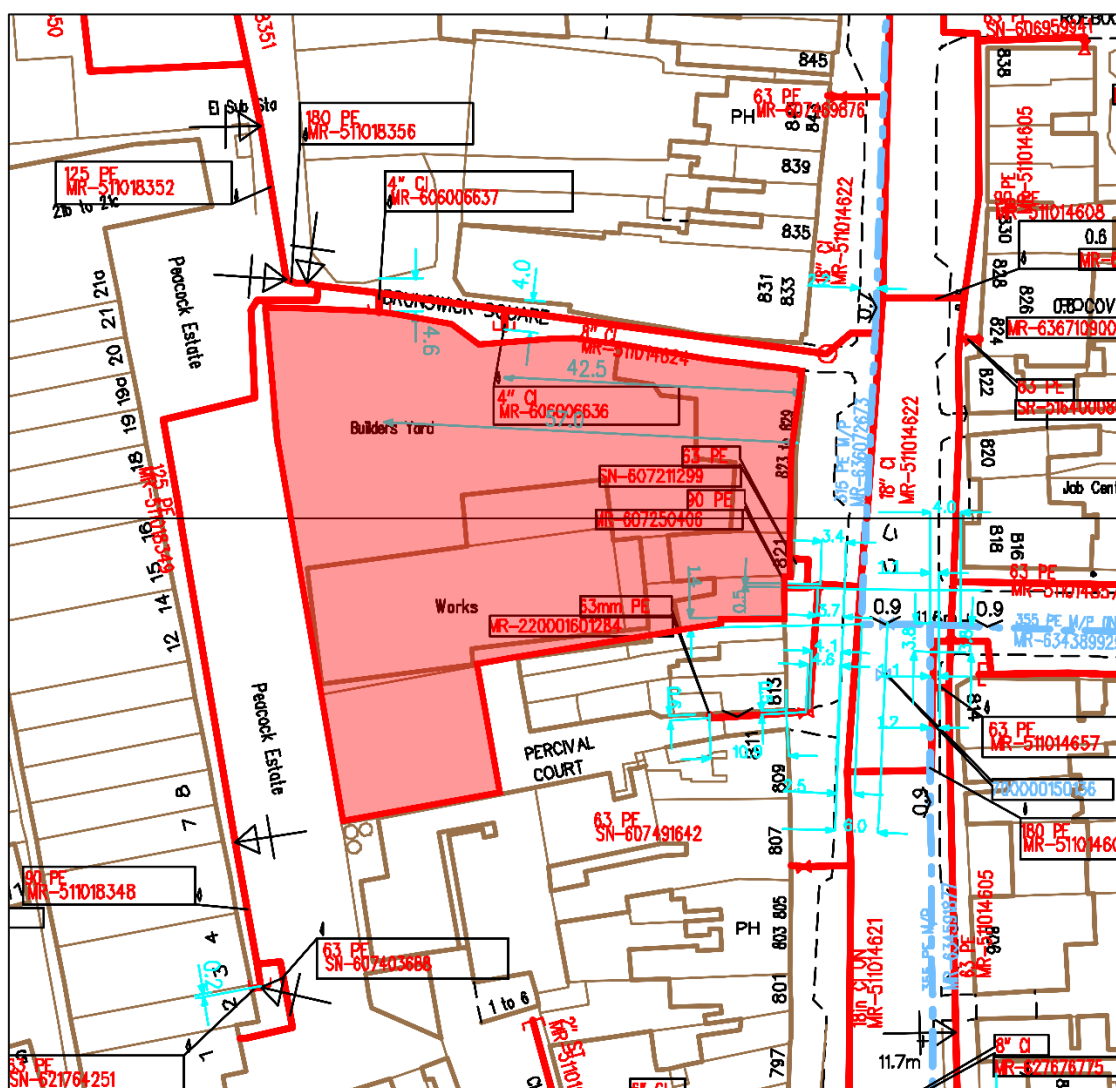


Figure 2-2 - Cadent gas network layout with site boundary shown with red overlay

2.5 Existing Water Network

Thames Water is the incumbent potable water supplier for the area and have water mains running along Brunswick Square, High Road and Northumberland Park. However, as shown by Figure 2-3, the only connections to existing buildings shown on the Printworks site in Thames Water's records are at 821 and 823-829 High Road on the eastern side of the site.

It is anticipated that there are other existing connections to the other buildings within the site boundary that will need to be disconnected prior to construction. An additional survey should be conducted to confirm this and find the connection points and network layout.

