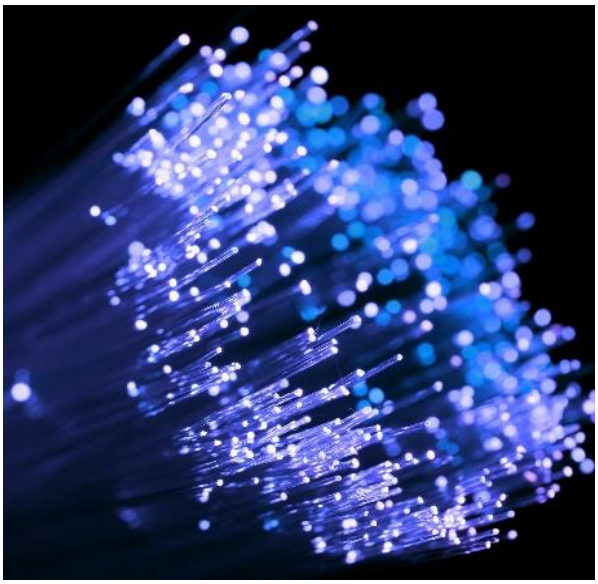


Audrey Street & Benton Street

UCML Utility Study

Level 1

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UCML Utility Study – Level 1

Audrey Street, Manchester

Benton Street, Manchester

Produced for: BTP Architects

Issue/Revision	Comments	Date	Prepared By	Checked By
1	First Issue	21/01/2021	Sean Williams	Ryan Elliman
2				
3				

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1.0 Introduction

UCML has been instructed by BTP Architects (hereafter referred to as 'the Client') to provide a desktop utility study to identify the outline constraints derived from the statutory utility infrastructure on a proposed residential development split across two sites. The two sites are located off Audrey Street and Benton Street, with Audrey Street comprising 12 dwellings and Benton Street 6 dwellings.. This study includes the parcels of land within the red line boundary as indicated within Figure 1.1 and Figure 1.2 below.



Figure 1.1 – Aerial view of existing Audrey Street site



Figure 1.2 – Aerial view of existing Benton Street site

UCML has been commissioned to provide a desktop utility study defining potential cost and timescale risks that could impact on the overall delivery of the project. The principal aim of this utility study is to identify the key constraints derived from statutory utility infrastructure on the proposed development. The information provided within this desktop study is based on review of the Site Layout drawing no. 105 provided to UCML by BTP Architects, indicated in Figure 1.3 and Figure 1.4 overleaf.



Figure 1.3 – Audrey Street Site Layout Plan



Figure 1.4 – Benton Street Site Layout Plan

This desktop study has been produced using the statutory records received from each relevant body. The host statutory network operators which operate in the vicinity of the development site and covered within this study are listed in Table 1.1 below. UCML is not responsible for the accuracy or quality of the information provided on statutory utility infrastructure records, and has attempted to use reasonable skill and care in investigating the existing site services. Unless stated otherwise, UCML has not made any provision for out-of-area water mains, private networks, unrecorded networks, Liquid Petroleum Gas (LPG) networks, street lighting, CCTV, traffic signals/illuminated signage, data centre networks, electricity generation installations, interconnectors, or drainage/sewerage networks.

Utility	Statutory Operator
Electricity	Electricity North West Ltd
Gas	Cadent Gas
Water	United Utilities
Telecoms	Openreach Virgin Media

Table 1.1 – Host Statutory Network Operators

Please note, all information on the drawings contained within this utility study and elsewhere is indicative only. The verification of the details and plant location given on the relevant infrastructure records should be undertaken using the following methods;

- The use of plant location equipment to trace all underground plant.
- The use of hand dug trial holes to confirm the precise location of plant.
- The use of suitable paint or markers on the surface to clearly indicate the position of buried apparatus.

All works undertaken are to be in accordance and compliance with the Construction Design and Management 2015 Regulations, published Health & Safety Guidelines, and the agreed working practices of the relevant utility companies. The following assumptions must be made in regards to any existing utility apparatus;

- All mains, services cables, and pipes should be assumed live until proven dead prior to any excavation, demolition or groundworks commencing.
- Any existing building is assumed to have live services until proven otherwise.
- Any site is assumed to have existing utility apparatus located within the boundary until proven otherwise.
- Service connections are not indicated on all utility infrastructure records. Where no service connections are indicated, their presence should be anticipated until proven otherwise.

2.0 Scope and Objectives

Utilities Connections Management Limited (UCML) is an independent Utility Consultancy providing services relating to the provision of utility connections to all types of developments.

This desktop utility study aims to provide a 'snapshot' in time of the current statutory utility networks and review the potential connection, diversion, and disconnection works that may be required to accommodate the development proposals. The objective of the commission is to provide a level of information relating to budgetary costs and risks, without incurring significant costs relating to distribution network studies. It should be noted that as this study is desktop in nature, no site visits or surveys have been undertaken during its completion.

The scope of works undertaken by UCML may be summarised as follows;

- Obtain the statutory Network Operators' infrastructure records.
- Review the existing utility distribution networks within the local area of the site.
- Provision of budget costs for proposed disconnection, diversion, and connection works.
- Identification of possible abnormal costs associated with existing and proposed infrastructure.
- Highlighting of abnormal legal requirements including wayleaves and easements.

UCML's desktop utility studies provide a detailed overview of the statutory electricity, gas, clean water and telecommunications infrastructure in the vicinity of a proposed site, ideal for:

- Due diligence prior to land purchase to allow negotiation.
- Risk assessment prior to tender.
- Assistance with site layout design to minimise impact on existing utilities, taking into account statutory utility infrastructure legal requirements.
- Detailed planning statements.
- Investment analysis.

3.0 Assumptions and Exclusions

In view of the limitations of the available information, the following assumptions have been made in order to produce this utility study;

- All estimated loads have been based on information provided in the Network Operators Distribution Code and other documented standards.
- The information provided within the desktop study is based on the development site area as identified on the proposed site layout plan shown in Figure 1.2 within the introduction. Any land falling outside of the provided boundary is outside of the scope of this desktop study and, should it be incorporated within the proposed development boundary, this may affect the information and recommendations provided within this desktop study.
- The desktop study has been produced based on the specification provided by the Client/Developer at the time of instruction. Any changes to the size, type, number of specification of the development (for instance the extent of EV charging provision and/or use of Low Carbon heating solutions) may affect the information and recommendations provided within this desktop study.
- In the timescales and budget costs quoted, no allowances have been made in respect to the following unless stated otherwise;
    - Wayleaves, easements, or access rights.
    - Reinforcement charges.
    - Land transfers or lease arrangements for substation requirements if applicable.
    - Abnormal off-site civils.
    - Specialist traffic management (non-standard).
    - On-site civils and builders work.
    - Seasonal Embargoes.

  It should be noted that all budgetary figures quoted are exclusive of any Value Added Tax (VAT) that may be applicable unless stated otherwise.

4.0 Cost Summary

4.1 Audrey Street Site Cost Summary

Matrix Key	
	Do not envisage any major issues.
	Could cause delay that can be measured in weeks, and can also be prevented.
	Could cause delay that can be measured in months, and may be prevented.
	Could cause major delay, that may not be mitigated.

Utility	Risk
Electricity	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – *£18,500.00 based on 12 dwellings.* **Total Electricity Costs - £18,500.00**	
Gas	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – *£10,000.00 based on 12 dwellings.* **Total Gas Costs - £10,000.00**	
Water	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – *£10,500.00 based on 12 dwellings.* **Total Water Costs - £10,500.00**	
Telecoms – Openreach	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *£4,000.00 for the disconnection and alternate connection of overhead cable, plus an additional £800.00 Openreach survey fee.* **Connections** – *£7,056.00 for fibre to the premise (FTTP) connections based on 12 dwellings.* **Total Openreach Costs - £11,856.00**	
Telecoms – Virgin Media	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – It can be assumed that Virgin Media will provide a connection proposal for the development at no cost to the developer. **Total Virgin Media Costs - £Nil**	
Budgetary sums exclude Value Added Tax, on-site civils and principal contractor preliminaries.	

4.2 Benton Street Site Cost Summary

Matrix Key	
	Do not envisage any major issues.
	Could cause delay that can be measured in weeks, and can also be prevented.
	Could cause delay that can be measured in months, and may be prevented.
	Could cause major delay, that may not be mitigated.

