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# Greggs Bakery / Twickenham

## Utilities Connection Report



**LONDON SQUARE DEVELOPMENTS LTD**

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

**Utilities Connections Report**

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**SCHEDULE OF REVISIONS**

<b>Revision</b>	<b>Date</b>	<b>Changes</b>	<b>Author</b>	<b>Checked</b>
01	01/02/2019	DRAFT FOR COMMENT	JC/PJ/RB	AD
02	18/02/2019	PLANNING SUBMISSION	JC/PJ/RB	AD
03	20/02/2019	ASSAEL'S COMMENTS INCORPORATED	JC/PJ/RB	AD

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## **1.0 EXECUTIVE SUMMARY**

This report outlines the current status of the new utility connections for the proposed residential development at the former Greggs Bakery site in Twickenham. The project comprises construction of 51 new townhouses and 65 new apartments. Also included in the proposal is car parking, vehicle access roads, cycle and refuse storage and two storeys of commercial space at the south of the site.

The site is located within the London Borough of Richmond upon Thames and is situated in the centre of an established low-rise residential area mainly comprising townhouses. The development is accessible via both Gould and Crane Road, and Twickenham station sits approximately 900 metres due East of the site.

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

## **2.0 INTRODUCTION**

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

### **Summary of Proposals**

The new incoming electricity connection will serve the individual dwellings, along with a 'Zeroth' district heating network serving the apartments only. Heating to the townhouses 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 if 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



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Lighting:	High efficiency LED and compact fluorescent lighting throughout.
On site LZC technology:	Air Source Heat Pumps & 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).

Thames Water have stated that It is unknown at this time if any upgrading or reinforcing is required to the existing network but further investigations are being undertaken by Thames Water and budget costs have been requested for all associated works required.

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

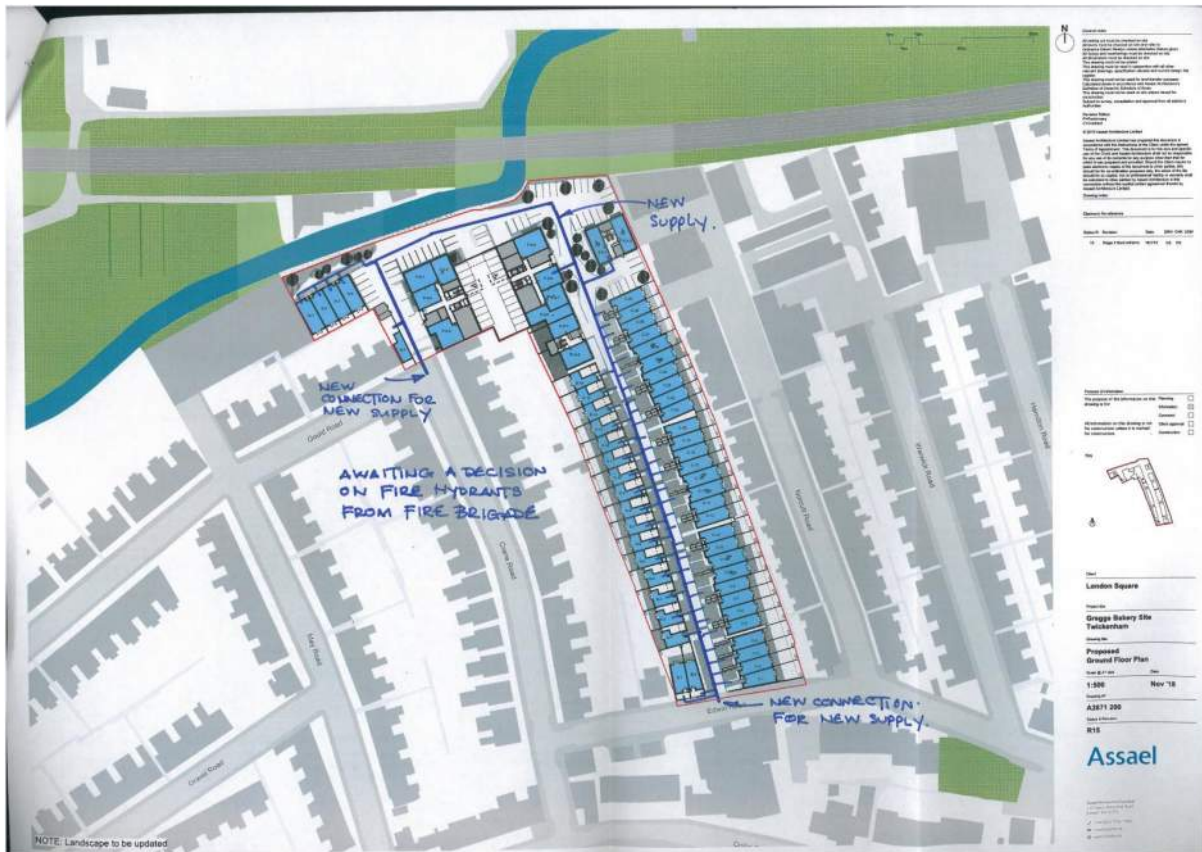
Thames Water have been contacted and an application has been made for two new connections to serve the development. It is proposed to serve the site with one new 100mm mains water supply from the existing supplies within Gould Road/Crane Road and Edwin Road.



