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# Greggs Bakery / Twickenham

## Utilities Connections Report

Prepared by Desco

05 August 2022



**LONDON SQUARE DEVELOPMENTS LTD**

**FORMER GREGGS BAKERY SITE  
TWICKENHAM  
TW2 6RT**

**Utilities Connections Report  
Industrial-Led Scheme**

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Issue No.: 03

Date: July 2022

Ref: 1823-50-RPT-10

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Checked/Authorised: SB

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## **SCHEDULE OF REVISIONS**

<b>Revision</b>	<b>Date</b>	<b>Changes</b>	<b>Author</b>	<b>Checked</b>
01	16/03/2022	DRAFT FOR COMMENT	JC/PJ/RB	SB
02	04/04/2022	UPDATED PLANNING SUBMISSION	JC/PJ/RB	SB
03	13/07/2022	UPDATED TO INCLUDE AFFORDABLE WORKSHOP UNIT	SB	SB

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## **1.0 EXECUTIVE SUMMARY**

This report outlines the current status of the new utility connections for the proposed development at the former Greggs Bakery site in Twickenham. The project comprises of the Demolition of existing buildings (with retention of a single dwelling) and redevelopment of the site to provide 97 residential units and 883 sqm industrial floorspace (Use Class E(g)(iii)) and 117sqm of affordable workspace (Use Class E) with associated hard and soft landscaping, car parking and highways works and other associated works

The existing Site comprises the former Greggs Bakery Site in Twickenham and no.2 Gould Road, within the London Borough of Richmond Upon Thames. The Site is L shaped and is bound by the River Crane to the north and railway line beyond, residential properties on Norcutt Road to the east, Edwin Road to the south, residential properties on Crane Road to the west and further residential properties on Crane Road/ Gould Road and at Crane Mews to the northwest.

Desco have applied for connection quotations for new water, electricity and telecommunication services to the site.

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## **2.0 INTRODUCTION**

The utility connections applications have been made based on load assessments carried out for the proposed development.

### **Summary of Development**

Demolition of existing industrial buildings across the Site with the retention of an existing two storey end of terrace dwelling house on Edwin Road.

Redevelopment of the Greggs Bakery Site through the provision of a variety of buildings ranging from 2 – 5 storeys, comprising delivery of mews housing, apartment buildings to the north of the Site fronting the River Crane and the delivery of an industrial building fronting Edwin Road.

Delivery of 97 x residential units (Use Class C3) (33 x 1 bed, 33 x 2 bed, 31 x 3 bed) including 20 Affordable Housing units (equating to 20% of residential provision by unit or 19% by habitable room).

Provision of 1000 sqm of commercial floorspace (Use Class E) designed for light industrial usage.

### **Summary of Proposal**

The new incoming electricity connection will serve the individual dwellings, along with an air source heat pump 'Zeroth' district heating network serving the apartments only.

Heating to the townhouses will be generated via individual air source heat pumps.

Heating & cooling to the industrial units will be generated via individual air source heat pumps.

Connections to feeder pillars strategically positioned around the site will feed external lighting and electric vehicle charging points as required.

### **Apartments**

Heating/Cooling system:	Zeroth district heating network
Domestic Hot Water:	Zeroth district heating network and immersion heater 'boost' facility
Ventilation:	MVHR mechanical supply and extract ventilation with heat recovery.
Passive measures:	Enhanced U-Values to all new build elements
Air tightness:	APR = 3 m <sup>3</sup> / m <sup>2</sup> ·h @ 50pa
Lighting:	High efficiency LED and compact fluorescent lighting throughout.
On site LZC technology:	Air Source heat pumps

### **Townhouses**

Heating/Cooling system:	Air source heat pump
Domestic Hot Water:	Air source heat pump and immersion heater 'boost' facility
Ventilation:	MVHR mechanical supply and extract ventilation with heat recovery.
Passive measures:	Enhanced U-Values to all new build elements
Air tightness:	APR = 3 m <sup>3</sup> / m <sup>2</sup> ·h @ 50pa
Lighting:	High efficiency LED and compact fluorescent lighting throughout.
On site LZC technology:	Air Source Heat Pumps & Photovoltaics