Utility	Risk
Electricity	
Disconnection Works – *None currently anticipated* **Diversionary Works** – *None currently anticipated* **Connections** – *£14,500.00 based on 6 dwellings.* **Total Electricity Costs - £14,500.00**	
Gas	
Disconnection Works – *None currently anticipated.* ***Diversionary Works*** – *None currently anticipated.* **Connections** – *£12,500.00 based on 6 dwellings.* **Total Gas Costs - £12,500.00**	
Water	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – *£9,000.00 based on 6 dwellings.* **Total Water Costs - £9,000.00**	
Telecoms – Openreach	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – *£9,600.00 for fibre to the premise (FTTP) connections based on 6 dwellings.* **Total Openreach Costs - £9,600.00**	
Telecoms – Virgin Media	
Disconnection Works – *None currently anticipated.* **Diversionary Works** – *None currently anticipated.* **Connections** – It can be assumed that Virgin Media will provide a connection proposal for the development at no cost to the developer. **Total Virgin Media Costs - £Nil**	
Budgetary sums exclude Value Added Tax, on-site civils and principal contractor preliminaries.	

5.0 Electricity

The electricity distribution network in the vicinity of the development sites is under the ownership of Electricity North West and is operated within the terms of its Electricity Distribution License issued by Ofgem. The local electricity distribution network in the immediate vicinity of the site comprises of underground cables and associated substations operating at High Voltage (HV) and Low Voltage (LV).

The diagram below illustrates the location of existing Electricity North West infrastructure which has been extracted from its network records. The cables shown in blue are operated at 6,600 Volts (HV), and those shown in orange are operated at 415 Volts (LV). Please refer to the infrastructure record appended to this study for further detail.

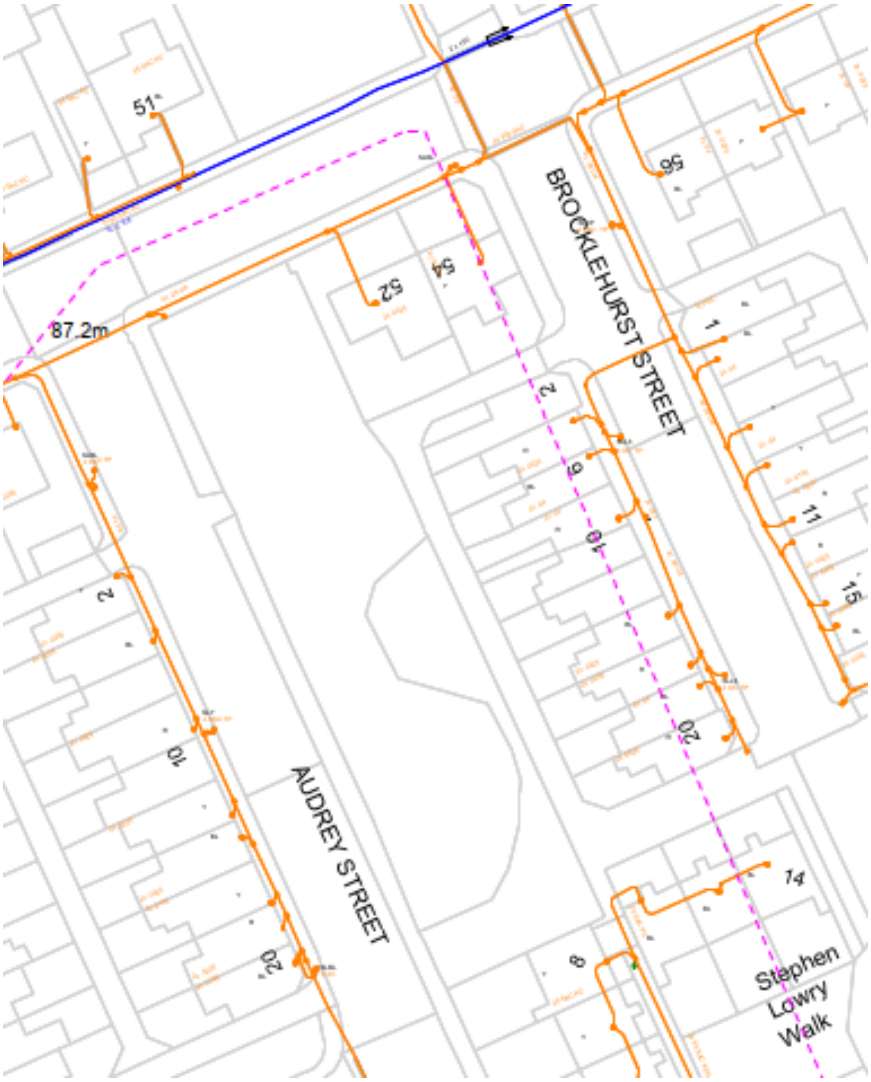


Figure 5.1 – Existing Electricity Infrastructure Plan near Audrey Street site



Figure 5.2 – Existing Electricity Infrastructure Plan near Benton Street site

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

Disconnections:

Audrey Street

Electricity North West infrastructure records do not appear to indicate any service connections within the site boundary. As the site appears to be clear, with no evidence of any former buildings having occupied the site, no disconnection works are currently anticipated.

Benton Street

Electricity North West infrastructure records do not appear to indicate any service connections within the site boundary. As the site appears to be clear, with no evidence of any former buildings having occupied the site, no disconnection works are currently anticipated.

Diversions:

Audrey Street

Electricity North West infrastructure records indicate the presence of a Low Voltage cable within the site side footpath of Lily Lane. The proposed works would lower the kerb in this region to provide access to a parking space. This may affect the cable, but not to the extent that diversionary works are currently anticipated.

Electricity North West infrastructure records indicate the presence of a High Voltage cable within the opposite side footpath of Lily Lane. However, as the cable is at sufficient enough distance from the site boundary it is unlikely to be affected by the proposed works.

Electricity North West infrastructure records do not indicate and cables within the site side footpath of Audrey Street. Therefore, electricity diversion works are not currently anticipated.

Benton Street

Electricity North West infrastructure records do not indicate the presence of any infrastructure within the vicinity of the site boundary. Therefore, electricity diversion works are not anticipated for the Benton Street site.

Connections:

Audrey Street

It is envisaged there may be sufficient capacity in the existing Low Voltage (LV) network to provide supply to the proposed development. A Point of Connection (POC) application is recommended to confirm the actual availability of capacity within the local network. For the purpose of this study, UCML has assumed a connection can be taken at Low Voltage (LV). Allow a **budget cost of £18,500.00** for connections to the Audrey Street site of 12 dwellings.

Benton Street

It is envisaged there may be sufficient capacity in the existing Low Voltage (LV) network to provide supply to the proposed development. A Point of Connection (POC) application is recommended to confirm the actual availability of capacity within the local network. For the purpose of this study, UCML has assumed a connection can be taken at Low Voltage (LV). Allow a **budget cost of £14,500.00** for connections to the Benton Street site of 6 dwellings.

6.0 Gas

The local Gas Distribution Network in the vicinity of the development site is owned and operated by Cadent Gas under its Gas Transportation License issued by Ofgem. The gas network in the immediate vicinity of the site comprises of gas mains and apparatus operating at Low Pressure.

The following diagram is an extract from Cadent Gas statutory records and details the currently indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no services present which are not recorded on statutory records. Please refer to the infrastructure record appended to this study for further detail.

