RED BANK OUTLINE APPLICATION

Utilities Statement

April 2023



Far East Consortium

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Utilities Statement

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EXECUTIVE SUMMARY

This Utilities Statement has been prepared by WSP on behalf of Far East Consortium (FEC) in support of an outline planning application with all matters reserved for a residential led development for up to 3,250 dwellings with supporting commercial, social and community infrastructure at Red Bank, Victoria North, Manchester.

A separate planning application is being submitted for further development at Dantzic Street (Plots NT02, NT03 and NT04), and is the subject a separate Utilities Statement.

This report presents a strategy for the supply of new utility services to the site and for dealing with any existing services that may be present within the site boundary.

Dialogue with the various utility operators is ongoing and therefore strategies will be further refined as design and construction progresses.

Records of existing utilities assets in the vicinity of the site have been reviewed to assess the impact of the proposed development on existing utility networks. Incumbent operators of utility infrastructure have been contacted to establish the requirements for providing new utility supplies to the site.

Details of private services within the site have not been made available for review and therefore there remains the possibility of encountering uncharted services during development. Further surveys and assessment should be carried out as appropriate prior to construction.

A package of strategic infrastructure works to enable development of the Northern Gateway (now referred to as 'Victoria North') Strategic Regeneration Area has been prepared by Manchester City Council (Housing Infrastructure Fund (HIF) works). This includes provision of utilities infrastructure for the Red Bank development. Reference to these works is made in the report where appropriate.

Electricity

Electricity North West (ENWL) operate the existing electricity network in the vicinity of the site. Typically, there are underground 6.6kV and low voltage (LV) networks within the streets throughout the development. There are also some 33kV cables within Red Bank and Roger Street.

LV cables are present within the boundary of some plots associated with the site's former and current uses. These cables are to be abandoned prior to development.

Some diversion or lowering of cables may be required to enable highway improvement works at Dantzic Street, Roger Street and Chase Street.

The existing ENWL networks do not have sufficient capacity to supply the proposed development. The total electrical demand for the site is assessed to be 14.1 MVA, assuming electric heating and some provision for electric vehicle (EV) charging.

As part of the wider planned regeneration of the Victoria North area, a strategy for the supply of power to the development plots has been developed by Manchester City Council via the HIF funded works. The consented HIF works include for 3 no. new 6.6kV ring mains throughout the development, fed from the ENWL Queens Park primary substation. 6.6kV connections will be taken from the ring mains into dedicated substations within each plot. A fourth ring main to serve the later phase plots is required from a new Victoria North substation, the location of which is yet to be confirmed.

Gas

Cadent Gas and GTC operate gas distribution infrastructure in the local area. Gas networks are typically Low Pressure (LP) and located within the streets throughout the development, although a Medium Pressure (MP) main is located in Dantzic Street.

The MP main in Dantzic Street is to be diverted as part of development proposals south of Dantzic Street (Plots NT02 to NT04). This includes abandonment of some LP mains in Dantzic Street.

A LP main in Hargreaves Street is to be abandoned.

LP mains in Red Bank, Dantzic Street and Roger Street may require diversion or lowering to facilitate highway improvement works, subject to detailed design proposals.

No new gas connections to the development plots are proposed.

Water

Potable water supply infrastructure in the area is operated by United Utilities (UU). Large diameter trunk mains are present in Red Bank. Distribution mains in the area are typically between 63mm and 250mm, located within the streets throughout the development.

Connections to existing buildings within development plots are to be abandoned prior to development. The main within Hargreaves Street is also to be abandoned.

Local diversion or lowering of mains may be required to enable highways improvement works at Dantzic Street and Chase Street. Furthermore, diversion of a main within Red Bank may be required to enable the construction of the junction with the new neighbourhood road.

The total water demand for the site, including potable and fire water use, is estimated to be 75l/s. Separate potable and fire main connections are to be provided to each plot from adjacent distribution mains.

The consented HIF works propose upgraded water distribution infrastructure to serve a number of the development plots, including new mains within the new neighbourhood road along the Plateau; new main between the new neighbourhood road and Dantzic Street; and upsizing of existing mains in Roger Street and Chase Street.

Sewerage

United Utilities (UU) operate the public sewerage system in the vicinity of the site. Existing sewers are combined with no dedicated foul and surface water sewers in the area.

A combined sewer passes through plots RB03, RB04 and RB16 to Dantzic Street. This may require diversion of the sewer at two locations to enable development of the plots. Alternatively, the sewer could remain in place, subject to agreement with UU.

A CSO outfall pipe is present in Warford Street within Plot RB16. This may either be diverted or remain in place, subject to agreement with UU.

UU combined sewers in Hargreaves Street and Crabbe Street are to be abandoned.

The total peak foul water discharge for the development has been calculated at 151 l/s. Connections to the UU sewerage network will be made a number of locations convenient to the development plots.

The consented HIF works include new foul sewers to serve some of the development plots, specifically a new foul sewer south of plots RB02 to RB05A/B/C, discharging to the UU combined sewer south of plot RB03; and a new foul sewer connecting plots RB01, RB12B and RB06 to the UU combined sewer in Chase Street.

Data & Telecommunications

Openreach operate data and telecommunications infrastructure in the area comprising above and below ground networks. There are potentially live existing connections within Plots RB10, RB16 and RB17 which are to be abandoned. The networks in Hargreaves Street and Crabb Street are also to be abandoned.

Openreach networks at Red Bank, Chase Street and Dantzic Street may require local diversion or lowering to facilitate highway improvement works, including construction of the junction of the new neighbourhood road with Red Bank.

Virgin Media infrastructure in the area is sparse. A network is present at Red Bank. Diversion or local lowering of the VM network at Red Bank may be required to facilitate the junction with the new neighbourhood road.

A Vodafone cable is present in Red Bank. Diversion of Vodafone cables is not required.

New Openreach connections to each plot are proposed. Openreach provide Fibre-to-the-premises (FTTP) connections for free to all residential developments of 20 dwellings or more.

Virgin Media may choose to extend their network to serve the development should they decide it is commercially viable.

The consented HIF works include construction of a network of ducts throughout the development for the purposes of new Openreach and Virgin Media networks accessing the development plots.

1

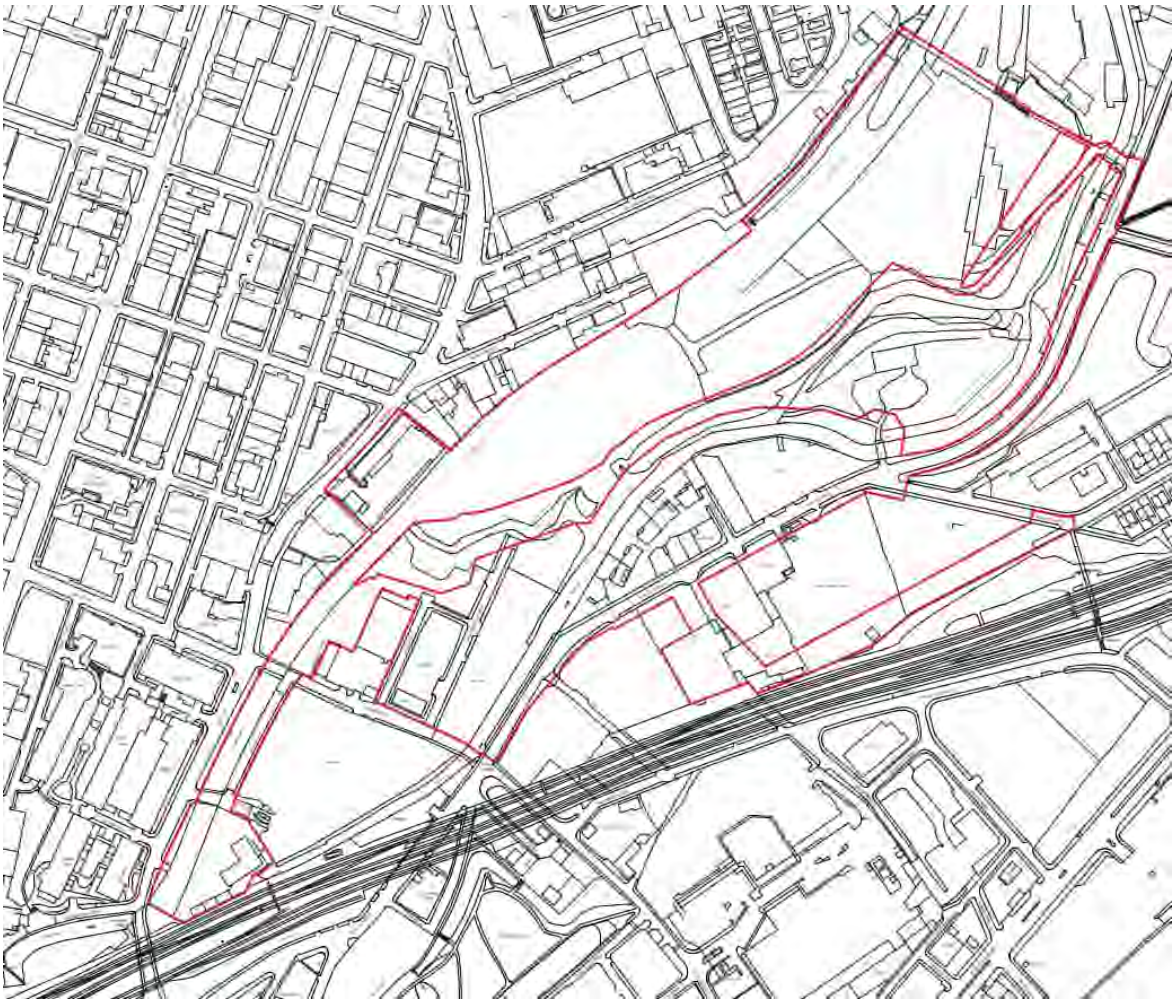
INTRODUCTION

1. INTRODUCTION

1.1. APPROACH

1.1.1. WSP has been commissioned by FEC to conduct an assessment of the existing utilities infrastructure at Red Bank, Victoria North, Manchester. This resulting Utilities Statement has been prepared in support of an outline planning application with all matters reserved for a residential led development for up to 3,250 dwellings with supporting commercial, social and community infrastructure.

Figure 1-1 - Outline Planning Application Boundary



1.1.2. This report is intended to provide a summary of the strategies for dealing with existing utilities (specifically electricity, gas, water, sewerage, data and telecommunications) within the site boundary, including requirements for relocation or abandonment; and also for the provision on new utility supplies including upgrades of existing utility networks. Surface water drainage is excluded from the scope of this assessment. Separate studies have been undertaken to assess the requirements for disposal of surface water from the site.

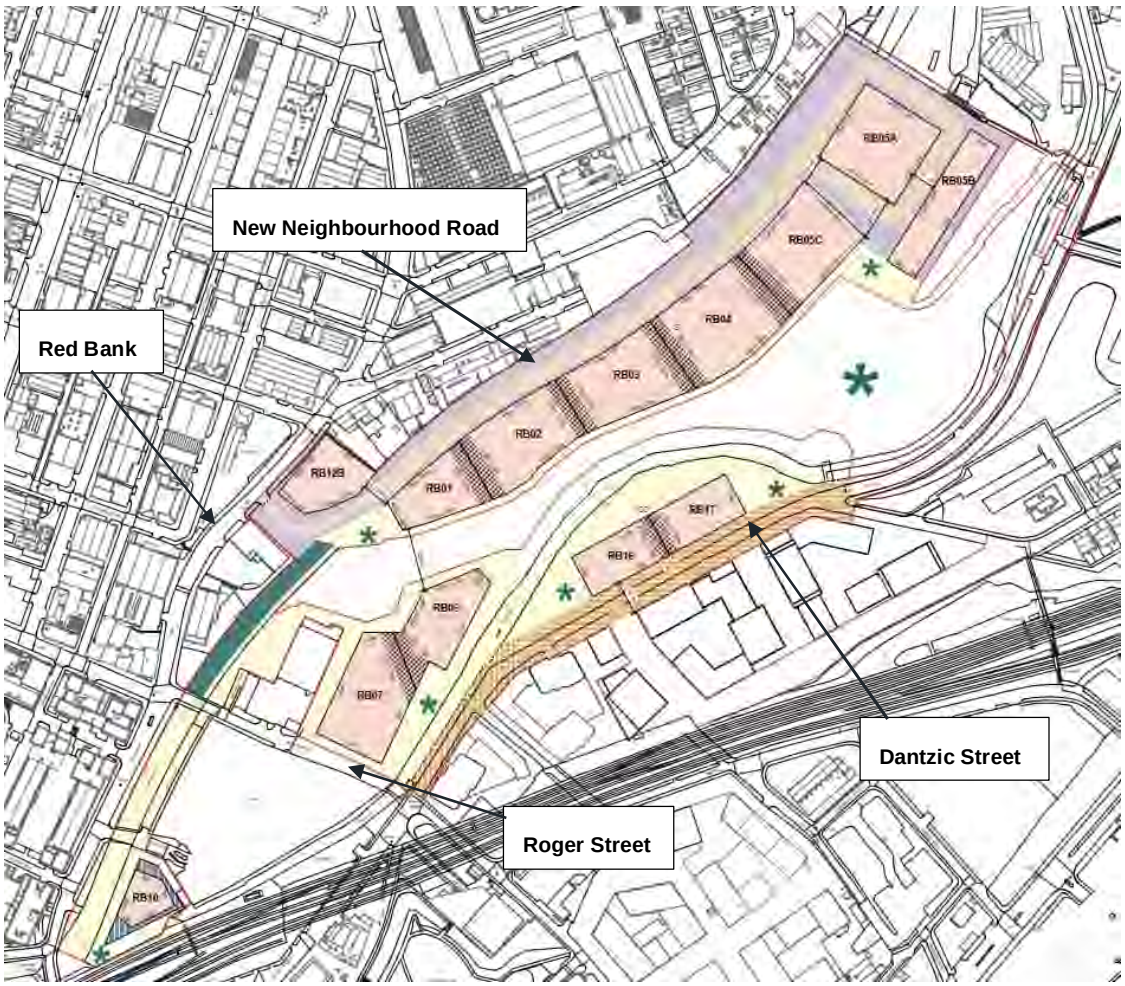
1.1.3. The report provides estimates of the likely utilities demands based on high level information regarding the nature of development, anticipated number of dwellings, population and/or floor area. Further, more detailed assessment should be carried out as design progresses.

1.1.4. The assessment is based on information received from utilities providers. The location of existing utilities in the vicinity of the site is based on records of each provider's assets and has been supplemented in some areas with Ground Penetrating Radar (GPR) survey information to identify accurate line and level where possible. There remains potential for further uncharted services, including privately owned apparatus, to be located in and around the site which may impact on development. Assessment of these is excluded from this report.

1.2. DEVELOPMENT PROPOSALS

1.2.1. The development seeks to deliver up to 3,250 no. dwellings and up to 6,300m^2 of non-residential (use classes E, F and Sui Generis) including health centre, primary school, and new neighbourhood road within thirteen development plots in the Red Bank area of Manchester, M4 4NL. The development site is located within the Northern Gateway (now referred to as 'Victoria North') Strategic Regeneration Framework area. The development is proposed via submission of an outline planning application with all matters of detail reserved for future approval. A Parameter Plan showing the layout and extent of the proposed development plots is provided in Appendix A.

Figure 1-2 – Outline Planning Application Development Plots



1.2.2. The existing site is previously developed ('brownfield') and comprises a mix of vacant land having been cleared and structures demolished, and existing industrial units off Dantzic Street and Roger Street. The site covers an area of approximately 10.29 ha and is bordered to the north by existing commercial and industrial uses. To the north-east is the HMG Paint and P&P complex boundary. To the east, the Site is bound by Collyhurst Road and an area of open greenspace. To the south, it is bound in part by Dantzic Street and the elevated railway line into Victoria Station, and the emerging Victoria Riverside development. To the south-west, the Site is bound by an area of hardstanding currently in-use as a car park and the Red Bank viaduct. To the west, it is bound by Red Bank (existing highway), along which is a residential neighbourhood consisting of a number of mid-rise buildings. The River Irk passes through the site following the alignment of Dantzic Street.

1.3. HOUSING INFRASTRUCTURE FUND WORKS

1.3.1. A package of strategic infrastructure works (Housing Infrastructure Fund (HIF) works) to enable development of the Victoria North area has been prepared by Manchester City Council (MCC) and obtained planning consent. This includes provision of utilities infrastructure for the Red Bank Neighbourhood area and the New Town development plots on Dantzic Street, including new high voltage electricity cables, water mains, foul sewers and telecommunications ducting.

1.3.2. Planning permission of for the HIF works has been granted (planning ref: 133143/VO/2022).

1.3.3. Details of the specific HIF works relevant to the proposed development are referenced in this report.

1.4. SCOPE OF WORKS

1.4.1. In preparation of this assessment, the following activities have been carried out:

- Baseline assessment of the existing utilities infrastructure within the vicinity of the site, identifying the location of existing apparatus and constraints to development;
- Identify the need for diversion of existing infrastructure to facilitate development.
- Estimate the likely utility demands of the development based on the proposed land use;
- Propose a strategy for connection of the proposed development to utility networks, identify points of connection and comment on the need for off-site network reinforcement;
- Identify principal on-site utilities infrastructure requirements.

2

ELECTRICITY

2. ELECTRICITY

2.1. UTILITY PROVIDERS

2.1.1. Electricity infrastructure in the area is operated by Electricity North West (ENWL). Contact details are provided below:

Electricity North West Ltd.
Hartington Road
Preston
Lancashire
PR1 8AF

2.2. EXISTING INFRASTRUCTURE

Red Bank (South)

2.2.1. ENWL records show 33kV, 6 – 6.6kV, and Low Voltage (LV) cables in Red Bank adjacent to Plot RB10. LV cables are present within Plot RB10, serving existing buildings.

2.2.2. The 33kV cable serves a substation (Vallea Court No 1) on the west side of Red Bank opposite Plot RB10. The cable heads northwards towards Roger Street.

Red Bank (North) and New Neighbourhood Road

2.2.3. ENWL records indicate 6 – 6.6kV and LV cables in Red Bank adjacent to Plot RB12B. LV cables are shown within Plot RB12B, serving existing buildings.

2.2.4. There are no ENWL assets shown within the area of the new neighbourhood road and Plots RB01 to RB05A/B/C.

Roger Street / Hargreaves Street / Chase Street

2.2.5. Roger Street appears to be a primary corridor for ENWL assets in the area. ENWL records show multiple 33kV, 6 – 6.6kV, and LV cables in Roger Street adjacent to Plot RB07.

2.2.6. LV cables are present within Hargreaves Street which is located within Plots RB06 and RB07.

2.2.7. LV cables are also present within Chase Street adjacent to Plot RB07. A substation(Chase Street) is located on the west side of Chase Street, opposite Plot RB07.

Dantzic Street

2.2.8. ENWL records indicate 6 – 6.6kV and LV cables in Dantzic Street, adjacent to Plot RB16 and RB17.

2.2.9. LV cables are shown entering Plots RB16 and RB17 from Dantzic Street, serving existing buildings and facilities.

2.3. DIVERSIONS AND ABANDONMENTS

2.3.1. Existing LV cables within development Plots are to be abandoned prior to development.

2.3.2. No diversions of existing ENWL assets are considered to be required for development of the plots. Some diversions or lowering of cables may be required for works to existing highways at Dantzic

Street, Roger Street and Chase Street. This will be subject to detailed design proposals at the appropriate stage.

2.4. NEW SUPPLIES

2.4.1. New electrical connections are required to serve each plot. An assessment of electrical demand has been carried out to inform design of the required connections. A summary of the demand assessment is provided in Table 2 below.

Table 1 - Peak Electricity Demand

	Residential		Non-Residential		EV Charging		Total Load (kVA)
Plot	**Dwellings**	**Load (kVA)**	**GIA (m^2)**	**Load (kVA)**	**Spaces**	**Load (kVA)**	
All	3,250	8,125	11,275	3,383	350	2,625	**14,133**

2.4.3. The loads in Table 2 are based on electric heating to all residential dwellings and commercial property, with an allowance for electric vehicle charging spaces as shown.

HIF Works

2.4.4. The HIF works propose the installation of new 6.6kV ring mains to serve the development plots as follows. Refer to Arup drawing VNIF-ARP-00-YYY-DR-CU-1002 in Appendix C.

- Ring 1 (5.28MVA) – NT02, NT03, NT04 (refer to separate planning application);
- Ring 2 (4.75MVA) – RB06, RB07, RB16, RB17;
- Ring 3 (5.01MVA) – RB03, RB04, RB05A, RB05B, RB05C;
- Ring 4 (4.18MVA) – RB10, RB12B (ducting only);

2.4.5. Ring mains 1, 2 and 3 are to be fed from the Queens Park primary substation, with cables laid along Rochdale Road and Dalton Street, entering the site at Dantzic Street.

2.4.6. Queens Park substation does not have capacity for Ring Main 4, and thus a new Victoria North substation is proposed, the location of which is to be confirmed. Ring Main 4 and hence, development plots RB10 and RB12B will be fed from the proposed Victoria North substation.

Plot Connections

2.4.7. Individual HV connections will be taken from the ring mains as described above into dedicated substations within each plot.

3

GAS

3. GAS

3.1. UTILITY PROVIDERS

3.1.1. Gas infrastructure in the area is currently operated by Cadent Gas and GTC.

3.1.2. Contact details are provided below:

Cadent Gas Ltd
Business Services
PO Box 7084
Wolverhampton
WV1 9AW

GTC
Synergy House
Woolpit Business Park
Woolpit
Bury St Edmunds
IP30 9UP

3.2. EXISTING INFRASTRUCTURE - CADENT

Red Bank (South)

3.2.1. Cadent Gas records show a 125mm PE Low Pressure (LP) gas main in Red Bank adjacent to Plot RB10. This main is noted to be sleeved within a 6" cast iron main. The main becomes 180mm PE further north along Red Bank.

3.2.2. No Cadent Gas mains are shown within Plot RB10.

Red Bank (North) and New Neighbourhood Road

3.2.3. Cadent Gas records indicate a 24" cast iron LP main in Red Bank, adjacent to Plot RB12B.

3.2.4. There are no Cadent Gas assets shown within the area of the new neighbourhood road and Plots RB01 to RB05A/B/C.

Roger Street / Hargreaves Street / Chase Street

3.2.5. Cadent Gas records indicate a 24" cast iron LP main in Roger Street, adjacent to Plot RB07.

3.2.6. A 90mm PE LP main is present in Hargreaves Street, within Plots RB06 and RB07. This main is fed from the 24" LP main in Roger Street.

3.2.7. A 63mm PE LP main is present in Chase Street, adjacent to Plot RB07. This main is fed from the 24" LP main in Roger Street.

Dantzic Street

3.2.8. Cadent Gas records indicate the presence of an 18 inch steel Medium Pressure (MP) main within Dantzic Street, adjacent to Plots RB16 and RB17.

3.2.9. 30” cast iron, 18” cast iron and a 12” cast iron LP mains are also present in Dantzi Street, adjacent to Plots RB16 and RB17.