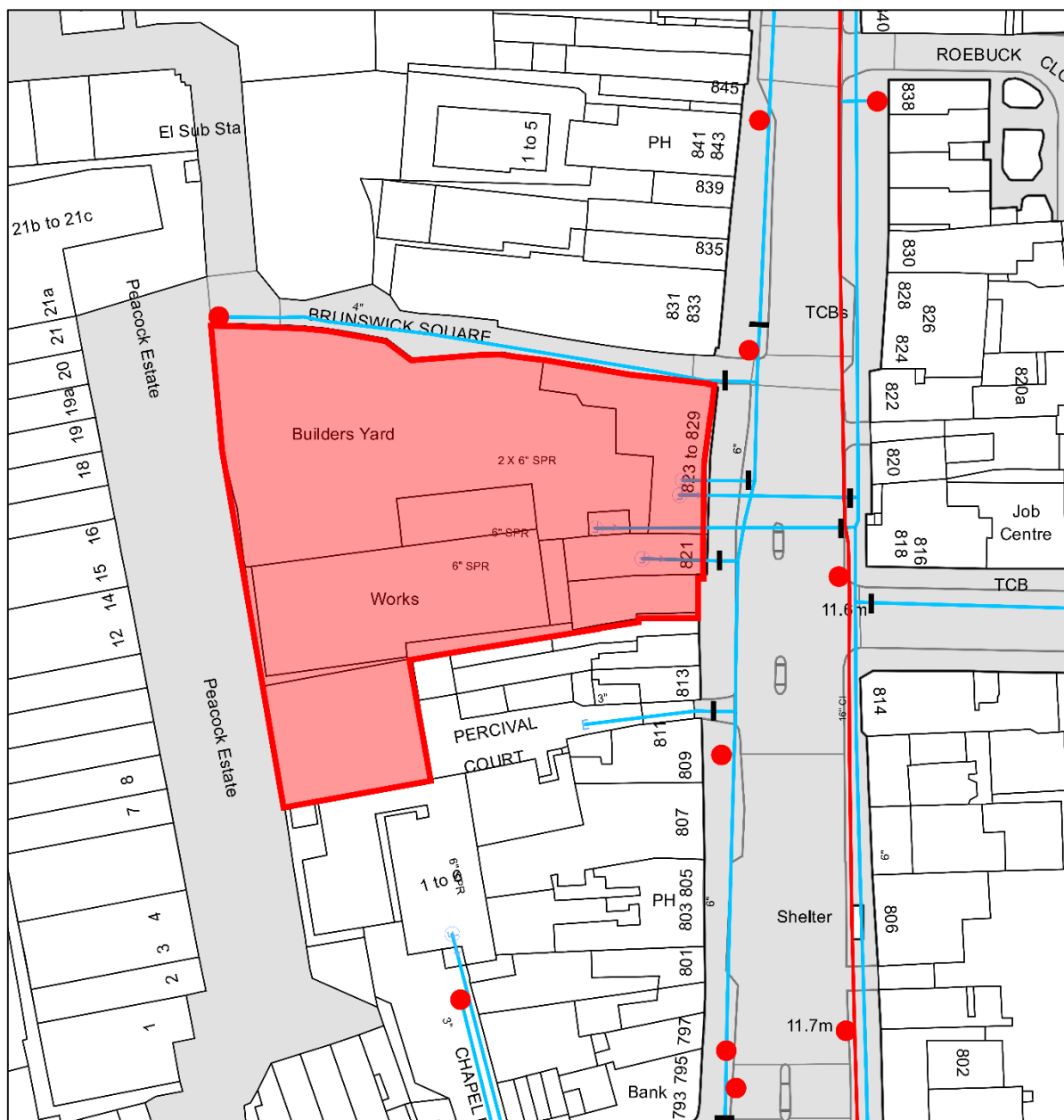


Figure 2-3 - Thames Water potable water mains network layout with site boundary shown with red overlay

2.6 Existing Sewer Network

Thames Water also provides the foul and surface water drainage for the area. Figure 2-4 shows the fact that there are pipe runs and manholes present on site for both surface and foul water drainage, which connect to the main network running along Brunswick Square, and later High Road. The records show that the diameter of the foul and surface water drainage pipes on site have diameters of 250mm and 152mm respectively.

However, the connection 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 Thames Water foul and surface drainage infrastructure. These existing connections should be removed and the existing pipes on site will likely need to be diverted or abandoned