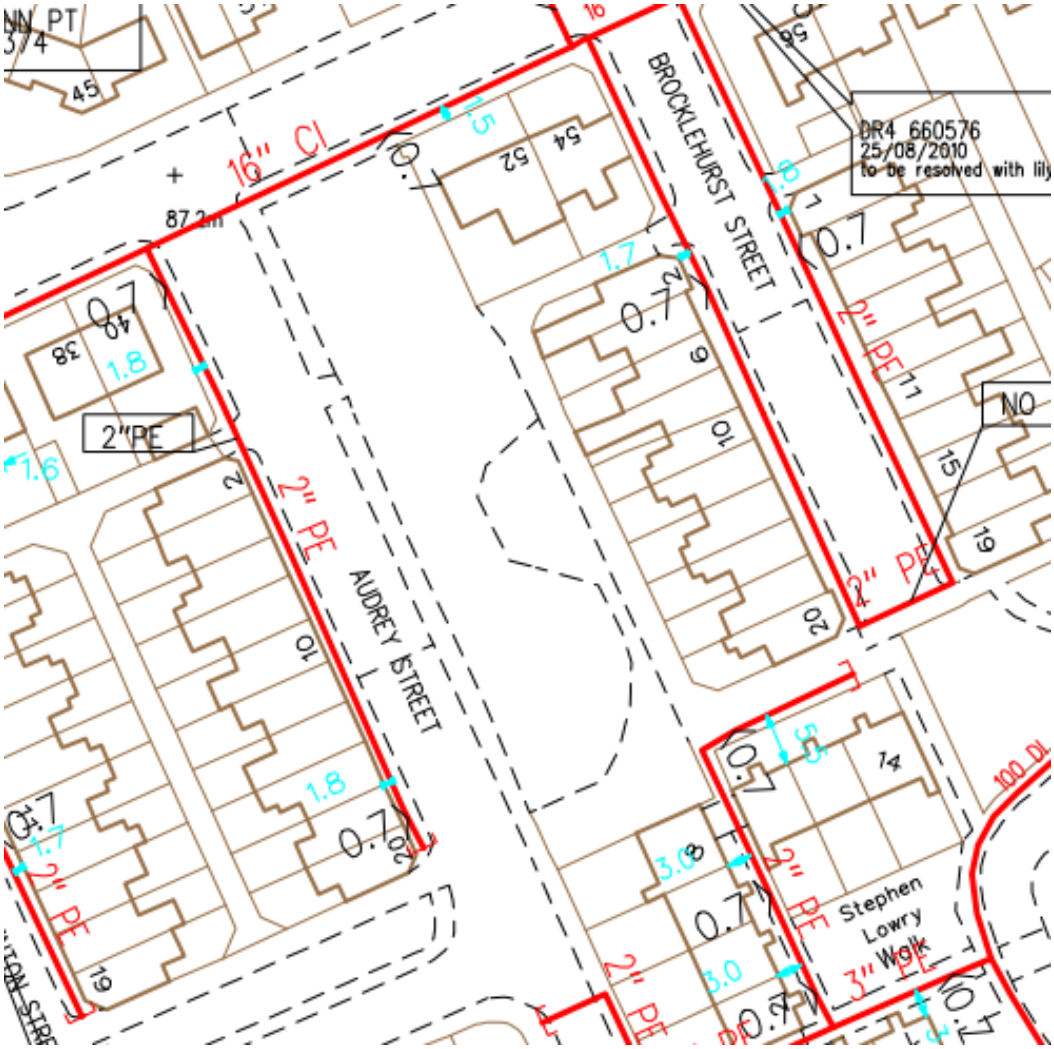


Figure 6.1 – Existing gas infrastructure plan near Audrey Street site

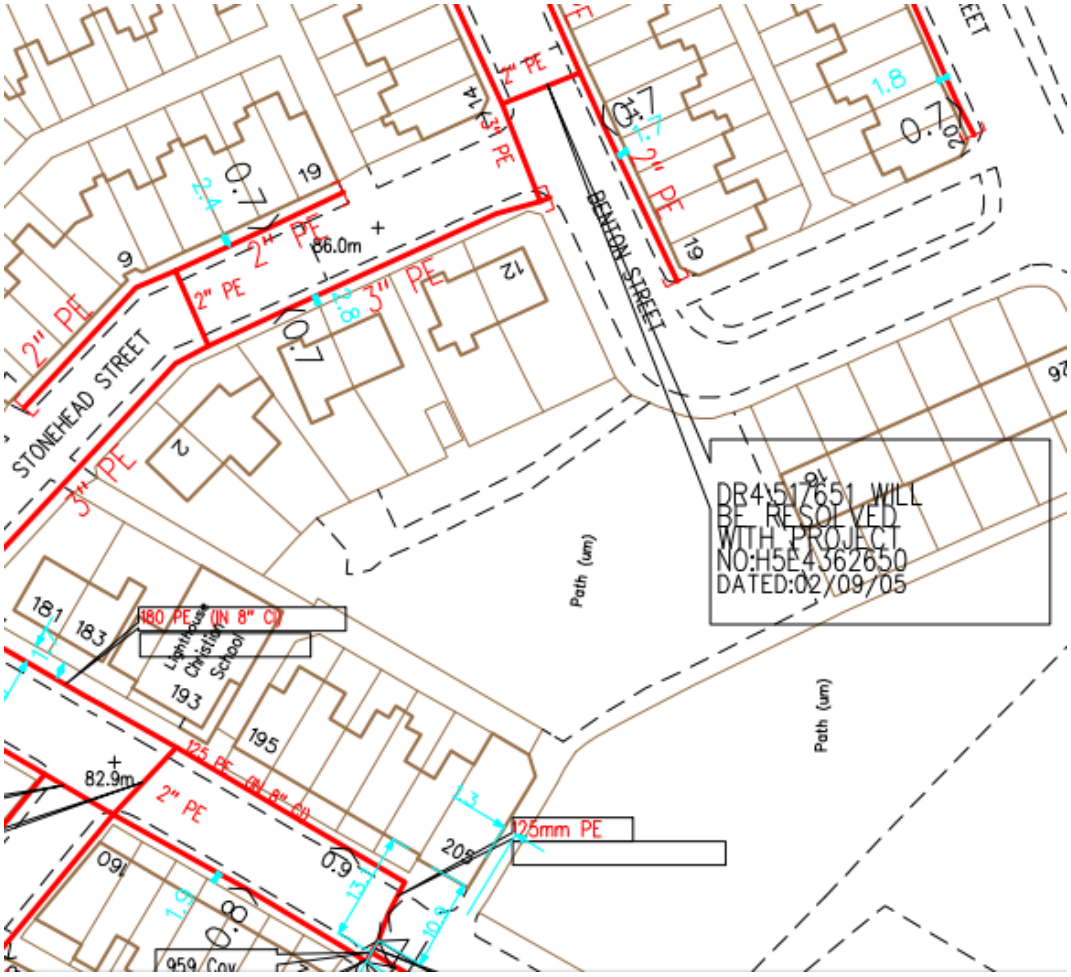
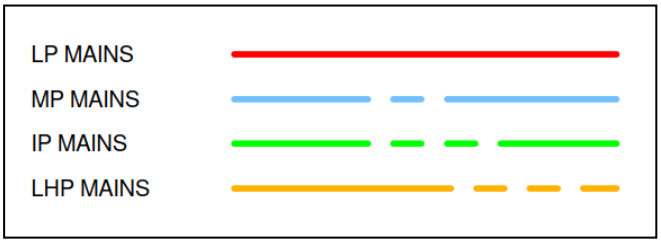


Figure 6.2 – Existing gas infrastructure plan near Benton Street site



Disconnections:

Audrey Street

Cadent Gas infrastructure records do not typically indicate the presence of individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based upon desktop review, as the Audrey Street site is clear open space, no gas disconnection works are currently anticipated.

Benton Street

Cadent Gas infrastructure records do not typically indicate the presence of individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based upon desktop review, as the Benton Street site is clear open space, no gas disconnection works are currently anticipated.

Diversions:

Audrey Street

Cadent Gas infrastructure records indicate the presence of a 16" Cast Iron Low Pressure gas main within the site side footpath on Lily Lane. The proposed works would lower the kerb in this region to provide access to a parking space. This may affect the gas main, but not to the extent that diversionary works are currently anticipated.

Benton Street

Cadent Gas infrastructure records do not indicate the presence of any infrastructure within the vicinity of the Benton Street site. Therefore, gas diversion works are not currently anticipated.

Connections:

Audrey Street

It is envisaged there may be sufficient capacity in the existing Low Pressure (LP) network to provide supply to the proposed development. A point of connection application is recommended to confirm the actual availability of capacity within the local network. For the purpose of this study, UCML has assumed a connection can be taken at Low Pressure (LP). Allow a **budget cost of £10,000.00** for connections based on 12 dwellings. This budget figure excludes any potential asset value subsidy which may apply for the adoption of the new gas network by an Independent Gas Transporter.

Benton Street

It is envisaged there may be sufficient capacity in the existing Low Pressure (LP) network to provide supply to the proposed development. A point of connection application is recommended to confirm the actual availability of capacity within the local network. For the purpose of this study, UCML has assumed a connection can be taken at Low Pressure (LP). Allow a **budget cost of £12,500.00** for connections based on 6 dwellings. This budget figure excludes any potential asset value subsidy which may apply for the adoption of the new gas network by an Independent Gas Transporter.

7.0 Water

The local clean water distribution network in the vicinity of the development site is owned and operated by United Utilities within the terms of its statutory license issued by Ofwat. The clean water network in the immediate vicinity of the site comprises of distribution water mains and associated apparatus. Please refer to the infrastructure record appended to this study for further detail.

The following diagram is an extract from United Utilities statutory records and details the current indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no unknown services which are not recorded.