3.2.10. There are no Cadent Gas assets shown within Plots RB16 and RB17.

3.3. EXISTING INFRASTRUCTURE - GTC

Red Bank (South)

3.3.1. GTC operate a 250mm LP main in Red bank, adjacent to Plot RB10.

3.4. DIVERSIONS AND ABANDONMENTS - CADENT

Red Bank (North) and New Neighbourhood Road

3.4.1. Local diversion or lowering of the 24” LP main in Red Bank may be required to form the junction with the new neighbourhood road, adjacent to Plot RB12B.

Roger Street / Hargreaves Street / Chase Street

3.4.2. The 24” LP main in Roger Street may require diversion or lowering to facilitate highway improvement works, subject to detailed design proposals.

3.4.3. The existing 90mm LP main in Hargreaves Street is to be abandoned prior to development of Plots RB06 and RB07.

3.4.4. The existing 63mm LP main in Chase Street may require diversion or lowering as part of highway upgrade works here.

Dantzic Street

3.4.5. There are diversion and abandonment proposals for Cadent Gas mains at Dantzic Street relating to development south of Dantzic Street (Plots NT02 to NT04). This is the subject of a separate planning application and Utilities Statement. In summary, the 18” MP main is to be diverted to the south of Dantzic Street, affecting the alignment of the main within Dantzic Street itself. Abandonment of some LP mains within Dantzic Street is also proposed as part of the same works.

3.4.6. Further diversion or lowering of LP mains in Dantzic Street may be required to suit highway improvement works here.

3.5. DIVERSIONS AND ABANDONMENTS - GTC

3.5.1. No diversion or abandonment of GTC gas mains is required.

3.6. NEW SUPPLIES

3.6.1. No new gas connections to the proposed development plots are proposed. This is primarily due to the forthcoming change in Building Regulations, whereby from 2025 gas central heating will not be permitted to new residential dwellings.

4

WATER

4. WATER

4.1. UTILITY PROVIDERS

4.1.1. The incumbent provider for mains water in the area is United Utilities (UU). Contact details are provided below:

United Utilities Water Ltd
Developer Services Water
Windermere House
Lingley Green Avenue
Warrington
WA5 3LP

4.2. EXISTING INFRASTRUCTURE

Red Bank (South)

4.2.1. A 36” cast iron trunk main is located in Red Bank , adjacent to Plot RB10.

4.2.2. 24” cast iron, 110mm PE and 200mm ductile iron distribution mains are also present in Red Bank, adjacent to Plot RB10.

4.2.3. Distribution mains are shown in Faber Street, fed from the 5” cast iron main in Red Bank, passing beneath the disused railway viaduct. These mains appear to serve the existing building within Plot RB10.

Red Bank (North) and New Neighbourhood Road

4.2.4. There are 36” cast iron and 24” cast iron trunk mains in Red Bank, adjacent to Plot RB12B.

4.2.5. A 110mm PE distribution main is also present in Red Bank, adjacent to Plot RB12B. Connections from this main are shown entering Plot RB12B.

4.2.6. There no UU water mains shown within the area of Plots RB01 to RB05A/B/C.

Roger Street / Hargreaves Street / Chase Street

4.2.7. A 90mm PE distribution main is present in Roger Street, adjacent to Plot RB07.

4.2.8. A 90mm PE distribution main is located in Hargreaves Street within Plots RB06 and RB07. This main is fed from the 90mm main in Roger Street.

4.2.9. A 63mm PE distribution main in Chase Street, adjacent to Plot RB07, fed from the 90mm main in Roger Street.

Dantzic Street

4.2.10. United Utilities mains water asset records show 250mm PE, and 90mm PE mains within Dantzic Street, adjacent to Plots RB16 and RB17.

4.2.11. A connection is shown from the 90mm main towards Plot RB16, and is assumed that this provides a feed to existing buildings and facilities, although no UU water mains are shown within Plots RB16 and RB17.

4.3. DIVERSIONS AND ABANDONMENTS

Red Bank (South)

4.3.1. The connection within Faber Street to the existing building within Plot RB10 is to be abandoned prior to development.

Red Bank (North) and New Neighbourhood Road

4.3.2. The 110mm PE distribution main in Red Bank may require localised diversion or lowering to form the junction with the new neighbourhood road.

4.3.3. The connection into Plot RB12B from the 110mm PE main in Red Bank is to be abandoned.

Roger Street / Hargreaves Street / Chase Street

4.3.4. The 90mm PE distribution main within Hargreaves Street is to be abandoned prior to development.

4.3.5. The 63mm main in Chase Street may require localised diversion or lowering to facilitate highway improvement works here, subject to detailed design.

Dantzic Street

4.3.6. The existing connection to Plot RB16 and RB17 are to be abandoned prior to development.

4.3.7. Diversion or lowering of the water mains within Dantzic Street may be required to suit highway improvement works, subject to detailed design.

4.4. NEW SUPPLIES

4.4.1. New mains water connections are required to serve each plot. An assessment of potable and fire main demand has been carried out to inform design of the required connections. A summary of the demand assessment is provided in Table 3 below:

Table 2 – Mains Water Demand

	Residential				Non-Residential			Plot Total
Plot	**Potable**		**Fire**		**Potable**			
	Storage (l)	*Flowrate (l/s)*	*Storage (l)*	*Flowrate (l/s)*	*GIA (m^2)*	*Loading Units*	*Flowrate (l/s)*	*Flowrate (l/s)*
All	414,914	57.56	606,600	6.96	11,275	702	10.44	**74.95**

HIF Works

4.4.2. The HIF works propose upgrade of existing UU mains and the provision of new water mains to serve the development plots as follows. Refer to Arup drawing VNIF-ARP-00-YYY-DR-CU-1003 in Appendix C.

- New 2 x 200mm PE mains within new neighbourhood road, connecting to existing UU 36” trunk main at Red Bank;

- New 200mm PE main from new neighbourhood road to existing UU 200mm main in Dantzic Street.
- Upsize existing UU mains in Roger Street and Chase Street to 160mm PE.

Red Bank (South)

4.4.3. A connection to the existing 200mm main in Red Bank is proposed for Plot RB10, subject to confirmation by UU.

Red Bank (North) and New Neighbourhood Road

4.4.4. Plot RB12B is to be provided with a connection to the existing 110mm UU main in Red Bank, subject to confirmation by UU.

4.4.5. Development Plots RB01 to RB05A/B/C are to be connected to the 200mm mains installed by the HIF works. Refer to para 4.4.2).

Roger Street / Hargreaves Street / Chase Street

4.4.6. Plots RB06 and RB07 are to be fed from connections to the proposed 160mm mains in Chase Street and Roger Street, as upgraded under the HIF works. Refer to para 4.4.2.

Dantzic Street

4.4.7. Connection to the existing 250mm UU main in Dantzic Street is proposed for Plots RB16 and RB17, subject to confirmation by UU.

5

SEWERAGE

5. SEWERAGE

5.1. UTILITY PROVIDERS

5.1.1. The incumbent provider for wastewater services in the area is United Utilities. Contact details are provided below:

United Utilities
Developer Services and Planning
Warrington North Wastewater Treatment Works
Gatewarth Industrial Estate
Off Liverpool Road
Warrington
WA5 1DS

5.2. EXISTING INFRASTRUCTURE

5.2.1. United Utility sewer records indicate they operate a number of combined public sewers in the area. There are no dedicated foul or surface water sewers in the vicinity of the site.

Red Bank (South)

5.2.2. A 900 x 1400mm combined sewer is located in Red Bank, adjacent to Plot RB10.

5.2.3. A 450mm dia. combined sewer is also located in Red Bank, adjacent to Plot RB10.

5.2.4. A 525mm dia combined sewer is present within Faber Street, connecting to the 900 x 1400mmm combined sewer at Red Bank.

Red Bank (North) and New Neighbourhood Road

5.2.5. A 380 x 480mm combined sewer is located in Red Bank, adjacent to Plot RB12B.

5.2.6. A 410 x 410mm combined sewer crosses through Plots RB03 and RB04 from Collingham Street towards the River Irk. A statutory easement is likely to be associated with the sewer. Such easements are usually 3m either side of the sewer.

Roger Street / Hargreaves Street / Chase Street

5.2.7. A 525mm dia. combined sewer flows north-west along Roger Street. This is the same combined sewer that passes through Faber Street (refer to para 5.2.3).

5.2.8. A 300mm dia. combined sewer is located in Roger Street. This sewer becomes 475 x 750mm adjacent to Plot RB07, before discharging into the 525mm combined sewer in Roger Street.

5.2.9. A 375mm combined sewer overflow (CSO) outfall pipe is present within Rodger Street, discharging to the River Irk close to Plot RB07.

5.2.10. A combined sewer is located at Hargreaves Street within Plots RB06 and RB07. This sewer changes size a number of times along its length. It becomes 490 x 750mm towards the southern end of Hargreaves Street, before discharging into the 525mm dia. combined sewer in Roger Street.

5.2.11. A 300mm combined sewer is located at Crabbe Street within Plot RB07, discharging to the combined sewer in Hargreaves Street.

5.2.12. A 375 x 500mm combined sewer is located in Chase Street, adjacent to Plot RB07.

Dantzic Street

5.2.13. A 1550mm dia. combined sewer and a 300mm dia combined sewer are present in Dantzic Street. The 300mm dia sewer discharges into the 1550mm sewer in Dantzic Street, opposite Plot RB16.

5.2.14. A 300mm dia combined sewer is located in Warford Street within Plot RB16. This sewer is a continuation of the combined sewer passing through Plots RB03 and RB04 (refer to para 5.2.6). The sewer discharges into the 1550mm dia. combined sewer in Dantzic Street.

5.2.15. A 300mm dia. CSO outfall pipe is located in Warford Street within Plot RB16, discharging to the River Irk.

5.2.16. UU records indicate the presence of some private combined drains within Plot RB16. The asset records show these to be isolated and not connecting to the public sewerage system, although, connection to the sewer in Dantzic Street or Warford Street is likely.

5.3. DIVERSIONS AND ABANDONMENTS

Red Bank (South)

5.3.1. No diversion of UU sewer is required for the development of Plot RB10.

Red Bank (North) and New Neighbourhood Road

5.3.2. Diversion of the 410 x 410mm combined sewer within Plots RB03 and RB04 may be required to enable development, subject to a detailed development layout.

Roger Street / Hargreaves Street / Chase Street

5.3.3. The combined sewers in Hargreaves and Crabbe Street are to be abandoned prior to development of Plots RB06 and RB07.

Dantzic Street

5.3.4. The existing 300mm dia. combined sewer and CSO outfall pipe in Warford Street are to be retained following development of Plots RB16 and RB17. Diversion of these may be required, subject to a detailed development layout, although it is possible they will be retained on their current alignment. Should diversion through Plots RB16 and RB17, or stopping up of Warford Street be proposed, an easement will be required for these pipes. Typically, the easement width would be 3m either side of the pipe.

5.3.5. The private combined drains within Plot RB16 as shown on UU records will be abandoned prior to development.

5.4. NEW SUPPLIES

5.4.1. New foul water connections will be provided for each plot into the UU public sewerage system. Anticipated foul water discharge is presented in Table 4 below.

5.4.2. Surface water drainage is beyond the scope of this report. Details of the surface water drainage strategy for the site are presented elsewhere.

Table 3 – Foul Water Discharge

Plot	Residential		Commercial		Total Discharge (l/s)
	No of dwellings	Peak Discharge (l/s)	GIA (m^2)	Discharge (l/s)	
All	3,250	150.46	11,275	0.56	151.02

5.4.3. Details of the proposed discharge rates from the plots as shown above has been shared with UU for their comment, and a response is awaited.

5.4.4. Individual plots are expected to be connect to the UU combined sewers, at a convenient location, subject to detailed design proposals, and confirmation by UU.

HIF Works

5.4.5. The HIF works proposes new foul sewers to serve the development plots as flows. Refer to Arup drawing VNIF-ARP-00-YYY-DR-CD-0003 in Appendix C.

- New foul sewer to serve plots RB02, RB03, RB04, RB05A, RB05B and RB05C, connecting to existing UU 410 x 410mm combined sewer, south of RB03 (refer to para 5.2.6).
- New foul sewer serving plots RB12B, RB01 and RB06 discharging into the existing UU 375 x 500mm combined sewer in Chase Street (refer to para 5.2.12).

These sewers are expected to be adoptable by UU via a S104 agreement.

Red Bank (South)

5.4.6. Plot RB10 is expected to connect to the 525mm dia. combined sewer in Faber Street, subject to confirmation by UU.

Red Bank (North) and New Neighbourhood Road

5.4.7. Plots RB12B and RB01 to RB05A/B/C are to connect to the proposed HIF foul sewers as described in para 5.4.5.

Roger Street / Hargreaves Street / Chase Street

5.4.8. Plot RB06 is to connect to the proposed HIF foul sewer as described in para 5.4.5.

5.4.9. Plot RB07 is to connect to the existing UU combined sewer in Chase Street (refer to para 5.2.12), subject to confirmation by UU.

Dantzic Street

5.4.10. Plots RB16 and RB17 are expected to connect to the UU combined sewers in Warford Street or Dantzic Street. The specific point of connection is subject to detailed design proposals and confirmation by UU.

6

DATA & TELECOMMUNICATIONS

6. DATA & TELECOMMUNICATIONS

6.1. UTILITY PROVIDERS

6.1.1. Current operators of data and telecommunications infrastructure in the area are Openreach, Virgin Media, and Vodafone. Contact details are provided below:

Openreach

www.openreach.co.uk/cbyd
Contact: T: 0800 783 2023 E: cbyd@openreach.co.uk

Virgin Media

www.virginmedia.com/lightning/network-expansion/property-developers
Contact: T: 0800 408 0088 E: newbuild@virginmedia.co.uk

Vodafone

E: Osm.enquiries@atkinsglobal.com
T: 01454 662881

6.2. EXISTING INFRASTRUCTURE - OPENREACH

Red Bank (South)

6.2.1. Openreach records show a below ground network in Red Bank, adjacent to Plot RB10. This network extends along Faber Street, beneath the disused railway viaduct and services the existing building within Plot RB10.

Red Bank (North) and New Neighbourhood Road

6.2.2. There are below and above ground Openreach networks present within Red Bank, adjacent to Plot RB12B.

6.2.3. There are no Openreach assets shown as present within development Plots RB01 to RB05A/B/C.

Roger Street / Hargreaves Street / Chase Street

6.2.4. There is a below ground Openreach network located in Roger Street, adjacent to Plot RB07.

6.2.5. Openreach records shown above and below ground networks present in Hargreaves Street within Plots RB06 and RB07. The above ground network connects to Chase Street via Crabbe Street, connecting back to the below ground network in Roger Street.

Dantzic Street

6.2.6. Openreach records show mainly below ground networks within Dantzic Street adjacent to Plots RB16 and RB17, supplemented by some overhead cables and poles.

6.2.7. These above and below ground networks extend into Plots RB16 and RB17, serving existing facilities.

6.3. EXISTING INFRASTRUCTURE – VIRGIN MEDIA

Red Bank (South)

6.3.1. There are no Virgin Media (VM) assets in close proximity to Plot RB10. The nearest VM cables are further north along Red Bank, towards Roger Street and Lord Street.

Red Bank (North) and New Neighbourhood Road

6.3.2. A VM cable is present within Red Bank adjacent to Plot RB12B.

6.3.3. There are no VM assets shown within the area of development Plots RB01 to RB05A/B/C.

Roger Street / Hargreaves Street / Chase Street

6.3.4. There are no VM assets shown within the area of development Plots RB06 and RB07, or within the adjacent roads.

Dantzic Street

6.3.5. There are no Virgin Media assets within Dantzic Street, or Plots RB16 and RB17.

6.4. EXISTING INFRASTRUCTURE - VODAFONE

Red Bank (South)

6.4.1. A Vodafone cable is present within Red Bank, adjacent to Plot RB10.

Red Bank (North) and New Neighbourhood Road

6.4.2. Vodafone asset records provided do not show this area of the site. Vodafone have stated that this is because there are no assets within this area.

Roger Street / Hargreaves Street / Chase Street

6.4.3. Vodafone have no assets within the areas of Plots RB06 and RB07, or the surrounding streets.

Dantzic Street

6.4.4. Vodafone have no assets within Dantzic Street, or Plots RB16 and RB17.

6.5. DIVERSIONS AND ABANDONMENTS - OPENREACH

Red Bank (South)

6.5.1. Abandonment of existing Openreach connections to the existing facilities in Plot RB10 is proposed prior to development.

Red Bank (North) and New Neighbourhood Road

6.5.2. Diversion or local lowering of the below ground network in Red Bank may be required to facilitate the junction with the new neighbourhood road to serve Plots RB01 to RB05A/B/C. Diversion of the overhead network at Red Bank may also be required for the same purpose.

Roger Street / Hargreaves Street / Chase Street

6.5.3. The below and above ground networks in Hargreaves Street and Crabbe Street are to be abandoned prior to development.

6.5.4. The below ground network in Chase Street may required local diversion or lowering to enable highway improvement works here, subject to detailed design proposals.

Dantzic Street

6.5.5. The above and below ground Openreach networks in plots RB16 and RB17 are to be abandoned prior to development.

6.5.6. Diversion or local lowering of the Openreach networks in Dantzic Street may be required to enable highway improvement works, subject to detailed design proposals.

6.6. DIVERSIONS AND ABANDONMENTS – VIRGIN MEDIA

Red Bank (North) and New Neighbourhood Road

6.6.1. Diversion or local lowering of the VM network in Red Bank may be required to facilitate the junction with the new neighbourhood road to serve Plots RB01 to RB05A/B/C.

6.7. DIVERSIONS AND ABANDONMENTS – VODAFONE

6.7.1. No diversion or abandonment of Vodafone assets is required.

6.8. NEW SUPPLIES

HIF Works

6.8.1. As part of the HIF proposals, below ground duct routes will be provided to enable cabling by Openreach and Virgin Media for the purposes of feeding the development plots. Refer to Arup drawing VNIF-ARP-00-YYY-DR-CU-1006 in Appendix C.

6.8.2. The HIF telecoms work include a primary distribution route 12 no. ducts (6 x 2) following a route along Roger Street, Chase Street, Red Bank and the new neighbourhood road, and linking to existing Openreach and VM networks at Dantzic Street.

6.8.3. A secondary distribution route of 8 no. ducts (4 x 2) is proposed in the vicinity of Plot RB05A/B/C.

6.8.4. A tertiary route of 4 no. ducts is proposed within the new neighbourhood road and to the south of Plots RB01 to RB05A/B.

Openreach

6.8.5. It is proposed that each plot will be served with a new connection to the Openreach network for access to telephone and broadband internet services. Current Openreach policy is to provide a Fibre-to-the-Premises (FTTP) connection for all developments over 20 no. dwellings.

6.8.6. Plots RB01 to RB05A/B/C, RB06, RB07, RB10 and RB12B are to be fed via the HIF telecoms infrastructure as described above.

6.8.7. Plots RB16 and RB are anticipated to connect to the existing below ground Openreach network in Dantzic Street, subject to confirmation by Openreach.

6.8.8. A series of below ground ducts and chambers will be located within the roads within the plots to facilitate the network.

Virgin Media

6.8.9. Connection to the Virgin Media network for plots is possible via the HIF infrastructure, connecting to the existing VM network in Red Bank.

6.8.10. A Virgin Media connection to Plots RB16 and RB17 is possible, should VM decide that it is viable to extend their network along Dantzic Street to serve the development.

Appendix A

PARAMETER PLANS

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Do not scale from this drawing. Verify all dimensions on site. Drawing should be read in conjunction with information from all other design consultants and contractors. All drawings in digital format are for reference only, paper copies are available on request.

0 25 75m

FOR APPROVAL

Legend:

- Outline planning application boundary
- Areas within applicant's ownership

Rev	Details	Drawn	Chkd	Date
P1		AE	JC	04/04/23

DRAFT

MACCREANOR LAVINGTON

Vijverhofstraat 47
3032 SB Rotterdam
The Netherlands
+31(0)10 443 90 60

Proj. No.	Project	Status
524	Red Bank, Manchester	FOR PLANNING

Sheet Name	Client
Site Location Plan	FEC

CDE ID	Scale	Size	Rev.
RDB-MLM-00-RF-DR-AR-111001	1:1250	A1	P1

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0 25 75m

FOR APPROVAL

RB05A
RB05B
RB05C
RB04
RB03
RB02
RB01
RB12B
RB17
RB16
RB06
RB07
RB10

Legend:

- Development plots
- Potential route between plots
- Maximum extent of RB10 development plot above ground level. Development at grade may be appropriate subject to an additional Flood Risk Assessment as part of a Detailed Application.
- Development zone including public realm
- Public realm including rights of way, emergency access, car parking, sustainable urban drainage systems and infrastructure.
- Dantzic Street enhancements
- Neighbourhood road
- Consented improved green infrastructure works within outline planning application boundary. Application number: *133143/VO/2022*
- Key public open space
- Consented improved green infrastructure works outside outline planning application boundary. Application number: *133143/VO/2022*
- +- 00m Limit of development plot boundary deviation plus or minus by noted dimension in metres.
- - 00m Limit of development plot boundary deviation minus by noted dimension in metres.

