



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
Residential-Led Scheme**

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Author: JC, PJ, RB

Checked/Authorised: AMD

SCHEDULE OF REVISIONS

Revision	Date	Changes	Author	Checked
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
04	16/10/2019	UPDATED TO INCLUDE LATEST UTILITIES INFORMATION	JC/PJ/RB	AD
05	16/03/2022	UTILITY QUOTATIONS UPDATED	JC/PJ/RB	SB
06	04/04/2022	UPDATED PLANNING SUBMISSION	JC/PJ/RB	SB

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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 demolition of existing buildings (with retention of a single dwelling) and redevelopment of the site to provide up to 116 residential units and 175 sqm commercial floorspace (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 north west.

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 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, four apartment buildings to the north of the Site fronting the River Crane and the delivery of a commercial building fronting Edwin Road.

Delivery of 116 x residential units (Use Class C3) (33 x 1 bed, 33 x 2 bed, 46 x 3 bed, 4 x 4 bed) including 58 Affordable Housing units (47 affordable rent and 11 shared ownership) equating to 50% of residential provision by unit or 40% by habitable room.

Provision of 175 sqm of commercial floorspace (Use Class E) designed as affordable workspace with rents set at levels equivalent to 50% of open market rents and secured only for local small and start-up organisations.

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.

Heating & cooling to the commercial building will be generated via 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 ³ / m ² ·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 ³ / m ² ·h @ 50pa
Lighting:	High efficiency LED and compact fluorescent lighting throughout.
On site LZC technology:	Air Source Heat Pumps & Photovoltaics

Commercial office building

Heating and cooling system:	Variable refrigerant flow (VRF) Air conditioning
Domestic Hot Water:	Electric point of use hot water heaters
Ventilation:	Mechanical ventilation with heat recovery
Insulation:	Enhanced U-Values to all elements.
Air tightness:	APR = 3.0m ³ / m ² ·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 commercial office building 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.



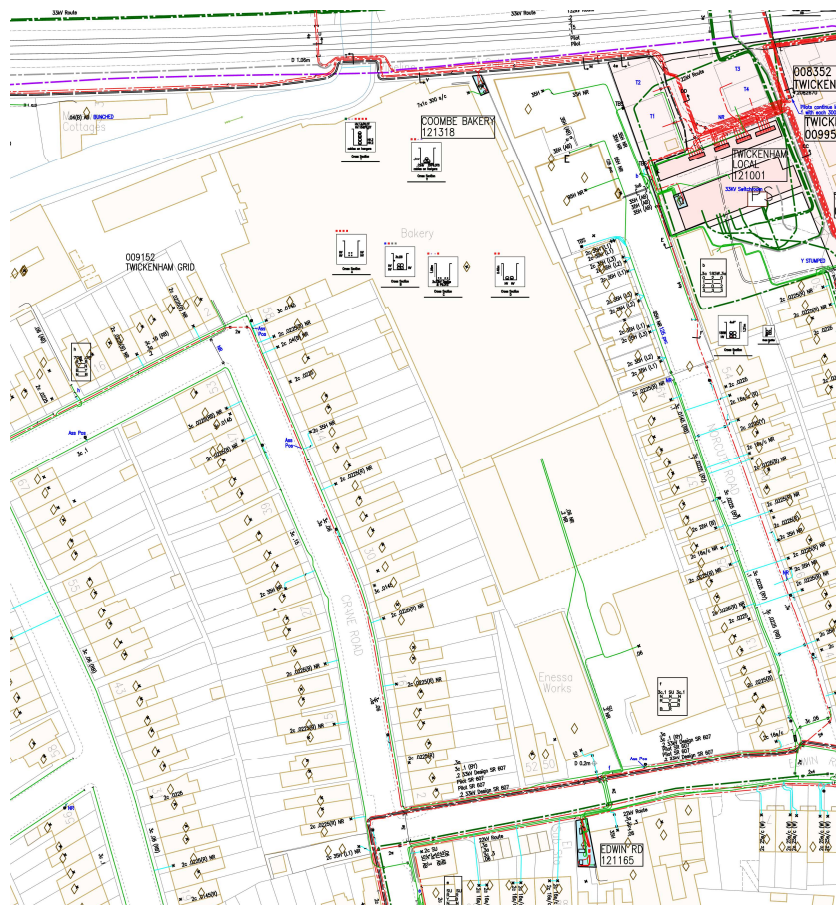
PROPOSED NEW MAINS WATER SUPPLIES

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 North East 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

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

Email: connections.gateway@ukpowernetworks.co.uk

Project Designer: Carl Perrett

Tel. 01622 352628

Mob. 07812 262930

Email: carl.perrett@ukpowernetworks.co.uk

UKPN Project Ref: 8500123356 Email: 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

Project Ref: E10415/LOS/001



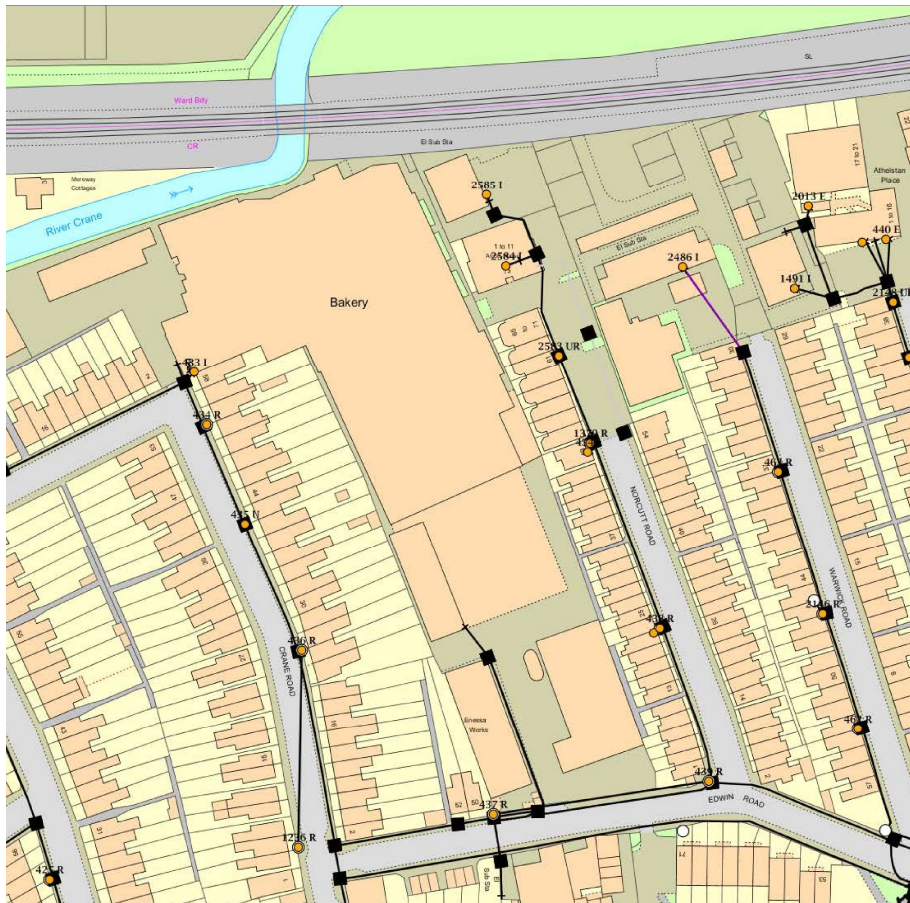
Indicative Substation Location and Meter Positions