### **Industrial Units**

Heating and cooling system:	Heat Pump fed Radiant Panel Heaters with Mechanical Cooling
Domestic Hot Water:	Hot water by means of air sourced heat pumps
Ventilation:	Mechanical ventilation with heat recovery
Insulation:	Enhanced U-Values to all elements.
Air tightness:	APR = 3.0m <sup>3</sup> / m <sup>2</sup> ·h @ 50pa.
Lighting:	High efficiency lamps throughout.
On site LZC technology:	Air source heat pumps and Photovoltaics

### **3.0 WATER**

#### **3.1 Existing Supplies**

Thames Water Asset map has been attained which shows that 100mm water mains exist around the site within Gould Road/Crane Road and Edwin Road, (see below).

#### **3.2 Proposed new connections**

Thames Water have been contacted and an application has been made for two new connections to serve the development. It is proposed to serve the site with one new 100mm mains water supply from the existing supplies within Gould Road/Crane Road and Edwin Road.

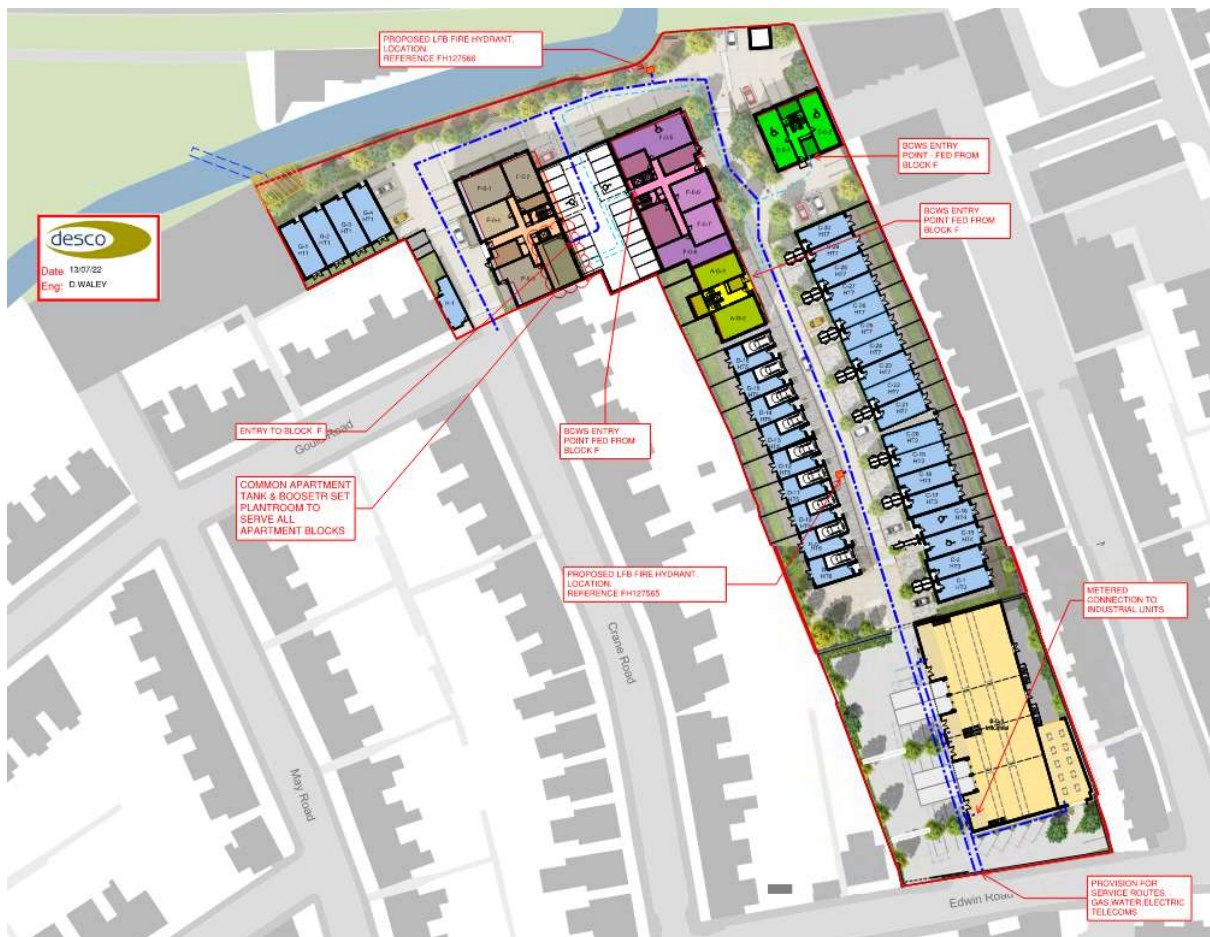


THAMES WATER, WATER MAINS ASSET MAP