  At the detailed planning application stage where permission is sought for a building line, the building line for each plot can deviate on all boundaries of each plot where stated as + or -.
- Outline planning application boundary
- S1 Existing sewer subject to diversion
- S2 Existing sewer subject to a no-build zone

DRAFT

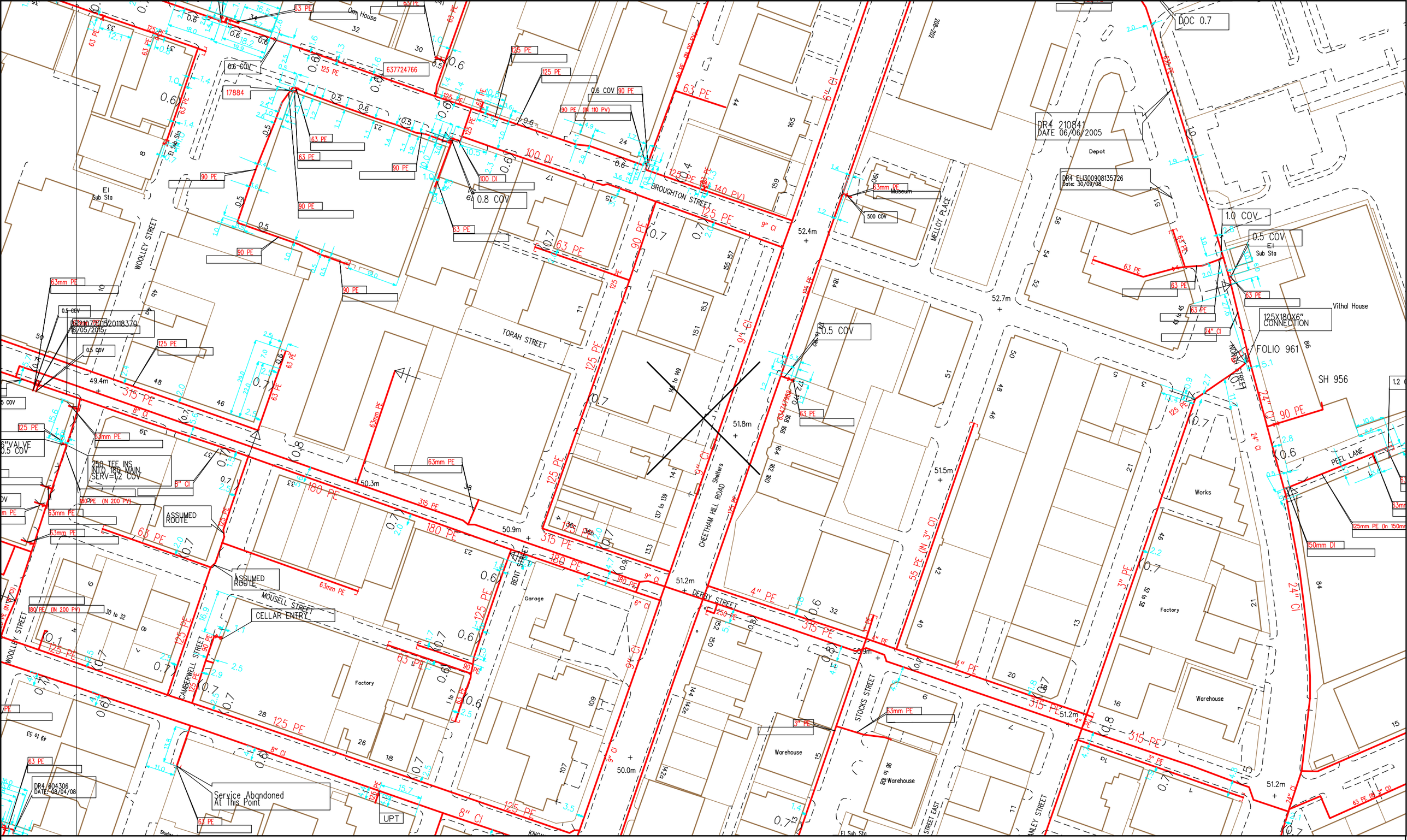
Rev	Details			Drwn	Chkd	Date
P1				AE	JC	04/04/23

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The Netherlands
+31(0)10 443 90 60

Proj. No.	Project	Status
524	Red Bank, Manchester	FOR PLANNING
Sheet Name		**Client**
Parameter Plan P1 - Development Plots and Public Realm		FEC
CDE ID	**Scale**	**Size** **Rev.**
RDB-MLM-00-00-DR-AR-211417	1:1250	A1 P1

Appendix B

UTILITIES ASSET RECORDS



SCALE: 1 : 1250	LP MAINS
USER ID: RAMC2390	MP MAINS
DATE: 16/06/2021	IP MAINS
EXTRACT DATE: 01/03/2021	LHP MAINS
MAP REF: SJ8499	
CENTRE: 384234, 399823	

Some examples of Plant Items: Valve, Depth of Cover, Syphon, Diameter Change, Material Change, Out of Standard Service

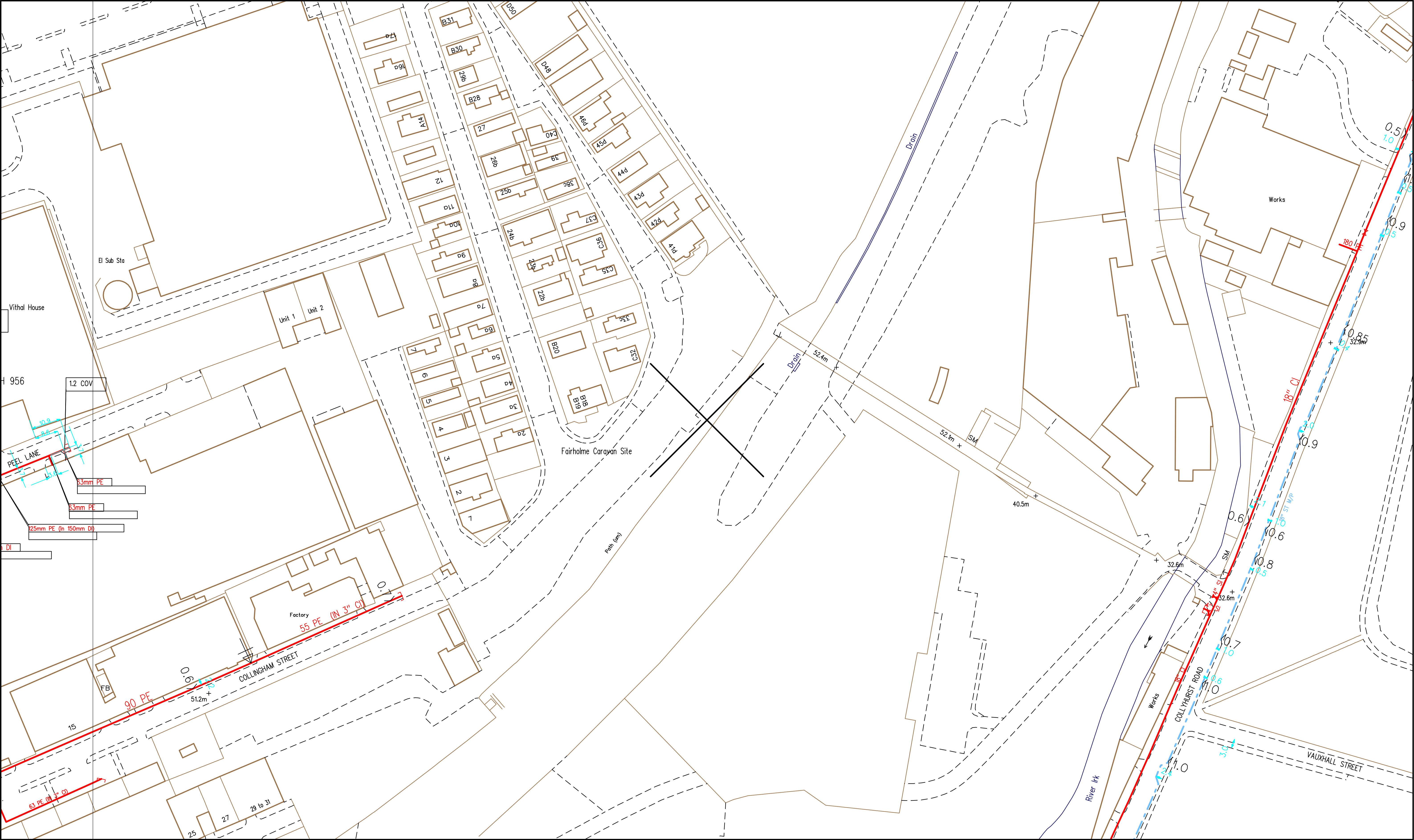
This plan shows those pipes owned by Cadent Gas Ltd in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this 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.

CHECKED

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SCALE: 1 : 1250

USER ID: RAMC2390

DATE: 16/06/2021

EXTRACT DATE: 01/03/2021

MAP REF: SJ8499

CENTRE: 384728, 399823

LP MAINS

MP MAINS

IP MAINS

LHP MAINS

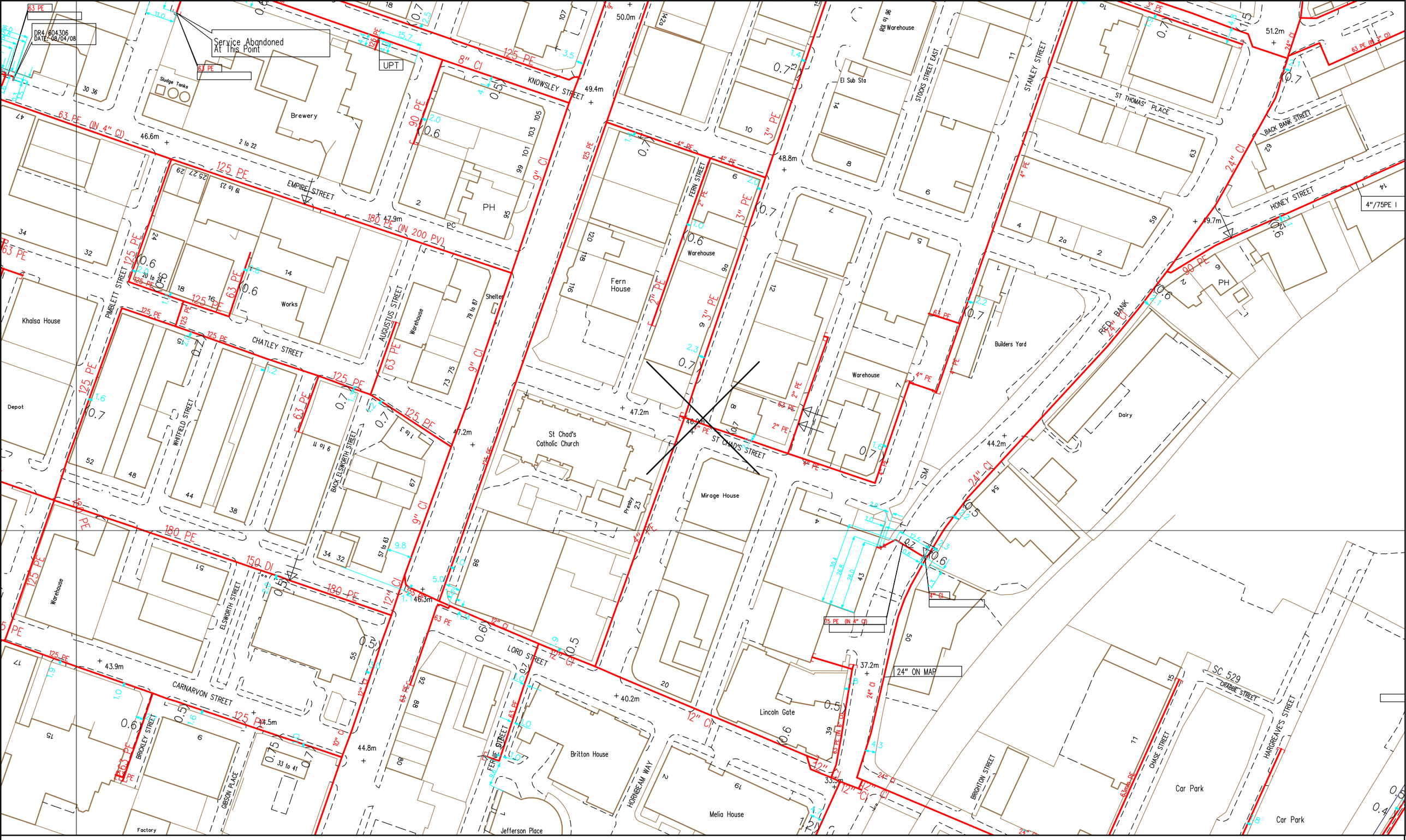
Some examples of Plant items: Valve, Depth of Cover, Syphon, Diameter Change, Material Change, Out of Standard Service

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SCALE: 1 : 1250	
USER ID: RAMC2390	
DATE: 16/06/2021	
EXTRACT DATE: 01/03/2021	
MAP REF: SJ8499	
CENTRE: 384234, 399542	

LP MAINS
MP MAINS
IP MAINS
LHP MAINS

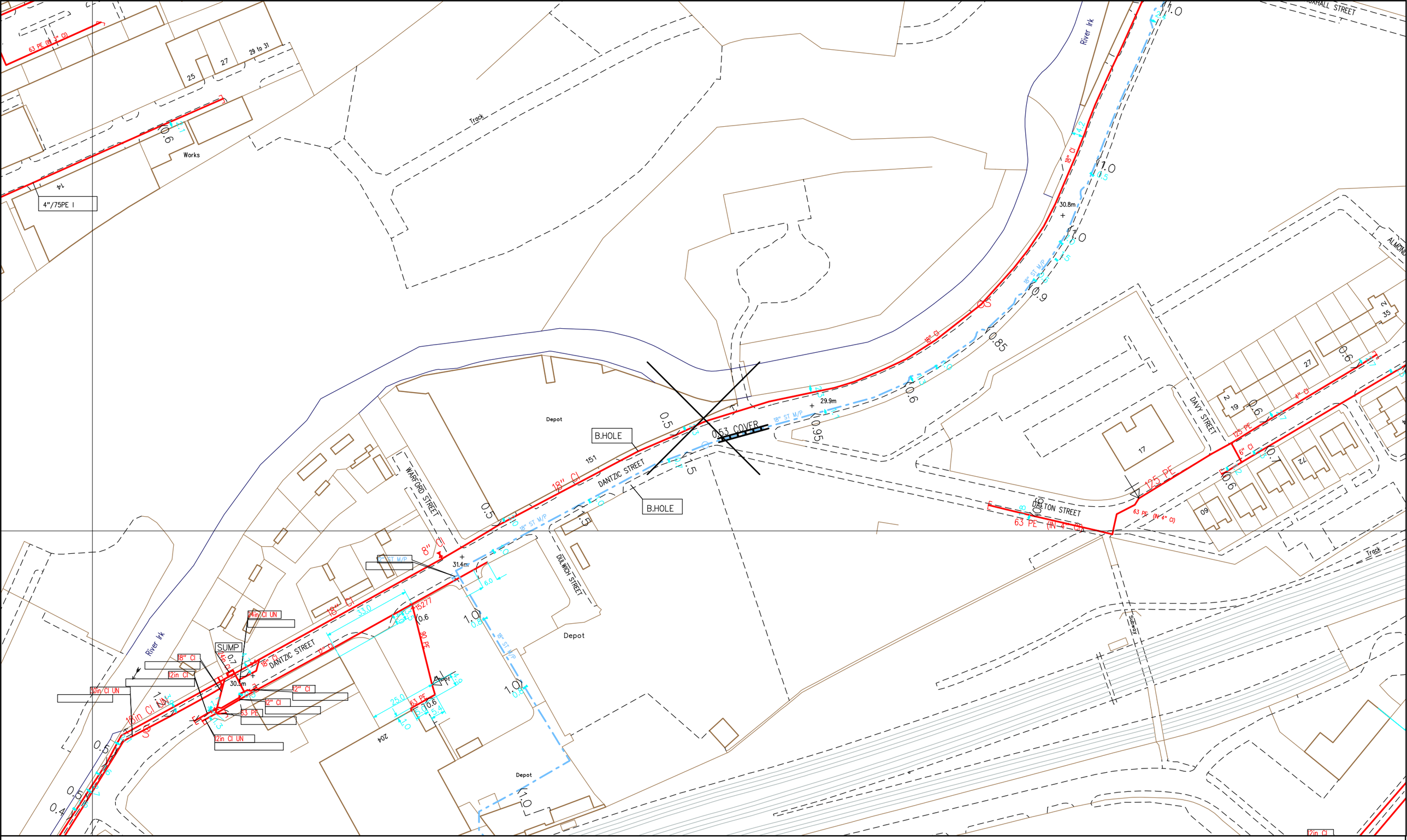
Some examples of Plant Items
Valve | Depth of Cover | Syphon | Diameter Change | Material Change | Out of Standard Service

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.

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SCALE: 1 : 1250	LP MAINS
USER ID: RAMC2390	MP MAINS
DATE: 16/06/2021	IP MAINS
EXTRACT DATE: 01/03/2021	LHP MAINS
MAP REF: SJ8499	
CENTRE: 384728, 399542	

Some examples of Plant Items

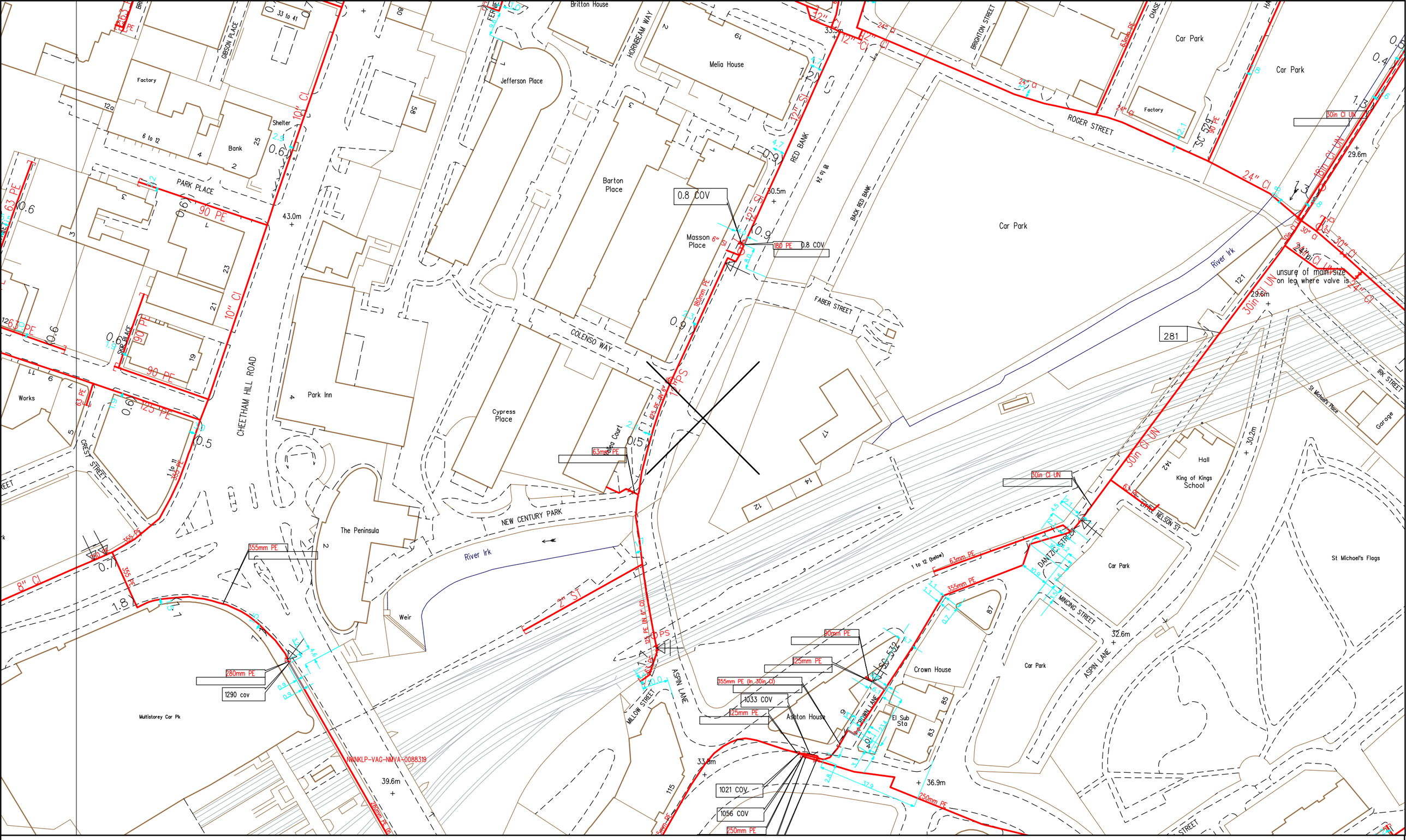
Valve | Depth of Cover | Syphon | Diameter Change | Material Change | Out of Standard Service

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.

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DATE: 16/06/2021	
EXTRACT DATE: 01/03/2021	
MAP REF: SJ8499	
CENTRE: 384234, 399262	

LP MAINS
MP MAINS
IP MAINS
LHP MAINS

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.

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WARNING! This area contains Gas Mains Operating at Intermediate Pressure between 2 and 7 bar. Before excavating in the area call 0800 688588.

BROMLEY STREET
WILLIAMSON STREET
BILBROOK STREET
BURSTOCK STREET
PEARY STREET
BRADFORD RD/ROCHDALE RD
ROCHDALE ROAD
BACK ST GEORGE'S ROAD
TEBBUTT STREET
MOORHEAD STREET
SUDELL STREET
OLD MOUNT STREET
GOLD STREET
SIMEON STREET
NAPLES STREET
LUDGATE HILL
DURANT STREET
CLIVE STREET
HINTON STREET
IRK STREET
Depot
Works
Garage
Shelter
Car Park
El Sub Sta
Ophthalmic Works
The Citadel
St Michael's Flags
Matrix Buil
EASEMENT No.DM/ 30830
EASEMENT NO. 10502
63 PE
90 PE
125 PE
180 PE
2" PE
12" CI
18" CI
24" CI
30" CI
30in CI UN
12in CI
18" DI
24" DI
6" STEEL
4" CI
4"/63PE
18" ST M/P
12" ST M/P
MANCHESTER 7 BAR
PM065 - MANCHESTER 7 BAR
PM065 - MANCHESTER 7 BAR
PM065 - MANCHESTER 7 BAR
WNKMP-VAC-NCKA-43X
63608032
37.2m
63mm PE
0.7 COV
0.9 COV
29.6m
39.6m
45.4m
52.4m
53.0m
52.1m
500 GF21
499 GF19
498 GF18
3 GF20 13.5 C/W
2 GF28
1 GF22
4
B.H's
Marsh
111
87

SCALE: 1 : 1250
USER ID: RAMC2390
DATE: 16/06/2021
EXTRACT DATE: 01/03/2021
MAP REF: SJ8499
CENTRE: 384728, 399262

LP MAINS
MP MAINS
IP MAINS
LHP MAINS

Some examples of Plant Items
Valve | Depth of Cover | Siphon | 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.