5.0 TELECOMMUNICATIONS

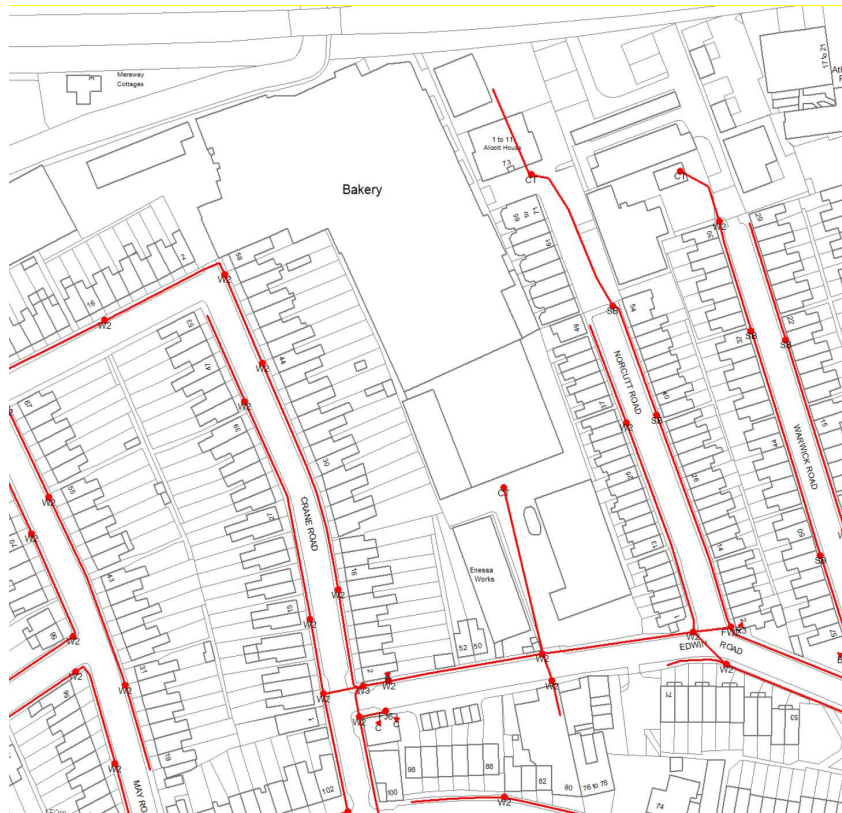
5.1 Existing Supplies

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.

6.0 BELOW GROUND DRAINAGE

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



7.0 APPENDIX A – WATER SUPPLY QUOTATION



Desco (Design & Consultancy) LTD
 Dingwall Road
 CROYDON
 CR0 2LX

-  **DS reference DS6065806**
-  **developer.services@thameswater.co.uk**
-  **0800 009 3921**
Mon-Fri 8am-5pm
-  **thameswater.co.uk/developerservices**

12 November 2019

Your quote for a new water main.

Site location: Gregs Bakery Site, Edwin Road Twickenham, TW2 6S0
Description of works: Lay approximately 332m of 90mm Barrier Pipe mains extension off the existing 4"CI at P1 and P8 location to serve 53 houses 63 flats and 1 commercial unit.

Dear Sir / Madam,

Thank you for requesting a quote for a new water main to serve the above development. The charges have been calculated in accordance with our 'Charging arrangements for new connection services', which can be found on our website at developers.thameswater.co.uk/new-connection-charging.

This quote is valid until 10 May 2020 and includes two options, which are explained further on the enclosed acceptance sheets.

Option	Charge ex. VAT
Offer A: A self-lay provider does the contestable work	
We'll make a financial contribution	£79,684
Offer B: We do all the work	
You'll need to pay us	If we do all excavation and reinstatement: £10,796

Finding your best fit

When getting new water pipes, we want you to choose the installer that best suits your site needs and timescales. This might not be us – independent 'self-lay providers' (SLPs) might be able to fit in better with your construction programme, and some can also install multiple utilities. Self-lay schemes receive exactly the same level of service from us as all other jobs, and SLPs are accredited to all the standards required for us to adopt the pipework at completion.

SLPs can carry out the majority of activities involved in laying new pipes – these are known as 'contestable' works. Your SLP will be your single point of contact, and they'll liaise with us directly to get all the work done. You can find SLPs to contact for competitive quotes through the Lloyd's Register at lr.org/wirs.



NAVs are companies that can become new water and/or wastewater providers within an existing water company's region to serve specific customers or developments. You may be able to use a NAV if you meet criteria defined by Ofwat. To find out more, visit Ofwat's website at ofwat.gov.uk/regulated-companies/markets/nav-market.



About our design

Our drawing shows:

- the location of the connection to our existing water network
- the proposed new on-site and off-site water mains
- where service connections are to be made
- details of the materials and pipe lengths

Please ensure site staff and other utility providers are aware of our design and keep the path of the new pipes clear so they can be laid as indicated, avoiding delays and additional charges.

What's included

Our quote includes new water mains as indicated on our drawing [50201557](#), and in addition:

- one meeting before work starts
- 3 visits to site to complete the installation of the new water main
- supply and delivery of all materials to lay the main
- provision of all plant, labour and supervision
- excavation and reinstatement of existing surfaces off-site
- costs of on-site excavation and reinstatement* (if you ask us to do this)
- traffic management
- gaining access to third party land, if required

*You can decide whether you'd like us to carry out the on-site excavation and reinstatement or if you'd prefer to arrange your own groundworker. We've provided charges for both options.

Service connections

Our design shows the location of proposed service connections. We'll provide a separate quote for the charges associated with these.

Self-lay providers can install service connections up to 63mm diameter, and you can request competitive quotes from them for this aspect of the work even if we install your new water main.

Land contamination

The site contamination report provided with your application indicates that pipes suitable for use in contaminated land are required. We've therefore allowed for this in our quote. Please note this means that your service connections must also be made using a suitable barrier pipe, or we'll be unable to approve them.

Making changes

Our charges are based on the information provided with your enquiry. We know changes can happen during the progress of a development. Providing details of any alterations to your proposals as early as possible will help us to minimise the impact of a change to the planned delivery of the new water infrastructure.

Unless you have advised us that construction should be phased, our quote assumes we can lay all of our pipework in a single phase, without interruption. In the event that we're unable to complete the work in line with the agreed phasing, additional abortive and phasing charges will apply.



If changes create a modification to our current design which needs us to recalculate the charge for the new main, we'll invoice or credit you for the difference and also apply a re-quote fee.

What to do next

Please consider the offers on the attached acceptance sheets. Once you've decided which one is best suited to your needs, please complete that sheet and return it to us by email or post.

If you need to pay us for the work, you can use one of the following methods:

- **BACS or CHAPS**
IMPORTANT NOTE FOR ALL BACS PAYMENTS: to avoid delays to your work, it's essential that whoever is paying this quote uses the DS reference **DS6065806 as the payment reference** so we can identify your payment.
Our bank details are: sort code 60-00-01, account number 90478703.
- **Cheque**
Please make it payable to Thames Water Utilities and write your DS reference **DS6065806** on the back.
- **Visa or MasterCard**
Please call us on 0800 009 3921.

What we'll do after you accept an offer

We'll contact you within five calendar days of receiving your acceptance sheet to acknowledge your acceptance and confirm that payment has been made, or that you will be providing an acceptable form of security. If you choose to provide security and pay on completion, the charge you pay will be recalculated using the rates published and in effect when the works are completed. This may be different from the charges outlined in this quote.

Within 14 calendar days of receiving confirmation of your payment or security, and a signed copy of your acceptance sheet, we'll contact you to arrange a pre-start meeting at which we'll discuss your proposed start date and programme.

If you need any further assistance or information please don't hesitate to contact me.

Yours sincerely,

Wojciech Jozwiak
DD: 0203 577 8677
Senior Designer
Developer Services



Thames Water Developer Services
 Clearwater Court
 Vastern Road
 Reading
 RG1 8DB
developer.services@thameswater.co.uk

**Scheme: Gregs Bakery Site, Edwin Road
 Twickenham, TW2 6S0**

Issue date: 12 November 2019
Expiry date: 10 May 2020

Acceptance sheet: Offer A
Using a self-lay provider

We'll contribute towards the cost of the work by making an **asset payment**. This sum recognises the value of the future income we expect to receive from bill payers over the 12 years following completion of the new water mains.

