

New Street, Oldtown

Reference: 12345

Utility Feasibility Report (sample)

Month 2014

ATKINS

Plan Design Enable

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Document history

Job number: (12345)			Document ref: Utility Feasibility Report	
Revision	Purpose description	Originated	Checked	Date
Rev 1.0	Feasibility Report (sample)	LB	AB	

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Table of contents

Chapter	Pages
1. Introduction	4
2. Electricity Infrastructure	6
2.1. UK Power Networks (UKPN)	6
3. Gas Infrastructure	8
3.1. National Grid Gas	8
4. Telecommunications Infrastructure	9
4.1. BT Openreach	9
4.2. C A Telecom UK Ltd	9
5. Water Infrastructure	11
5.1. Thames Water	11
6. Sewer Water Infrastructure	13
6.1. Thames Water	13
7. Liability	14
7.1. Existing Plant	14
7.2. Liability	14
8. Appendices	15

SAMPLE

1. Introduction

Atkins Ltd has been engaged by (Client Name) to evaluate the site wide utility constraints for the development site currently known as New Street.

It is understood that the proposed development will comprise 162 new residential flats and a mixed development of A1 and B1 employment use; spread over approximately 19,267 sq ft of GEA.

The development site itself is located at 102 New Street, in Oldtown. The land is currently used to occupy an existing warehouse, which will be redeveloped to accommodate the proposal.

This report will detail the utility constraints identified on and around the proposed development site based on the results of the utility search carried out by Atkins under reference (12345).

It is understood that (Client Name) require preliminary guidance on the methodologies and costs associated with any diversions and disconnections required in order to clear the site of utility constraints to enable the works to take place. In addition, it is understood that (Client Name) require information pertaining to available capacity to support the additional loads of the proposed development, as well as budget costs for the new supplies.

This report will:

- Determine the existing constraints on the site, as shown on the utility plans procured.
- Propose a strategy for removing any constraints from the development.
- Include estimated elemental costs for any diversionary works and disconnections deemed required.
- Include information procured from the regional utility network operators regarding the availability of capacity and budget quotations for new supplies.

The utilities that fall within the scope of this report include high voltage (HV) and low voltage (LV) electricity, low pressure (LP) and medium pressure (MP) gas, telecommunications, potable and waste water mains.

Any reference made herein to the “site plan” or “site layout” refers to the plan provided by (Client Name); appended to this report.

Assumptions

A brief desktop study indicates that the current land use of the proposed development site is Brownfield. As a site layout plan is currently unavailable, assumptions have been made that the existing warehouse and parking will be demolished to accommodate the proposal; which will cover the area within the entire site boundary.

When procuring information in relation to utility network capacity, the information used as a basis for utility demands for the domestic units is based on standard loadings for gas heated residential dwellings. In

general, these figures are standard and will be applied by the relevant utility companies when considering their network capacity.

For the commercial units, Atkins has estimated that a gas supply of approximately 74kW will be required for the A1 retail unit, and approximately 54kW required for the B1 Offices (total = 128kW.) For electricity, Atkins have estimated that approximately 80kW (100Kva) will be required for the A1 retail unit and approximately 70kW (88Kva) for the B1 Offices (total = 150kW.) The report will be based on these estimates; which have been calculated using the GIA provided by (Client Name).

Basis of Cost

Any costs detailed within this report that have been indicated by Atkins and not procured from the utility companies will be 'Elemental Estimated Budget Costs' only. They are formed with reference to quotations received from District Network Operators (DNOs) on previous projects of a similar nature.

Exclusions

All elemental budget costs exclude VAT unless otherwise stated. Elemental Estimated Budget Costs exclude service disconnections, diversions and lowering unless otherwise stated. Estimated costs exclude the cost of any sewer diversions and disconnections.

The following utilities returned an "affected" response to the Utility Search carried out under reference (12345), however their apparatus is outside of the site boundary or is outside the scope of this report:

- Arqiva – their response indicates that they have no equipment on site.
- BskyB – their response indicates that they have apparatus outside of the site boundary.
- Fulcrum Pipelines – their response indicates that they have a section of network supplying units on the opposite site of New Street. No further consideration is given in this report and attention is drawn to the C2 response from Fulcrum.
- GTC – their response shows proposed plans for apparatus on the eastern side of the nearby railway line, outside of the boundary of the proposed development site.
- Instalcom Ltd - their response indicates that they have apparatus outside of the site boundary.
- Linesearch – their response indicates the presence of National Grid assets in the area. The gas network response is covered in the National Grid section within this report. The electricity transmission cables are shown to run outside of the site boundary.
- London Underground – their response indicates they have no assets within 50 metres of the site boundary.
- London Underground A P Power Maintenance – their response states that they have no HV cables or cable duct routes in the area.
- Network Rail – their response is in respect of the railway lines to the east of the site, and the land that falls within Network Rail ownership bounding the site to the east. This is not within the scope of this report.
- Vodafone Ltd - their response indicates that they have apparatus which falls outside of the site boundary.