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

Miss Chrissy Elliott
Atkins
The Hub 500 Park Avenue, Aztec West, Patchway
Almondsbury Bristol
BS32 4RZ

Our Reference: 22398525

Your Reference: 97079/HaK

Dear Miss Chrissy Elliott

Electricity Network Plans

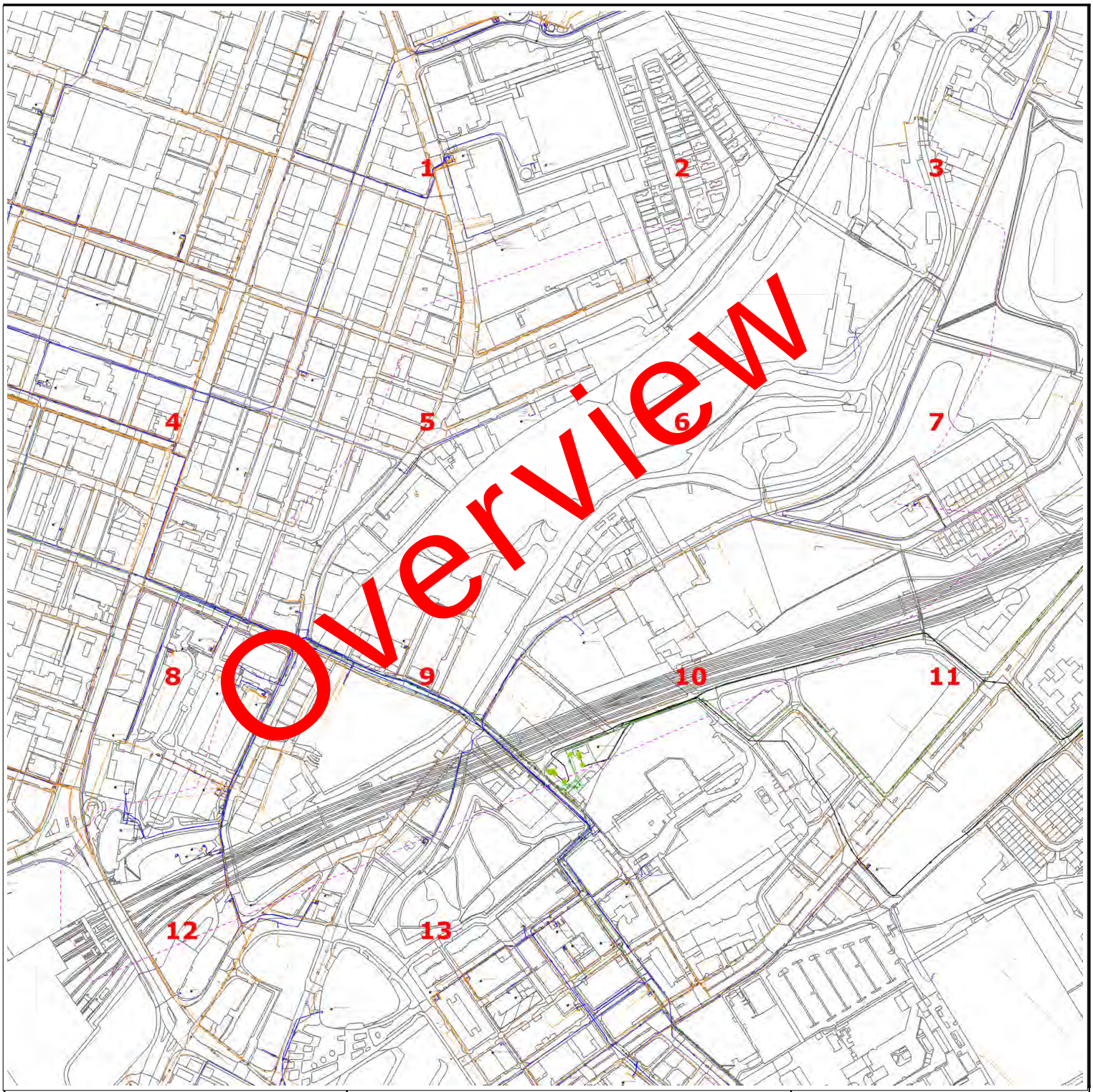
I acknowledge with thanks your request dated 15/06/2021 04:02:15 AM for information on the location of our services.

Please find enclosed plan(s) showing the approximate position of our apparatus known to be in the vicinity of this site.

I attach Conditions and information regarding electricity mains, which details contact numbers for additional services (i.e. new supplies, connections, diversion). In addition you should ensure they are made available to anyone carrying out any works which may affect our apparatus.

Yours sincerely,

Data Management



Requested by: Chrissy Elliott
Company: Atkins
Date Requested: 15/06/2021
Job Reference: 22398525
Your Scheme/Reference: 97079/HaK

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	

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Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