This is a fixed sum offer and includes all excavation and reinstatement work. It's subject to revision if there are changes to the design shown in the attached drawing and/or the number of properties specified in your application, in which case we will update the value of the net asset payment.

<input type="checkbox"/>	If you'd like us to carry out only the non-contestable works:	
	The estimated gross asset payment for this scheme is:	£88,444
	Deducting the charges for non-contestable work that we'll complete:	£8,760
	Means the estimated net asset payment we'll make is: (or, if this is a negative figure, which you'll need to pay us in advance of the works)	£79,684
<input type="checkbox"/>	If you'd like us to also carry out the contestable off-site works:	
	Further deducting the charges for off-site works:	£8,060
	Means the estimated net asset payment we'll make is: (or, if this is a negative figure, which you'll need to pay us in advance of the works)	£71,624

If we agree to your SLP also carrying out any non-contestable works we'll adjust the net asset payment to reflect this.

This offer does not include any service connections or infrastructure charges.

Acceptance

I/we wish to enter into a self-lay agreement with Thames Water, based on the option selected above. My/our chosen SLP is

Signed

Print.....

On behalf of

Date.....

IMPORTANT NOTE FOR ALL BACS PAYMENTS

To avoid delays, if you are making a payment to us in relation to this quote it's essential you use DS reference **DS6065806 as the payment reference**. Our bank details: sort code 60-00-01,



account number 90478703.
 Thames Water Developer Services
 Clearwater Court
 Vastern Road
 Reading
 RG1 8DB
developer.services@thameswater.co.uk

**Scheme: Gregs Bakery Site, Edwin Road
 Twickenham, TW2 6SO**

Issue date: 12 November 2019
Expiry date: 10 May 2020

Acceptance sheet: Offer B
Asking us to do the work

This is a fixed sum offer. It's subject to revision if there are changes to the design shown in the attached drawing and/or the number of properties specified in your application.

We'll review each scheme on completion to assess whether the size(s) and length(s) of new water main laid were the same as in the quote. If the diameter of the pipework was different, the surface type was different or the length of the pipework was at least three metres more or less than in the quote, we will recalculate the charge.

Where we have to recalculate charges we will invoice or credit you for the difference, also applying a re-quote fee.

If you pay on completion rather than in advance of the work, you will need to provide an acceptable form of security (see the attached 'Conditions' for guidance on this) prior to the start of the work, and the charge you pay will be recalculated using the rates published and in effect when the works are completed. This may be different from the charges outlined in this quote.

Thames Water to excavate and lay all pipework for the new main.		Developer to excavate and reinstate on-site, Thames Water to excavate off-site and lay all pipework on and off-site.	
Tick to accept	<input type="checkbox"/>	Tick to accept	<input type="checkbox"/>
Quote	£10,796	Quote	£3,021
Re-Quote Fee	£0.00	Re-Quote Fee	£0.00
VAT	£0	VAT	£0
Total	£10,796	Total	£3,021

This offer does not include any service connections, infrastructure charges or ancillary charges.

Acceptance

I/we wish to accept the option indicated above, and to pay:

- In advance, and will make payment of £..... prior to the start of the work
- On completion, and will provide an acceptable form of security prior to the start of the work

Signed

Print.....

On behalf of

Date.....

IMPORTANT NOTE FOR ALL BACS PAYMENTS

To avoid delays, it's essential you use DS reference **DS6065806 as the payment reference**. Our bank details: sort code 60-00-01, account number 90478703.



Breakdown of charges for your new water main.

Please note that all charges stated below are excluding VAT. Any VAT payable is outlined on our acceptance sheets.

The **income offset** is our financial contribution to the cost of the work which offsets the future income we expect to receive from bill payers over the 12 years following completion of the new water main.

If we do all excavation and reinstatement:

Work that is the responsibility of Thames Water (non-contestable work)			
Item	Quantity	Rate	Charge
Mains Application Fee	0	£0.00	£0.00
Re-Quote Fee	0	£350.00	£0.00
Phasing charge	0	£0.00	£0.00
Special Circumstances (Connection)	0	£0.00	£0.00
90mm Mains Connection in Road	2	£4,380.00	£8,760.00
		Subtotal	£8,760.00
Work that could be done by Thames Water or a self-lay provider (contestable work)			
Item	Quantity	Rate	Charge
Mains Design Fee	0	£0.00	£0.00
Special Circumstances (Off-Site)	0	£0.00	£0.00
Special Circumstances (On-Site)	0	£0.00	£0.00
BMP90PM : 90 MM PE BARRIER PIPE	319	£260.00	£82,940.00
BMP90C : 90 MM PE BARRIER PIPE	13	£580.00	£7,540.00
		Subtotal	£90,480.00
Gross charge			£99,240.00
Income offset			£88,444.00
Net charge (ex. VAT)			£10,796.00



If you do the on-site excavation and reinstatement:

Work that is the responsibility of Thames Water (non-contestable work)			
Item	Quantity	Rate	Charge
Mains Application Fee	0	£0.00	£0.00
Re-Quote Fee	0	£350.00	£0.00
Phasing charge	0	£0.00	£0.00
Special Circumstances (Connection)	0	£0.00	£0.00
90mm Mains Connection in Road	2	£4,380.00	£8,760.00
		Subtotal	£8,760.00
Work that could be done by Thames Water or a self-lay provider (contestable work)			
Item	Quantity	Rate	Charge
Mains Design Fee	0	£0.00	£0.00
Special Circumstances (Off-Site)	0	£0.00	£0.00
Special Circumstances (On-Site)	0	£0.00	£0.00
BMP90 : 90 MM PE BARRIER PIPE	319	£120.00	£38,280.00
BMP90C : 90 MM PE BARRIER PIPE	13	£580.00	£7,540.00
		Subtotal	£45,820.00
Gross charge			£54,580.00
Income offset			£51,559.00
Net charge (ex. VAT)			£3,021.00

About contestable and non-contestable charges

Self-lay providers (SLPs) can carry out the majority of the work involved in laying new pipes – this is known as ‘contestable’ work. Some ‘non-contestable’ works remain our responsibility even if you choose to use a SLP, and we’ll work in partnership with them to carry this out.

Non-contestable work that we’ll always do includes:

- Sizing pipes
- Designing alterations to our existing network
- Approving on-site water designs (except where self-certification arrangements are in place)
- Decommissioning redundant mains following diversion
- Carrying out high-risk installations that could impact existing customers or infrastructure

Non-contestable work that we might allow a suitably accredited SLP to carry out is:

- Connecting services over 63mm in diameter to our existing water network
- Laying the branch connection (or ‘spur’) from our existing main

Please note that water main laying is contestable unless we assess that it involves heightened risk to existing assets or could affect supplies to existing customers.



Our financial contribution (if we do all excavation and reinstatement)

This table shows our detailed calculations of our financial contribution towards the charge for your new main. These workings are based on us carrying out all excavation.