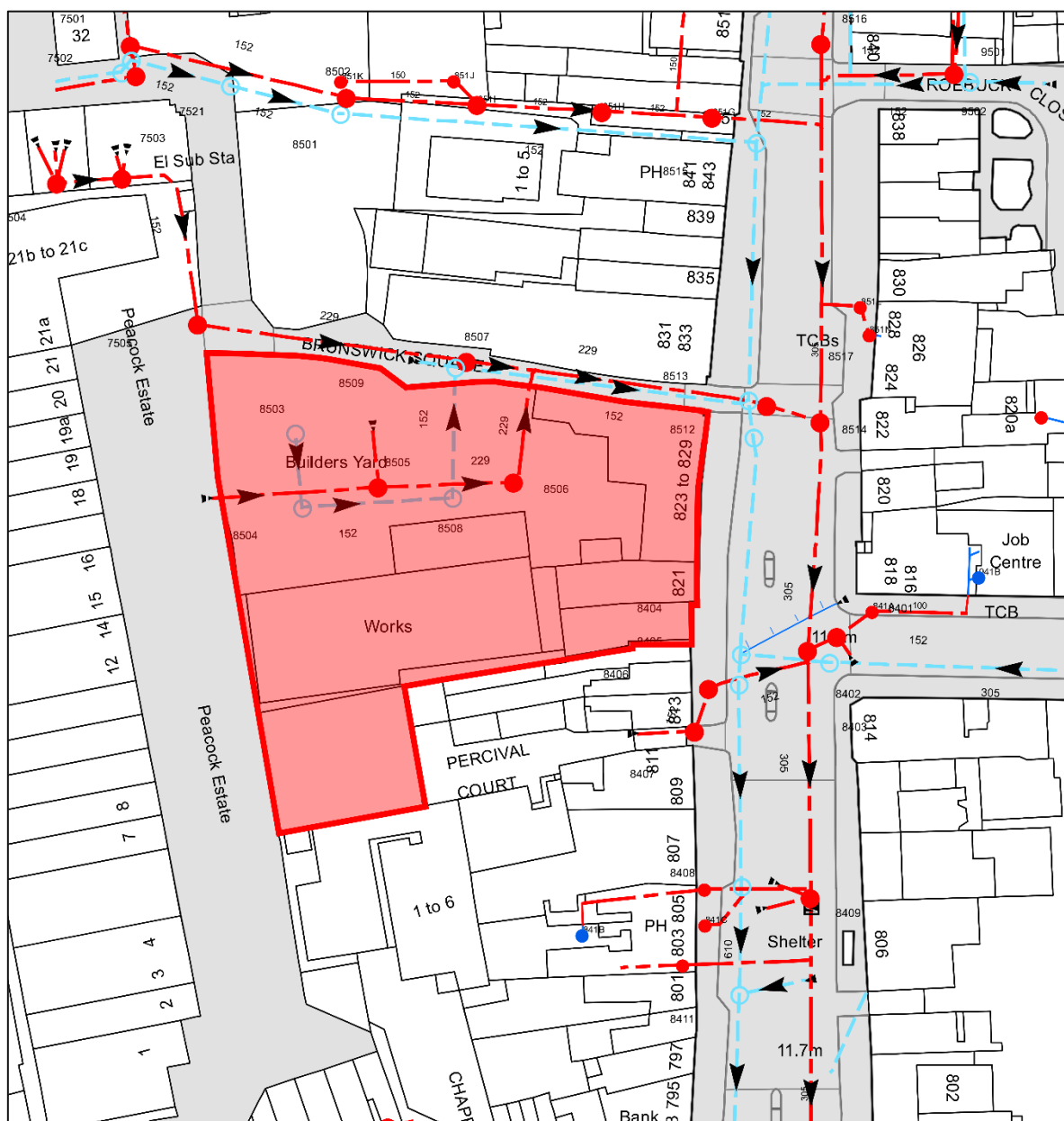


Figure 2-4 - Thames Water surface and foul water drainage network layouts with site boundary shown with red overlay

2.7 Existing Telecommunications Network

BT Openreach are the only provider that have telecommunications infrastructure on the Printworks site. Figure 2-5 shows that there is an existing BT pole close to the Printworks building, as well as two split couplings. This infrastructure is served by cabling which later connects to the main network on the western side of the pavement on High Road which is in very close proximity to the site. All the above ground infrastructure on site will need to be removed, while the underground cabling will likely need to be abandoned.



Figure 2-5 - BT Openreach telecommunications network layout with site boundary shown with red overlay

There is also infrastructure operated by Virgin Media and Vodafone in the wider area. The Vodafone network in the area has cabling present at the junction of Northumberland Park and High Road before running south along High Road.

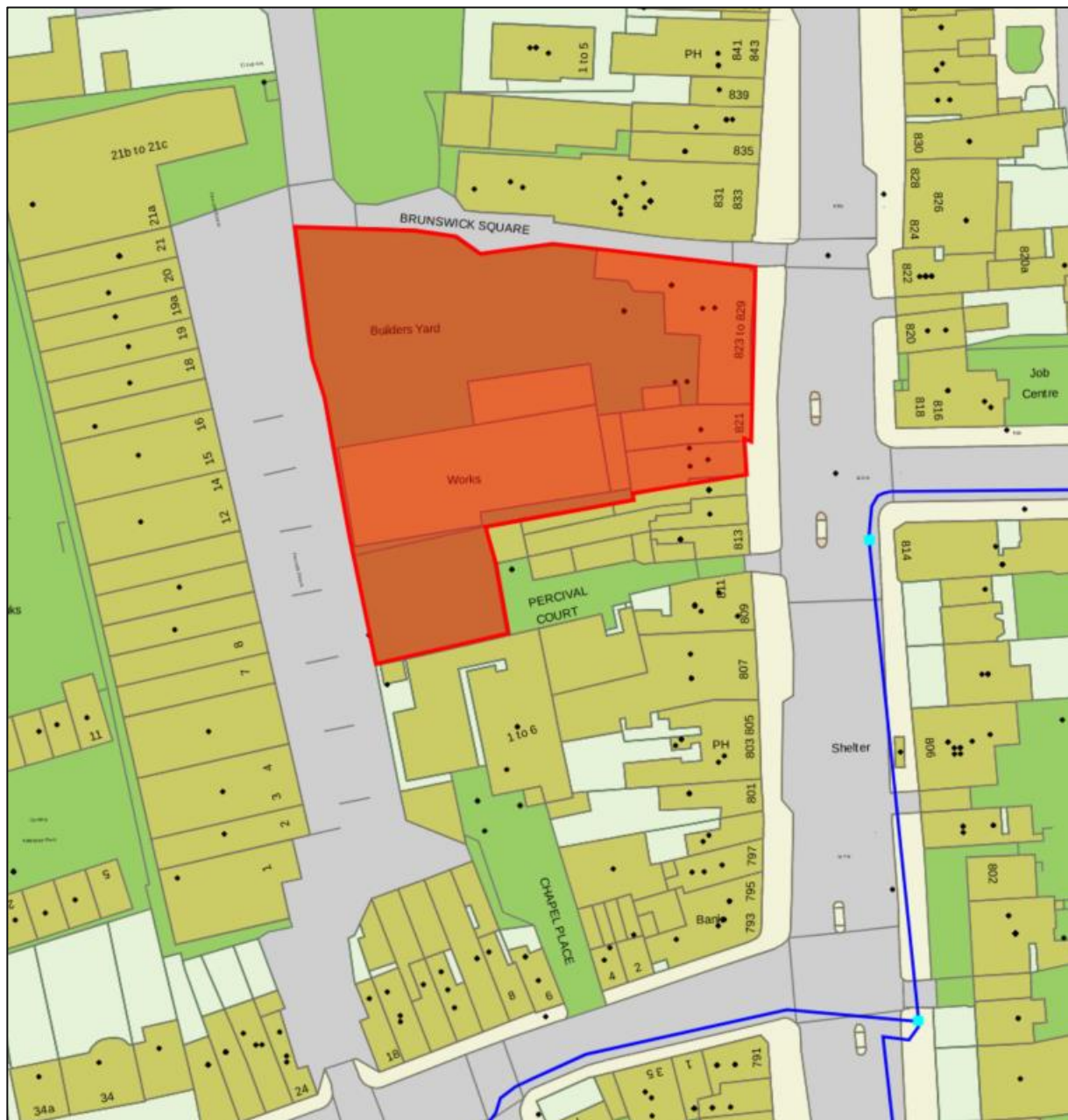


Figure 2-6: Vodafone telecommunications network layout with site boundary shown with red overlay

Virgin Media cabling is in much closer proximity to the site, running along the western pavement of High Road and including a small spur at the junction of Brunswick Square and High Road which is approximately 10 metres long.