2. Electricity Infrastructure

2.1. UK Power Networks (UKPN)

Existing Infrastructure & Constraints

- **Substations / Transformers**

Records received from UKPN indicate that an existing substation is located adjacent to the northern extent of the proposed site boundary at no. 104 New Street. A further substation is indicated on UKPN plans, located opposite no. 102 New Street.

- **Buried Cables**

Records indicate that there are existing HV and LV mains, running within New Street in the near and far side carriageways. HV and LV cables are shown to run from the substation at 104 New Street, before running along both sides of New Street itself, past the proposed development site.

Methodology to overcome Constraints

It is not anticipated that a diversion of existing UKPN apparatus will be required, in particular since no cables are shown to run within the boundary of the proposed site. Measures to lower / protect the existing mains running close to the site boundary may need consideration should the footpath require alteration for site access. However in the absence of any plans depicting such works, no further comment is made in this report.

It is assumed that the existing warehouse building on site benefits from an existing electricity supply, which will require disconnecting prior to redevelopment of the site.

New Supplies & Capacity

An application has been made to UK Power Networks to carry out an assessment of their network with a view to supporting the proposed development. Although UKPN did not comment on the capacity available in the existing infrastructure around the site, a budget estimate for the new connections was provided, based on a point of connection to the HV network along New Street.

Since the anticipated connection to the site will be at high voltage, it is assumed that a substation will be required and can be located on the site. UKPN further comment that an additional sum of £100,000 could be applicable in the event that further diversionary or reinforcement works are necessary.

Estimated / Budget Costs

Description of Works	Cost Estimation (£)
New Supplies	
New connections (including a new substation)	£140,000

Disconnections	
Disconnect and assumed existing 3 phase supply to the warehouse	£10,000
Diversiory Works	
None anticipated – however some provision within UKPN budget estimate	£100,000

Assumed depth of electric apparatus: LV = 450mm, HV 11kV = 600mm or lower

Based on NJUG Volume 2.

SAMPLE

3. Gas Infrastructure

3.1. National Grid Gas

Existing Infrastructure & Constraints

- **Buried Pipework**

Records received from National Grid Gas show an existing 300mm Ductile Iron Low Pressure gas distribution main running in the far side carriageway of New Street.

Methodology to overcome Constraints

The 300mm LP main located in New Street is not considered to impose a constraint to the development as it appears to be buried in the furthest carriageway from the site boundary. No gas mains are shown to run within the site boundary, however it is assumed for the purposes of this report that the existing warehouse has a gas supply that will need to be disconnected before commencing works.

New Supplies & Capacity

An application has been made to National Grid to carry out an assessment of their network and advise whether there is sufficient capacity in their existing network to support the proposed development.

National Grid have confirmed that there is sufficient capacity available from the 300mm DI low pressure main located approximately 14 metres from the site boundary in New Street. A budget cost for the new supplies has not been received at the time of issuing this report.

Estimated / Budget Costs

Description of Works	Cost Estimation (£)
Disconnections	
Disconnect assumed supply to existing warehouse on site	£12,000
Diversionsary Works	
None anticipated.	£0

Assumed depth of Gas apparatus = 600mm or lower

Based on NJUG Volume 2.

4. Telecommunications Infrastructure

4.1. BT Openreach

Existing Infrastructure & Constraints

- **Buried Cables**

Records indicate that existing BT Openreach apparatus and associated chambers run underground along the far side of New Street, from which records indicate a buried cable crosses the street to supply the existing infrastructure at no. 102 and no. 104. There is also a buried cable and joint box shown running to the smaller unit near the railway tracks, which is located within the proposed site boundary. This appears to be close to the northern boundary of the site.

Methodology to overcome Constraints

No diversions to BT apparatus are anticipated in respect of the cables along New Street. Additionally, no consideration has been given to diverting the apparatus running close within the boundary to supply no.104. However, it is anticipated that the existing BT line supplying number 102 New Street will need to be disconnected.