ON-SITE TW EXCAVATION Scheme Discounted Aggregated DAD

Water Version 37.0

Project Variables			
Scheme Title	<input type="text" value="Gregs Bakery Site"/>	District/Work Request No.	<input type="text" value="TBC"/>
Total Scheme Cost	<input type="text" value="99240"/>	Water/ Sewerage Project	<input type="text" value="W"/>
Number of Properties	<input type="text" value="117"/>	Average Income per Property	<input type="text" value="£196.44"/>
Occupancy Reference	<input type="text" value="CC"/>	Private/ Local Authority Developer	<input type="text" value="0"/>

Basic Variables			
OFWAT Borrowing Interest Rate	<input type="text" value="2.75%"/>	Number of Applicable Years	<input type="text" value="12"/>
OFWAT Deposit Interest Rate	<input type="text" value="0.50%"/>	Domestic Sewerage Income per Property	<input type="text" value="£145.62"/>
NPV Discount Rate	<input type="text" value="2.75%"/>	Domestic Water Income per Property	<input type="text" value="£196.44"/>
Long Term Annual Inflation	<input type="text" value="3.00%"/>	Discount for commercial offer	<input type="text" value="0%"/>

Deficit & Lump Sum Calculation										
Year	Cumulative Occupancy	Cumulative Properties	Measured Income	Reckonable Income/ Projected Future Revenue	Qualifying Amount/ Annual Borrowing Cost	Relevant Deficit	DCF/ Commuted Sum	Deposit C/F	Payable Interest	Deposit B/F
0								117,864.00		
1	10.0%	12	2,298.35	2298	9822	7524	7323	110,340.00	551.70	110,891.70
2	26.0%	30	5,975.70	6155	9822	3667	3473	106,673.00	533.37	107,206.37
3	56.3%	66	12,928.21	13716	9822	0	0	0.00	0.00	0.00
4	87.8%	103	20,168.00	22038	9822	0	0	0.00	0.00	0.00
5	97.5%	114	22,408.89	25221	9822	0	0	0.00	0.00	0.00
6	97.5%	114	22,408.89	25978	9822	0	0	0.00	0.00	0.00
7	97.5%	114	22,408.89	26757	9822	0	0	0.00	0.00	0.00
8	97.5%	114	22,408.89	27560	9822	0	0	0.00	0.00	0.00
9	97.5%	114	22,408.89	28387	9822	0	0	0.00	0.00	0.00
10	97.5%	114	22,408.89	29239	9822	0	0	0.00	0.00	0.00
11	97.5%	114	22,408.89	30116	9822	0	0	0.00	0.00	0.00
12	97.5%	114	22,408.89	31019	9822	0	0	0.00	0.00	0.00
Total			220,641.41	268,484.00	117,864.00	11,191.00	10,796.00 #			

Calculation of Qualifying Amount & Grossing Up Factor			
Interest Rate, i	<input type="text" value="2.75%"/>	Water Act 1989 Basis Cost	<input type="text" value="117864.00"/>
Capital Sum, a	<input type="text" value="99,240"/>	Project Capital Cost	<input type="text" value="99,240"/>
Qualifying Amount 9821.654764	<input type="text" value="9821.65"/>	Grossing Up Factor	<input type="text" value="1.188"/>

Discounted Aggregate Deficit (DAD)	<input type="text" value="10796.00"/>
---	---------------------------------------

Non Statutory Lump sum based on the value per the DAD reduced by discount	<input type="text" value="10796.00"/>
--	---------------------------------------

Self Lay Asset Payment	
TOTAL SELF LAY ASSET PAYMENT	<input type="text" value="88,444.00"/>



Our financial contribution (if you do the on-site excavation and reinstatement)

This table shows our detailed calculations of our financial contribution towards the charge for your new water main. These workings are based on you carrying out the on-site excavation.

ON-SITE LAY ONLY Scheme Discounted Aggregated DAD

Water Version 37

Project Variables			
Scheme Title	Greggs Bakery Site	District/Work Request No.	TBC
Total Scheme Cost	54580	Water/ Sewerage Project	W
Number of Properties	117	Average Income per Property	£196.44
Occupancy Reference	CC	Private/ Local Authority Developer	0

Basic Variables			
OFWAT Borrowing Interest Rate	2.75%	Number of Applicable Years	12
OFWAT Deposit Interest Rate	0.50%	Domestic Sewerage Income per Property	£145.62
NPV Discount Rate	2.75%	Domestic Water Income per Property	£196.44
Long Term Annual Inflation	3.0%	Discount for commercial offer	0%

Deficit & Lump Sum Calculation											
Year	Cumulative Occupancy	Cumulative Properties	Measured Income	Reckonable Income/ Projected Future Revenue	Qualifying Amount/ Annual Borrowing Cost	Relevant Deficit	DCF/ Commuted Sum	Deposit C/F	Payable Interest	Deposit B/F	
0								64,824.00			
1	10.0%	12	2,298.35	2298	5402	3104	3021	61,720.00	308.60	62,028.60	
2	26.0%	30	5,975.70	6155	5402	0	0	0.00	0.00	0.00	0.00
3	56.3%	66	12,928.21	13716	5402	0	0	0.00	0.00	0.00	0.00
4	87.8%	103	20,168.00	22038	5402	0	0	0.00	0.00	0.00	0.00
5	97.5%	114	22,408.89	25221	5402	0	0	0.00	0.00	0.00	0.00
6	97.5%	114	22,408.89	25978	5402	0	0	0.00	0.00	0.00	0.00
7	97.5%	114	22,408.89	26757	5402	0	0	0.00	0.00	0.00	0.00
8	97.5%	114	22,408.89	27560	5402	0	0	0.00	0.00	0.00	0.00
9	97.5%	114	22,408.89	28387	5402	0	0	0.00	0.00	0.00	0.00
10	97.5%	114	22,408.89	29239	5402	0	0	0.00	0.00	0.00	0.00
11	97.5%	114	22,408.89	30116	5402	0	0	0.00	0.00	0.00	0.00
12	97.5%	114	22,408.89	31019	5402	0	0	0.00	0.00	0.00	0.00
Total			220,641.41	268,484.00	64,824.00	3,104.00	3,021.00 #				

Calculation of Qualifying Amount & Grossing Up Factor			
Interest Rate, i	2.75%	Water Act 1989 Basis Cost	64824.00
Capital Sum, a	54,580	Project Capital Cost	54,580
Qualifying Amount 9821.654764	5401.71	Grossing Up Factor	1.188

Discounted Agregate Deficit (DAD)	3021.00
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Non Statutory Lump sum based on the value per the DAD reduced by discount	3021.00
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Self Lay Asset Payment	51,559.00
TOTAL SELF LAY ASSET PAYMENT	51,559.00



Conditions

If you appoint a self-lay provider (SLP) to do work, we'll ask both you and the SLP to enter into a contract with us known as a 'self-lay agreement'. This is available from us separately, and will be progressed if you return the acceptance sheet for the self-lay offer (Offer A) to us.

Where Thames Water is completing works, all quotes are based on the following assumptions. Any variation from these assumptions may affect the final charge.

1. General

- 1.1.** This quote is issued on the basis that no special circumstances exist in this scheme, as defined in section 14 of our 'Charging arrangements for new connection services'.
- 1.2.** It is assumed that the mains can be laid as indicated on the attached layout drawing.
- 1.3.** We are a statutory undertaker and are only obliged to carry out the work in accordance with our statutory obligations, and are in no way contractually bound to clauses and conditions of the Royal Institute of British Architects (RIBA) form of contract for nominated sub-contractor or to any similar conditions. Therefore, no actions can be taken on orders received by us that refer to conditions not set out in our own documentation.
- 1.4.** Mains will only be laid (except where otherwise agreed) in areas adopted by the highways authority. The minimum acceptable width of footpath or verge for use by utility services is 1.8 metres. Should this not be the case, you must advise us as soon as possible, as this may require a change to your scheme.
- 1.5.** The main will be laid with a minimum 0.9 metres of cover below finished ground or surface levels.
- 1.6.** The applicant will provide all 'lines and levels' for the water mains installation once our contractor begins work on site. This describes the depth at which the water main will be laid, and its route, and ensures the pipe has an appropriate level of cover and is appropriately situated. Should any variations in lines or levels be made without our consent after the mains have been laid, then you will be charged for any rectifications required. Verifying that the main is being laid in the correct position relative to the lines and level given by you shall be your responsibility. Any significant deviation should be notified to Thames Water or their representative without delay.
- 1.7.** Clear access to site for main laying will be required via hard roads.
- 1.8.** Our quote is based upon the number of site visits indicated in our quote letter to complete the installation of the new water main. Phasing of this scheme or development should be notified to Thames Water prior to starting works on site so that potential additional charges can be calculated. If we are unable to complete our works in the agreed number of phases, additional abortive and phasing charges will be payable.
- 1.9.** Where main-laying is proposed on a phased basis, a clear run of at least 200m or the whole site (if less) will be required to enable economical use of resources.
- 1.10.** A site meeting will be required once we receive a signed acceptance sheet and payment or an acceptable form of security, and before works begin on site. It is expected that Thames Water, Thames Water's contractor and the client's representative will attend this meeting. The aim of this meeting is to capture any alterations to our design and quote to that which you have paid for. You will also be required to attend a 'site walk off' meeting.
 - 1.10.1.** Any significant changes to the design identified at the initial site meeting will incur delays as the scheme will have to be redesigned and we'll have to recalculate the charge for the new main. In this case we'll invoice or credit you for the difference, and also apply a re-quote fee.



