



Building Services Design
Consulting Engineers

43 london Street
Reading RG1 4PS

190470 - P1
June 2019



**UTILITY STATUS REPORT FOR
43 LONDON STREET,
READING RG1 4PS**

ISSUE & REVISION RECORD

Issue	Document prepared			Document checked		
	Name	Signature	Date	Name	Signature	Date
1	Tony Vaughan Sylwia Chlopecka	<i>T.Vaughan</i>	06/06/19	T.Vaughan	<i>T.Vaughan</i>	06/06/19

Edition	Date	Details	Approved by
P1	06/06/19	Preliminary Issue	T.Vaughan

GAS SERVICE

A budget quote for a gas supply has been applied for from Fulcrum, the gas service management company based on the site drawings of 43 London Street, issued by Douglas Stephen Partnership, 134 Old Street, London EC1V 9BL.

It has been assumed that each dwelling will have a separate metered gas supply serving a wall mounted domestic boiler and a domestic gas cooker. The boiler will generate hot water for heating purposes and domestic hot water usage.

The proposed 24 Kw boiler for each dwelling has been sized to provide heating to the dwelling based on a watts/metre heat loss figure and the domestic hot water demand for the sanitaryware as shown on the proposed layout drawings.

The duty for the domestic cooker was extrapolated using figures from the internet, manufacturers technical data and CIBSE (Chartered institute Building services Engineers) guidelines

The figures were combined as shown in the table below and this information passed to Fulcrum for sizing of the appropriate gas service.

A Utility status report detailing the progress of the gas application is included at the end of this report.

Reference	kw	duty M ³ /sec for an individual cooker	total duty for 22 cookers M ³ /sec	Total duty for 22 dwellings* M ³ /sec	total	pipe size	pressure drop
web site	5	0.000129199	0.002842377	0.0137	0.016542	80 dia	1.25
engineering toolbox	20	0.0006	0.0132	0.0137	0.0269	90 dia	1.5
Cibse	-	0.0012	0.0264	0.0137	0.0401	100 dia	1.75
zanussi tech spec	-	0.000135	0.00297	0.0137	0.01667	80 dia	1.75

* assuming 24 kw per boiler for 22 dwellings = 528 Kw = 0.0137 M³/sec

DOMESTIC WATER SERVICE

A budget quote for a domestic cold water supply has been applied for from Thames Water based on the site drawings of 43 London Street, issued by Douglas Stephen Partnership, 134 Old Street, London EC1V 9BL.

It has been assumed that each dwelling will have a separate metered water supply.

A table indicating the sanitaryware within the dwellings is shown below.

This table has been used to size the domestic cold water service to each dwelling and has been passed to Thames water to allow them to prepare their Budget quote.

The calculated loading units have been compiled using BS8558 (Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages)

UNIT	TYPE	Loading units					
		WC	WHB	Bath	shower	sink	w/m
1	Commercial unit	1			1		
2	studio flat	1	1	1		1	1
3	studio flat	1	1	1		1	1
4	one bed flat	1	1	1		1	1
5	three bed maisonette	2	2	1	1	1	1
6	two bedroom flat	2	2	1	1	1	1
7	two bedroom flat	2	2	1	1	1	1
8	two bedroom flat	2	2	1	1	1	1
9	one bedroom flat	1	1	1		1	1
10	one bedroom flat	1	1	1		1	1
11	two bedroom flat	2	2	1	1	1	1
12	one bedroom flat	1	1	1		1	1
13	two bedroom flat	2	2	1	1	1	1
14	one bedroom flat	1	1	1		1	1
15	two bedroom flat	2	2	1	1	1	1
16	two bedroom flat	2	2	1	1	1	1
17	one bedroom flat	1	1	1		1	1
18	three bedroom flat	2	2	1	1	1	1
19	two bedroom flat	2	2	1	1	1	1
20	two bedroom flat	2	2	1	1	1	1
21	one bedroom flat	1	1	1		1	1
22	three bedroom flat	2	2	1	1	1	1

	total	34	33	21	13	21	21
--	-------	----	----	----	----	----	----

Total domestic usage = 509 loading units = 4.24 L/sec = 67 dia pipework

Single Appliance Checker				
Outlet	Loading Units	Number	Total Cold Units	Total Hot units
WC	2	34	68	-
Bidet	1	0	0	0
WHB	2	33	66	66
Shower	3	13	39	39
Bath	10	21	210	210
Sink	3	21	63	63
Dishwasher	2	0	0	-
Washing Machine	3	21	63	-
Total			509	378
Total Water Flow Rate (l/s)			4.24	3.44
Pipe Size (mm)			67	67
Total Combined Demand			887	
Combined Total BCWS / HWS			6.26	

A Utility status report detailing the progress of the water application is included at the end of this report.

ELECTRICAL SUPPLY

A budget quote for an electrical supply has been applied for from Scottish and Southern Electricity Network (SSE) based on the site drawings of 43 London Street, issued by Douglas Stephen Partnership, 134 Old Street, London EC1V 9BL.

It has been calculated that the total maximum demand for the development is 170 kVA 3phase. This is on the basis that the development will not be electrically heated.

The simple allowance we have included for in respect of the electrical loads is as follows:

- | | |
|--------------------------|--------|
| • Landlord | 30kVA |
| • Commercial Unit | 30kVA |
| • Apartments @ 5kVA each | 110kVA |

We have anticipated the need for 2no. 3phase meters to serve the commercial space and landlords' services and 22no. 1phase meters to serve all the dwellings.

The need for a sub-station on site cannot be determined until SSE have provided a quotation for the new connection by which time they would have analysed the capacity of the existing local infrastructure to see what is available at low voltage. Should a sub-station be required then an area 5mx 5m would be necessary with direct and clear permanent access to allow low loading truck access.

BT /INTERNET SUPPLY

The application to Openreach for new communication services is usually made by the client closer to construction as Openreach will require specifics such as dwelling addresses, post codes, etc.

However, based on the Openreach existing plant information there appears to be communications cabinets, distribution points, main services cabling, etc. within the vicinity of the development and we would anticipate that new lines should be easily provided.

For developments over 30 units Openreach do not usually charge for connections onto their network. It is 30 units or below then a contribution would be sought. BSD would anticipate that this contribution to be circa £100-£200/unit.

UTILITY STATUS REPORT

Thames water	Thames water, Developer services, Clearwater Court, Vastern Road, Reading, Berkshire RG1 8DB	Application for budget quote sent to Thames water on 31 st may 2019
FULCRUM	Joanne Bonnett Joanne.Bonnett@fulcrum.co.uk	Application for budget quote requested on the 29 th May 2019
Thames water	Thames water, Developer services, Clearwater Court, Vastern Road, Reading, Berkshire RG1 8DB	Application applied for and design fee of £276 paid on the 4 th June. Quote is usually issued 14 to 28 days after payment of fee.
Scottish & Southern Electricity Network (SSE)	quote reference: -EPG059	Application for budget quote sent to SSE on 04th of June 2019.