Estimated / Budget Costs

Description of Works	Cost Estimation (£)
Disconnections	
Disconnect existing line to number 102 New Street	£7,500
Diversions Works	
None anticipated	£0

4.2. C A Telecom UK Ltd

Existing Infrastructure & Constraints

- **Buried Cables**

Records indicate existing apparatus, operated by Colt Technology Services, runs along the far side of New Street, crossing the street and running close to the northern boundary of the proposed development site. The cable is then shown to terminate in 104 New Street, to the north of the proposed development.

Methodology to overcome Constraints

It is not considered that any diversionary works will be necessary, however the location of the cables where they run close to the site boundary should be verified before undertaking any work in that area.

Assumed depth of Telecommunications = 350mm or lower

Based on NJUG Volume 2

SAMPLE

5. Water Infrastructure

5.1. Thames Water

Existing Infrastructure & Constraints

- **Buried Pipework**

Records indicate an existing 200mm DI water main runs along the near side footpath of New Street, running near to the boundary of the proposed site.

Methodology to overcome Constraints

It is unlikely that the water main will require a diversion to accommodate the development proposals as it does not run within the site boundary.

Typically, due to the depth of water apparatus, diverting, lowering or protection is not usually required for works associated with the construction of a new access road, if such works are required. This is dependent on the depth of excavation, however no costs have been included in this report.

It is assumed that the existing warehouse will have a water supply that will need to be disconnected in advance of construction works taking place.

New Supplies & Capacity

An enquiry has been raised with Thames Water to carry out an assessment of their network and advise whether there is sufficient capacity available to support the proposed development.

Thames Water have confirmed that further investigation will be needed to determine whether there is sufficient water capacity available to serve the site, and have recommended a flow and pressure test on the distribution main. The cost of the test is £924.00 (inc. VAT) payable in advance to Thames Water Ltd.

Thames Water have also provided a budget quote for the new connections costs, outlined below.

Estimated / Budget Costs

Description of Works	Cost Estimation (£)
New Supplies	
• Service connections: 1x125mm MDPE Bulk supply, 162 internal meters from the 200mm main in New Street	£21,551.74
• Non-domestic supply: 25mm (or 32mm) metered MDPE supply for each commercial unit from the 200mm main in New Street (£724.00/unit)	£1448.00
• Domestic infrastructure charges for potable water (162 x £347.00)	£56,214.00
• Commercial infrastructure charges (2 x £347.00/unit)	£1388.00

Disconnections	
Disconnect existing supply to warehouse	£7,500
Diversions Works	
None anticipated	£0

Assumed depth of Potable Water mains = 750mm – 900mm or lower

Based on NJUG Volume 2.

SAMPLE

6. Sewer Water Infrastructure

6.1. Thames Water

Existing Infrastructure & Constraints

- **Buried Pipework**

Records indicate that there are foul sewer and surface water sewer mains running in New Street, near to the boundary of the site.

Methodology to overcome Constraints

It is not anticipated that either main will require diverting, lowering or protecting, as both run in the road of New Street.

New Supplies & Capacity

An application has been made to Thames Water to consider the capacity available in their network to support additional flows of foul and surface water from the proposed development. Thames have not yet provided a response, however it is anticipated that further investigation will be required.

Assumed depth of Sewer mains = 750mm – 900mm or lower

Based on NJUG Volume 2

7. Liability

7.1. Existing Plant

The quality and accuracy of information provided by utilities about their existing plant is indicative and no warranty is made as to its accuracy. Therefore, any map extracts and/or marked up drawings provided by each utility must only be used as a guide and the actual location of plant should be verified by CAT scan or trial holes before construction works commence. It is the responsibility of any on site contractor to identify and locate any utility plant prior to development work going ahead. It is enshrined in the NRSWA that it is the responsibility of any on site contractor to ensure the safety of its employees on site in relation to utility plant and to ensure that there is no damage to utility plant caused by site works.

7.2. Liability

Where applicable, our estimates provided in the course of completing this review, are provided on the basis of our experience and are accordingly on an estimate basis. The client should be aware that actual charges made by utilities providers are determined by a number of factors. Accordingly any cost estimates provided are for information purposes only. If the client wishes to have more robust information, better information on localised proposals and phased development proposals should be provided and further estimates should be obtained from utilities providers as and when the better information becomes available. Atkins Ltd will take all reasonable steps to obtain the most robust information but shall accept no liability for the accuracy of such information or report.

8. Appendices

Site location plan and utility responses on following sheets.

Adam Bushnell

Atkins Limited
The Hub, 500 Park Avenue
Aztec West
Almondsbury
Bristol, BS32 4RZ

Email: Adam.Bushnell@atkinsglobal.com

Telephone: +44 (0) 1454 662606