1.10.2. At both meetings, forms will be completed and signed as a record. These forms will outline proposed lines and levels on site, health and safety requirements, storage requirements and protection of our apparatus once it has been installed.

1.10.3. You will be required to take all reasonable steps to safeguard our apparatus against any damage. You must notify Thames Water of any damage so this can be rectified without delay. Any costs resulting from repairs to any damaged apparatus will be fully recoverable from you.

1.11. Excavation in any surface that is different from that used for the quote will be subject to a variation order being signed (see point 6, 'variation orders').

1.12. If your quote is for 'lay only', all ground works, trenches and reinstatement will remain your responsibility. Thames Water or their representatives will be the sole arbiter of the safety and suitability of the site. Should any of your works be considered unsafe or unsuitable, you shall immediately make good any deficiency. Additional charges will apply for any abortive works.

1.13. If you change your requirements, or the information you provided to us was incorrect or incomplete, you'll have to pay a re-quote fee to cover the extra work and administration we incur when revising the quote, and we'll invoice or credit you for the difference in charges.

2. Mains installation

2.1. Following acceptance of our quote, a minimum of 42 days should be allowed before the works begin. We may occasionally be unable to meet this timescale due to traffic management requirements. In such cases we'll contact you as soon as we can with an alternative start date.

2.2. Adequate time should be allowed for the installation and commissioning of mains on site before properties are due to be handed over. On completion of the work, our mains will be tested to ensure that there are no defects and the water quality will be checked. The use of HPPE or MDPE pipe is based on there being no contaminated ground on site likely to affect this material (see point 4, 'contaminated land'). Should this not be the case, the quote will no longer be valid and a revised quote will be issued. In this case we'll invoice or credit you for the difference in charges, and also apply a re-quote fee.

3. Service strip

3.1. Where a 1.8 metre wide service strip is reserved for the mains and other public utility services, it must be kept clear of foul and surface water sewers and drains, manholes, soakaways, and anything else that might obstruct or cause damage to our mains. If sewers are installed within the service strip and are found to be obstructing the proposed route of the water main, then delays might occur until the necessary alterations to accommodate our apparatus are agreed and carried out.

4. Contaminated land

4.1. Pipes, fittings and ancillary apparatus used by us are all suitable for underground use in normal ground conditions. Unless otherwise stated, our estimates and quotes assume normal ground conditions. However, where certain types of contaminant are present, it may be necessary to provide additional or alternative pipework or backfill material to protect the supply. For this reason, it is essential that the applicant informs us of any known or possible contamination present, for example, previous site usage such as landfill, garage facilities, print works or process works (this is not an exhaustive list). Additional measures to protect the pipework in the contaminated ground will affect the final charge and may delay the works. In this case we'll invoice or credit you for the difference in charges, and also apply a re-quote fee.



5. Service connections

5.1. A quote for the necessary service connections to supply your development will be provided separately if required.

6. Variation orders

6.1. A variation is where you cause a change to the design once works have begun on site. We or our contractor will seek a 'variation order' from you for any changes. For example, this could be a change to the original design of a proposed mains layout, phasing of the works, the surface type where the new mains will be installed, or a hindrance on site that prevents continuous working.

6.1.1. A variation order will require an authorised signature before any additional works can begin. Once this signature is received, works can commence.

6.1.2. If there is a credit or additional charge due, we will calculate this and send you an invoice. Payment is due within 14 calendar days of the invoice date.

6.1.3. Variation orders and their resulting additional works might have a programming implication.

7. Payments in advance

7.1. If you choose to pay in advance for your new water mains, you need to select this option and provide full payment when you accept our quote, and do so within the validity period of that quote. You will need to pay the full charge for the works as shown on the quote.

7.2. If there is a credit or additional charge due on completion of the works, we will calculate this using the rates in effect on the date of the quote and will send you an invoice. Any queries or disputes in relation to charges must be raised within seven calendar days of the invoice date. Payment of undisputed charges is due within 14 calendar days of the invoice date.

7.3. Please note that if you opt to pay in advance, we will only schedule works after we have received full payment for those works.

8. Payments in arrears

8.1. You may choose to pay in arrears for your new water mains if you provide security equal to the expected charges for the works (including an inflation allowance). If you choose this option, you need to make this clear when you accept our quote and do so within the validity period of the quote.

8.2. We will not schedule any works until we have received acceptable security. You should allow a reasonable amount of time for the form of your security to be agreed in order to avoid any unnecessary delay to your works.

8.3. The security we accept is:

8.3.1. A bank guarantee in our favour issued by a bank or building society registered and operating in the United Kingdom, appearing in the list of banks or building societies as compiled by the Bank of England and having an investment grade credit rating;

8.3.2. A letter of credit in our favour issued by a bank or building society registered and operating in the United Kingdom, appearing in the list of banks or building societies as compiled by the Bank of England and having an investment grade credit rating;

8.3.3. An on demand bond or guarantee issued in our favour by a third party having an investment grade credit rating

8.4. We will provide the required value and wording for each of the security documents on request.



- 8.5. If you choose to pay in arrears, we will calculate charges using the rates published and in effect when the works are completed, which may be different to those in your quote.
- 8.6. If you wish to move ahead with this option, please contact us to discuss.
- 8.7. For more information please refer to section 11 of our 'Charging arrangements for new connection services'.

9. Construction Industry Scheme (CIS) rules

- 9.1. If you need our unique taxpayer reference (UTR) in order to verify our CIS status with HM Revenue & Customs, please call us on 0800 009 3921.

10. Customer satisfaction

- 10.1. If you feel we haven't delivered an appropriate level of service please get in touch so that we can get your issue resolved. Further information is available at developers.thameswater.co.uk/Developing-a-large-site/Contact-us



8.0 APPENDIX B – ELECTRICITY QUOTATION

Mr. Tony Kavanagh
London Square
1, York Road
UXBRIDGE
Middlesex
UB8 1RN

Date: 22 August 2019

Our Ref: 8500123356 / QID 3500075619

Customer Ref: 8500123356 / 3500075619

Dear Mr. Kavanagh

Site Address: Gould Road / TWICKENHAM TW2 6RT

Thank you for your recent enquiry regarding the above site. I am pleased to be able to provide you with a Quote to carry out the work requested. I am writing to you on behalf of South Eastern Power Networks plc the licensed distributor of electricity for the above address trading as and referred to in this Quote as "UK Power Networks".

The Works will enable the provision of an import capacity of 920 kVA. .

The disconnection scheme to the site are under job number 8500126564 and the TBS is under job number 8500126565.

This price in this offer is based on the assumption that a minimum of 5 service connections will be made per visit. If this cannot be achieved, costs for additional visits to site will be chargeable.

UK Power Networks would like to carry out all of the requested work for you. However, there are other companies who can do some or all of the work for you; these are Independent Connection Providers (ICPs). You can approach NERS accredited ICPs directly, or you can approach an Independent Distribution Network Operator (IDNO) to request this work and they will arrange for an ICP to carry out the Contestable Works. To find out more about which ICPs work in our area and what work they can undertake please [click here](#).

To give you as much choice as possible we are able to offer you **the following options** for getting your work done:

How much is it going to cost?		Price excluding VAT	Price including VAT
A	UK Power Networks carries out all of the requested 'contestable' and 'non-contestable' works required for your connection	£119,152.19	£119,832.83
B	UK Power Networks carries out all the 'non-contestable' work and the 'contestable closing joint'. The ICP carries out all other requested 'contestable' work	£7,710.29	£7,761.18
C	UK Power Networks carries out the 'non-contestable' works only. The ICP carries out all of the works classified as 'contestable'	£5,599.51	£5,636.47

A short guide is available to help you understand the three different Prices (options A, B and C). To see this guide please [click here](#).