THAMES WATER, WATER MAINS ASSET MAP



The new water supply will feed each of the houses directly and be fitted with a Utility meter at the edge of each house boundary within the pavement. Blocks F & E 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.



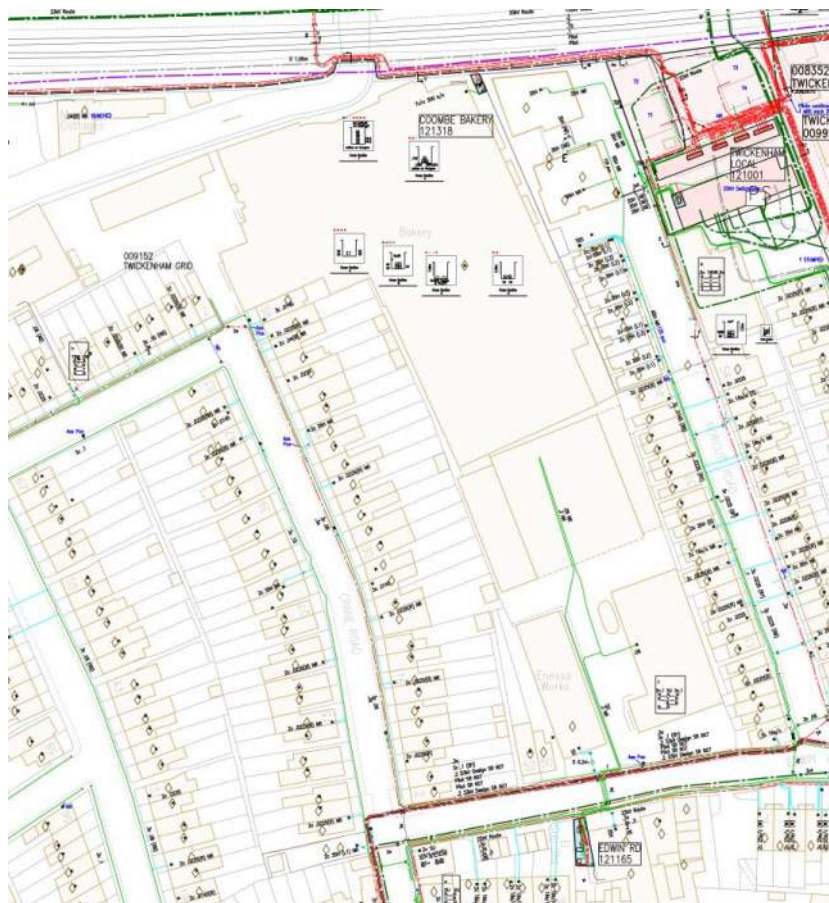
**PROPOSED NEW MAINS WATER SUPPLIES**

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

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 North East corner of the site. An allowance has been made for a new substation within the development if this is required by UKPN.



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 932kVA after diversity. These loads are based on the following criteria:

- Electric cooking in dwellings
- Apartment heating and domestic hot water provided via a 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 UKPN 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.

UKPN have since provided a budget quotation for the new electricity connection to serve the site. A copy of the quotation is appended to this report.

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

Connections Gateway  
UK Power Networks  
Metropolitan House  
Darkes Lane  
Potters Bar  
Hertfordshire  
EN6 1AG  
Tel. 0800 029 4282  
Email: [connections.gateway@ukpowernetworks.co.uk](mailto:connections.gateway@ukpowernetworks.co.uk)



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



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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**

Formal quotation to be added when received.





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**8.0 APPENDIX B – ELECTRICITY QUOTATION**

Mr J Clark  
Desco (Design & Consultancy) Ltd  
6<sup>th</sup> Floor, AMP House  
Dingwall Road  
East Croydon  
CR0 2LX

21<sup>st</sup> January 2019  
Our Ref: 8500107483\_1

Dear Mr Clark,

Site Address: Greggs Bakery, Gould Road, Twickenham TW2 6RT.