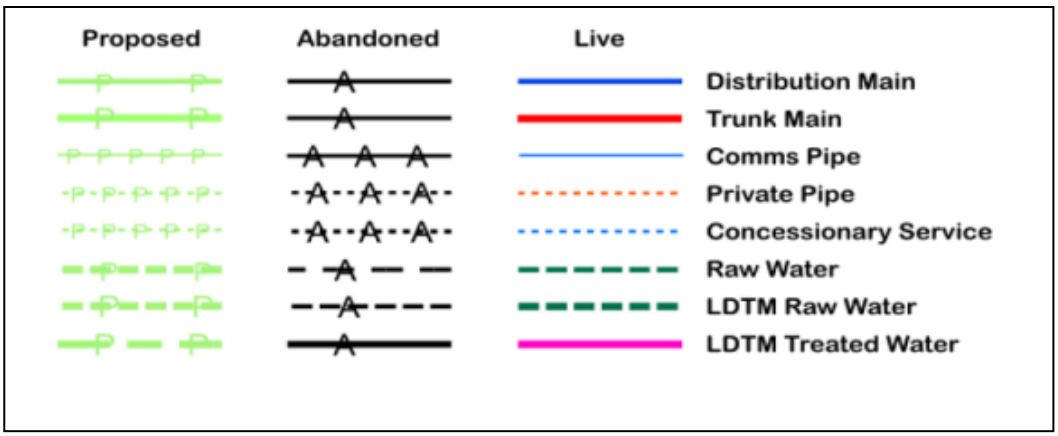
Please note on rare occasions 'out of area' water supply authorities have water mains crossing other water supply authority areas. This is typically trunk or raw water mains transporting water extracted from reservoirs or water courses between areas. Unless stated otherwise, UCML's utility study covers the statutory water network operator for this region as identified within the introduction only.



Figure 7.1 – Existing water infrastructure plan near Audrey Street site



Figure 7.2 – Existing water infrastructure plan near Benton Street site



Disconnections:

Audrey Street

United Utilities infrastructure records do not typically indicate the presence of individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based upon desktop review, as the site is clear open space, no disconnection works are currently anticipated.

Benton Street

United Utilities infrastructure records do not typically indicate the presence of individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based upon desktop review, as the site clear open space, no disconnection works are currently anticipated.

Diversions:

Audrey Street

United Utilities infrastructure records do not indicate the presence of any infrastructure directly within the site boundary. The records do indicate the presence of an existing 3" Cast Iron main within the carriageway of Audrey Street and a 4" PV main within the opposite site footpath of Lily Lane. However, as these infrastructure appear to be at a sufficient distance to not be affected by the proposed works. Therefore, water diversion works are not anticipated.

Benton Street

United Utilities infrastructure records indicate the presence of an 80mm ductile iron main within the footpath and carriageway of Benton Street, which may be affected by the proposed site entrance. However, provided the line and level of the existing footpath near the entrance is maintained above the main, water diversion works are not currently anticipated. It is recommended that further site investigation should take place to establish the position of the main to confirm the above.

Connections:

It is envisaged there may be sufficient capacity in the existing infrastructure to supply the proposed development. However, a pre-development enquiry is recommended to confirm the availability of pressure within the existing network.

From April 2018, off-site network reinforcement costs have been funded through the collection of infrastructure charges applicable to each new connection. However, if extensive reinforcement works are required a developer may need to provide further contribution to the costs. Any additional contribution required will be advised by United Utilities following formal application for a mains requisition offer and the completion of any required network modelling works. Infrastructure charges are calculated based on the estimated costs of all off-site reinforcement works required to facilitate connections to new developments within United Utilities' supply area over a rolling 5 year period, based on the total anticipated number of new connections within that supply area. Please note, the infrastructure charge costs can vary year on year and therefore long term developments may be affected by the possible variance in infrastructure charges. Each water company has a differing infrastructure charge based on their individual network and anticipated levels of reinforcement works, and the cost of the infrastructure charges for clean and waste water are likely to differ.

It is to be confirmed whether there are records of any chargeable water or sewerage connections on-site within the last 5 years, which will determine whether infrastructure credits will be available for this scheme.

A Phase 2 ground investigation and risk assessment will be required to precisely identify contaminated and uncontaminated ground within the site. The level of contamination on-site will determine the material used for the water mains and service pipes on-site. If the level of contamination is low, standard polyethylene pipe could be used. However, if the level of contamination on-site is determined to be high, the site will require the use of barrier pipe laid in a sterile trench. Should the use of barrier pipe be required, this will increase the cost of connections significantly. Based upon desktop review, as this is generally a greenfield site,

it has been anticipated that the levels of contamination may be low and so standard polyethylene pipe could be used.

From April 2020, water companies will be transitioning to new charging rules which stipulate that any applicable income offset will be paid against infrastructure charges instead of the mains requisition cost. Therefore, based on these new charging rules, the full construction cost for the mains requisition will be payable by the developer upfront, where previously the applicable income offset was payable to the developer by the relevant water company following completion of the connection.

As the income offset is paid by United Utilities against infrastructure charges paid by the developer, it will now be applicable to all connections (including any made to existing water mains) where infrastructure charges are payable. The income offset payment is set by each water company at a set charge per plot, and for connections in United Utilities area for 2020-2021 it has been set at £751.00. If no infrastructure charges are payable for a connection, no income offset payment will be available. For plots that qualify for the applicable Infrastructure Charge Discount Scheme which is discussed below, the full income offset amount will still apply per plot at the current set rate, which may result in a positive payment to the developer.

As previously mentioned, United Utilities has an Infrastructure Charges Discount Scheme intended to incentivise sustainable development within their region and encourage developers to construct properties which promote the efficient use of water. In compliance with Part G of the Building Regulations 2010, all new homes built in the UK must be built to a rating of 125 litres of water usage per person, per day (PPPD). United Utilities has introduced a reduced infrastructure charge of £30.00 per property for clean water where it can be demonstrated that properties have been built to a usage rating of 110 litres of water PPPD or less.

In order to qualify for the reduced charge, a completed ‘Water Efficiency Calculator’ form must be submitted with an application for connections, with one completed calculation required for each property type on a development. This is to demonstrate the fixtures and

fittings planned to be installed comply with the water usage criteria (please see http://sites.wrcplc.co.uk/partgcalculator/ for further information). Along with the efficiency calculator results, United Utilities will require a signed disclaimer notice from the Developer. This disclaimer notice is for Developers to agree to United Utilities conducting an audit of built properties to confirm they comply with the requirements of the discount scheme and regulations, and confirms the Developer accepts liability for the full infrastructure charge if the information provided is found to be inaccurate following an audit.

For sewerage, a reduced infrastructure charge of £28.00 per property will be payable for all properties built with no surface water connection to the public sewer. To qualify for the reduced charge for sewerage, a drainage layout plan that confirms the drainage connectivity of the proposed properties must be submitted with an application for water services.

Audrey Street

The standard infrastructure charges applicable to developments within United Utilities' region for the current scheme of charges (2020-2021) are £302.00 per plot for clean water and £279.00 per plot for sewerage, both of which are applied to the water connection costs. Based on these infrastructure charges, allow a **budget cost of £10,500.00** for connections to 12 dwellings.

Benton Street

The standard infrastructure charges applicable to developments within United Utilities' region for the current scheme of charges (2020-2021) are £302.00 per plot for clean water and £279.00 per plot for sewerage, both of which are applied to the water connection costs. Based on these infrastructure charges, allow a **budget cost of £9,000.00** for mains and connections to 6 dwellings.

8.0 Communications

8.1 Openreach

Openreach own and operate telecommunications apparatus in the vicinity of the development site within the terms of its statutory license issued by Ofcom. The Openreach network in the immediate vicinity of the site comprises of underground cables, overhead lines and associated apparatus. Please refer to the infrastructure record appended to this study for further detail.

The following diagram is an extract from Openreach records and details the current indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no unknown services which are not recorded.