Terms and Conditions

The Quote is subject to version 7 (September 2016) of our **Terms and Conditions For Connection and Diversionary Works** (the "Terms and Conditions") which you can view [here](#). Alternatively, please let me know if you would like me to send you a copy in the post. These create legally binding obligations so it is important that you take the time to read and understand them. They also contain definitions of terms used in this document and in the linked pages on our website that you may find helpful.

When can you expect your electricity connection?

Once you have accepted this Quote we will call you to discuss a programme of Works. Subject to the Terms and Conditions the Works referred to in this Quote will be completed on or before 22 February 2020.

We will try to meet your requested dates wherever possible but the completion date will be dependent on:

- The date that the Quote is accepted;
- How much of the work you wish UK Power Networks to complete;
- Any further discussions we may have with you regarding the programming of the works; and
- The completion of work by other people or companies that must be done before we can complete our work.

"Attached is a generic indicative mobilisation and delivery timeline for a typical project of this type. This provides a generic indication of the approximate usual time taken to undertake the activities described in the timeline. The timeline is provided as a generic guide only and is subject to change. You should not consider it to be the actual programme of works. Any reliance that you place on this indicative timeline is at your own risk."

Interactivity

We have not received a request from any other customer for connections to the same part of our Distribution System, but to find out what happens if they do, please [click here](#).

Post quote call

I will contact you within the next few days to discuss your quote, to ensure you understand the work we will do for the quoted price, your responsibilities, any dependencies and the likely timescales for the work. UK Power Networks are always looking to improve our service offering and as such, the post quote call may be recorded for training purposes. We will not share the recorded call with anyone outside of our connections business and it will be deleted as soon as we have completed the training review. However, if you do not want us to record the call please let me know at the beginning of the call.

What you need to do next

Before you decide to proceed it is really important that you take note of our **Terms and Conditions**, any **special conditions** detailed above and the details in **Your Information Pack** which includes information contained within the hyperlinked text, all of which constitute your **Quote**.

If you would like to accept this Quote you will need to ensure that the requested payment is in our bank account in full and cleared funds and that we have received your signed Acceptance Form from section 5 below by 5pm on 20 November 2019.

If you would like UK Power Networks to carry out all of the Works please accept option A. If you would prefer to use an ICP to carry out the Contestable Work (or an IDNO to arrange for an ICP to carry out the Contestable Works), you can pass this Quote to them and they can accept either option B or option C. Alternatively, you can accept option B or option C yourself, but you will need to ensure that your appointed ICP or IDNO understands what they must do, and what UK Power Networks will do for these options. **You can only accept one option.**

If you have any questions about this Quote or need more information, please do not hesitate to contact me.

Yours sincerely

Carl Perrett

Telephone: 01622 352 628
Mobile: 07812 262 930
Email: carl.perrett@ukpowernetworks.co.uk

Please support our safety campaign and join the growing number of companies signing up to our [Pledge](#)



To download your free safety leaflets and resources visit
[UK Power Networks - Safety Page](#)

Your Information Pack

The following pack provides all of the information you should need to successfully complete your electrical connection for the work you have been quoted. Please pay particular attention to the information that is specific to your project.

Do not hesitate to contact me should you require any further support.

Section 1 The Scope of Works

Section 2 Cost Breakdown

Section 3 Your Responsibilities

Section 4 Information To Help You As You Plan For Your Work

Section 5 Acceptance Form To Proceed With The Works

Section **1** Scope of Works

Please read the details in this section in conjunction with the customer proposal plan (referred to in the Drawing Schedule in Section 4).

A

Proposed Works

The customer is to install a new brick built substation close to the site boundary at the North end of the site. A new 1000kVA unit transformer, ring main unit, 5-way take off chamber and talus unit will be installed within the brick built substation. Both ring switches are to be automated.

Cut back the existing .1 copper 3c PILCSWA and straight joint 2 x 185ax onto the .1 copper 3c PILCSWA and lay through the customer's duct line and terminate into the ring main unit.

Feeder 1 - Block F.

Terminate 1 x 300H into the take-off chamber and lay through the customer's duct line and terminate into a 600A cut-out & fuse at 400A within the customer's communal intake position. The development is to adopt the new BNO setup whereby it is the responsibility of the customer to install all isolation equipment, risers & laterals and Ryfield style distribution boards to feed the flats and landlord supply. This is as per EDS 08-0118. This will supply 53 flats and a landlords.

Feeder 2 - Block A, Block E, 5 x houses, 1 x Feeder Pillar.

Block A - Terminate 1 x 300H into the take-off chamber and lay through the customer's duct line. Straight joint a 4c 35H onto the 300H and lay through customer's duct line and terminate into a 100A three-phase cut-out within the customer's communal intake position. The development is to adopt the new BNO setup whereby it is the responsibility of the customer to install all isolation equipment, risers & laterals and Ryfield style distribution boards to feed the flats and landlord supply. This is as per EDS 08-0118. This will supply Block A for 6 flats and a landlords.

Block E - Branch joint a 4c 35H onto the 300H and lay through customer's duct line and terminate into a 100A three-phase cut-out within the customer's communal intake position. The development is to adopt the new BNO setup whereby it is the responsibility of the customer to install all isolation equipment, risers & laterals and Ryfield style distribution boards to feed the flats and landlord supply. This is as per EDS 08-0118. This will supply Block E for 6 flats and a landlords.

5 houses - Branch joint a 300H onto the 300H and lay through customer's duct line and terminate into a LV pot end. Branch joint 5 x 2c 35H onto the 300H and lay through the customer's duct line and terminate into 100A single-phase cut-outs within the customer's external meter box positions.

Feeder Pillar - Branch joint a 4c 35H onto the 300H and lay through customer's duct line and terminate into a 100A three-phase cut-out within the customer's kiosk. TT Earth.

Feeder 3 - 16 x houses, Commercial, 1 x Feeder Pillar.

Commercial - Terminate 1 x 300H into the take-off chamber and lay through the customer's duct line. Straight joint new 4c 35H onto 300H and lay through customer's duct line and terminate into a 100A three-phase cut-out within the customer's intake position.

Feeder Pillar - Branch joint a 4c 35H onto the 300H and lay through customer's duct line and terminate into a 100A three-phase cut-out within the customer's kiosk. TT Earth.

16 houses - Branch joint 16 x 2c 35H onto the 300H and lay through the customer's duct line and terminate into 100A single-phase cut-outs within the customer's external meter box positions.

Feeder 4 - 30 x houses.

Terminate 1 x 300H into the take-off chamber and lay through the customer's duct line and terminate into a LV pot end. Branch joint 30 x 2c 35H onto the 300H and lay through the customer's duct line and terminate into 100A single-phase cut-outs within the customer's external meter box positions.

Feeder 5 - Pot End.

Terminate 1 x 300H into the take-off chamber and terminate into LV pot end just outside the substation.

Construction Works

All off-site excavations/reinstatement works and cable laying are to be undertaken by UK Power Networks.

Assumed uninterrupted access on/off site.

This quotation is on the basis of current conditions on/off site at the stage of quotation.

Works are to be carried out during normal working hours (08.00 till 17.00).

All arisings are deemed to be either inert or non-hazardous.

The developer/customer will be responsible for all on-site excavation and reinstatement works including any necessary guarding or signage.

The developer/customer will be responsible for providing all welfare facilities for the duration of the works.

The developer/customer will be responsible for providing all on-site parking for the duration of the works.

No provision has been made for Temporary access arrangements.

No provision has been made for fencing or guarding the works excavated by the customer.

No provision has been made for attending jointing operations.

The developer/customer will be responsible for all on-site trench excavation and reinstatement works including any necessary guarding or signage.

No provision has been made for the removal of any vegetation or obstructive debris/material.

Traffic and pedestrian management system quotations are based on the necessary approvals and maybe subject to variation, with any changes re-quoted.