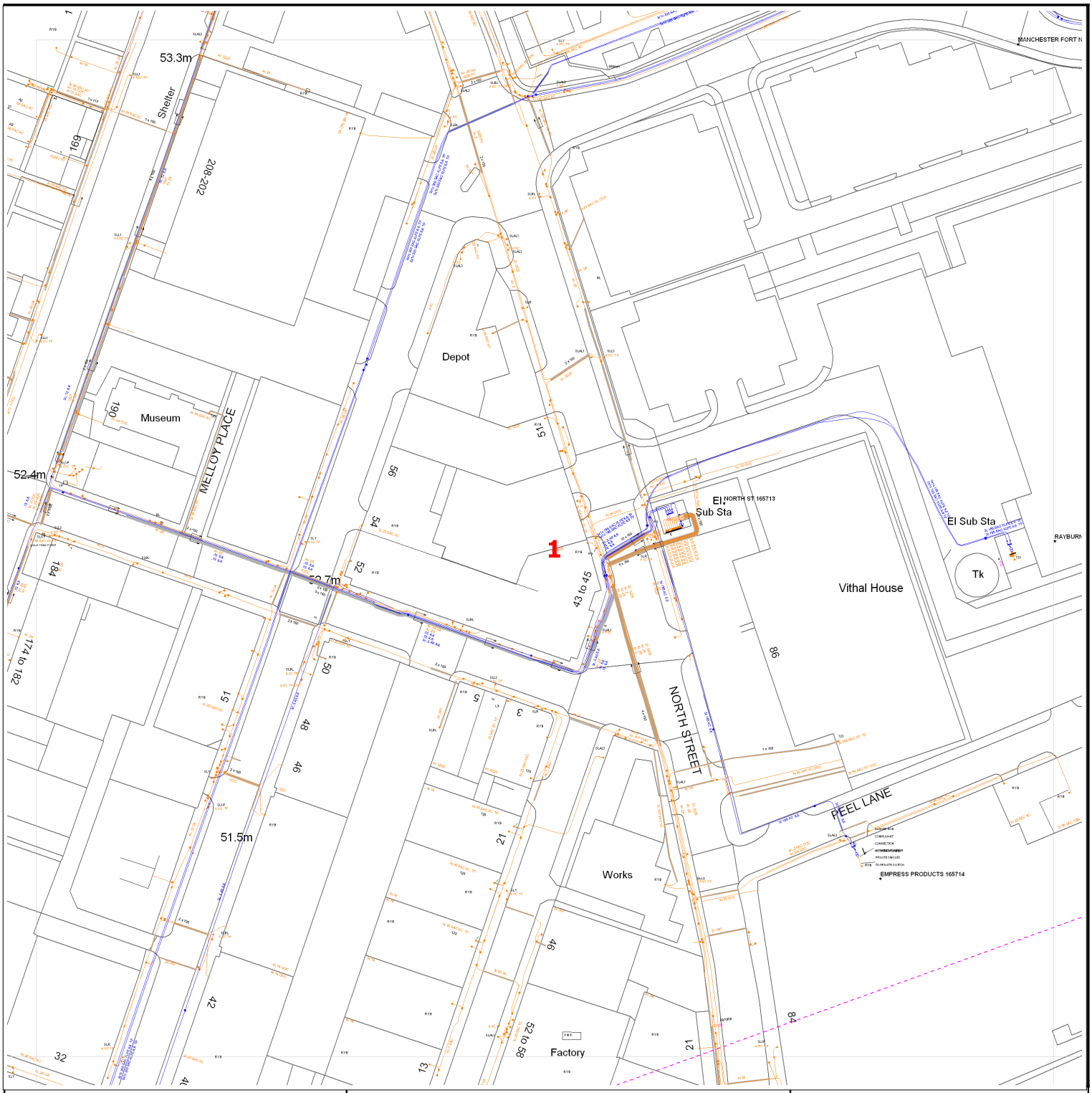
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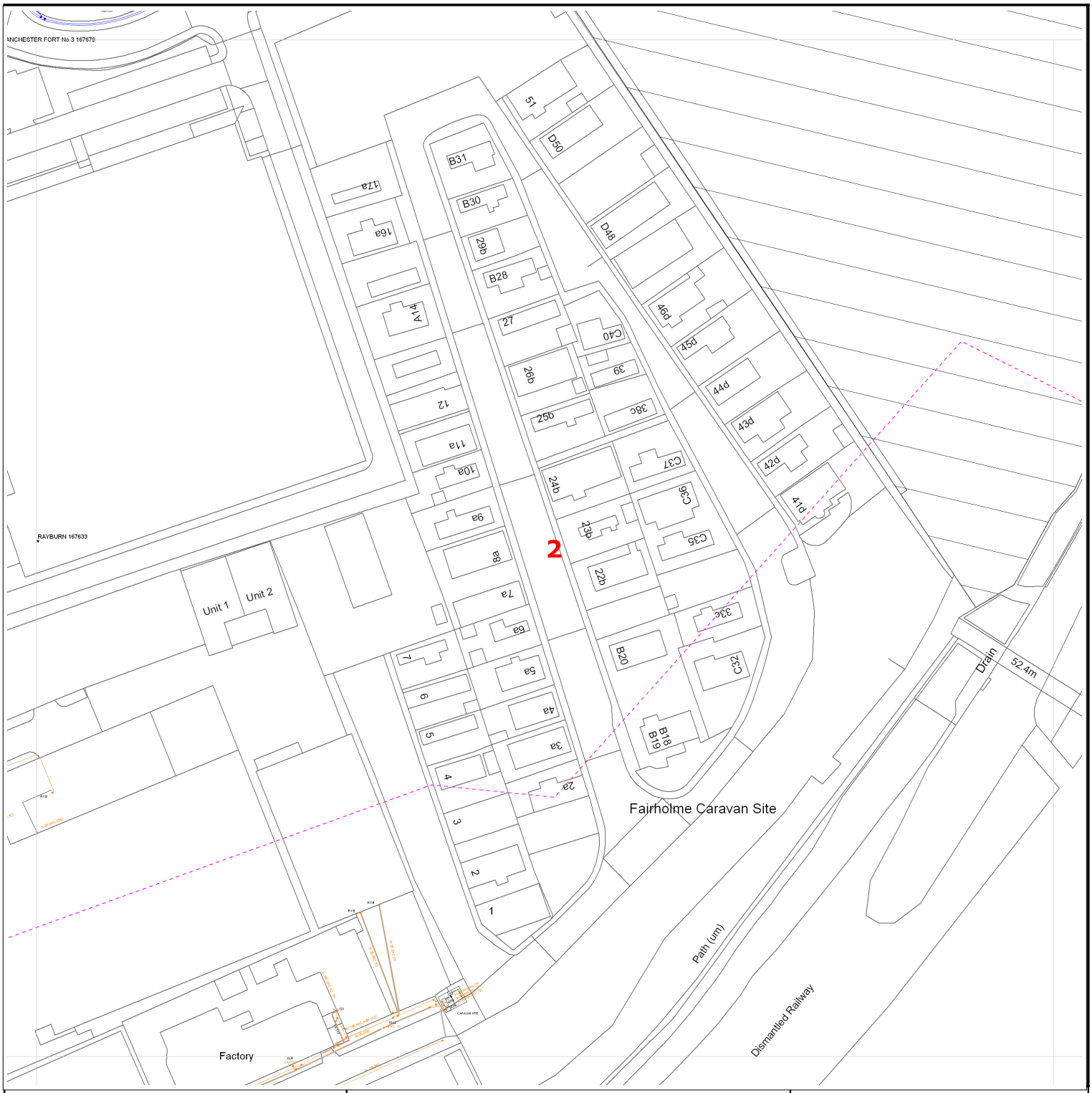
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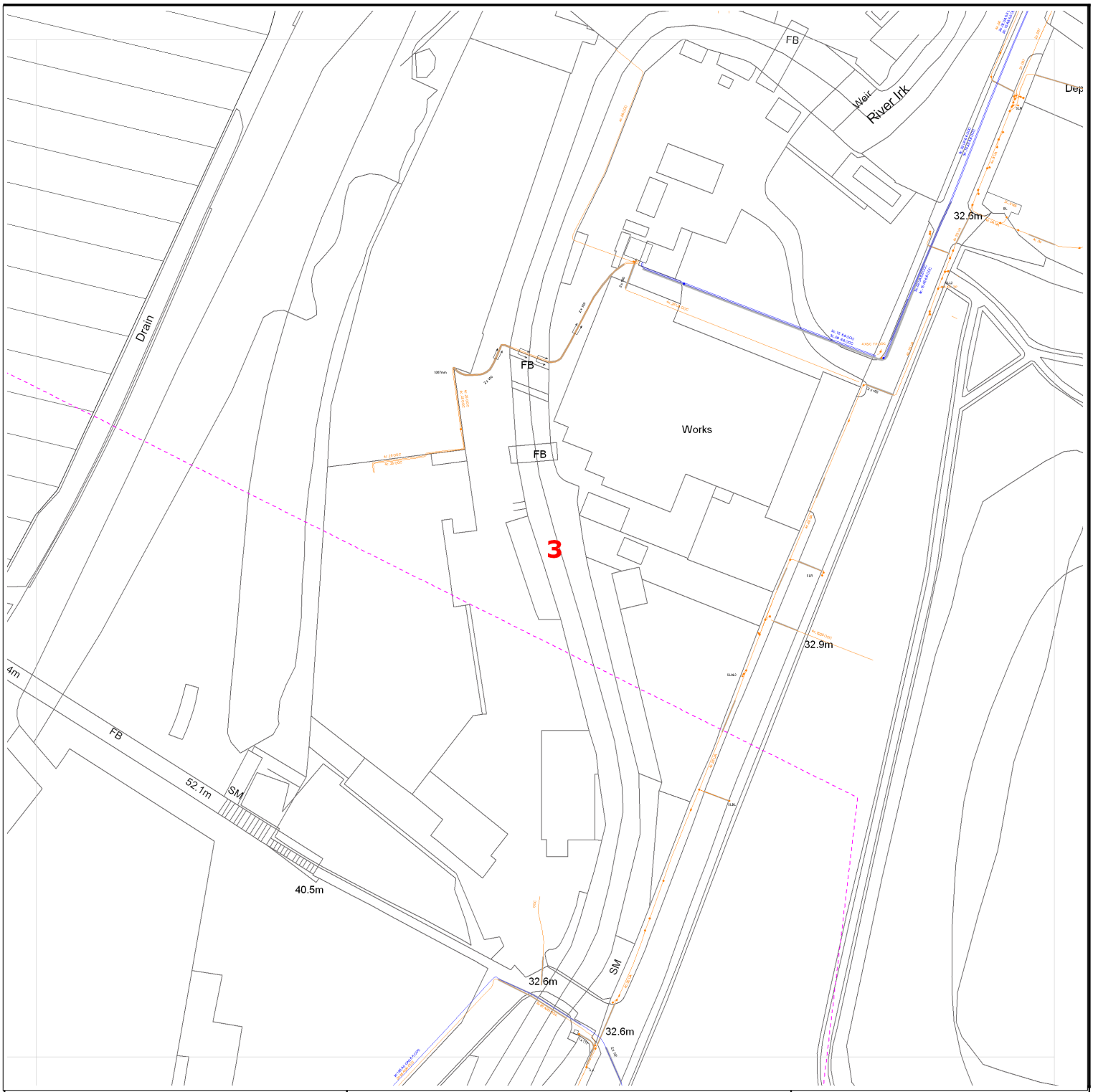
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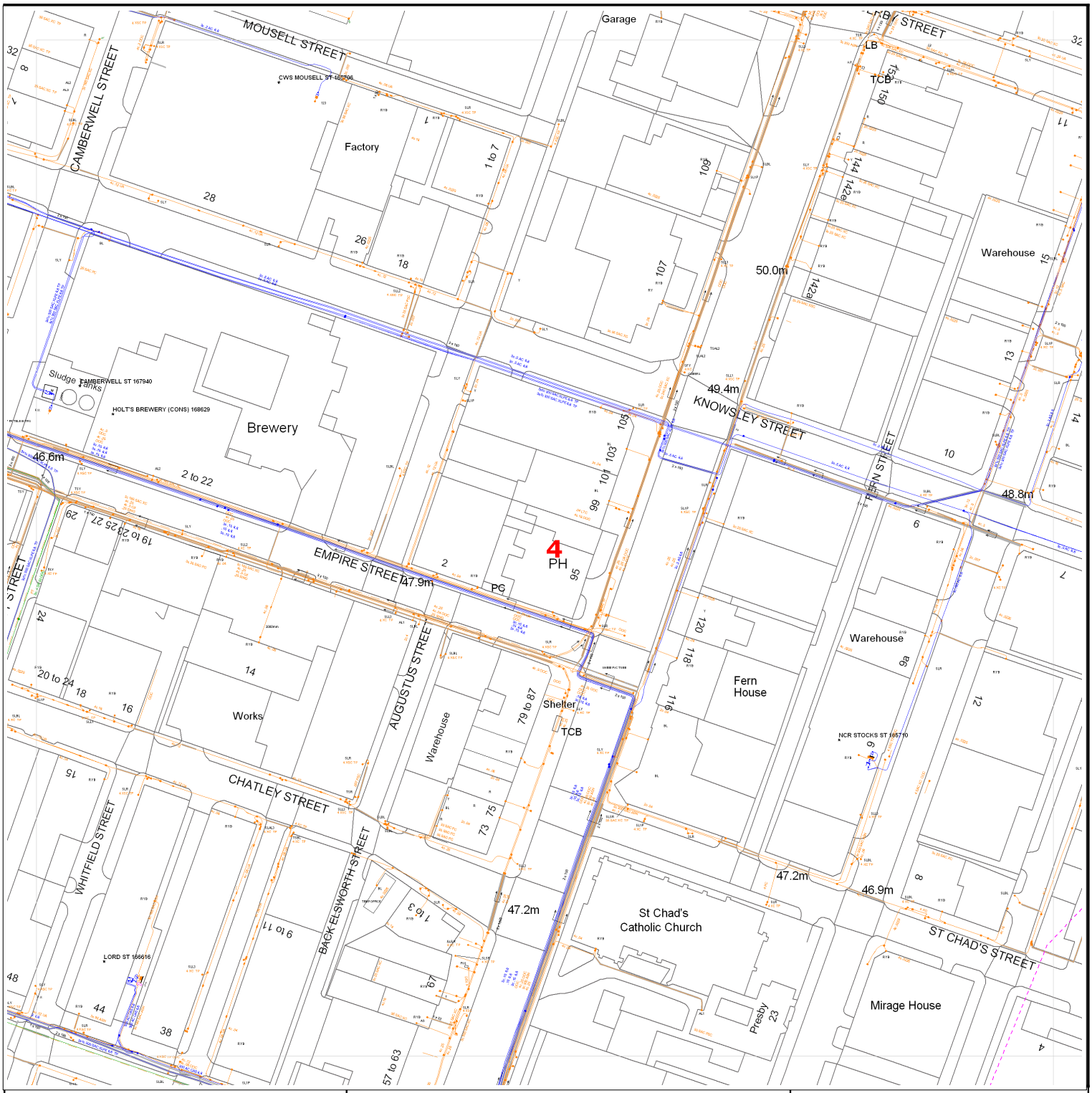
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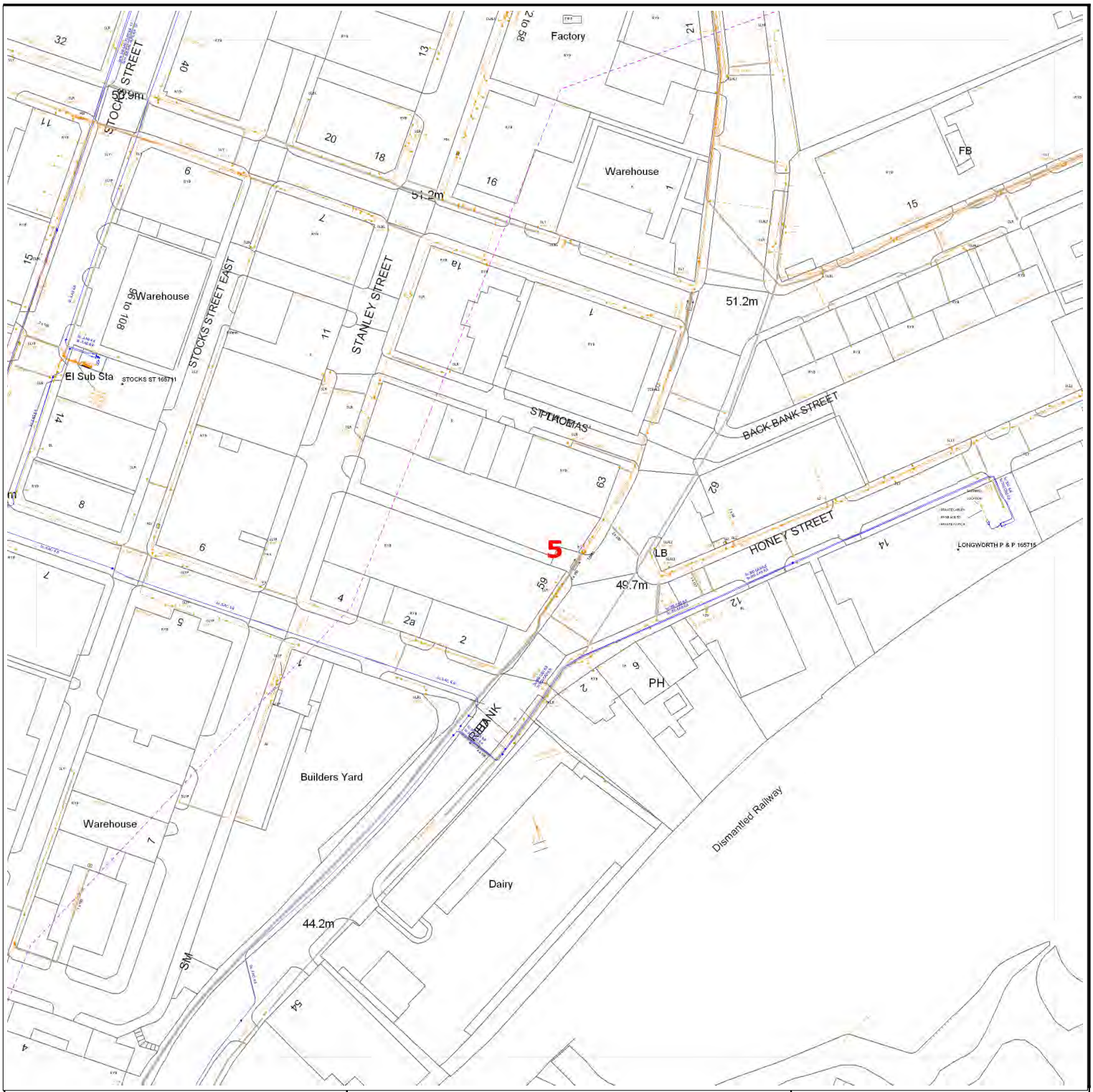
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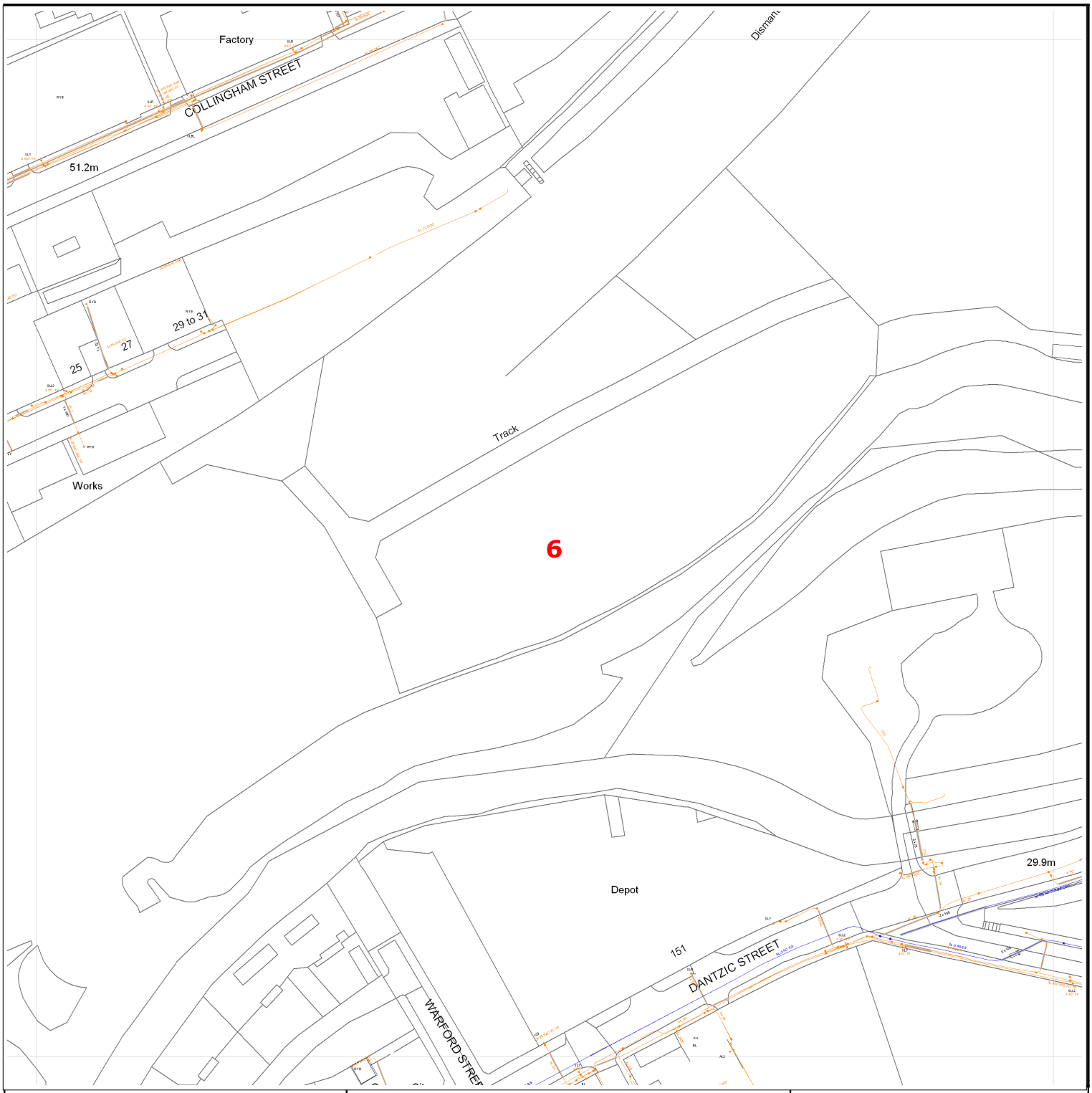
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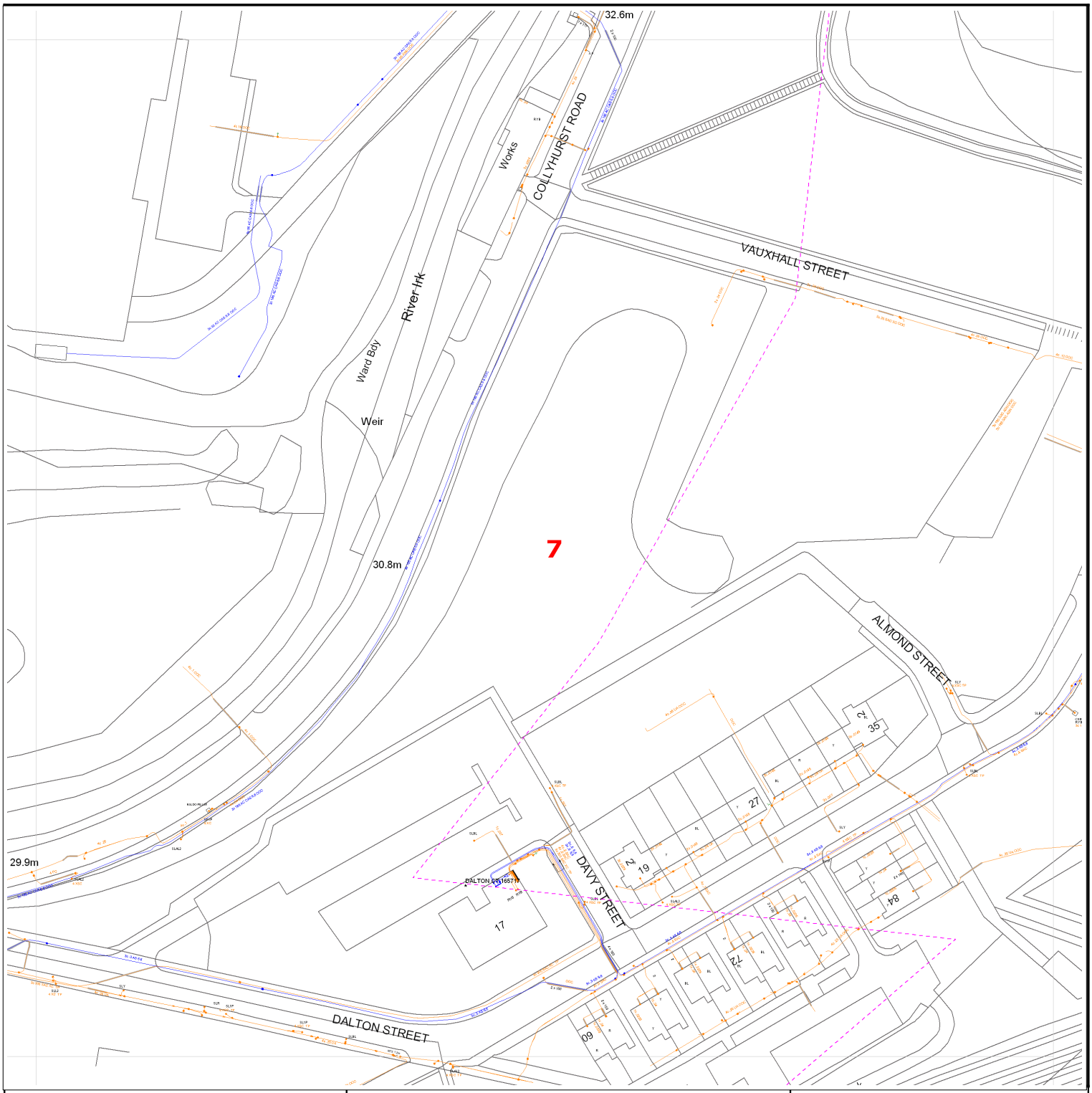
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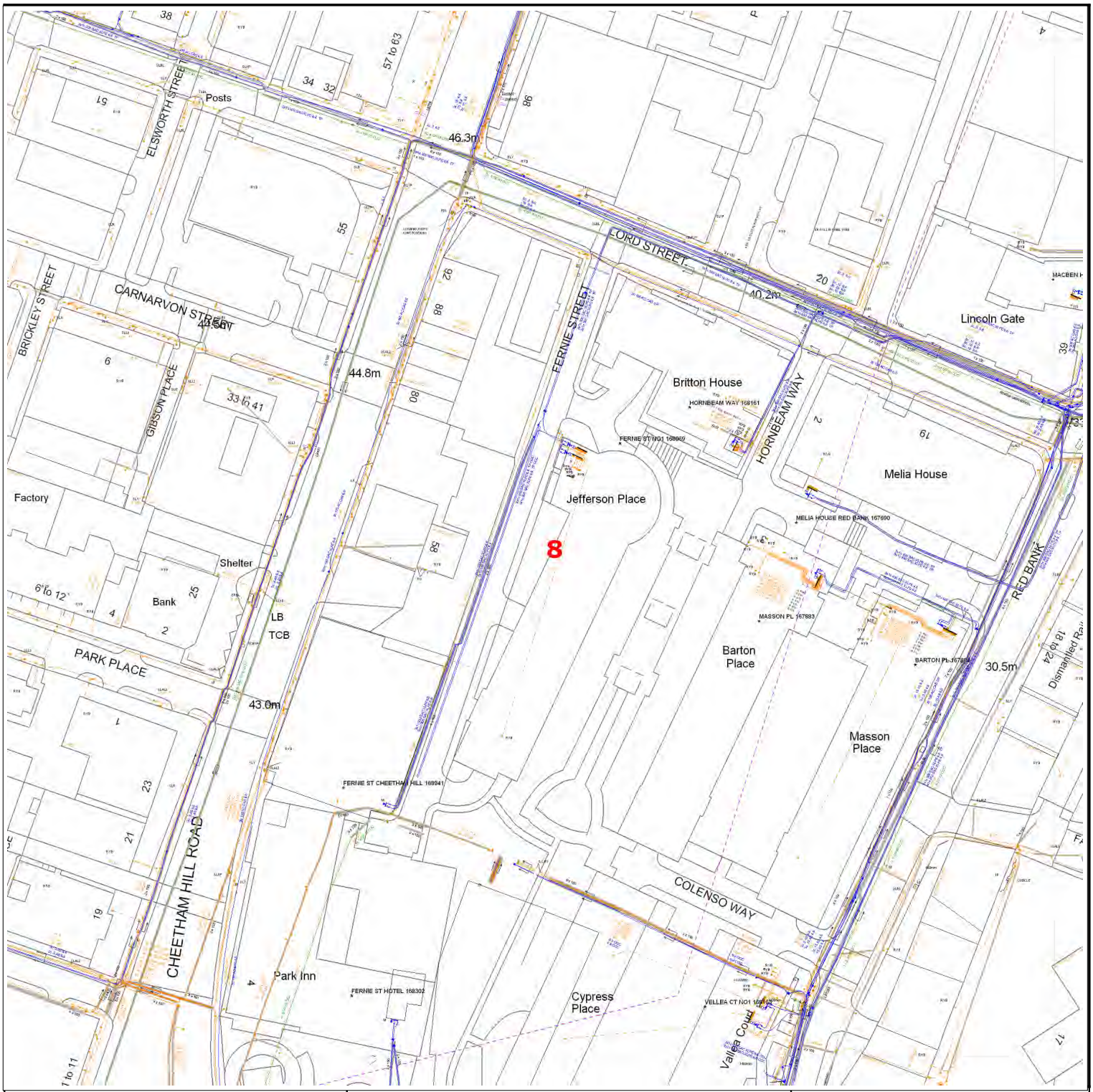
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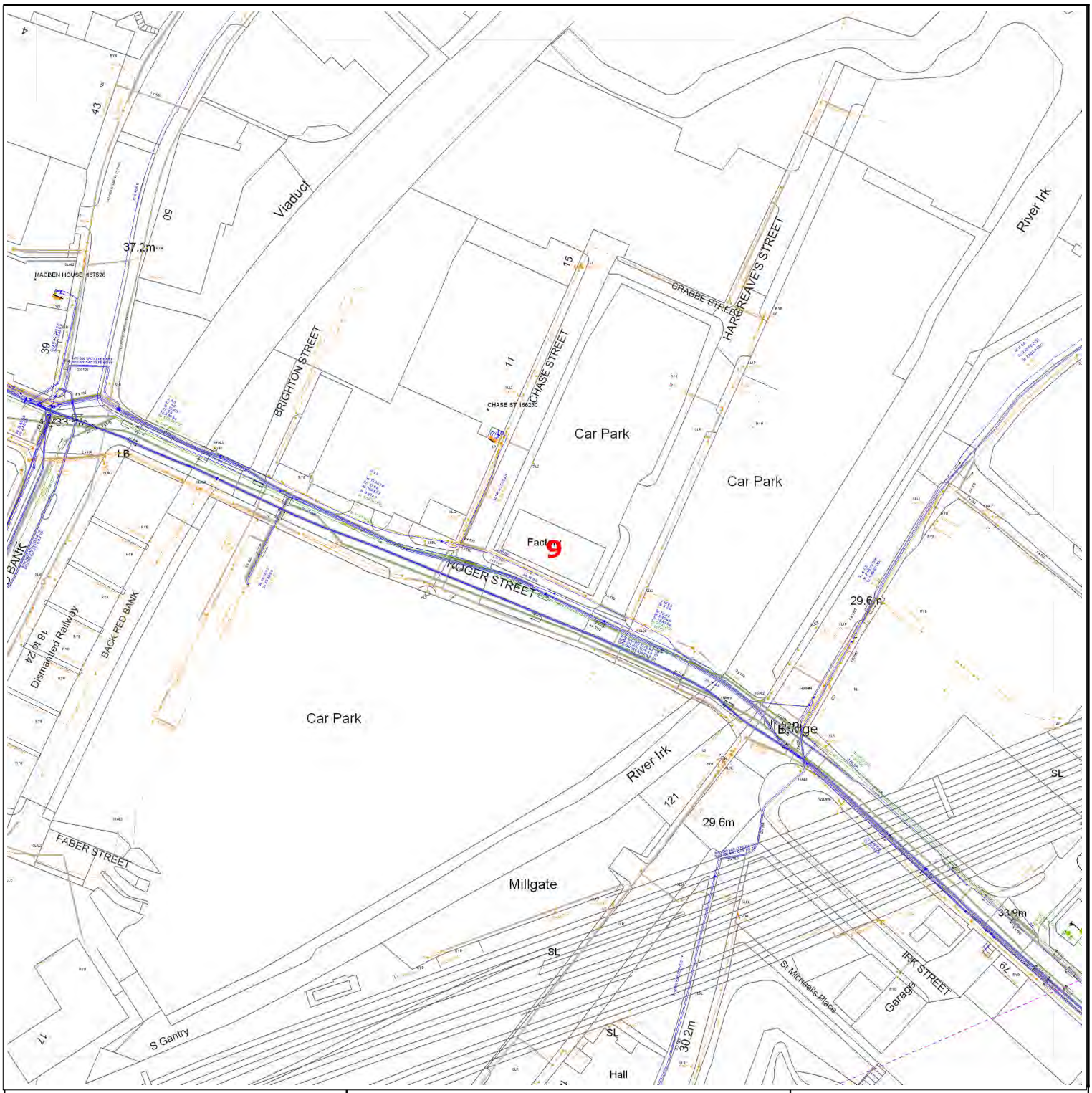
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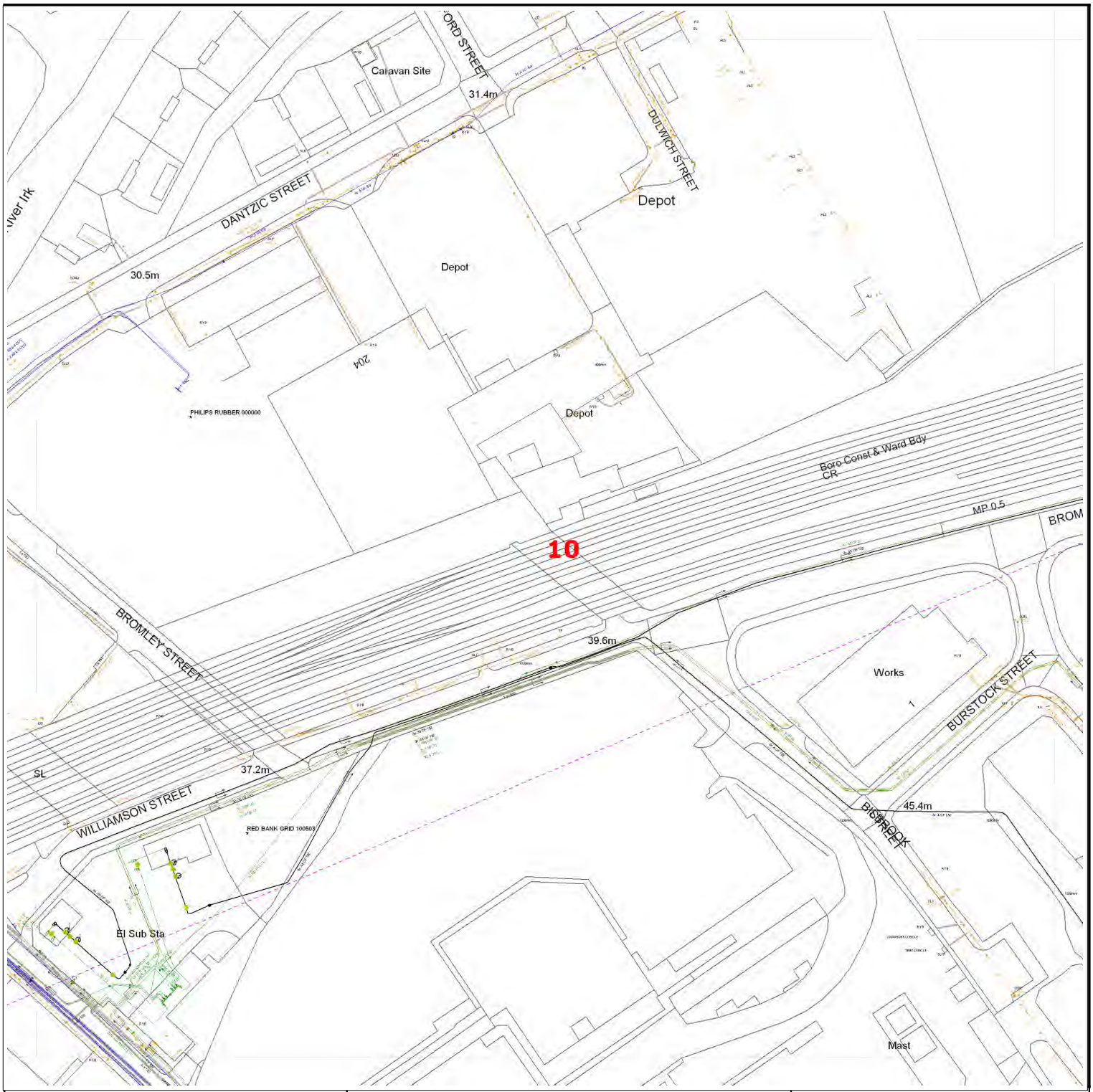
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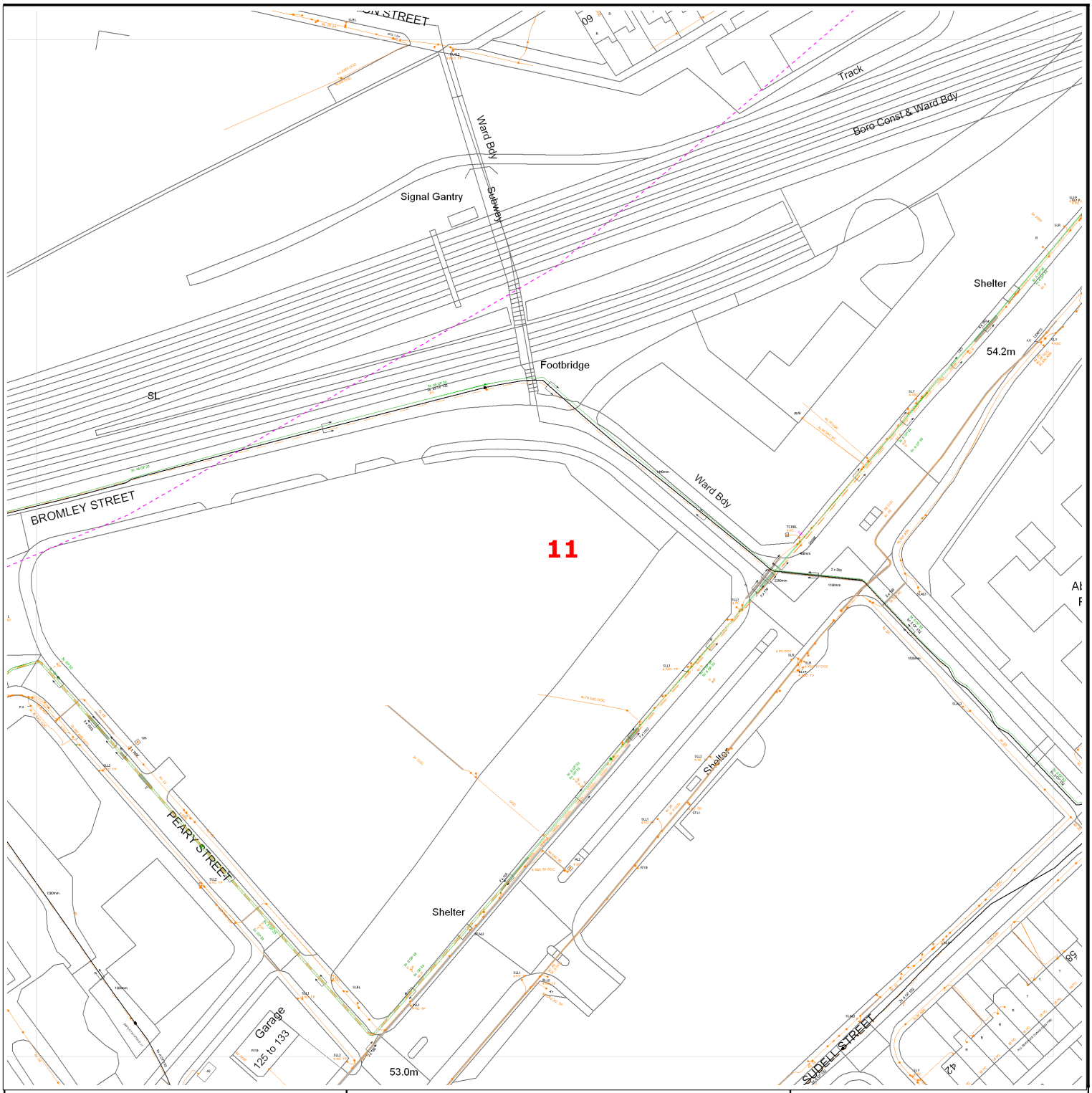
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Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

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



Requested by: Chrissy Elliott
Company: Atkins
Date Requested: 15/06/2021
Job Reference: 22398525
Your Scheme/Reference: 97079/HaK