Figure 8.1.1 – Existing Openreach infrastructure near Audrey Street site

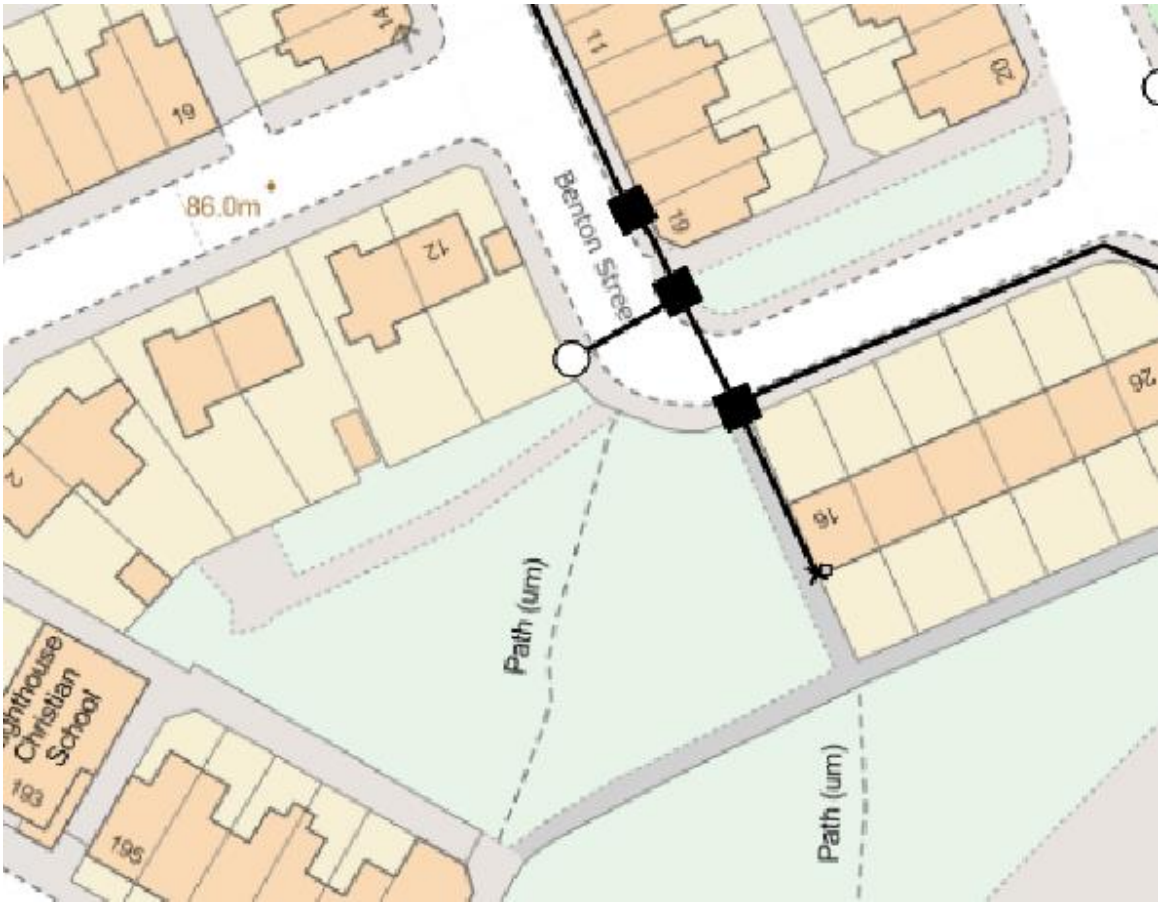
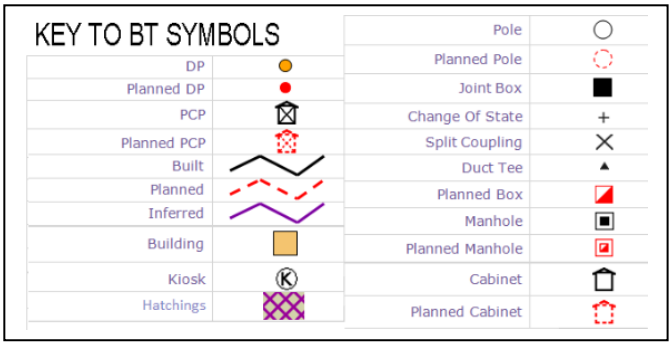


Figure 8.1.2 – Existing Openreach infrastructure near Benton Street site



Disconnections:

Audrey Street

Openreach infrastructure records do not typically indicate the presence of individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based upon desktop review, as the site is generally clear open space, no disconnection works are currently anticipated.

Benton Street

Openreach infrastructure records do not typically indicate the presence of individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based upon desktop review, as the site is generally clear open space, no disconnection works are currently anticipated.

Diversions:

Audrey Street

Openreach infrastructure records indicate the presence of a distribution pole located on the site-side footpath on Audrey Street. Given the site layout, it is assumed that the pole may be retained in its current position. However, and overhead service cable from the pole that oversails the site assumed to service a property to the rear of the site will need to be diverted. It is assumed the current overhead line can be disconnected and the property resupplied via an existing distribution pole within Brooklehurst Street. Allow a **budget cost of £4,000.00** for these works, plus allow an additional £800.00 for an upfront Openreach survey fee.

Benton Street

Openreach infrastructure records indicate the presence of a distribution pole located within the site side footpath of Benton Street. Given the location of this pole to the rear of the footpath upon the corner of the site in relation to proposed new site access, it is assumed the pole may be retained in situ and no diversionary works are currently anticipated.

Openreach infrastructure records indicate the presence of underground apparatus and a service chamber within the southern footpath of Benton Street to the east of the site boundary. Given the proposed site layout, it is assumed that the proposed site access will tie into the existing footpath in the region whereby the chamber is located. This being the case it is assumed that the chamber and underground apparatus may be unaffected and that no diversionary works are currently anticipated. It is suggested that further onsite investigation and consultation is undertaken with Openreach to confirm the above.

The above mentioned diversionary costs are based on the underground infrastructure being copper, as opposed to fibre optic cables. UCML recommend that Openreach is formally contacted in the early stages of the scheme in order for Openreach to provide a survey to determine the extent of any potential diversionary works and the associated costs. Openreach infrastructure records do not currently differentiate between copper and fibre optic cables, and as such the type of infrastructure within the ground cannot be determined by reviewing their statutory infrastructure records. Please note, the presence of fibre optic cables could significantly increase anticipated diversion costs.

Connections:

Audrey Street

A reasonable assumption can be made that a connection can be taken from the existing infrastructure located on Audrey Street. As the development consists of under 20 dwellings, the Client will be required to contribute to the cost of Fibre to the Premise (FTTP) connections. For a site of this size, the Client contribution will be **£7,056.00** (£588.00 per dwelling) based on Openreach's current published rate card for 12 dwellings.

Benton Street

A reasonable assumption can be made that a connection can be taken from the existing infrastructure located on Benton Street. As the development consists of under 20 dwellings, the Client will be required to contribute to the cost of Fibre to the Premise (FTTP) connections. For a site of this size, the Client contribution will be **£9,600.00** (£1,600.00 per dwelling) based on Openreach's current published rate card for 6 dwellings.

8.2 Virgin Media

Virgin Media has confirmed that they own and operate telecommunications apparatus in the vicinity of the development site. The Virgin Media network in the immediate vicinity of the site comprises of underground cables and associated apparatus.

The following diagrams are extracts from Virgin Media records and details the current indicated position of existing infrastructure, however it may be prudent to undertake a below ground survey to ensure there are no unknown services which are not recorded. Please refer to the infrastructure record appended to this study for further detail.

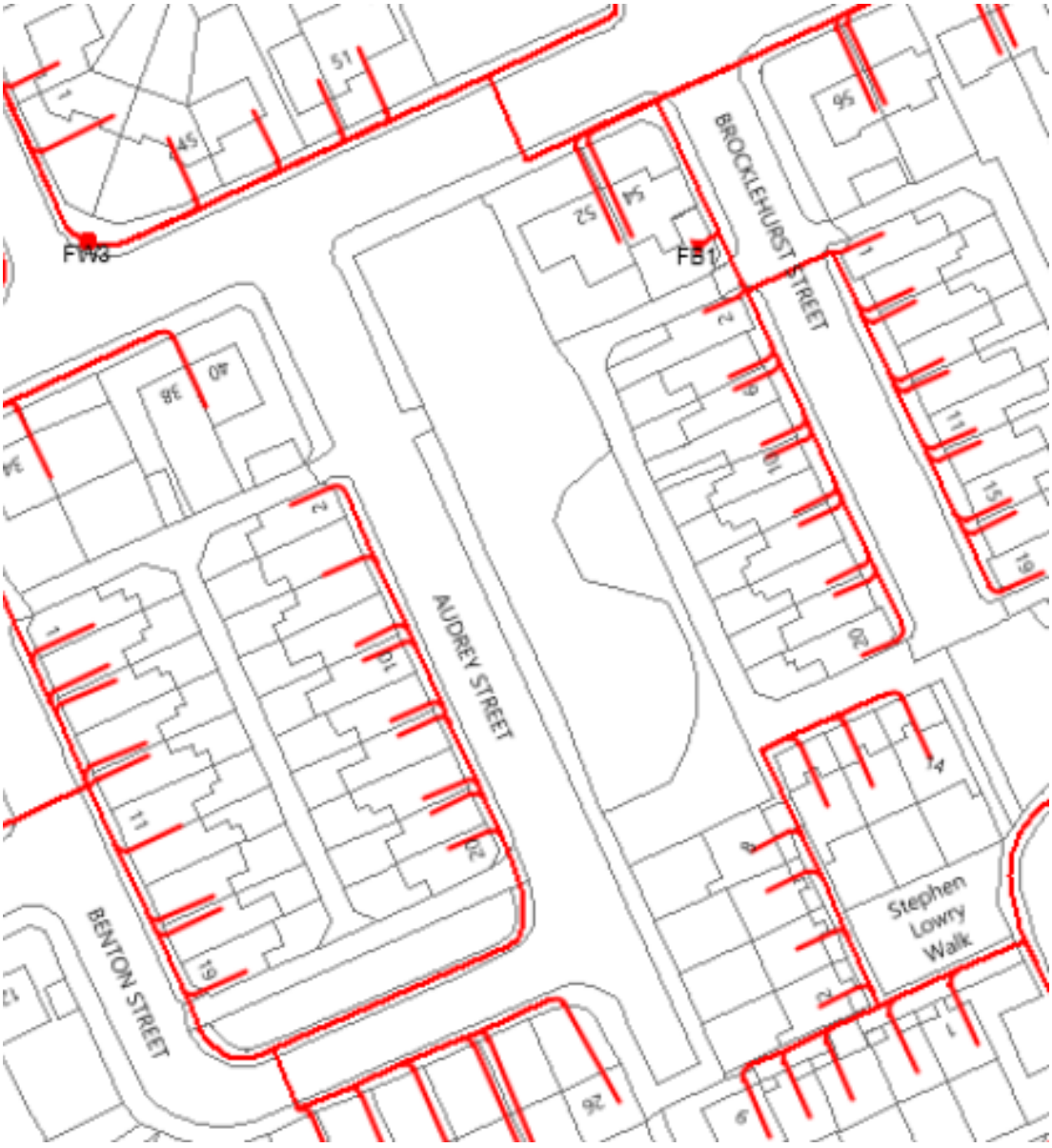
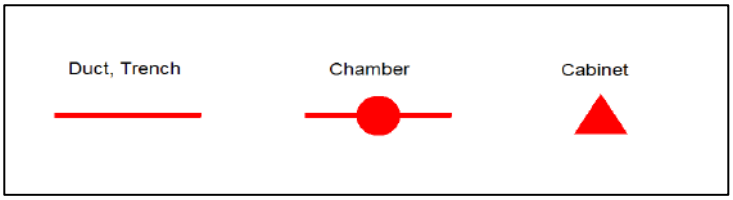