Figure 2-7: Virgin Media telecommunications network layout with site boundary shown with red overlay

2.8 Existing Transport Network

London Underground records indicate that there is an existing road and track power cable is running alongside High Road, part of which is lying within the Printworks site boundary, as shown in Figure 2-8. However, the location appears to be shown indicatively, so it should be further investigated to see whether it actually is outside of the carriageway and will require diversion.

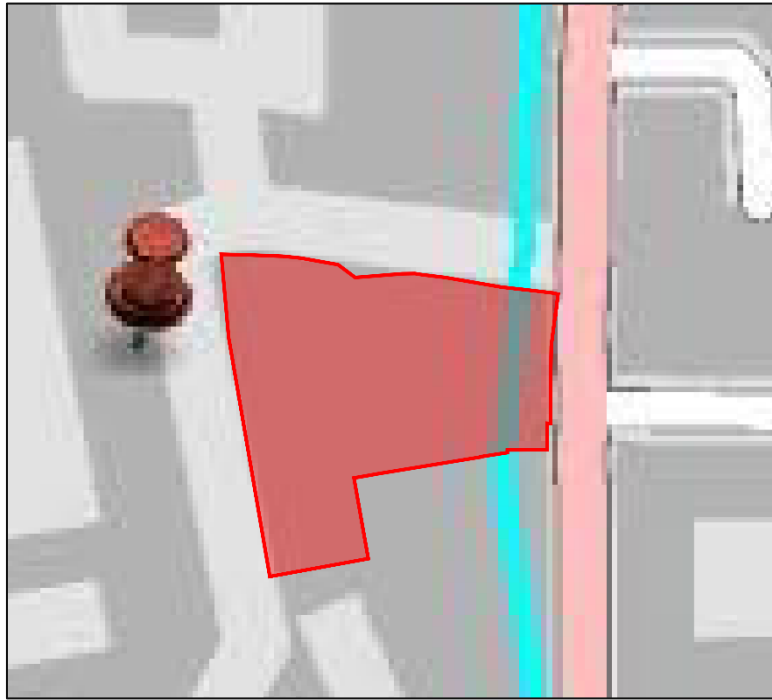


Figure 2-8 - Transport for London HV track and road cable network layout with the site boundary shown with red overlay

Figure 2-9 shows a Transport for London drawing that shows traffic control equipment at the junction of High Road and Northumberland Park, which is in very close proximity to the site boundary. However, it would appear that there isn't any traffic control equipment at Brunswick Square