The new water supply will feed each individual house in blocks C, D & G and the industrial units directly and be fitted with a Utility meter at the edge of each house and industrial unit boundary within the pavement. Blocks A, E & F will be fed from a single tank room and booster pump set located within the Block F ground floor tank room.

From here a boosted cold water supply shall distribute within dedicated risers to feed all of the apartments. Each dedicated riser shall also be fitted with the Utility water meters for each apartment with individual supplies run to each apartment.



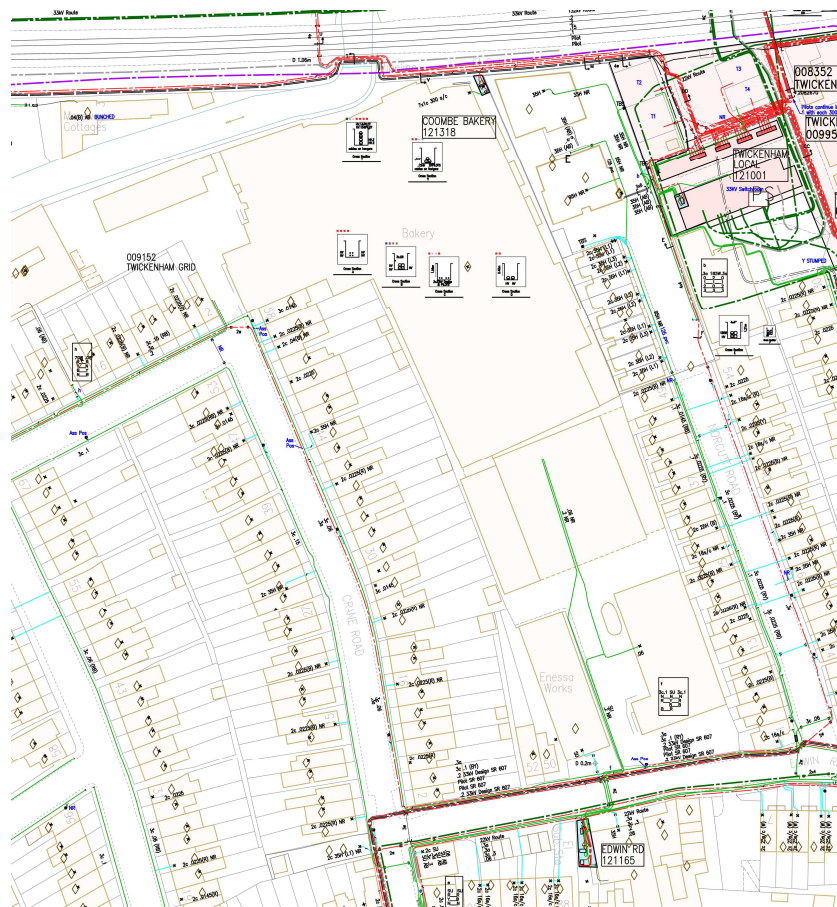
### PROPOSED NEW MAINS WATER SUPPLIES

## 4.0 ELECTRICITY

### 4.1 Existing Supplies

Existing electricity asset maps have been obtained and enclosed below. It appears that there are existing low voltage cables emanating from Edwin Road and running through the South of the site to serve the existing factory buildings. Applications have been made to remove these existing supplies and quotations appended to this document.

The asset maps also indicate that the main Greggs Bakery building is fed via an LV supply derived from the existing Coombe Bakery 121318 substation located in the Northeast corner of the site. An allowance has been made for a new substation within the development as required by the District Network Operator (DNO).