Figure 8.2.1 – Existing Virgin Media Infrastructure near Audrey Street site



Figure 8.3.2 – Existing Virgin Media Infrastructure near Benton Street site



Disconnections:

Audrey Street

Virgin Media infrastructure records do not always indicate the presence of all individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based on desktop review, as the site is generally clear open space, no disconnection works are currently anticipated.

Benton Street

Virgin Media infrastructure records do not always indicate the presence of all individual service connections. However, the presence of service connections should always be anticipated until proven otherwise. Based on desktop review, as the site is generally clear open space, no disconnection works are currently anticipated.

Diversions:

Audrey Street

The Virgin Media infrastructure records do not indicate the presence of any infrastructure directly within the site boundary. There is existing infrastructure within the opposite side footpath of Audrey Street, but this is unlikely to be affected by the development. Therefore, diversion works are not currently anticipated.

Benton Street

The Virgin Media infrastructure records do not indicate the presence of any infrastructure directly within the site boundary. There is existing infrastructure on Benton Street, but this unlikely to be affected by the development. Therefore, diversion works are not currently anticipated.

Connections:

Audrey Street

A reasonable assumption can be made that a connection can be taken from the existing infrastructure located on Audrey Street.

Benton Street

A reasonable assumption can be made that a connection can be taken from the existing infrastructure located on Benton Street.

9.0 Conclusion

Based on the information currently available for review, the existing utility infrastructure within the vicinity of the development site appears to be capable of supporting the additional demand required to provide connections for the proposed sites of 12 and 6 residential dwellings. There are existing electricity, gas, water and telecoms services immediately adjoining the development site, which should have sufficient capacity to serve the development.

It is recommended that formal applications are made to the relevant statutory network operators to confirm the actual availability of capacity within the existing networks, and to provide firm points of connection. Formal connection offers will only be valid for a limited period of time, and no capacity can be reserved until acceptance and payment of a formal quotation has been made.

The connection costs provided in the main body of the report are based on individual utility connection proposals being accepted. It may be possible to undertake the connections works as part of a multi utility offering which can combine the installation of electricity, gas, water and telecoms under a single works contract. For some sites, the appointment of a multi utility provider may be more cost-effective option for the connections.

This desktop utility study covers statutory infrastructures surrounding the site. All information has been taken from the records of the statutory authorities and although this information is the most accurate available it may be prudent to undertake trial excavations in strategic locations to definitively determine the depth and location of infrastructure. Utility Providers Networks are constantly under review and subject to applications from other parties and the capacities and loads currently available may be subject to change.

The costs provided are advised as a predicted worst-case scenario of the foreseeable works. However, as these are only budget figures the actual costs entailed will not be determined until detailed proposals are received from the owners of the infrastructure.

Produced;
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Utilities Connections Management Ltd.

Checked by;
Ryan Elliman BEng (Hons) MIET – Technical Engineer
Utilities Connections Management Ltd.

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No individual is personally liable in connection with the preparation of this Desktop Utility Study. By receiving this study and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

Completeness – Due care and effort is made to locate all Utility companies in a search area, however, due to the existence of redundant utilities, emergence of new companies and the combining of, takeover or sale of existing companies, UCML cannot guarantee to provide details on all utilities in a given area.

There may be a time delay between the physical installation, repair or upgrading of utilities networks and the subsequent recording of the works on utility infrastructure records. Therefore, it should be noted there may be utilities present that are not shown on the records.

10.0 Further UCML Services

Utility Study – Level 2

UCML's Level 2 Utility Study provides a detailed overview of the electricity, gas clean water, and communications statutory infrastructure in the vicinity of development site, ideal for;

- Due diligence prior to land purchase to aid negotiation.
- Risk assessment prior to tender.
- Assistance with site layout design to minimize impact on existing utilities, taking into account statutory utility infrastructure and legal requirements.

The services provided within UCML's Level 2 Utility Study includes;

- Application for existing statutory infrastructure records.
- Technical review of all statutory authority infrastructure affected by proposed on-site and off-site works.
- Application for firm point of connection for electricity, gas and water supplies to the site to determine location of proposed connection and firm cost for required electricity network reinforcement works.
- Provision of budget figures for disconnection, diversion and connection works derived from firm non-contestable charges including required reinforcement works where applicable.
- Cost risk and analysis.
- Timescales for provision and execution of quotations for the required works, highlighting risks to project programme.
- Highlight abnormal legal requirements including wayleaves and easements and explanation of requirements to mitigate risk.

Technical Procurement

UCML's technical procurement service deals with the obtaining of capacity checks as well as disconnection, diversion, connection, service alteration and temporary supply quotations. These include electricity, gas, clean water and telecom supplies for all forms of residential, commercial and industrial developments. Use of our technical procurement services can result in;

- Considerable cost savings.
- Reduced overheads.
- Reduced timescales.
- Reduced delays.
- Reduced time expenditure.
- Removal of provisional sums from tender submissions.

The services provided by UCML's Technical Procurement service includes;

- Review of proposed meter positions to ensure technical and regulatory viability.
- Application for:
  - Existing statutory infrastructure records.
  - Disconnection quotations including meter removals where required.
  - Statutory infrastructure diversion quotations.
  - Temporary building supplies.
  - New connections quotations.
  - Legal searches including easement, wayleaves and Land Registry title searches.
- Technical review of all quotations received including technical and commercial comparison across all competing quotes.
- Submission of successful quotations for acceptance.
- Single point of contact for project administration, and an assigned Technical Engineer to each scheme.

Project Management

UCML's Project Management service deals with the project management of disconnections, diversions, connections, service alterations, capacity checks and temporary supply installations for all forms of residential, commercial and industrial developments. Our Project Management team can work in conjunction with our Technical Procurement service or as a stand-alone offering to manage the delivery of all electricity, gas, clean water and telecom works. Use of our Project Management service can result in:

- Improved program planning accuracy.
- Reduced time expenditure.
- Reduced abortive visit charges.
- Reduced delivery timescales and as a result less delays.

The services provided by UCML's Project Management service includes;

- Management of statutory connections from quotation acceptance to completion.
- Assigned Project Manager to the scheme to provide a single point of contact for site staff, and attend site meetings and design team meetings as required.
- Provision of a site pack including existing and proposed drawings and relevant technical information relating to dimensions and layout of metering enclosures.
- Management of legal agreements required including wayleaves, easements and adoption agreements.
- Programming of all mains, connections and metering works through proactive communication with site staff.