This quotation is based on the use of cable trailers (Including transportation) any variation to the usage will be deemed a variation.

No Section 58 allowances have been included within this quotation.

This quotation is based on the cable route as indicated on the red line drawing. Any deviation to the intended route/design will be deemed a variation unless confirmed at the RFQ stage.

This quotation is provisional and subject to local authorities' approval of TM plans.

We have not allowed for any TM in this quotation.

We have not allowed for any scrub/tree removal or any other site clearance works in this quotation.

We have not allowed for any cost/ measures requested by railway authorities.

The customer is to undertake all on-site excavations/reinstatement works and to install 2 x 150mm black rigid ducts from the site boundary to the proposed substation position.

Customer to install 125mm black rigid ducts for all 300H LV mains and into all intake positions for the block of flats & commercial unit.

Customer to provide an install external meter boxes to each house with a 32mm polyduct access.

Customer to install a weatherproof and lockable kiosk for the 2 x feeder pillars with a 50mm polyduct access.

Steel Ducts: Where ducts are to be installed in concrete or through a void (for any reason) prior agreement must be obtained from UK Power Networks and the use of steel pipes will be required. The steel pipe is to be welded steel tube with no protruding seam internally; the internal weld must be smooth to the touch throughout. All joints to be screwed and socketed with ends of tubes finished smooth to the touch. Tubes to be Medium duty in red oxide or self-colour finish, complying with EN10255. Galvanised ducts are not acceptable as the galvanising process can leave the ducts with an abrasive finish internally.

Customer to Install Cable Marker Tape. To comply with policy: Installation of Underground Cables - LV to 132kV, 6.1 Cable Protection Tapes and Covers, ECS 02-0019.

No earth will be provided for the feeder pillars so it is recommended an RCD is installed by the customer to provide the necessary earth protection.

Customer to provide a communal intake position for the block of flats on the ground floor that has a minimum height clearance of 2.2m by 1m wide and a fall back distance of 1m in front of the equipment. Additional space will be required for your equipment and the meters.

UK Power Networks to arrange for the customer's risers & laterals to be energised.

Customer to install brick built substation and plinth to UK Power Networks specifications.

Customer to remove site boundary wall by the HV point of connection.

Provision of freehold/leasehold agreement for the substation.

Customer to undertake the substation earthing. Substation earthing is to be combined as indication of a COLD site. A substation earth reading of 4.81ohms is to be achieved before connection.

UK Power Networks to manage the HV shutdown.

Legal consents required.

UK Power Networks carries out all the Contestable and Non-Contestable Works.

B

The customer is to undertake all contestable works, excluding closing joint. UK Power Networks to undertake the closing joint and non-contestable works.

You will need to arrange for the completion of the remaining Contestable Works by an accredited ICP.

If option B is accepted, your appointed ICP will be responsible for the production of all detailed constructible designs, which must be submitted to UK Power Networks for review and approved prior to the commencement of any Contestable Works. No charge will be made by UK Power Networks for this service.

C

The customer is to undertake all contestable works and the closing joint. UK Power Networks to undertake all non-contestable works.

You will need to arrange for the completion of the Contestable Works by an accredited ICP.

If option C is accepted, your appointed ICP will be responsible for the production of all detailed constructible designs, which must be submitted to UK Power Networks for review and approved prior to the commencement of any Contestable Works. No charge will be made by UK Power Networks for this service.

Your Connections

The table below provides a summary of the technical characteristics and the connection types you have requested:

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
Commercial	1	400V	Three Phase, 50HZ	30	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
Communal	35mm2 Multicore	100A to BS1361	PME(TN-C-S)	Whole Current	

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
House	51	230V	Single Phase, 50HZ	434	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
External Meter box	2c 35mm2 c/c	100A to BS1361	PME(TN-C-S)	Whole Current	

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
Feeder Pillars	2	400V	Three Phase, 50HZ	116	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
Kiosks	35mm2 Multicore	100A to BS1361	No Earth(TT)	Whole Current	

The below are all fed from three services via a BNO (Building Network Operator) arrangement:

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
Flat	12	230V	Three Phase, 50HZ	40	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
Communal	35mm2 Multicore	100A to BS1361	PME(TN-C-S)	Whole Current	

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
Landlords Supply	2	400V	Three Phase, 50HZ	20	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
Communal	35mm2 Multicore	100A to BS1361	PME(TN-C-S)	Whole Current	

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
Flat	53	230V	Three Phase, 50HZ	175	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
Communal	300mm2 Multicore	400A to BS88	PME(TN-C-S)	Whole Current	

Type of Property	No. of MPANs	Metering Voltage	Phase Type	Import Capacity (kVA)	Export Capacity (kW)
Landlords Supply	1	400V	Three Phase, 50HZ	105	
Meter Position	Service Cable	Fuse Size	Earthing	Metering	
Communal	300mm2 Multicore	400A to BS88	PME(TN-C-S)	Whole Current	

Phases of work

This Quote covers 1 phase(s) of work which may be subject to our performance standards, as detailed in our 'Our Connections Standards of Performance' leaflet which can be found [here](#).

Section **2** Cost Breakdown

Totals

Option	A	B	C
Net Price (Excluding VAT)	£119,152.19	£7,710.29	£5,599.51

Breakdown of Costs

Description of CONTESTABLE WORK that is included in option	A	only
Work involved		Net price (£)
Domestic Services		
<ul style="list-style-type: none"> Connect and energise unmetered BNO boundary (up to 100 Amps) Connect and energise unmetered BNO boundary (over 100 Amps) New three phase 100A service including underground joint & termination. New three phase 100A service including underground joint, earth pin & termination. New single phase 100A services including underground joint & terminations. New single phase 100A service including underground joint & termination. Supply only of single phase 35mm LV service cable Supply only of three phase 35mm LV service cable Supply only of 300mm LV waveform mains cable 		£31,916.46
Commercial Services		
<ul style="list-style-type: none"> New three phase 100A service including underground joint & termination. Supply only of three phase 35mm LV service cable 		£542.35
LV Underground Mains		
<ul style="list-style-type: none"> Install LV cable to duct or cable tray LV Mains branch joint of a 95-300mm cable to a 240-300mm main. LV waveform mains pot end & installation of earth pin. 		£18,452.01
HV Plant and Switchgear		
<ul style="list-style-type: none"> Establish a 1000kVA unit substation within a brick-built chamber. Includes 1000kVA transformer, Ring Main Unit, 5-way LV cabinet, RTU, internal small power/lighting and substation ancillaries. Excludes earthing, civil works and HV/LV jointing. Break down an existing compound 11kV end box and terminate 185mm cable. Distribution unit termination (LV Board/Cabinet) 		£53,501.79
HV Substation Civils		
<ul style="list-style-type: none"> Delivery of plant to site in normal weekday working hours Sand & cap/shingle substation (BRK) 		£2,032.54
HV Underground Mains		
<ul style="list-style-type: none"> Civils groundwork desktop study Excavate & Reinstate 11kV joint hole in unmade ground Exc. Xtra m3 11kV Joint Hole UNMADE Rein Xtra m3 11kV Joint Hole UNMADE Excavate, lay cable & reinstate 11kV trench in unmade ground. Install additional 11kV cable, widen unmade trench Install 11kV cable to trench including tape Civils groundworks costs Supply only of 11kV 185mm aluminium Triplex mains cable 		£4,996.75
	TOTAL	£111,441.90

Description of CONTESTABLE FINAL CLOSING JOINT WORK that is included in option	A	and in option	B
Work involved			Net price (£)
HV Underground Mains			
<ul style="list-style-type: none"> 11kV 185 Triplex to 95-185 PILC St Jnt 			£2,110.78
		TOTAL	£2,110.78

Description of NON-CONTESTABLE WORK that is included in option	A	and in option	B	and in option	C
Work involved					Net price (£)
HV Plant and Switchgear					
<ul style="list-style-type: none"> Commissioning of a Remote Terminal Unit (RTU) 11kV outage associated with the provision of an 11kV substation Legal fees for a Freehold/Leasehold for the establishment of a substation in a new physical location. 					£4,528.51
Transactional Charges					
<ul style="list-style-type: none"> Assessment & Design Charges 					£1,071.00
Other charges					
			TOTAL		£5,599.51

Please note that payment is required in full, in advance of the work being programmed.