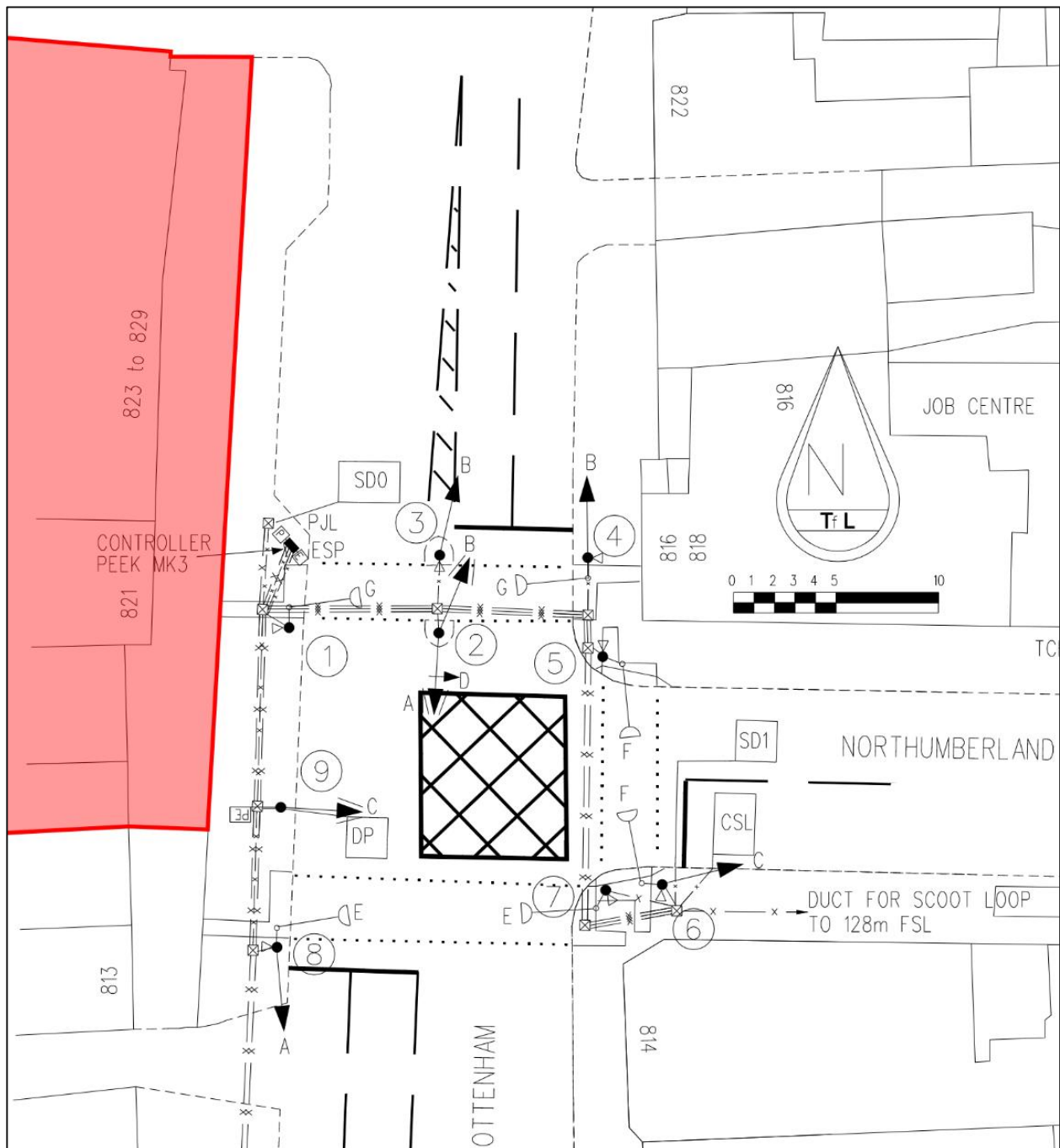


Figure 2-9 - Layout showing Transport for London traffic control equipment at the junction of Northumberland Park and High Road, with the Printworks site boundary shown with a red overlay

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.

3 New Utility Connections

3.1 Demand Analysis

Preliminary utility demands for the site have been estimated by the Buro Happold MEP team and tabulated below in Table 3-1. For more information on how these estimates were calculated refer to the building services report (ref. HRW-BHE-XX-XX-RP-MX-0001).

Table 3-1 - Utility demand estimates for the proposed development

	Units	Printworks Demand
Electricity load	kVA	980
Heating load	kW	630
Cooling load	kW	283
Cold water consumption	litres/day	33,000
Foul drainage	litres/second	13.32
Storm water drainage	litres/second	2.0

Discussions with UKPN have been held over the effects that the electricity demands of the Printworks will have on their network. There is currently enough capacity within the network to supply the Printworks development without additional network reinforcement costs, however the network does need to be reinforced to meet the demands of the overall High Road West development.

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

3.2 Proposed Electricity Network Connection

A 1MVA transformer is proposed to be located in a single sub-station at Ground Level opposite Core B at the entrance to the courtyard.

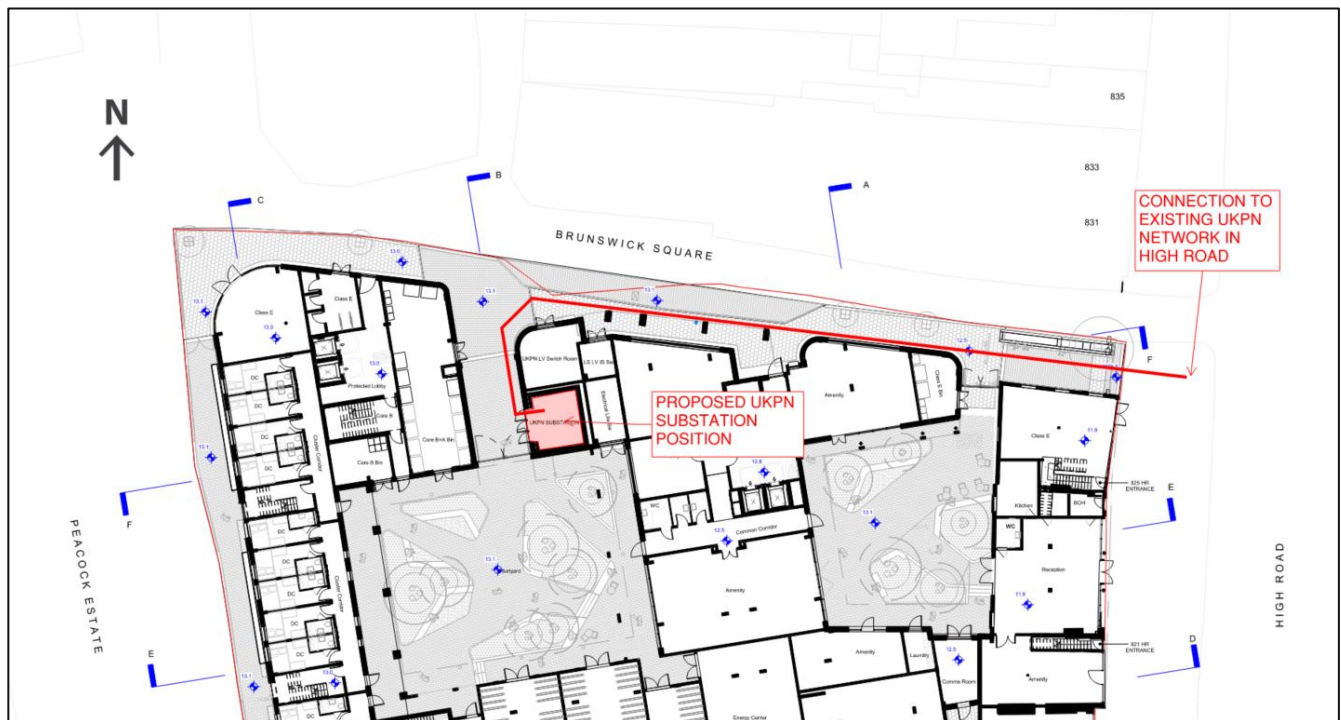


Figure 3-1: Indicative routing of incoming electricity supply from UKPN

A pre-planning application has been submitted to UKPN for a connection to the Printworks site from their existing network to the development site. UKPN have confirmed that they have capacity for an individual point of connection to the existing HV network on the High Road and an extension to a 1000kVA substation within the site with a ring main unit and air circuit breaker.