Appendices

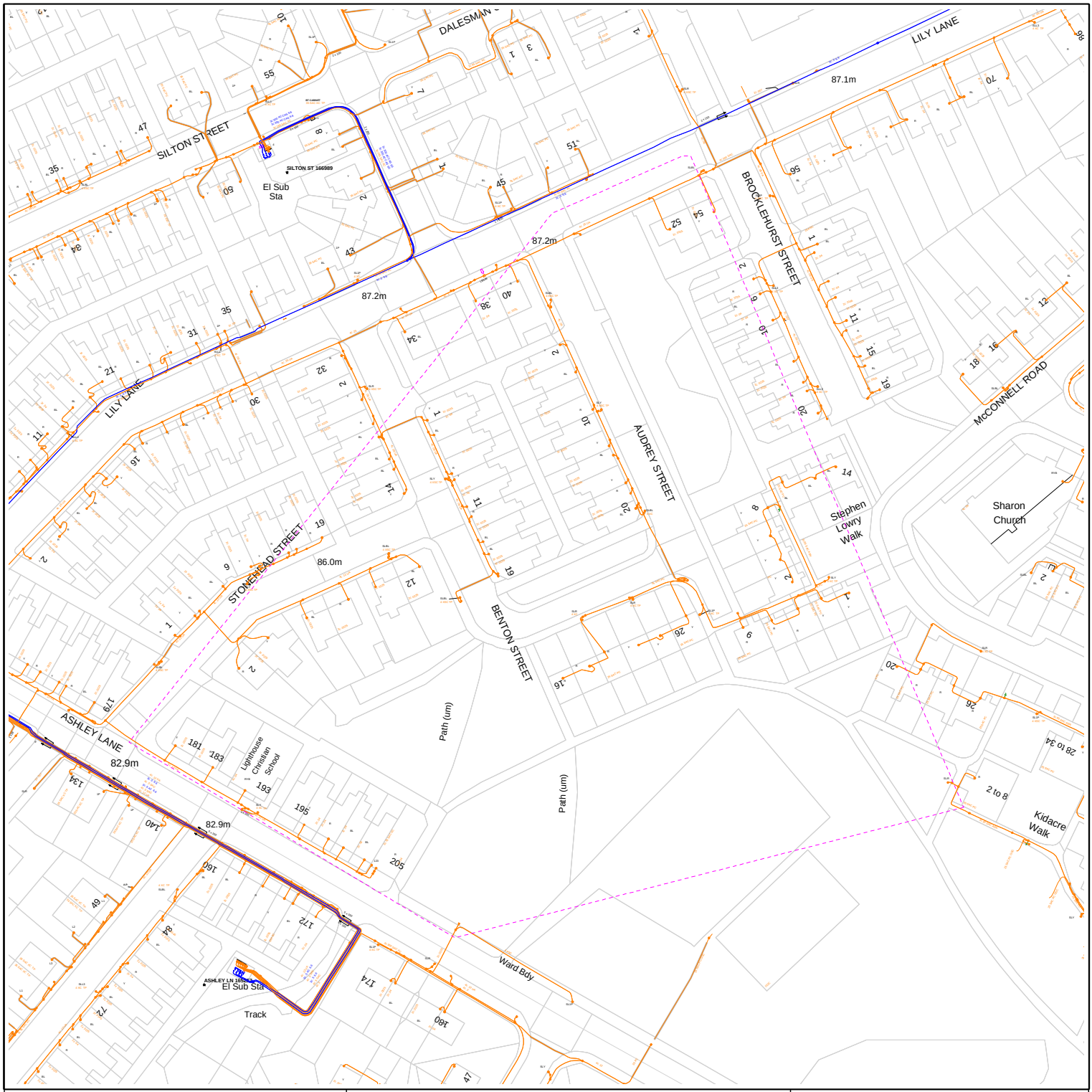
Appendix 1 – Electricity North West Infrastructure Plan

Appendix 2 – Cadent Gas Infrastructure Plan

Appendix 3 – United Utilities Infrastructure Plan

Appendix 4 – Openreach Infrastructure Plan

Appendix 5 – Virgin Media Infrastructure Plan



Requested by: Sean Williams

Company: Utilities Connection Management L

Date Requested: 08/01/2021

Job Reference: 20950963

Your Scheme/Reference: Audrey & Benton S

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

electricity north west

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

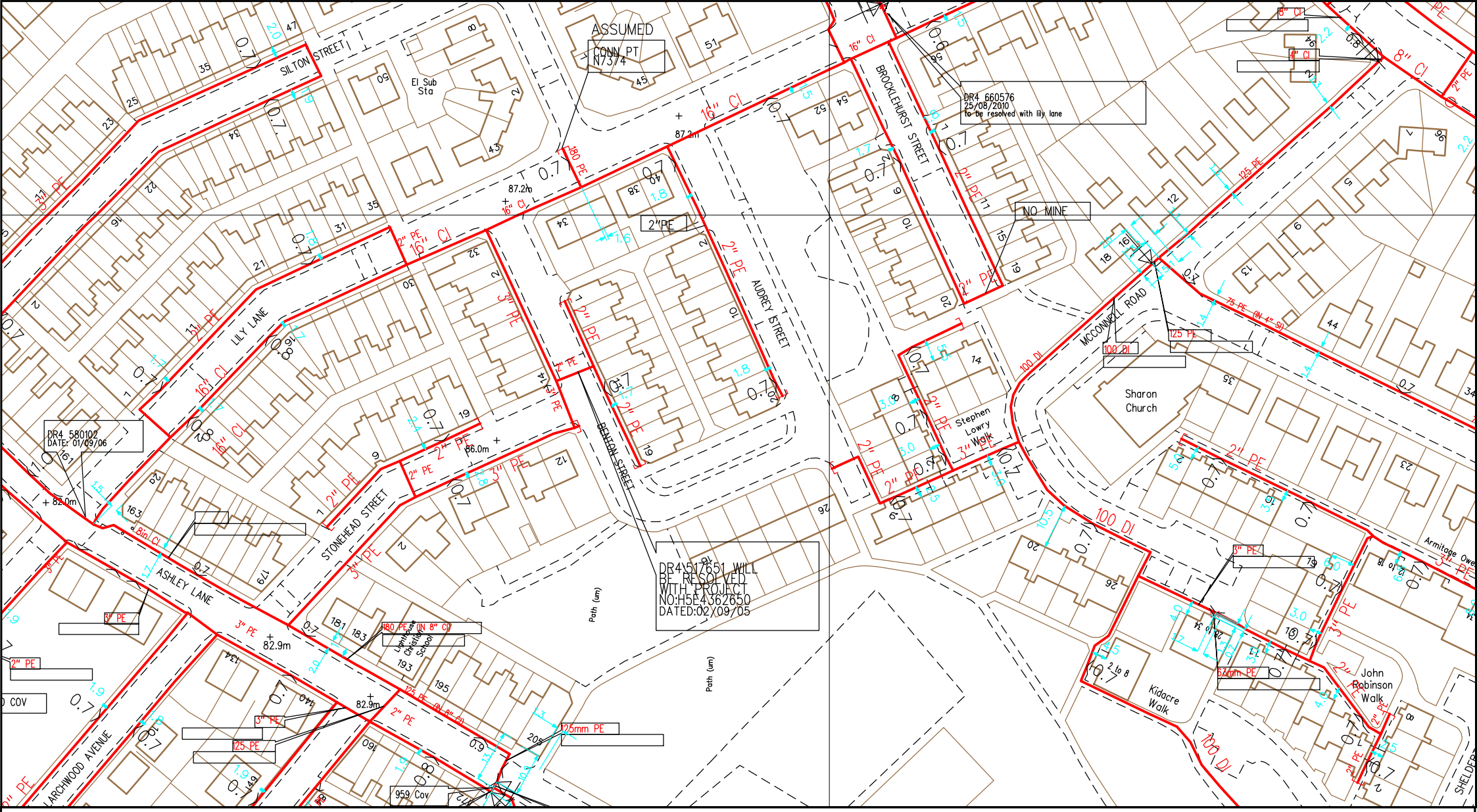
Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

Unless otherwise indicated the depth of Electricity North West Limited cables are in accordance with NJUG (450mm for Low Voltage & 600mm for 11kV cables) 33kV and 132kV cables are laid at depths as marked. The depth and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However third parties may have altered the level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated on the cable records. Other apparatus may also be present which is owned by a third party other than Electricity North West Limited.