Extract from UKPN Asset Map

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## **4.2 Proposed new connections**

We have calculated the estimated maximum demand for the site at 921kVA after diversity. These loads are based on the following criteria:

- Electric cooking in dwellings
- Apartment heating and domestic hot water provided via an air source heat pump district 'Zeroth' heating network
- Townhouse heating and domestic hot water provided via individual air source heat pumps
- Each dwelling comprising an immersion heater to boost the domestic hot water generation to meet peak demand.

These calculations have been submitted to the relevant utility providers as part of the new electricity connection application in addition to a site layout showing the proposed meter positions.

Separate connections serving landlord services within the apartment blocks have been requested, along with connections to strategically positioned feeder pillars around the site to feed external lighting, electric vehicle charging points, drainage pumping stations etc.

Formal quotations have been obtained from UKPN and Power On for the new electricity connections and a copy appended to this document.

Contact details for the UKPN new connections team are enclosed below:

UK Power Networks,  
Connections Gateway,  
Metropolitan House,  
Darkes Lane,  
Potters Bar,  
Hertfordshire,  
EN6 1AG  
T: 0800 029 4282

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Email: [connections.gateway@ukpowernetworks.co.uk](mailto:connections.gateway@ukpowernetworks.co.uk)

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Email: [carl.perrett@ukpowernetworks.co.uk](mailto:carl.perrett@ukpowernetworks.co.uk)

UKPN Project Ref: 8500123356 Email: [connections.gateway@ukpowernetworks.co.uk](mailto:connections.gateway@ukpowernetworks.co.uk)

Contact details for the Power On new connections team are enclosed below:

Power On Connections

Tesla House

Unit 14, Childerditch Industrial Est

Brentwood

Essex

CM13 3HD

Contact: Chris Cullis

M: +44 (0) 7584684599

Email: [chris.cullis@poweronconnections.co.uk](mailto:chris.cullis@poweronconnections.co.uk)

Project Ref: E10415/LOS/001



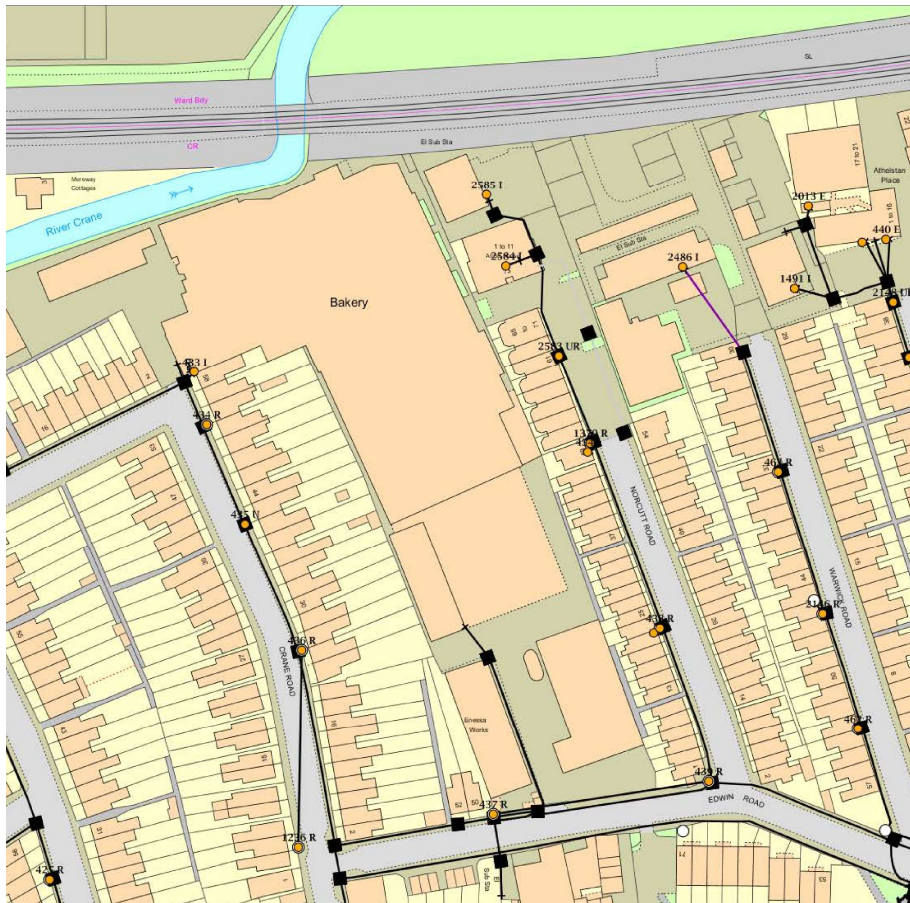
Indicative Substation Location and Meter Positions