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	

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

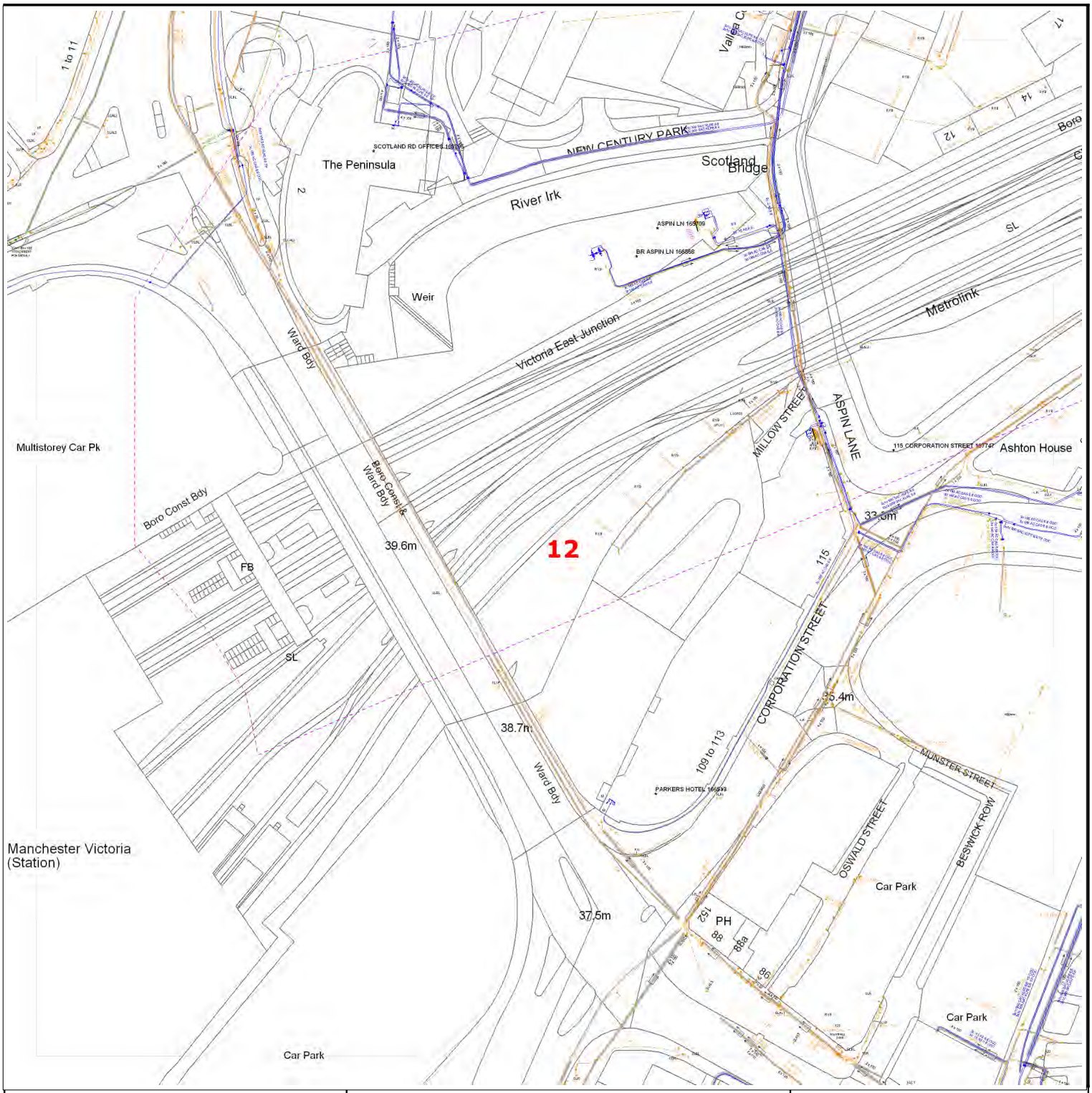
Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

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Phone: 0800 195 4141
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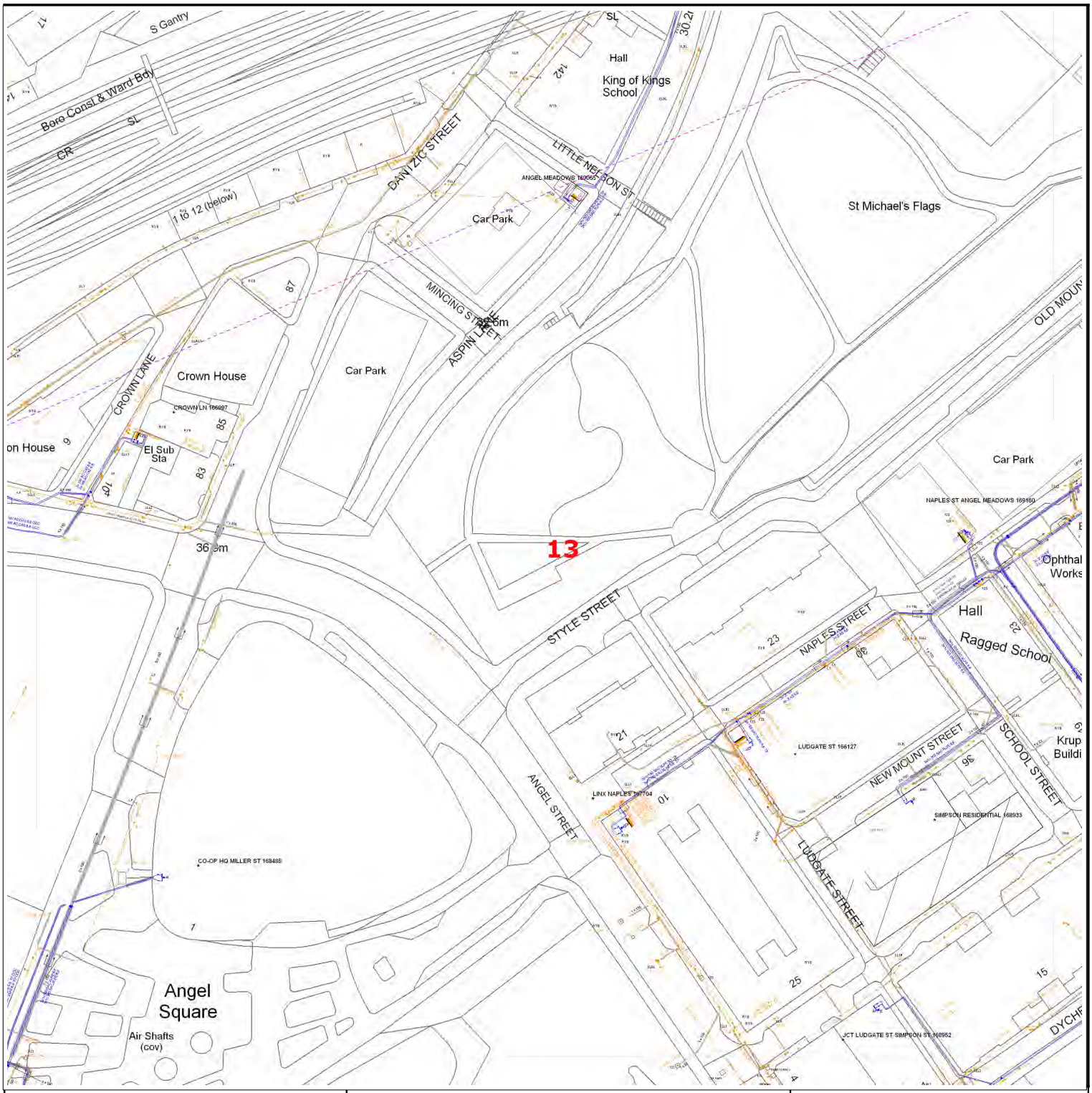
Scales on A4 paper:
1:1250 Area dig site
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1kV-6kV	Violet	
LV	Orange	
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Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Scales on A4 paper:
1:1250 Area dig site
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Conditions and information regarding electricity mains

These general conditions and precautions apply to the electricity distribution system of Electricity North West Limited.

Please ensure that a copy of these conditions is passed to your representative and contractor on site.

1. 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 a third party owns other than Electricity North West Limited

2. Before any machines are used all of Electricity North West's underground apparatus should be located by manual excavation taking the appropriate safety precautions in accordance with the **Health and Safety Executive Guidance note HS(G)47 "Avoiding danger from underground services"**. This contains advice to site personnel when working near underground services.

   Underground services, particularly electricity and gas, can be dangerous. Damage to electricity cables can cause a dangerous flash, leading to severe burns or even death. Gas leaks can cause fire or explosion.

   Damage can result from excavation or penetration of the ground, e.g. by a road pin.

   Underground services may be found in roads, footpaths and on sites. Always assume that they are present. Treat any services found anywhere as live.

   Accidents have happened because people have mistaken one service for another, e.g. black plastic covered electricity cables look like black plastic water pipes and cast iron gas and water mains look alike. Check before you act.

3. Before starting work you must:

   - Make sure you have plans of the underground services in the area. This may not always be possible for emergency or unforeseen works. **Remember that service connection cables and pipes from the main to building or streetlight may not be shown**.
   - Use a cable and pipe locator to trace electricity cables and metal pipes.
   - Look for signs of service connection cables or pipes, e.g. a gas meter or service connection entry into a house or a streetlight.
   - Hand dig trial holes (as many as necessary) to confirm the position of services in close proximity to the area of work.

4. When you start work:

   - Hand dig near buried services whenever possible. Spades and shovels are safer than picks, pins or forks.
   - Remember that cables may be embedded in concrete. Electricity cables embedded in concrete **must** either be made dead before the concrete is broken out or another safe way of working agreed with the cable owner.
   - Watch out for signs of services as work continues.
   - Report damage to a cable, pipe or pipe coating however slight.
   - Do not use hand held power tools within 0.5m of he marked position of an electricity cable, unless this is impracticable and the line of the cable has been identified by plans and positively confirmed by a locator.
   - Do not use hand held power tools directly over the marked line of cable unless:

     a) You have already found the cable at that position by careful hand digging beneath the surface and it is at a safe depth (at least 300mm) below the bottom of the surface to be broken, or

     b) Physical means have been used to prevent the tool striking it.

   - If an excavator is used near an electricity cable keep everyone clear of the bucket while it is digging. Buckets should not be used near cable – hand dig.
   - Do not use exposed services as a convenient step or handhold.
   - Do not handle or attempt to alter the position of an exposed service.
   - Do not install plant close to an existing service.
   - Do not build existing services into a manhole or other structure or encase them in concrete.

Would you also ensure that all site operators have this information and if any electrical apparatus is damaged, they/you should contact Electricity North West Limited fault desk on **0800 195 4141 (option 1)**

5. Overhead lines are not necessarily shown on the Electricity North West Limited cable records but may be present. In the event of work being carried out adjacent to overhead lines (including access, storage etc.) please always ensure strict adherence to the requirements of the **Health and Safety Executive's Document GS6 "Avoidance of Danger from Overhead Electric Lines"**.

   Extreme personal danger can result from contact, or near contact, with live conductors or overhead lines.

   Treat all overhead lines and other electrical apparatus as live. If in doubt, get advice.

6. Electricity North West Limited must be consulted if work is to take place within 15 metres of overhead lines on steel towers or 9 metres of overhead lines on wood, concrete or steel pylons. (All distances should be measure at ground level from a position estimated by eye to be vertically under the outermost conductor at a tower or pole position) Any person involved in work in the vicinity of overhead lines should:

   - Understand and follow the instructions given on safe working areas and methods of work.
   - Make sure that warning notices are in the cabs of machines working in the vicinity of an overhead line.
   - Make sure that barriers and warning notices are erected as required.
   - Not tip soil or stack material underneath overhead lines as this may reduce the clearance to an unsafe distance.
   - Make sure when handling or using platforms, scaffold, poles, piping, ladders, hand tools etc., that they are kept at a safe distance from overhead lines.
   - Not steady a suspended load, skip, hoist wire, slings etc., unless satisfied that there isn't any danger from overhead lines.
   - Remember that when mobile plant, such as a crane or excavator, is operating near overhead lines , the raising or slewing of the jib may introduce danger.
   - Always keep overhead lines in view when manoeuvring mobile plant.
   - Never operate a machine unless carefully guided by an experienced banksman.
   - Not approach or touch any broken or fallen conductors or any plant in contact with an overhead line before Electricity North West Limited confirms that conditions are safe. Warn others to keep well clear.

   Machine operators should note that: if a machine comes into contact with an overhead line and cannot be disentangled by backing off, remain seated in the cab and warn others to keep clear of the machine until Electricity North West Limited confirms that conditions are safe. If it is essential to leave the machine while it is in contact with the overhead line, for example if it catches fire, jump well clear – and **do not** attempt to climb down in the normal way nor touch any part of the machine when on the ground.

7. Electricity North West Limited provides approximate locations of its electricity mains or apparatus according to its records but these records are not necessarily accurate or complete and do not always show the position of private cables from mains to properties. No person or company shall be relieved from liability for any damage caused by reason of the actual positions and/or depths being different from those indicated.

8. Care should be taken when excavating near cables. Known road crossings are highlighted on the enclosed plans. Should any cable, or Electricity North West Limited apparatus indicated on the attached plans, be affected by your proposals please contact us as follows:

   Data Management
   Linley House
   Dickinson St
   Manchester
   M1 4LF

   Telephone: **0800 195 4141 (option 2)**

   Details of diversion costs, if any, will be provided on request once your firm proposals have been submitted.

9. Please note that service cables may be affected by some of the works being carried out on site.

   If any services do require temporary disconnection please phone **0800 195 4141 (option 2)** for domestic and commercial disconnection, so that arrangement can be made to disconnect before work commences on site.

10. For information regarding supplies please contact us on **0800 195 4141 (option 2)**.

11. Please note that cable records supplied may not be up to date, or may be incomplete, if the area concerned is a new site.

12. For information regarding wayleave or easement agreements contact:

Manchester	**08433 115157**
Preston	**08433 113969**
Kendal	**08433 115155**

13. The latest cable records are always available for inspection during normal working hours and you should satisfy yourself that the information you have is up to date at the time you commence work. This service is consistent with the requirement of Regulation 36 of the Electricity Supply Regulations and paragraph 79 of the New Road and Street Works Act.

    Please contact Data Management on **0800 195 4141 (option 2)** to arrange an appointment to view the records.

304 Bridgewater Place
Birchwood Park
Warrington
WA3 6XG

www.enwl.co.uk

Registered in England and Wales
Registered Number 2366949



From: plantenquiryservice@gtc-uk.co.uk
Sent: 15 June 2021 09:27
To: Utility Solutions GDC Requests
Subject: GTC Plant Enquiry - Ref- 1891801
Attachments: 1891801.png; GU-DPR-IG-0022 Safe working in the vicinity of utility networks.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Warning: GTC Apparatus Exists in This Area

Our Plant Enquiry Service Ref: 1891801
Your Enquiry Ref: 97079/HaK

Dear Chrissy,

Thank you for your enquiry concerning apparatus in the vicinity of your proposed work. For your records, the search area is shown in the attached map.

Please click on the links below to download copies of the relevant utility asset drawings locating our assets in the area which you identified. These drawings are grouped by our relevant network reference, should you need to contact us regarding any of our networks please quote this reference. Links to files will remain live for 10 days. If you do not download these files within this period you will need to submit a new enquiry – this will ensure you have an up-to-date copy of our asset records.

PLEASE NOTE: Where drawings are large, these have been provided in smaller segments. A drawing index is provided as the first file listed for each network reference (example of a network reference: N1234567) shown below. This is intended to help you find the drawing relevant to you more quickly. Please take care to ensure that you use the relevant drawings for every network listed below as we may have multiple networks and multiple utilities in this area.

N7039603

Gas

- N7039603-1_1_of_5.png
- N7039603-1_2_of_5.png
- N7039603-1_3_of_5.png
- N7039603-1_4_of_5.png
- N7039603-1_5_of_5.png

This information is for guidance only and the precise position of the plant must be established, prior to your works, using hand-digging methods only. The contractor will be held responsible for any damage caused to our asset. Please note our assets now include those owned and operated by:

- GTC Pipelines Limited
- Independent Pipelines Limited

- Quadrant Pipelines Limited
- Electricity Network Company Limited
- Independent Power Networks Limited
- Independent Water Networks Limited
- Open Fibre Networks Limited
- Independent Community Heating Limited

If you have any queries or require any further information please do not hesitate to contact us.

All works in the vicinity of our networks should be undertaken in accordance with the attached document "GU-DPR-IG-0022: Safe working in the vicinity of utility networks". Reference should also be made to HSG47 Avoiding Danger from Underground Services.

Important: The area of your proposed works may contain gas mains operating at Medium and Intermediate Pressure tiers or electric cables operating at High Voltage – please refer to the network drawings included with this email. If your proposed works are likely to involve excavation within 10 metres of any of these assets, including but not limited to gas governors and electric substations you MUST inform GTC Plant Enquiries by calling 01359 240363 and quoting your Plant Enquiries Service Reference number.
Important: Drawings provided by this service may include utility assets not owned or managed by GTC. Conversely our drawings will NOT display assets from all third parties. It is your responsibility to ensure you have requested information from all utility asset owners.

Gas Escape or Damage MUST be reported on 0800 111 999. National Grid / DNGT will attend to make safe and repair.
Electricity Network Damage MUST be reported to ENC on 0800 032 6990.
Water Network Damage MUST be reported to IWNL on 02920 028 711
Fibre Network Damage MUST be reported to IFNL on 0845 051 1669

Thank you for using the GTC Plant Enquiries Service.

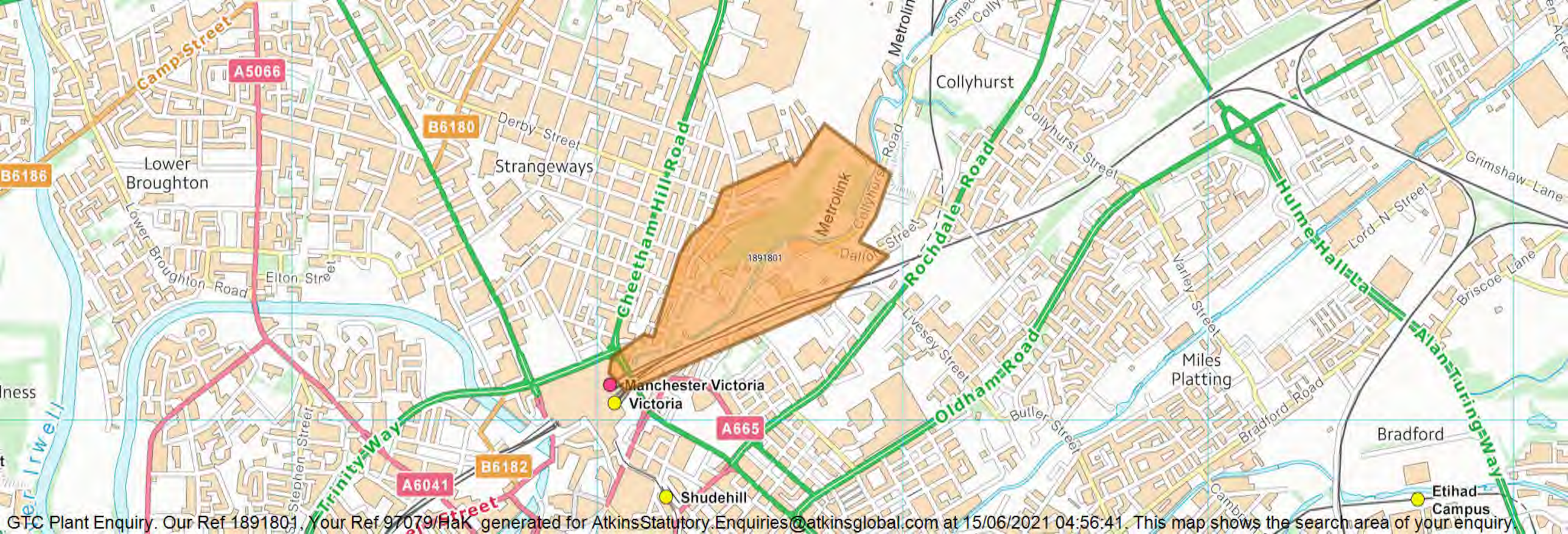
Your sincerely,

GTC Plant Enquiry Service

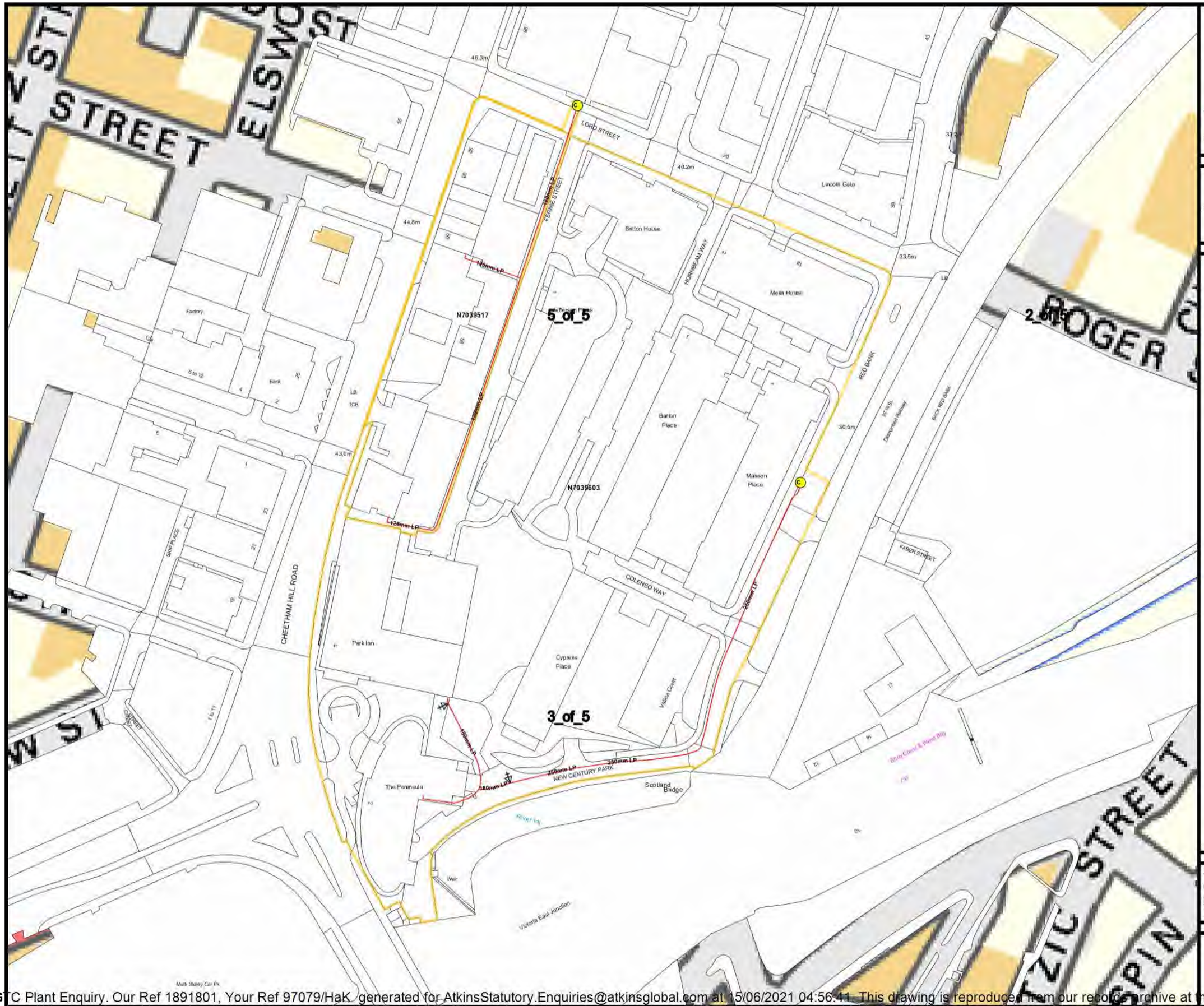
GTC
Synergy House
Woolpit Business Park
Woolpit
Bury St Edmunds
Suffolk, IP30 9UP
Tel: 01359 240363
plant.enquiries@gtc-uk.co.uk

NOTE:
This E-Mail originates from GTC, Synergy House, Woolpit Business Park, Woolpit, Bury St Edmunds, Suffolk, IP30 9UP
VAT Number: GB688 8971 40. Registered No: 029431.