Section 3 Your Responsibilities

This section provides information about the work that you are responsible for should you accept this Quote.

We have made all of our general information about your responsibilities available in our Knowledge Centre on our internet site at www.ukpowernetworks.co.uk. Links to each of the relevant articles are in the table below.

Please let me know if you think we can improve the information we have provided.

Job Specific Responsibilities

Subject	Link to our Knowledge Library
On-site trenches and cable route	Section 3.1 Click here
Ducts	Section 3.2 Click here
Services to houses	Section 3.3 Click here
Services to flats	Section 3.4 Click here
Building Network Operator responsibilities	Section 3.5 Click here
Landlord's connections	Section 3.8 Click here
Commercial or industrial connections - 400As and below	Section 3.9 Click here
Substations: Associated with LV connections	Section 3.11 Click here
Land rights required from You in connection with land within Your occupation, ownership or control (the freehold/leasehold of the substation site)	Section 3.20 Click here
Land rights required from You in connection with land within Your occupation, ownership or control (easements for the underground cables)	Section 3.21 Click here
Land rights required from You in connection with land within Your occupation, ownership or control (termed wayleave for the underground cables)	Section 3.22 Click here
Land rights required from others for land in their ownership occupation or control (Land rights over property outside the actual site boundary)	Section 3.23 Click here

Generic Responsibilities Applicable to all Quotes

Subject	Link to our Knowledge Library
Construction (Design & Management) Regulations 2015 (CDM)	Section 3.25 Click here
Appoint an electricity supplier	Section 3.26 Click here
Works to be undertaken by the ICP/IDNO if UK Power Networks is undertaking the non-contestable Works only	Section 3.27 Click here
Land rights for option B or C - where UK Power Networks is undertaking the non-contestable Works only	Section 3.28 Click here

Section 4 Information to Help You Plan For Your Work

Drawing Schedule

The table below shows a summary of the standard drawings that may be useful for this Quote, along with hyperlinks to the drawings that are currently applicable. Our drawings are revised periodically so the links in the table below may not work in the future if the drawings are superseded. However the latest versions of all of our standard drawings can be found [here](#). If you have not used our G81 web pages before you will be asked to register your credentials for future logins and updates.

Drawing Number	Drawing Description
8500123356	Customer proposal plan
ECS 02-0019	LV/HV/EHV cable trench details View
EDS 07-3102_16	Freestanding brick-built substation for a single transformer up to 1000kVA with ACB & LV Boards (Earth Ring) View
EDS 08-2110.01	100A Single Phase & Neutral Surface Mounted Meter Box Layout View
EDS 08-2110.02	100A Single Phase & Neutral Flush Mounted Meter Box Layout View
EDS 08-2110.03	100A Single Phase & Neutral Flush Mounted Meter Box Layout, with Internal Hockey Stick View
EDS 08-2110.05	100A Three Phase & Neutral Cut-out at Ground Level Standard Entry View
EDS 08-2110.07	200A & 400A Three Phase & Neutral Cut-out at Ground Level Standard Entry View
EDS 08-2110.13	Service Termination Cabinet to Accommodate Cut-out for Metered Supplies Permanent or Temporary View
EDS 08-1103	Supplies to multi-occupied buildings View

Job Specific Information

Subject	Link to our Knowledge Library
Supply characteristics at the Point of Supply for LV metered and un-metered customers	Section 4.2 Click here
Earth Fault Loop Impedance (EFLI)	Section 4.4 Click here
Cables between UK Power Networks and Customer installations up to 400A	Section 4.5 Click here
Private generation	Section 4.6 Click here
Interactive process	Section 4.10 Click here

Generic Information Applicable to all Quotes

Subject	Link to our Knowledge Library
Information common to all Quotes	Section 4.1 Click here

If you are unhappy with our service please follow our Complaints Procedure Specific to Commercial and Industrial Projects which can be found [here](#). This document details your right to contact Ofgem for a formal determination if we have been unable to resolve the matter to your satisfaction.

Section **5** Acceptance Form

Job Reference: 8500123356 / 3500075619

Site Address: Gould Road / TWICKENHAM TW2 6RT

Please return your completed form by post or email:

CC Proj.
UK Power Networks
Metropolitan House
Darkes Lane
Potters Bar, Herts, EN6 1AG

Email: billingteam-networks@ukpowernetworks.co.uk

Please indicate which option you accept:

	Please tick one only	Price excluding VAT	Price including VAT
A UK Power Networks carries out all of the requested 'contestable' and 'non-contestable' works required for your connection	<input type="radio"/>	£119,152.19	£119,832.83
B UK Power Networks carries out all the 'non-contestable' work and the 'contestable closing joint'. The ICP carries out all other requested 'contestable' work	<input type="radio"/>	£7,710.29	£7,761.18
C UK Power Networks carries out the 'non-contestable' works only. The ICP carries out all of the works classified as 'contestable'	<input type="radio"/>	£5,599.51	£5,636.47

Payment Profile

I understand that the Price, including VAT, must be paid in full to accept this Quote. I also understand that where VAT has been charged a Tax Invoice for the Price will be issued by UK Power Networks on receipt of payment.

Please indicate your method of payment:



Cheque

Please make cheques payable to **UK Power Networks** and **put our reference number on the back.**



Debit/Credit Card

Please call **0203 282 0610** and have your card to hand. We are sorry we cannot accept American Express/Diners Club.



BACS/CHAPS

Account: HSBC Bank Plc **Sort Code:** 40 05 30 **Account Number:** 02302934
UK Power Networks Ref. Number 3500075619
(You MUST include this reference so we know which job is being paid):

The Invoice Address	Your Site Contact
Name / Company name:	Name / Company name:
Contact name:	Contact name:
Address:	Address:
Telephone:	Telephone:
Email:	Email:

Your Acceptance

I accept your quotation for carrying out the DNO Works in accordance with the Quote for the option I have chosen overleaf.

To accept this Quote, the signed Acceptance Form and payment in cleared funds must reach UK Power Networks by 5pm on 20 November 2019. Acceptance Forms and payments received after this date may be returned and you will need to request a new Quote.

Signed: _____	Date: _____
Print name: _____	
Agent acting on behalf of: _____	

Job Reference: 8500123356 / 3500075619

Acceptance Form Part 2

Land Rights

If you are appointing a Solicitor to complete any legal work associated with acquiring substation sites and easements work, please provide UK Power Networks with their details by completing the table below.

Please also provide us with the name and address of the owner of any affected land.

Solicitors Information

Name / Company name:

Contact name:

Address:

Telephone:

Email:

Land Owners Information

Name / Company name:

Contact name:

Address:

Telephone:

Email:



9.0 APPENDIX C – OPENREACH QUOTATION

NSI Reference: L/TWI/154 Former Greggs Bakery Site, Gould Rd, Twickenham TW2 6RT

11/02/19

Dear Jim Clark

Thank you for registering your site with Openreach. We are delighted to inform you that your site will receive our Fibre to the Premise (FTTP) product.

As **London Square** has entered into the national framework agreement (reference number: IS2018/020) your account manager (Eren Yusuf eren.yusuf@openreach.co.uk) will now discuss this at the next review meeting to agree to add this site to the framework schedule (if not already agreed at a previous meeting).

We will also register this site to as a Developer Self-Install (DSI) site where your teams will install the connectorised cable, Optical Network Termination (ONT) and Battery Back Up (BBU) within each of your properties, for which you will be eligible for an additional rebate payment (£20) per plot.

If you do not wish proceed to self-install the internal equipment, then please advise your account manager immediately.

Yours faithfully,

Customer service reception team – infrastructure solutions