## 5.0 TELECOMMUNICATIONS

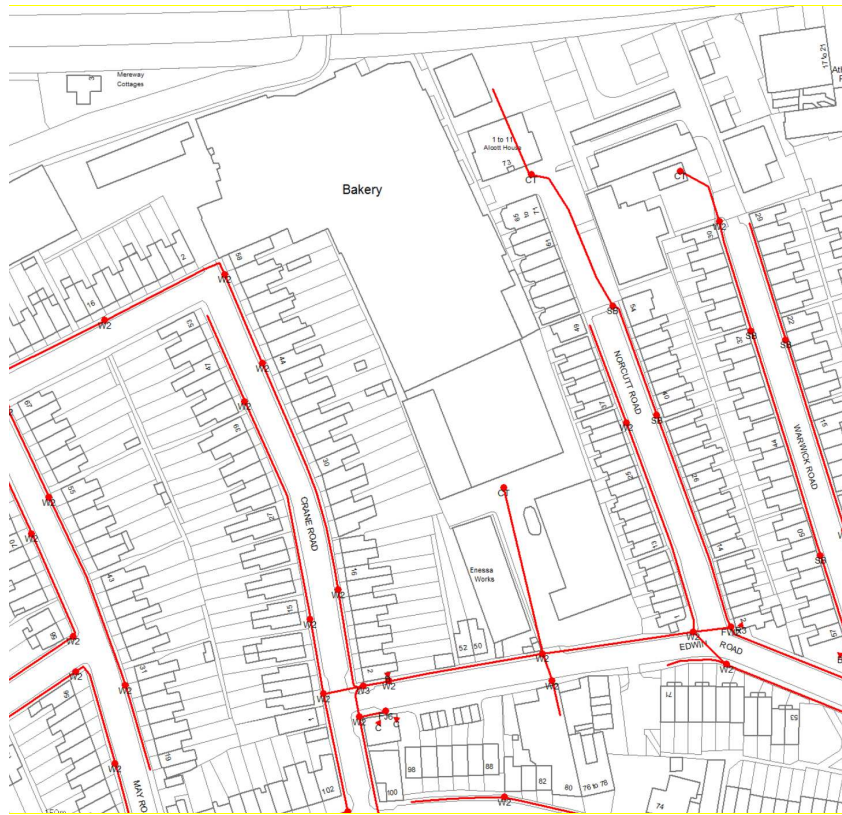
### 5.1 Existing Supplies

Utility searches of the site indicate that existing Openreach and Virgin Media services enter the Southern end of the site from Edwin Road to serve the existing factory buildings. BT services also appear to enter the site from Crane Road to serve Greggs Bakery.

Applications will need to be made to ensure these existing supplies are removed prior to construction works taking place.



Extract from Openreach Asset Map



Extract from Virgin Media Asset Map

## **5.2 Proposed new connections**

A quotation has been received from Openreach for a broadband infrastructure to the site and appended to this document.

It is likely that London Square will also engage with other fibre providers during the early design phase to provide an alternative fibre service to each dwelling.

The basic telecommunications infrastructure will comprise separate 90mm overall diameter grey HDPE twin walled ducts/sleeves for each telecommunications service. Each of these ducts shall be run from the incoming service points to the boundary line.

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## **6.0 BELOW GROUND DRAINAGE**

Please refer to Waterman Group's Flood Risk Assessment Report for details.





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**7.0 APPENDIX A – WATER SUPPLY QUOTATION**



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**8.0 APPENDIX B – ELECTRICITY QUOTATION**



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**9.0 APPENDIX C – OPENREACH QUOTATION**