DISCLAIMER



GTC Plant Enquiry. Our Ref 1891801, Your Ref 97079/HaK generated for AtkinsStatutory.Enquiries@atkinsglobal.com at 15/06/2021 04:56:41. This map shows the search area of your enquiry.



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N

Legend

Gas Pipe
- LP Pipe
- MP Pipe
- IP or Service Pipe

Gas Node
- Connection Point
- Reducer
- Capend

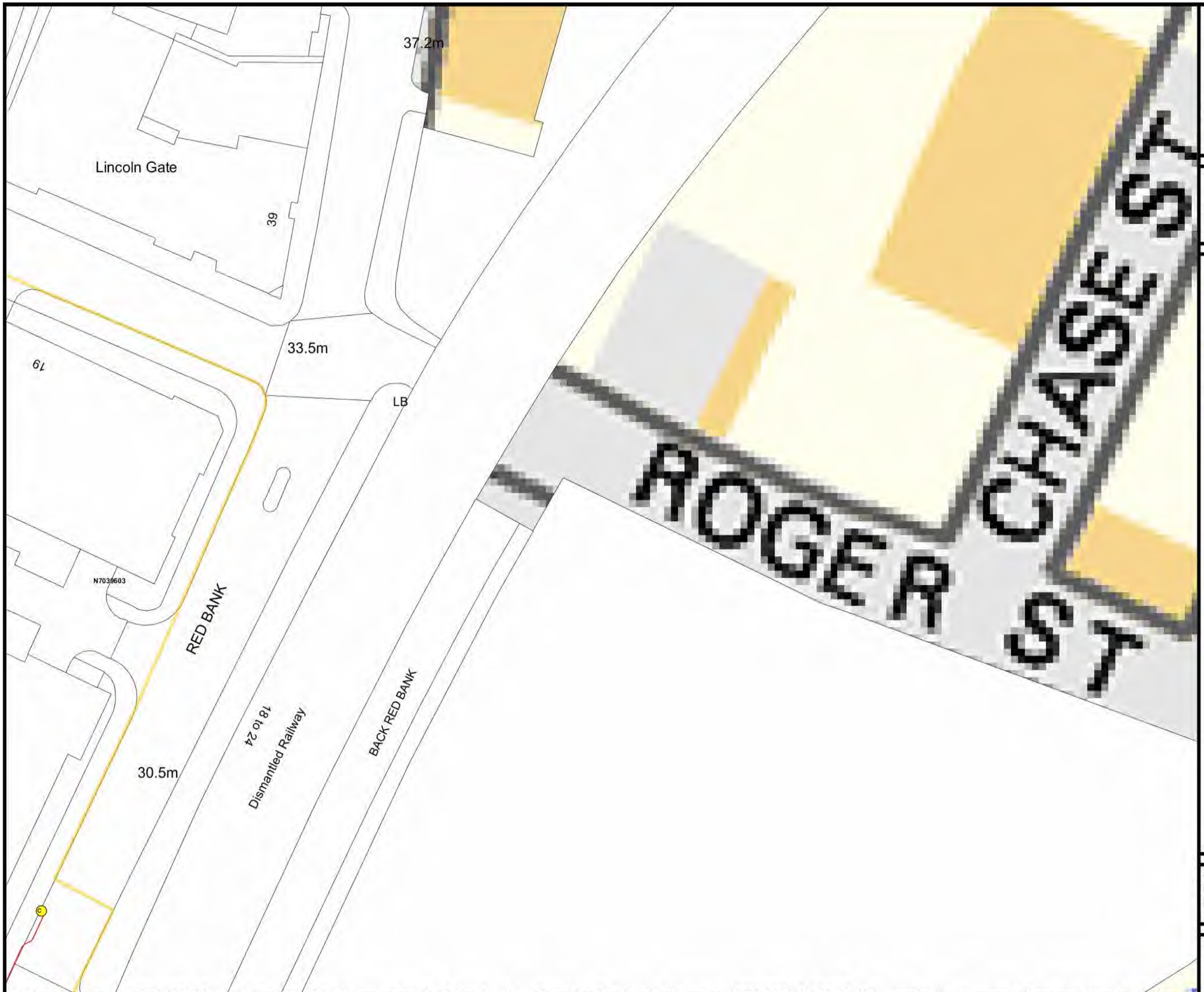
Gas PRI

0 — 53.7m

SCALE: 1:1244 **A3**
O.S.REF: 384176,399318
N7039603_1_of_5 Gas
Date: 02-08-2014

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Energy House
Woolpit Business Park
Woolpit
Suffolk IP30 9UP
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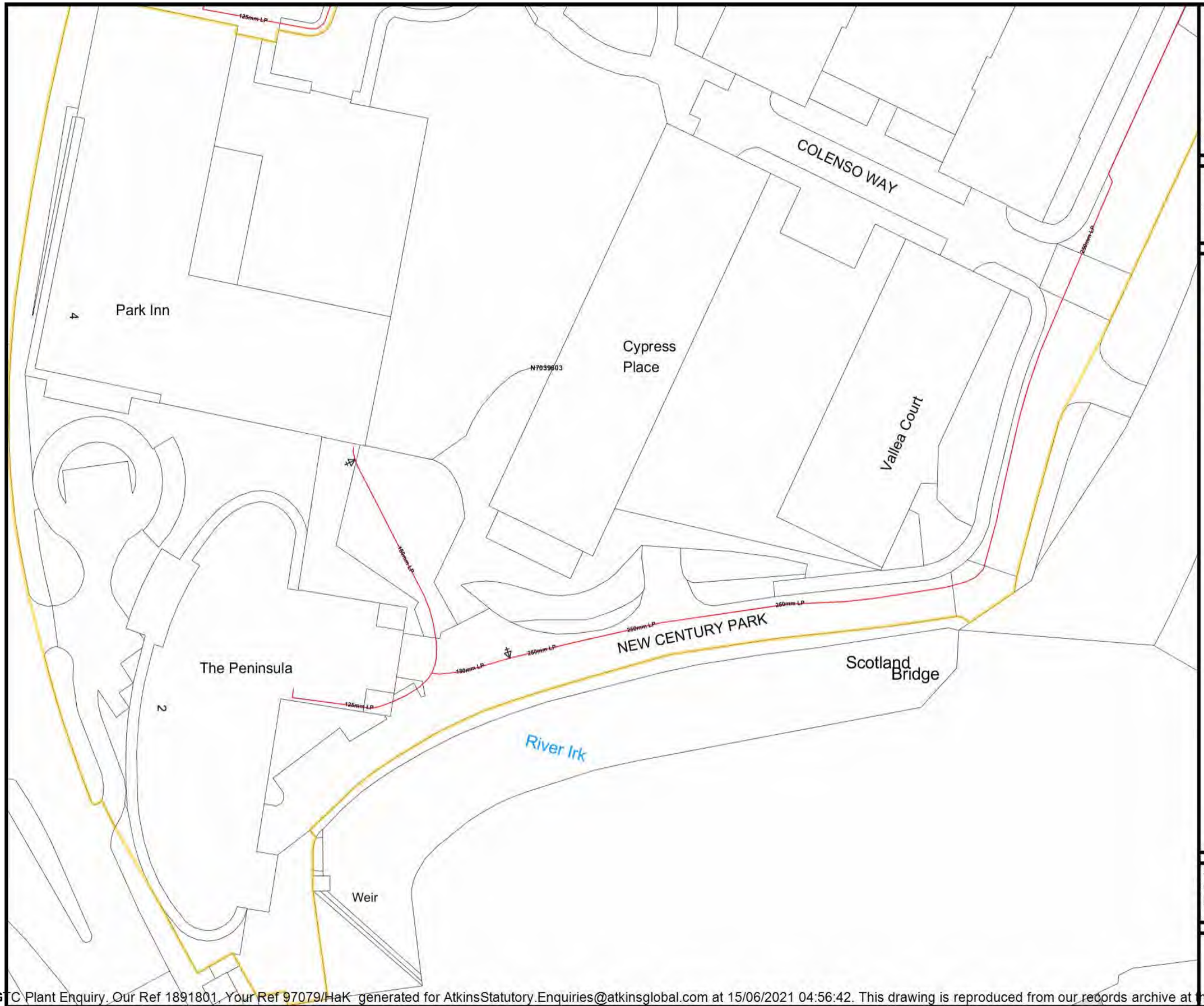
Gas PRI

0 21.6m

SCALE: 1:500 **A3**
O.S.REF: 384328,399384
N7039603_2_of_5 Gas
Date: 02-08-2014

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N

Legend

Gas Pipe
- LP Pipe
- MP Pipe
- IP or Service Pipe

Gas Node
- Connection Point
- Reducer
- Capend

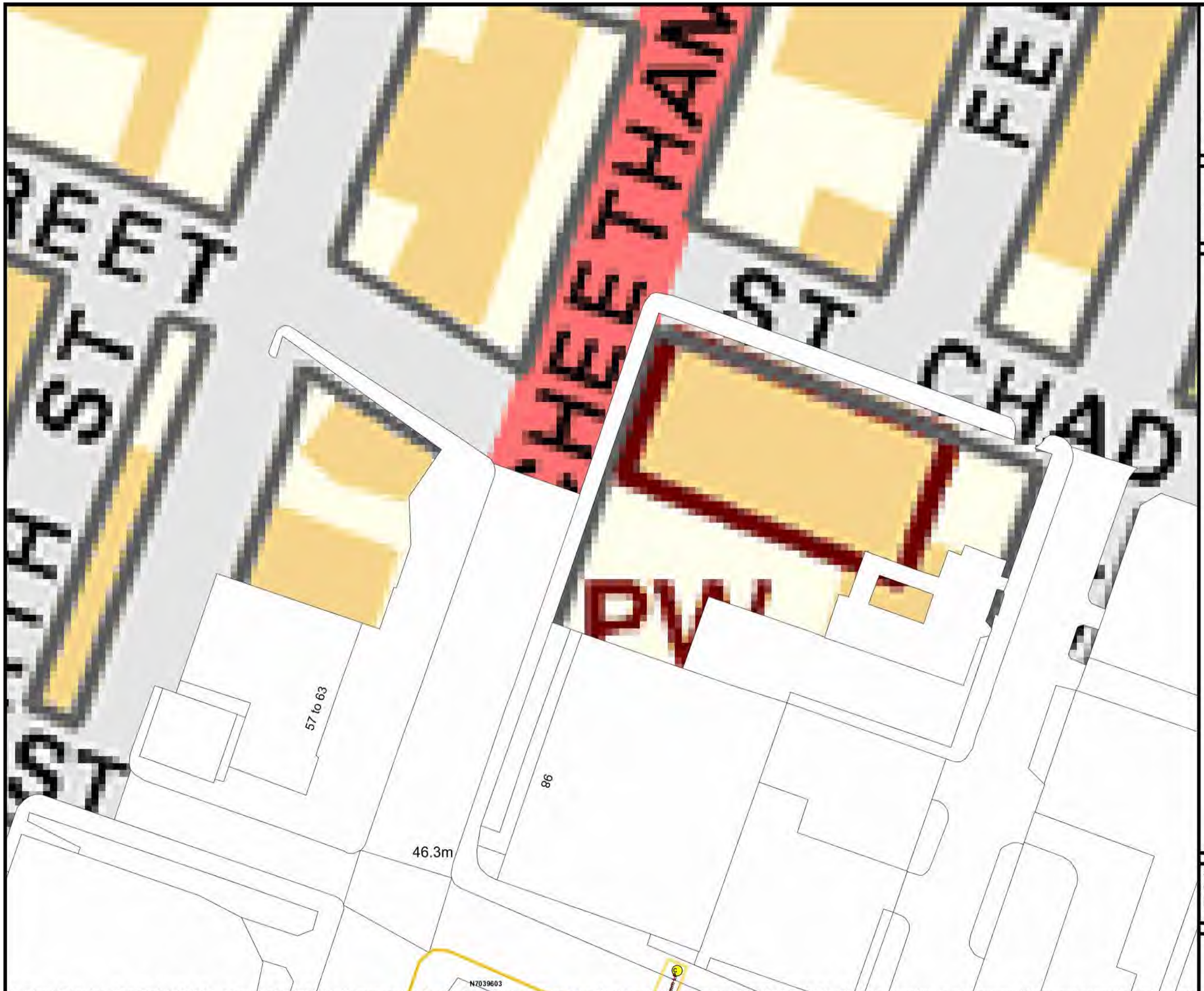
Gas PRI

0 21.6m

SCALE: 1:500 **A3**
O.S.REF: 384156,399242
N7039603_3_of_5 Gas
Date: 02-08-2014

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N

Legend

Gas Pipe
- LP Pipe
- MP Pipe
- IP or Service Pipe

Gas Node
- Connection Point
- Reducer
- Capend

Gas PRI

0 — 21.6m

SCALE: 1:500 **A3**
O.S.REF: 384156,399525
N7039603_4_of_5 Gas
Date: 02-08-2014

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...leading utility networks

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This plan must be available on site when excavation is taking place. The information shown on this plan is given without obligation or warranty. The accuracy thereof cannot be guaranteed. Where service cables and apparatus etc, are not shown, their presence must be anticipated. To the maximum extent permitted by law, no liability of any kind whatsoever (including liability or negligence) is accepted by GTC or the asset owners, their employees, contractors, agents or servants for any error or omission. The actual position of apparatus must be verified and established on site before any mechanical plant is used. Mechanical excavators should not be used within 0.5m of any apparatus. The information provided relates only to plant previously owned by companies within the Inexus group. It is advised that other utilities may have apparatus in the area and therefore must be contacted regarding details of their apparatus. This drawing may not include gas services.

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N

Legend

Gas Pipe
- LP Pipe
- MP Pipe
- IP or Service Pipe

Gas Node
- Connection Point
- Reducer
- Capend

Gas PRI

0 — 21.6m

SCALE: 1:500 **A3**
O.S.REF: 384156,399384
N7039603_5_of_5 Gas
Date: 02-08-2014

A group member of
Brookfield Utilities UK
Energy House
Woolpit Business Park
Woolpit
Suffolk IP30 9UP
...leading utility networks

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SAFE WORKING IN THE VICINITY OF UTILITY NETWORKS

(Refer to the HSE Guidance Document HSG47)

General

1. It is imperative that all works are carried out in accordance with the guidance provided by the HSE in their document HSG47 "Avoiding Danger from Underground Services", ISBN 0-7176-1744-0. No party should carry out any excavation works or other intrusive works such as piling, blasting or demolition without following the guidance in HSG47.

2. We own gas, electricity, water and fibre apparatus located in the highway, private property and through the countryside. Some plant may be located in land for which a wayleave or easement has been granted & there may be no surface evidence of the presence of apparatus.

3. Ensure that you have obtained detailed plans of existing and proposed gas, electricity water and fibre networks.

4. The position of the networks should be pinpointed as accurately as possible by reference to the plans and by means of a locating device, which has been tested and calibrated within the last twelve months.

   Excavation work should be carried out where applicable, and carefully follow recognised safe digging practices. Once a locating device has been used to determine position and route, excavation may proceed; trial holes should be dug using suitable hand tools to confirm the position of buried networks. During excavation the locating device should be reused to check position and route of buried apparatus.

5. Hand-held power tools can damage buried apparatus and should be used with care until the exact position has been determined. They may only be used to break a paved or concrete surface above the network, unless there are any indications that the network is particularly shallow, in such circumstances, accuracy of plant location is determined and excavation initiated adjacent to the apparatus.

6. No manhole, chamber or other structure should be built over, around or under the network. Such structures, other pipes, ducts and cables should be laid to provide a minimum clearance from the network of 300mm or 1.5 times the diameter of the network, whichever is the greater. No work should be carried out if this minimum clearance cannot be met or which results in a reduction of cover or protection over the network, without first consulting GTC.

7. Where an excavation uncovers a network apparatus the backfill should be adequately compacted, particularly beneath the network, to prevent any settlement, which would subsequently damage the network. Backfill material adjacent to the network should be selected fine material or sand, containing no stones, bricks or lumps of concrete etc. and should be suitably compacted to give comparable support and protection to that provided before excavation. No power compaction should take place until 200mm cover of selected fine fill has been suitably compacted by hand tools.

8. If the road construction is close to the top of the network, GTC should be asked about necessary precautions. The road construction depth should not be reduced without permission from the local Highway Authority.

9. Costs incurred by GTC through direct or consequential damage will be recharged.

Precautions for Gas Networks

10. Plans do not always show the presence of gas service pipes (from the gas main to premises) but their existence should be assumed.

11. The depth of cover for gas mains is normally 750mm in carriageways and grass verges and 600mm in footways. The depth of cover for gas services is normally 450mm. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

12. Plastic gas pipes should be located by hand digging before mechanical excavation begins. When the positions and depth of the pipes have been determined, work can proceed.

13. The danger created by damaging a gas pipe with an excavator is much greater than if the damage is done with a hand-held power tool (the opposite is true for work near electricity cables and this is reflected in the different safe digging practices). Gas pipes may have projections such as valve housings, which are not shown on the plans and to allow for this mechanical excavators should not be used within 500mm of a gas pipe.

14. If a gas leak is suspected, the following action should be taken immediately:

    - Remove all people from the immediate vicinity of the escape. If the service connection to a building or the adjacent main has been damaged, warn the occupants to leave the building, and any adjoining building, until it is safe for them to return. It is important to note that a mechanical excavator may not only cause damage/leakage at the point of impact. For example, damage to a service connection outside the building may result in further, unseen damage to the connection inside the building. Gas leaking from the damage inside or gas travelling along the line of the service connection pipe from outside the building may cause a build-up of gas within the building.
    - Prohibit smoking, and extinguish all naked flames and other sources of ignition i.e. stop excavator and compressor engines within at least 5.0m of the leak.
    - Inform National Grid by dialling **0800 111 999**
    - Remain on site.
    - Assist National Grid staff, Police or Fire Services as requested.

15. Where gas pipes cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress in the pipe. For pipes parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the pipe from the excavation, the type of soil and any excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the gas pipe or cause excessive loading over the gas pipe then GTC must be consulted.

16. No concrete or other hard material should be placed or left under or adjacent to any gas pipe as this can cause pipe fracture at a later date. Concrete backfill should not be used within 300mm of a gas pipe.
17. Where an excavation uncovers a gas pipe with a damaged wrapping, GTC should be told, so that repairs can be made to prevent future corrosions and leakage.
18. Pipe restraints or thrust blocks close to gas mains should never be removed.
19. Anyone who carries out work near underground gas plant should observe any specific requirements made by the site manager, and ensure that access to the plant by National Grid Gas and GTC staff is available at all times. No unauthorised repairs to gas pipes should be made.
20. Where excavation is within 5 metres proximity to above or below ground pressure control equipment, ground workers must be aware of the possibility of encountering small impulse pipe work that is more susceptible to damage.
21. Where PE pipes and cables have been exposed and it is intended hot work (e.g. welding, grinding, etc) be carried out, contact must be made with GTC to confirm additional precautions and actions that may require to be undertaken.
22. GTC should be consulted if it is intended to carry out any of the following activities:
    - using explosives within 30m of gas pipes or 400m of gas pressure reduction equipment
    - piling or boring within 15m of gas plant
    - excavating within 10m of pressure reduction equipment
    - reducing the cover or protection of a gas pipe
    - carrying out nearby deep excavations
    - working near our intermediate pressure (IP) mains.

Precautions for Electricity Networks

23. Plans do not always show the presence of electric service cables (from the electricity main to premises) but their existence should be assumed.
24. In most cases there will be no permanent surface marker posts or other visible indication of the presence of a buried cable. Even if no cables are shown on plans or detected by a locator, there may still be cables present, which could be live and a close watch should be kept for any signs which could indicate their presence such as marker tape, tape tile, concrete tiles and wooden battens. Any marker which is disturbed by our excavations must be replaced once work is completed.
25. Typically underground cables are laid in trenches between 450mm and 1.0m deep, although some high voltage cables will be deeper, however, depths should never be assumed.
26. A cable is positively located only when it has been safely exposed. Even then, digging should still proceed with care as there may be other cables adjacent or lower down.

27. Occasionally, cables are terminated in the ground by means of a seal, sometimes with external mechanical protection. These "pot ended" or "bottle ended" cables should be treated as live and should not be assumed to be abandoned or disused. They can be difficult to detect with locators even when "live".

28. Using hand held power tools to break up hard surfaces often leads to accidents. Where practicable, such power tools should only be used 500mm or more away from the indicated line of a cable buried in or below a hard surface. Having done so, the cable should then be positively located by careful hand digging under the hard surface. The hard surface should be gradually removed until the cable is exposed. If the cable is not exposed then it must be assumed to be embedded within the surface. Where possible a cable locator should be used as a depth guide down the side of the excavation.

29. Because of the difficulty in confirming depth, hand held power tools should never be used over the cable unless either:

    - the cable has already been exposed by digging under the surface to be broken out and it is at a safe depth (at least 300mm) below the bottom of the hard surface material; or
    - physical precautions have been taken to prevent the tool striking the cable.

30. Excavating close to electricity cables buried in concrete is dangerous and should not be undertaken unless the cable(s) have been isolated. For this reason alone electricity cables should not be buried in concrete.

31. Using mechanical means to break up concrete can cause damage to cables and if the cable is live, anyone present is likely to be injured.

32. Where mechanical excavators are used in the possible vicinity of underground cables, the work should be arranged so that damage to cables is avoided so far as is reasonably practicable and so that everyone is kept well clear of the excavator bucket while it is digging. Drivers should have been instructed to stay in the cab if a cable is struck. If they have to leave the cab, they should jump clear. If drivers climb down, they may be electrocuted. When a cable is struck, a watch should be kept on the machine and no one should go down into the excavation or approach the mechanical excavator or the cable until GTC are contacted and arranged for the damaged cable to be made safe.

33. Where cables have been exposed:

    - any damage should be reported to GTC immediately on **0800 032 6990** and work should not be undertaken in the vicinity of a damaged cable until GTC has investigated its condition;
    - for more than 1.0m and they cross a trench, support should be provided. If the exposed cable length is shorter than 1.0m support should still be considered if joints have been exposed or the cable appears otherwise vulnerable to damage. Where advice and help is needed contact GTC;

- Suitable precautions should be taken to prevent damage from on-going work in the excavation. This may involve for example the use of physical means (e.g. timber boards, sandbags etc) to prevent mechanical damage. Materials or equipment which could damage or penetrate the outer sheath of the cable should not be used. Cables lying in the bottom of an excavation are particularly vulnerable and should be protected by nail free wooden planks, troughing or other suitable means;
- cables should not be moved aside unless the operation is supervised by GTC;
- Precautions should be taken to prevent access by members of the public.

34. GTC should be consulted if it is intended to carry out any of the following activities:

- using explosives within 30m of plant or substations piling or boring within 15m of electric plant
- excavating within 10m of a substation
- carrying out nearby deep excavations
- working near our HV plant.