3.3 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 4" Thames Water main located in Brunswick Square provided it is capable of meeting the demand requirements for the new development. An alternative connection point is a 6" main located on High Road. Following submission of a Pre-Planning Enquiry to Thames Water, they have confirmed that the existing network has capacity to serve the development via the aforementioned 4" main on Brunswick Square.

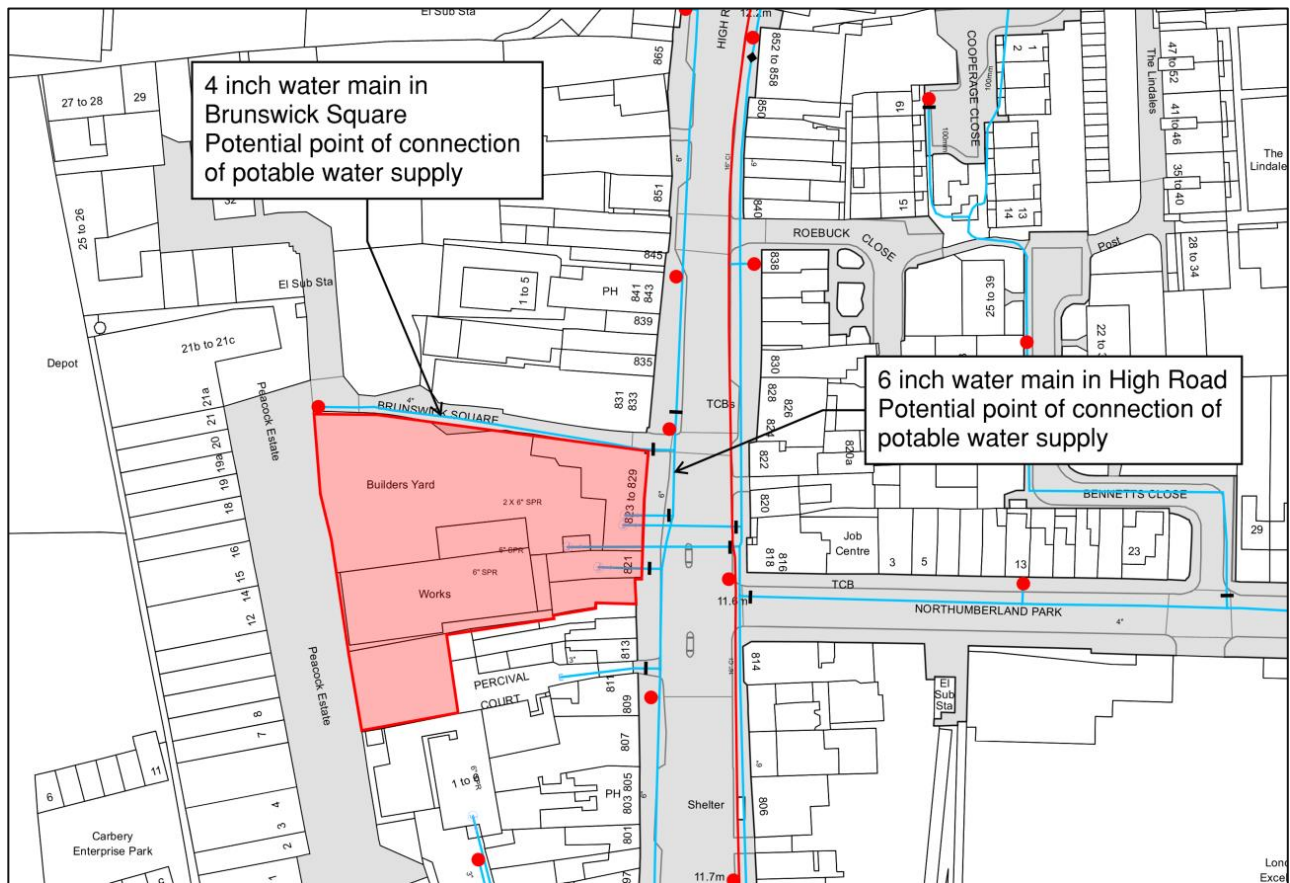


Figure 3-2 - Layout of proposed connection points for potable water supply from the existing Thames Water network

3.4 Proposed Drainage Network Connection

The existing drainage infrastructure within the Printworks site which served the previous development will need to be abandoned and removed.

The surface water from the Printworks is proposed to be discharged via gravity to the existing 610mm TW surface water sewer located in High Road, as shown in Figure 3-3, which will be a new connection.

It is proposed that foul water from the Printworks development will discharge into the existing 250mm foul sewer located on Brunswick Square, as can be seen in Figure 3-3.