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Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

Electricity North West Limited 304 Bridgewater Place, Birchwood Park, Warrington WA3 6XG. Registered in England and Wales. Registered No 02366949



SCALE: 1 : 1250	LP MAINS
USER ID: RyanElliman	MP MAINS
DATE: 07/01/2021	IP MAINS
EXTRACT DATE: 01/12/2020	LHP MAINS
MAP REF: SD8601	
CENTRE: 386977, 401452	

Some examples of Plant Items:

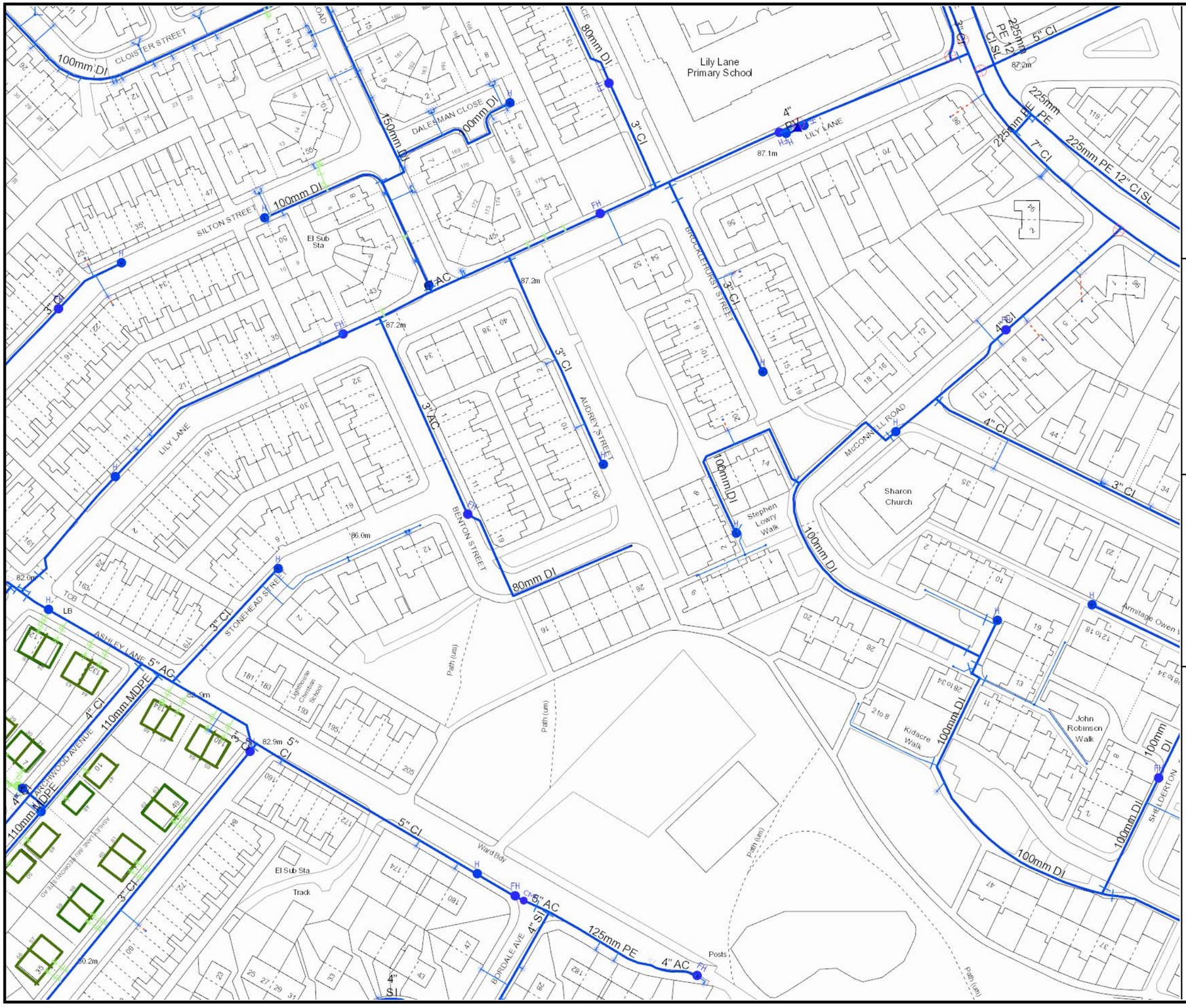
Valve | Depth of Cover | Syphon | Diameter Change | Material Change | Out of Standard Service

This plan shows those pipes owned by Cadent Gas Ltd in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Ltd or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAPS Viewer Version 5.8.0.1

Local Machine

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United Utilities

Water for the North West

WATER MAIN RECORDS

Address or Site Reference

2 AUDREY STREET,
MANCHESTER,
M9 4PF

Scale: 1:1250

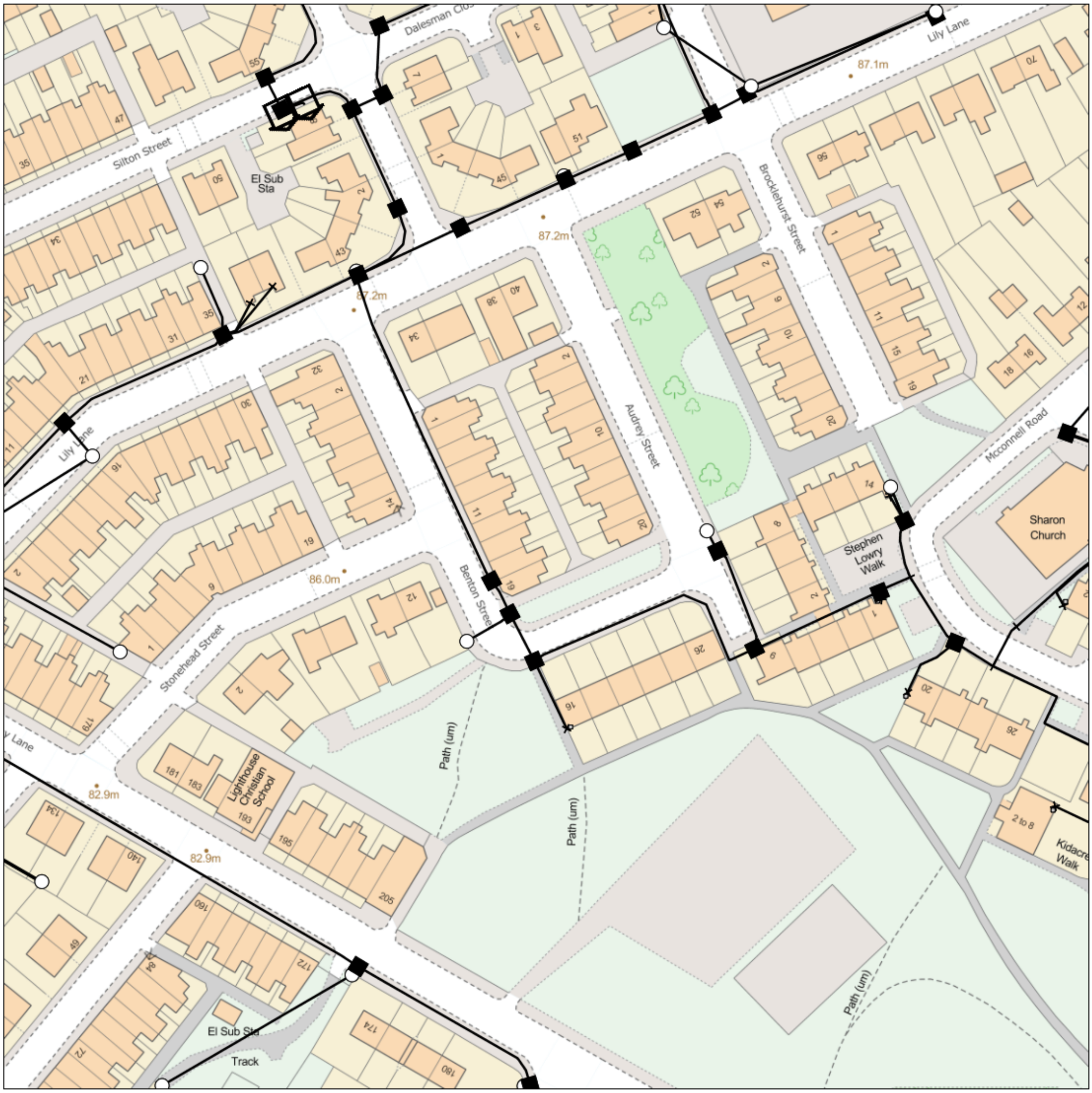
Date: 16/12/2020

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

openreach

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

Accidents happen

If you do damage any Openreach equipment please let us know by calling 0800 023 2023 (opt 1 + opt 1) and we can get it fixed ASAP

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KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings	
Split Coupling	×	Built	
Duct Tee	▲	Planned	
Building		Inferred	
Kiosk	K	Duct	

Other proposed plant is shown using dashed lines.
BT Symbols not listed above may be disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

	Pending Add	In Place	Pending Remove	Not In Use
Power Cable				
Power Duct				N/A

BT Ref : KJR01331L
Map Reference : (centre) SD8696301449
Easting/Northing : (centre) 386963,401449
Issued : 07/01/2021 13:33:26

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk



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Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. Further details can be found using the "Affected Postcodes.pdf", which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2020 Ordnance Survey 100019209.

Duct, Trench | Chamber | Cabinet

bharath.gowda@virginmedia.co.uk

VM.1180195