Thank you for your recent enquiry regarding the above premises. I am writing to you on behalf of South Eastern Power Networks PLC the licensed distributor of electricity for the above address trading as UK Power Networks.

I am pleased to be able to provide you with a budget estimate for the work. It is important to note that this budget estimate is intended as a guide only. It may have been prepared without carrying out a site visit or system studies. No enquiry has been made as to the availability of consents or the existence of any ground conditions that may affect the works. It is not an offer to provide the connection and nor does it reserve any capacity on UK Power Networks' electricity distribution system.

## 1. Budget estimate

The budget estimate for this work is: **£160,000.00** (exclusive of VAT) if the Point of Connection (POC) is to the low voltage network at the upgraded substation (121317-Coombe Bakery). This is to provide 118 connections at 230volts and 6 connections at 400volts.

This budget estimate is to upgrade the existing substation (121318 – Coombe Bakery) from 800kVA to 1000kVA, to lay low voltage mains through the site and to lay a low voltage cable into each intake position. This is based on the load requested not exceeding 930kVA, all the excavation and reinstatement on the site being carried out by your contractors.

Please note the regulations for multi-occupancy buildings have changed and UK Power Networks responsibility will finish at the cut out position (please see enclosed leaflet).

Additional costs may be required for off-site reinforcement. This will be decided by the results of a network study, which will be carried out during preparation of the formal quotation. The price would depend on site conditions, on obtaining any necessary legal consents, traffic

management requirements, final load details, site layout and the route of our incoming cable(s).

## 2. Budget estimate assumptions

This budget estimate is based on the following assumptions:

- The most appropriate Point of Connection (POC) is as described above.
- A viable cable or overhead line route exists along the route we have assumed between the Point of Connection (POC) and your site.
- In cases where the Point of Connection (POC) is to be at High Voltage, that a substation can be located on your premises at or close to the position we have assumed.
- Where electric lines are to be installed in private land UK Power Networks will require an easement in perpetuity for its electric lines and in the case of electrical plant the freehold interest in the substation site, on UK Power Networks terms, without charge and before any work commences.
- You will carry out, at no charge to UK Power Networks, all the civil works within the site boundary, including substation bases, substation buildings where applicable, joint bays and the excavation/reinstatement of cable trenches.
- Unless stated in your application, all loads are assumed to be of a resistive nature. Should you intend to install equipment that may cause disturbances on UK Power Networks' electricity distribution system (e.g. motors; welders; etc.) this may affect the estimate considerably.
- All UK Power Networks' work is to be carried out as a continuous programme of work that can be completed substantially within 12 months from the acceptance of the formal offer.

Please note that if any of the assumptions prove to be incorrect, this may have a significant impact on the price in any subsequent quotation. You should note also that UK Power Networks' formal connection offer may vary considerably from the budget estimate. If you place reliance upon the budget estimate for budgeting or other planning purposes, you do so at your own risk.

If you would like to proceed to a formal offer of connection then you should apply for a quotation, Please refer to our website [http://www.ukpowernetworks.co.uk/internet/en/help-and-advice/documents/the\\_connection\\_process.pdf](http://www.ukpowernetworks.co.uk/internet/en/help-and-advice/documents/the_connection_process.pdf) for '**The connection process**' which details our application process. To help us progress any future enquiry as quickly as possible please quote the UK Power Networks Reference Number from this letter on all correspondence.

If you have any questions about your budget estimate or need more information, please do not hesitate to contact me. The best time to call is between the hours of 9am and 4pm, Monday to Friday. If the person you need to speak to is unavailable or engaged on another call when you ring, you may like to leave a message or call back later.

Yours sincerely



Trevor Cross  
Prelims Project Designer  
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Email: [trevor.cross@ukpowernetworks.co.uk](mailto:trevor.cross@ukpowernetworks.co.uk)

Your feedback is important to us, and we would be grateful if you would complete a short questionnaire to tell us about the service that you have received in relation to this Budget Estimate. The customer relations team do contact a small number of customers by telephone as well. You can remain anonymous if you prefer when you provide this feedback. Please follow this [link](#) to complete the survey; it will take you only a few minutes. Thank you in advance for your help.

I will call you in a couple of days to ensure that you have received the Estimate and that it has met all of your requirements, however if you have any questions in the meantime please do not hesitate to contact me.



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**9.0 APPENDIX C – BT QUOTATION**

Formal quotation to added when received