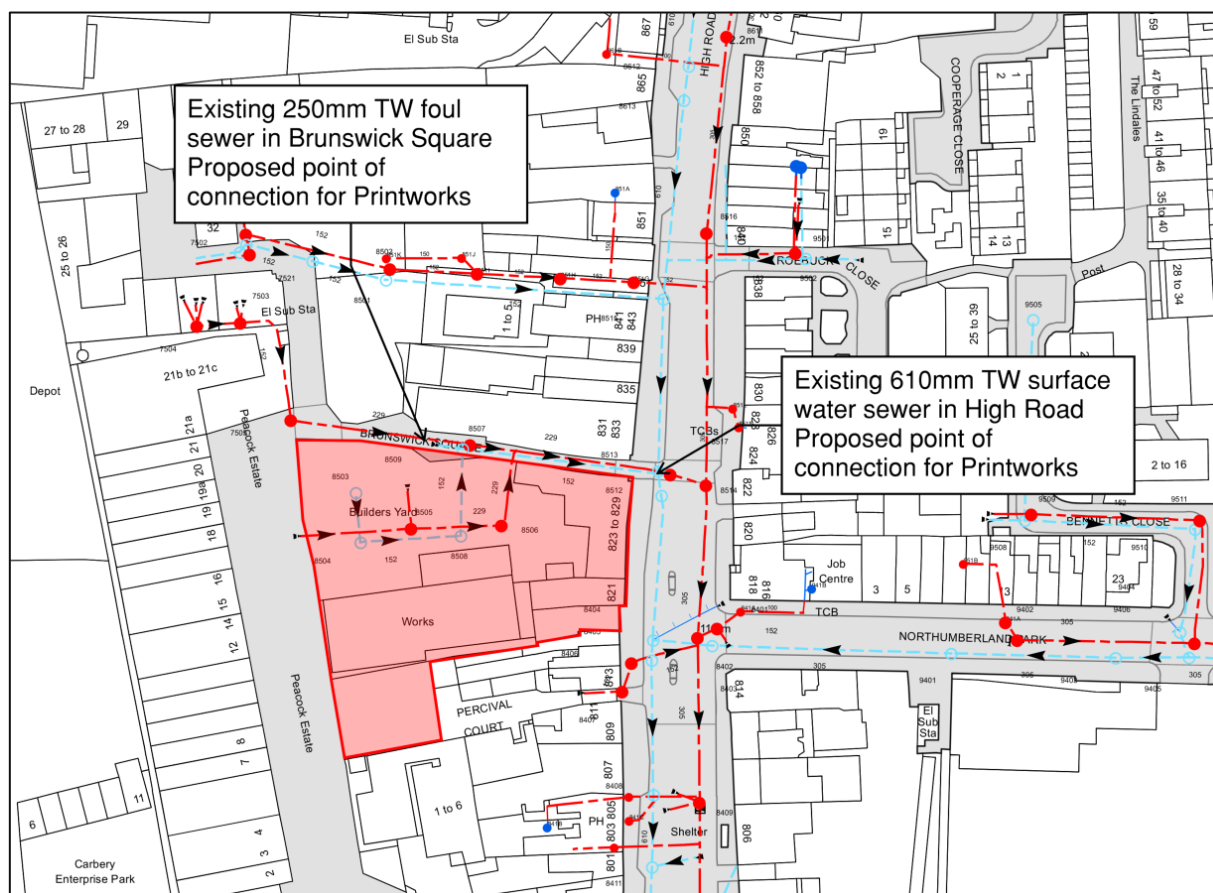


Figure 3-3 - Layout of proposed connection points for surface and foul water drainage to the existing Thames Water network

3.5 Proposed Telecommunications Network

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

3.6 Proposed District Energy Network

As previously stated in Section 2.3, 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 Printworks development runs along Fore Street, 400m from the site with plans to extend this to within 200m 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 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 3-4, where the DEN already under construction is shown in purple, and the proposed extension to the High Road West development is shown in orange:

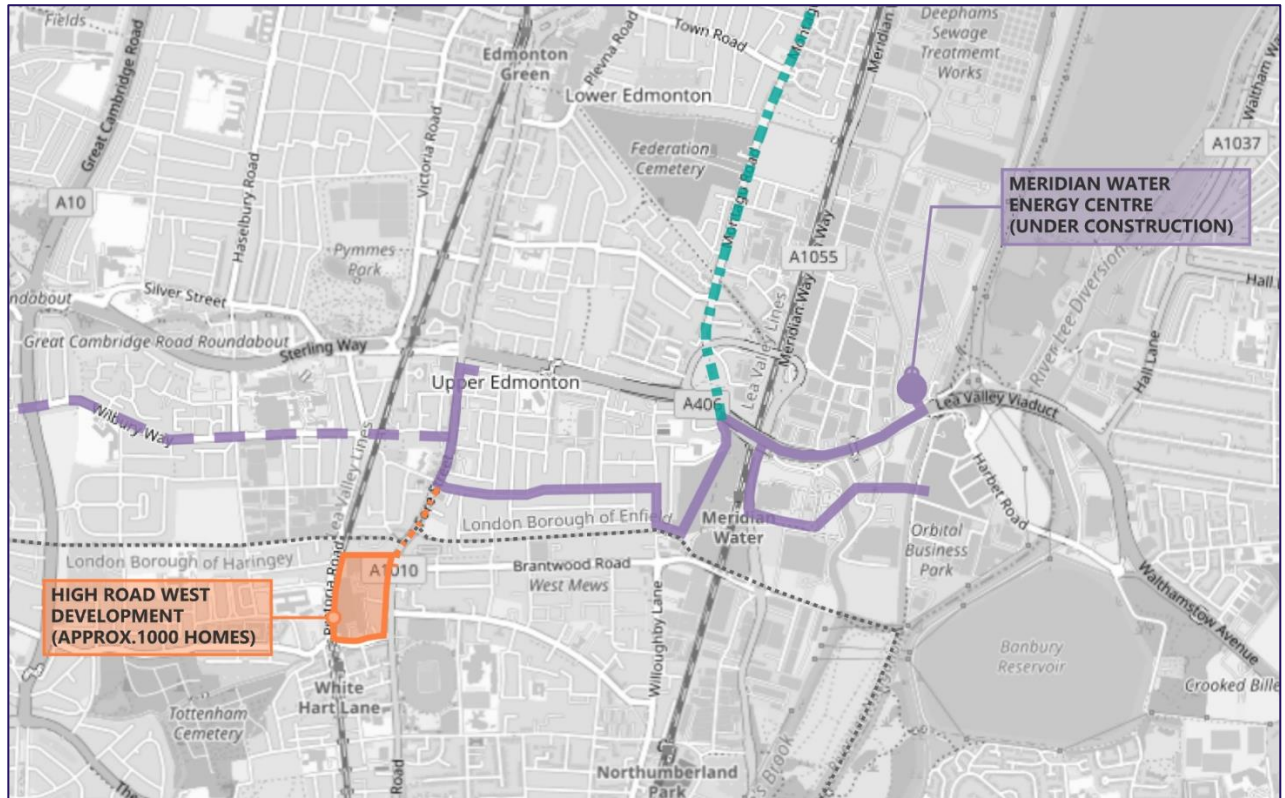


Figure 3-4 - Layout of Energetik district energy layout (purple) with proposed extension to development (orange)

4 Summary

There are a number of utilities with existing infrastructure in the Printworks site boundary, namely Cadent gas, BT Openreach telecommunications, and Thames Water drainage and potable water supply infrastructure, while UKPN electricity connections are also assumed. These are predominantly smaller diameter assets which were used for the distribution of utility services at the pre-developed site and will require abandonment and removal to facilitate the construction of the proposed development.

Preliminary utility demands have been estimated for the new development and a connections to the incumbent utility providers networks electricity, potable water, drainage, district energy and telecommunications are proposed from Brunswick Square where possible, and where this is not feasible they are to be provided from High Road.

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.

Appendix A Utilities Tracker

Utility Tracking Schedule : Buro Happold
Project: Printworks

Date: 09.08.2023

Revision:

				Application completed & closed				Awaiting response / decision				BH to continue					
Item	Type/ Element	Reason for utility work	Company	Contact Details	SCOPING			APPLICATION				WORKS			Progress & Risks	Document Hyperlink	Action required
					Study period	Costs of study	Cost of works	Application Issued	Quote Received	Quote Expiry Date	Fee/PO paid	Off site works required	Contestable or Non-constable Work	Expected Length of Work			
1	Surface Water Drainage																
1a	Pre Development Enquiry	Thames Water and LLFA to be consulted on surface water discharge from the proposed development. Proposed connection to existing 600mm TW sewer in High Road. Runoff restricted to greenfield runoff rates (2.0l/s)	Thames Water Developer Services LLFA London Borough of Haringey					25.07.23							It is anticipated a restricted greenfield discharge is required with attenuation by SuDS. BH to submit a pre-development enquiry for the surface water strategy for greenfield restricted rate.	Ref. DS6107040	25.07.23 BH issued pre-planning enquiry
2	Foul Water Drainage																
2a	Pre Development Enquiry	Estimated discharge (July 23): Discharge Rate: 12.82 l/s Proposed connection to existing 250mm TW foul sewer in Brunswick Square. The existing sewer will require lowering and regrading from MH7505 to MH8517 at High Road.	Thames Water Developer Services					25.07.23							Potential issues with lowering and regrading of existing 250mm TW foul sewer located on Brunswick Square	Ref. DS6107040	25.07.23 BH issued pre-planning enquiry
3	Potable Water																
3a	Pre Development Enquiry	276 bed student accommodation 321.2m2 commercial premises (GIA) Estimated peak clean water flow = 1.31/s (calculated in July 23) Proposed supply from the existing 6" main located on High Road TW response suggests reuse of existing connections off 6" in High Road which currently serve the shops on High Road to be retained for serving the new development. Alternative connection point from existing 4" main located on Brunswick Square.	Thames Water Developer Services	Colins Akemche Clean/Waste Pre-Planning Engineer developer.services@thameswater.co.uk 08000093921	N/A	N/A	N/A	25.07.23	09.08.23	09.08.24						Ref: DS6107027	25.07.23 BH issued pre-planning enquiry 09.08.23 Clean water capacity report received from TW. Capacity check confirms that the existing TW network has capacity to serve the 276 bed student accommodation & 321.2m2 commercial premises (GIA). Review reuse of existing connections which currently serve the shops on High Road if any of these can be retained to serve the new development. Alternative connection point from existing 4" main located on Brunswick Square.
4	Electricity																
4a	Connection Budget Estimate	Connection required to supply Printworks site Budget estimate	UKPN	Angela Adkins Angela.Adkins@ukpowernetworks.co.uk 07592330287			£140,000 (excl VAT)	28.07.23	09.08.23							Ref: 8500270746	28.07.23 BH issued budget estimate connection application for the proposed development. 09.08.23 Budget estimate received from UKPN for extension of HV network from High Road to new 1000kVA substation on the Printworks site.
5	Telecomms																
5a	Comms connection (Virgin Media)	New connection and supply to Printworks site	Virgin Media														Application for Telecoms to be made post planning
5b	Comms connection (BT Openreach)	New connection and supply to Printworks site	BT Openreach														Application for Telecoms to be made post planning
5b	Comms connection (Vodafone)	New connection and supply to Printworks site	Vodafone														Application for Telecoms to be made post planning
6	DHN																
6a	Connection application	Network currently unavailable. Network is under construction with plans to extend the network south towards the site. New connections required to the existing network to serve the proposed development. Heating = 254kW Cooling = 445kW	Energetik														Further enquiries to be made to Energetik post planning

Marc Jones
Buro Happold Limited
17 Newman Street
London
W1T 1PD
UK
T: +44 (0)207 927 9700
F: +44 (0)870 787 4145
Email: Marc.Jones@BuroHappold.com