Precautions for Water Networks

35. Plans do not always show the presence of water service pipes (from the water main to premises) but their existence should be assumed.

36. The depth of cover for water mains is normally 750mm in carriageways and grass verges and 750mn footways. The depth of cover for water services is normally 450mm. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

37. Water mains should be located by hand digging before mechanical excavation begins. When the positions and depth of the pipes have been determined, work can proceed.

38. The danger created by damaging a water pipe with an excavator is much greater than if the damage is done with a hand-held power tool (the opposite is true for work near electricity cables and this is reflected in the different safe digging practices). Water pipes may have projections such as valve housings, which are not shown on the plans and to allow for this mechanical excavators should not be used within 500mm of a water pipe.

39. If a water leak is suspected, the following action should be taken immediately:

- Remove all people from the immediate vicinity of the damage. It is important to note that a mechanical excavator may not only cause damage/leakage at the point of impact. For example, damage to a service connection outside the building may result in further, unseen damage to the connection inside the building.
- Shut down all working plant and machinery in the vicinity of the damage

- Inform IWNL by dialling **02920 028 711**.
- Remain on site.
- Do not attempt to make a repair.
- Assist GTC, approved contractors and Police or Fire Services as requested.

40. Where water pipes cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress in the pipe. For pipes parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the pipe from the excavation, the type of soil and any excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the water pipe or cause excessive loading over the water pipe then GTC must be consulted.

41. No concrete or other hard material should be placed or left under or adjacent to any water pipe as this can cause pipe fracture at a later date. Concrete backfill should not be used within 300mm of a water pipe.

42. Where an excavation uncovers a water pipe with a damaged wrapping, GTC should be told, so that repairs can be made to prevent future corrosions and leakage.

43. Pipe restraints or thrust blocks close to water mains should never be removed.

44. Anyone who carries out work near underground water plant should observe any specific requirements made by the site manager, and ensure that access to the plant by GTC staff is available at all times. No unauthorised repairs to water pipes should be made.

45. Where PE pipes and cables have been exposed and it is intended hot work (e.g. welding, grinding, etc) be carried out, contact must be made with GTC to confirm additional precautions and actions that may require to be undertaken.

46. GTC should be consulted if it is intended to carry out any of the following activities:
    - using explosives within 30m of plant
    - piling or boring within 15m of water plant
    - excavating within 10m of water asset structures
    - reducing the cover or protection of a water main or service
    - carrying out nearby deep excavations

Precautions for Fibre Networks

47. Plans may not always show the presence of fibre ducts but their existence should be assumed if GTC advise they have fibre services deployed in the given area. Any planned excavation work should only proceed with due care and attention.

48. Chambers with IFNL marked lids can be used as an onsite indictor that GTC have fibre plant deployed in a given area however an exclusion of their presence does not necessarily mean there is no plant present.

49. In most cases there will be no permanent surface marker posts or other visible indication of the presence of a buried fibre duct. Even if no ducts are shown on plans there may still be ducts present which could have live fibre service installed. A close watch should be kept for any signs which could indicate duct presence such as marker tape. Any marker which is disturbed by our excavations must be replaced once work is completed.

50. The depth of cover for fibre duct is normally 350mm in footways and grass verges, 600mm in carriageways and 1000mm in agricultural deployments. Remember these covers are to finished level, you may be working in an area, which will be made up or lowered at a later date.

51. Fibre ducts should be located by hand digging before mechanical excavation begins. When the positions and depth of the ducts have been determined, work can proceed. Even then, digging should still proceed with care as there may be other ducts adjacent or lower down.

52. If fibre duct damage is suspected, the following action should be taken immediately:

    - Remove all people from the immediate vicinity of the damage. It is important to note that a mechanical excavator may not only cause damage at the point of impact. For example, damage to a fibre connection outside the building may result in further, unseen damage to the connection inside the building.
    - Shut down all working plant and machinery in the vicinity of the damage
    - Inform IFNL NOC immediately on **0845 051 1669**.
    - Remain on site.
    - Do not attempt to make a repair.

53. Where fibre ducts cross or are parallel and close to excavations, changes in backfill etc. may cause differential ground settlement and increased stress on the duct. For ducts parallel and close to excavations, the degree of risk depends upon the depth of the excavation, the distance of the duct from the excavation, the type of soil and any excessive loading from heavy construction plant and materials. Wherever excavation works may affect the support of the fibre duct or cause excessive loading over the fibre duct then GTC must be consulted.

54. No concrete or other hard material should be placed or left under or adjacent to any fibre duct as this can cause damage to the duct at a later date. Any backfill should comply with the requirements of NRSWA. Concrete backfill should not be used within 300mm of a fibre duct.

55. Anyone who carries out work near underground fibre plant should observe any specific requirements made by the site manager, and ensure that access to the plant by GTC staff is available at all times. No unauthorised repairs to fibre ducts should be made.

56. Where fibre ducts have been exposed and it is intended hot work (e.g. welding, grinding, etc) be carried out, contact must be made with GTC to confirm additional precautions and actions that may require to be undertaken.

57. GTC should be consulted if it is intended to carry out any of the following activities:

- using explosives within 30m of plant or fibre asset structures
- piling or boring within 15m of fibre plant
- excavating within 10m of fibre asset structures (including the OSCP)
- reducing the cover or protection of a fibre duct
- carrying out nearby deep excavations



Our Ref: Ref shown on map

Date of issue: shown on map

email: nnhc@openreach.co.uk

Dear Customer,

NR & SW ACT 1991 – PROPOSED WORKS AT: **SITE LOCATION**

Prior to commencement of work: For free onsite guidance and accurate up to date location of BT Apparatus please contact our Plant Protection Service by the following methods:-

Email the Click Before You Dig Team CBYD@openreach.co.uk
Visit the Click Before You Dig Website www.openreach.co.uk/cbyd

Thank you for your request of **/**/** describing the above proposals.

Enclosed are copies of our drawings marked up to show the approximate locations of BT apparatus in the immediate vicinity of your works. It is intended for general guidance only. No guarantee is given of its accuracy.

The drawings are valid for 90 days from the date of issue and should not be relied upon after this time period has expired.

When planning excavation work or other works near to BT apparatus, please be mindful our apparatus may exist at various depths and may deviate from the marked route.

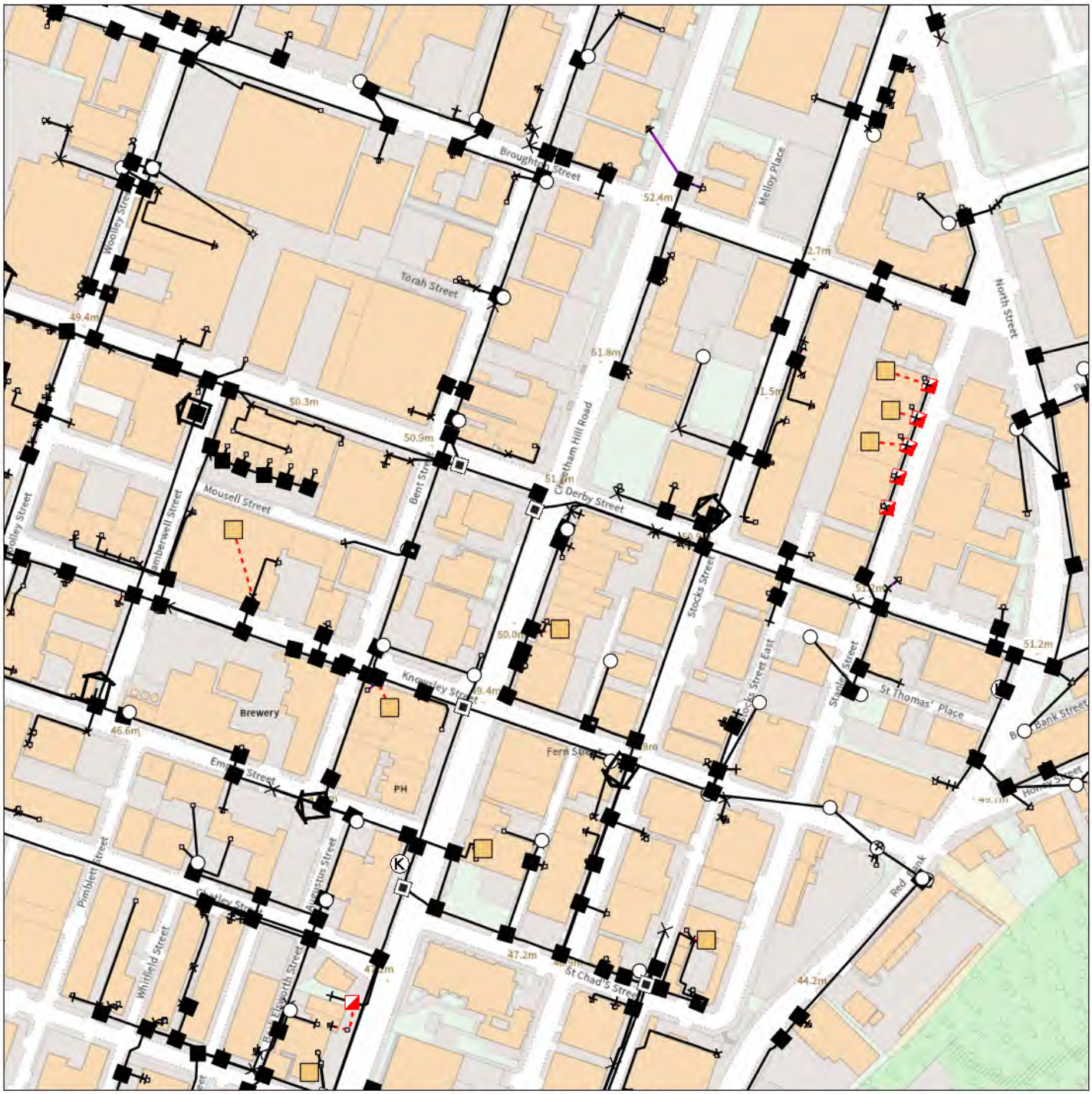
To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of BT apparatus. If scaffolding is erected, please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by the scaffolding.

In the event of BT apparatus being in the area of your works we recommend that your plant/vehicle crossing is either resited, or apply for a budget estimate by submitting detailed plans to our Network Relocation Team at https://www.ournetwork.openreach.co.uk/altering-our-network.aspx

Yours faithfully,

Julie Cullum
NNHC & MBE Manager

Maps by email Plant Information Reply



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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	X	Built	
Duct Tee	▲	Planned	
Building		Inferred	
Kiosk	K	Duct	

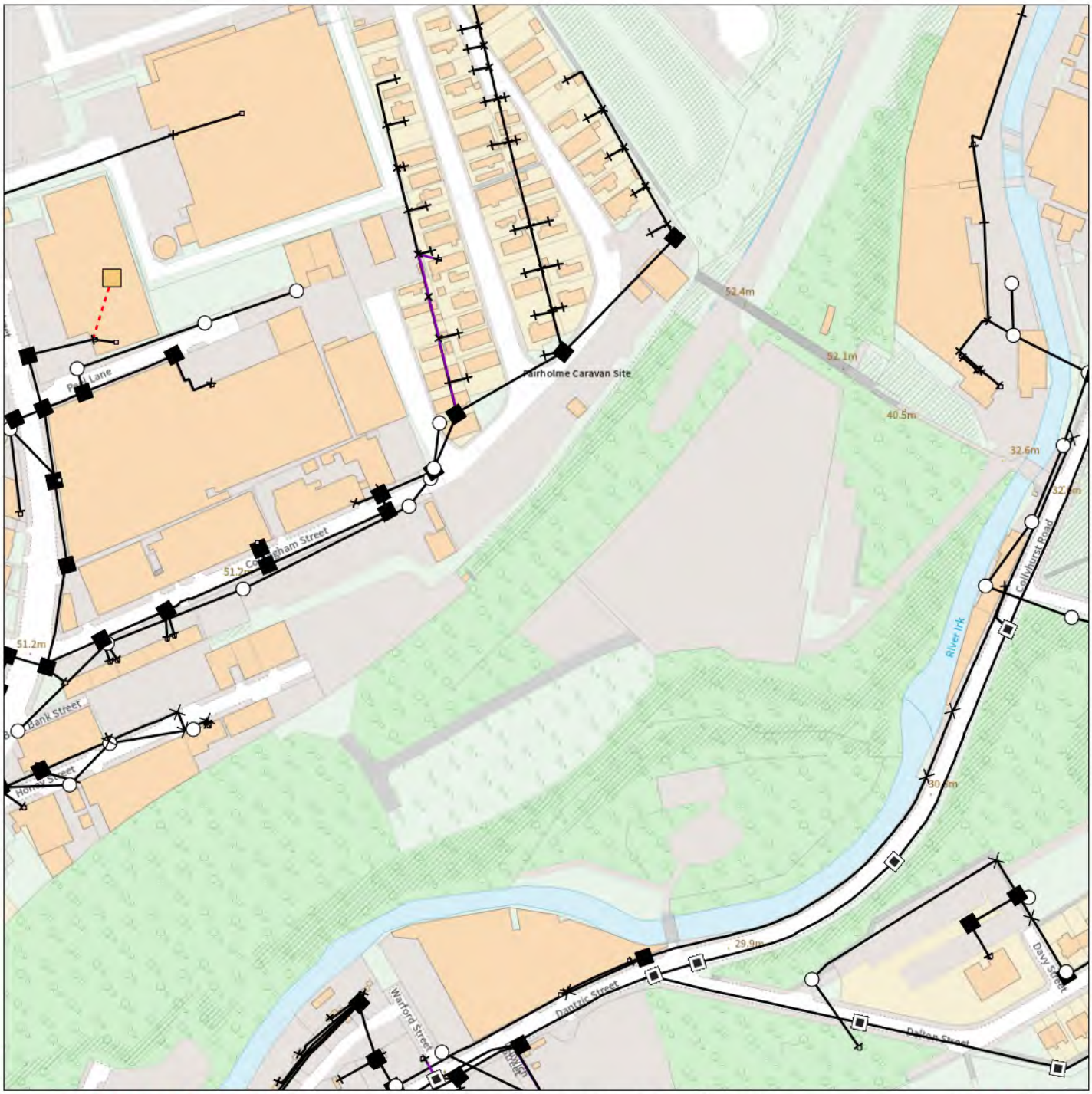
Other proposed plant is shown using dashed lines.
BT Symbols not listed above may be disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

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

BT Ref : LDW11072K
Map Reference : (centre) SJ8422099731
Easting/Northing : (centre) 384220,399731
Issued : 15/06/2021 23:07:13

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

Maps by email Plant Information Reply



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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.
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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 : YZI11074F
Map Reference : (centre) SJ8468499731
Easting/Northing : (centre) 384684,399731
Issued : 15/06/2021 23:07:18

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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	

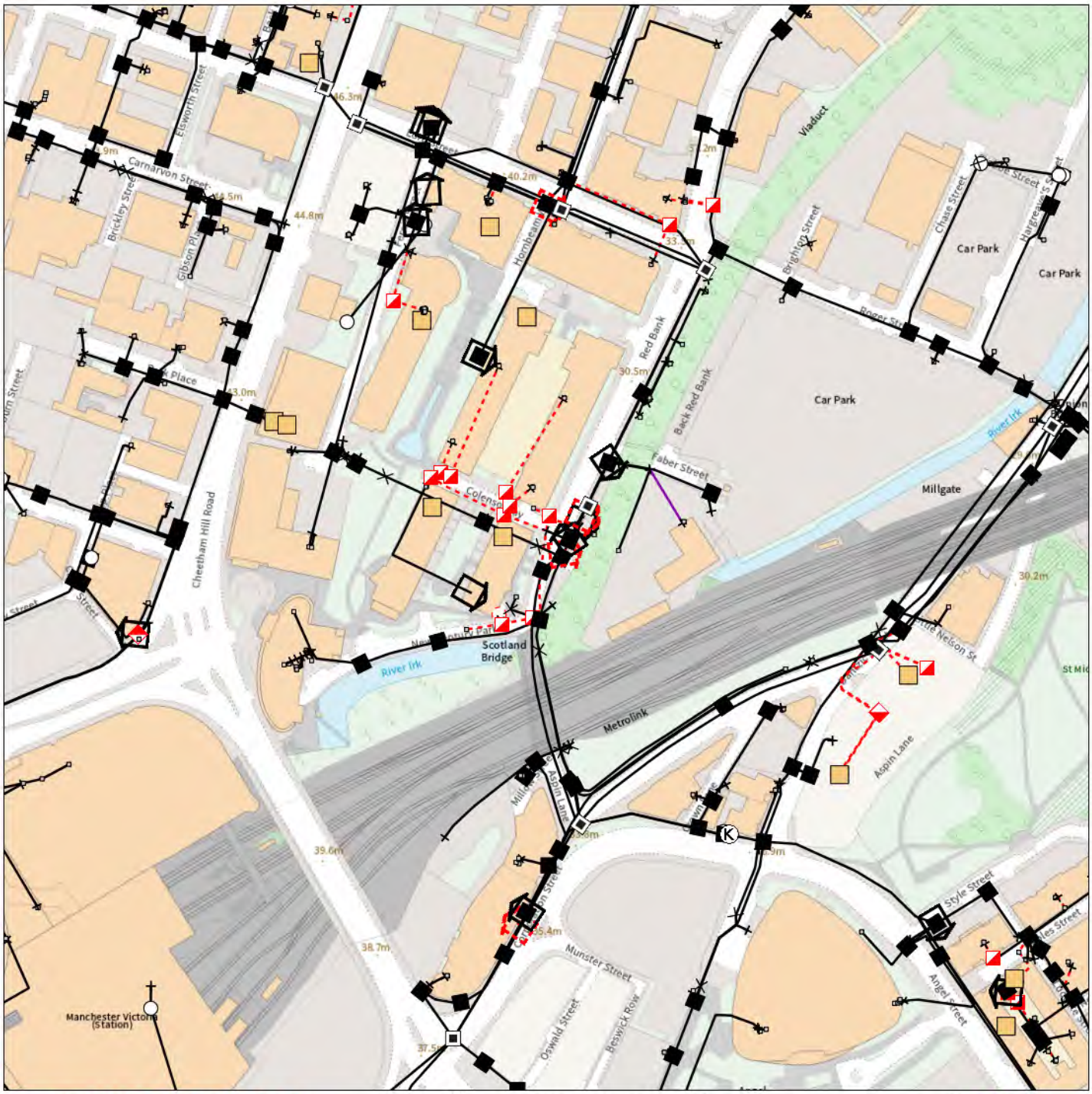
Other proposed plant is shown using dashed lines.
BT Symbols not listed above may be disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

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

BT Ref : SRO11079E
Map Reference : (centre) SJ8514999731
Easting/Northing : (centre) 385149,399731
Issued : 15/06/2021 23:07:18

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Maps by email Plant Information Reply



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KEY TO BT SYMBOLS

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Change Of State	+	Hatchings	
Split Coupling	X	Built	
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Building		Inferred	
Kiosk	K	Duct	

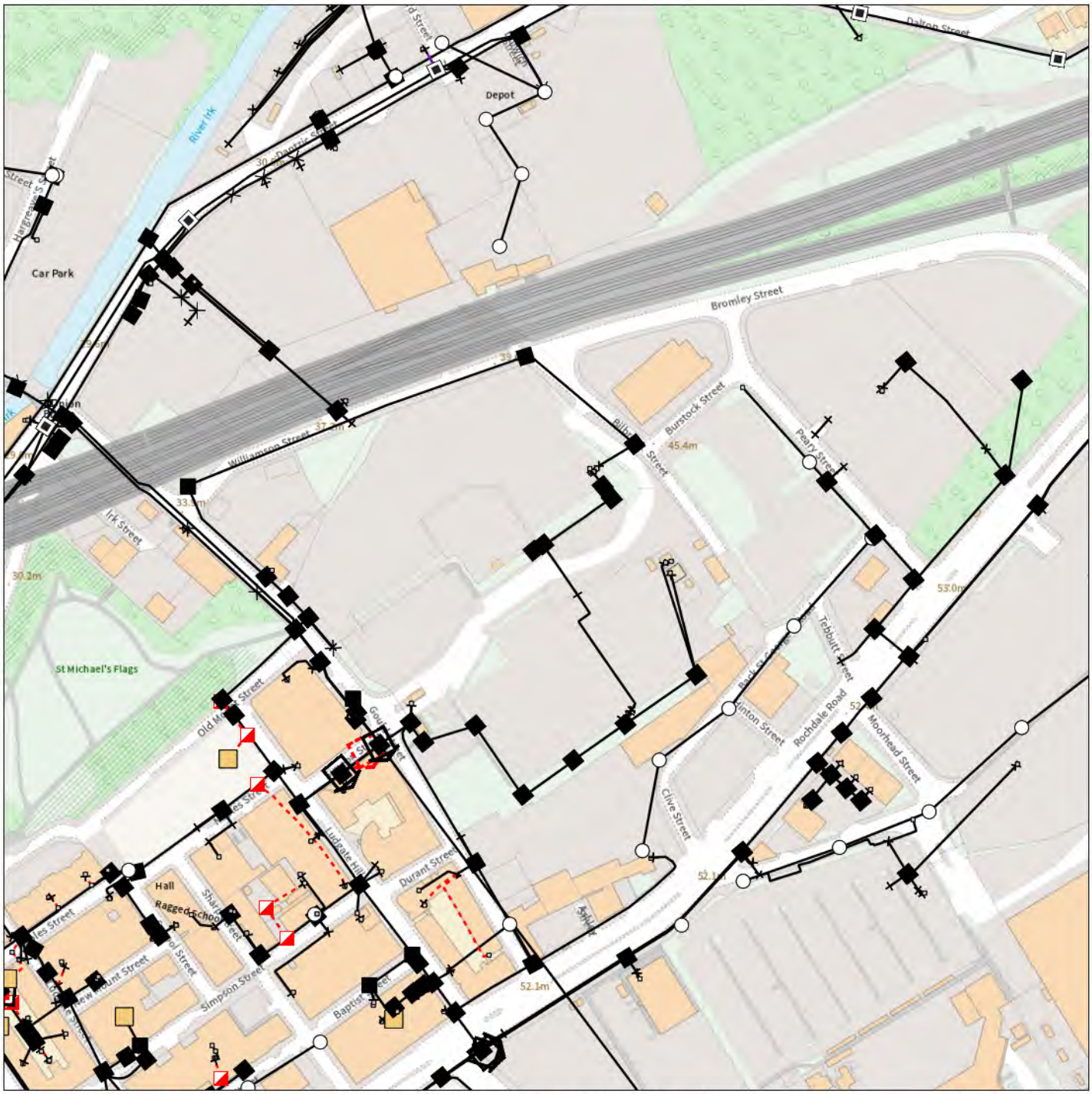
Other proposed plant is shown using dashed lines.
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Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

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

BT Ref : YDP110750
Map Reference : (centre) SJ8422099266
Easting/Northing : (centre) 384220,399266
Issued : 15/06/2021 23:07:23

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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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Controller of Her Majesty's Stationary Office
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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	

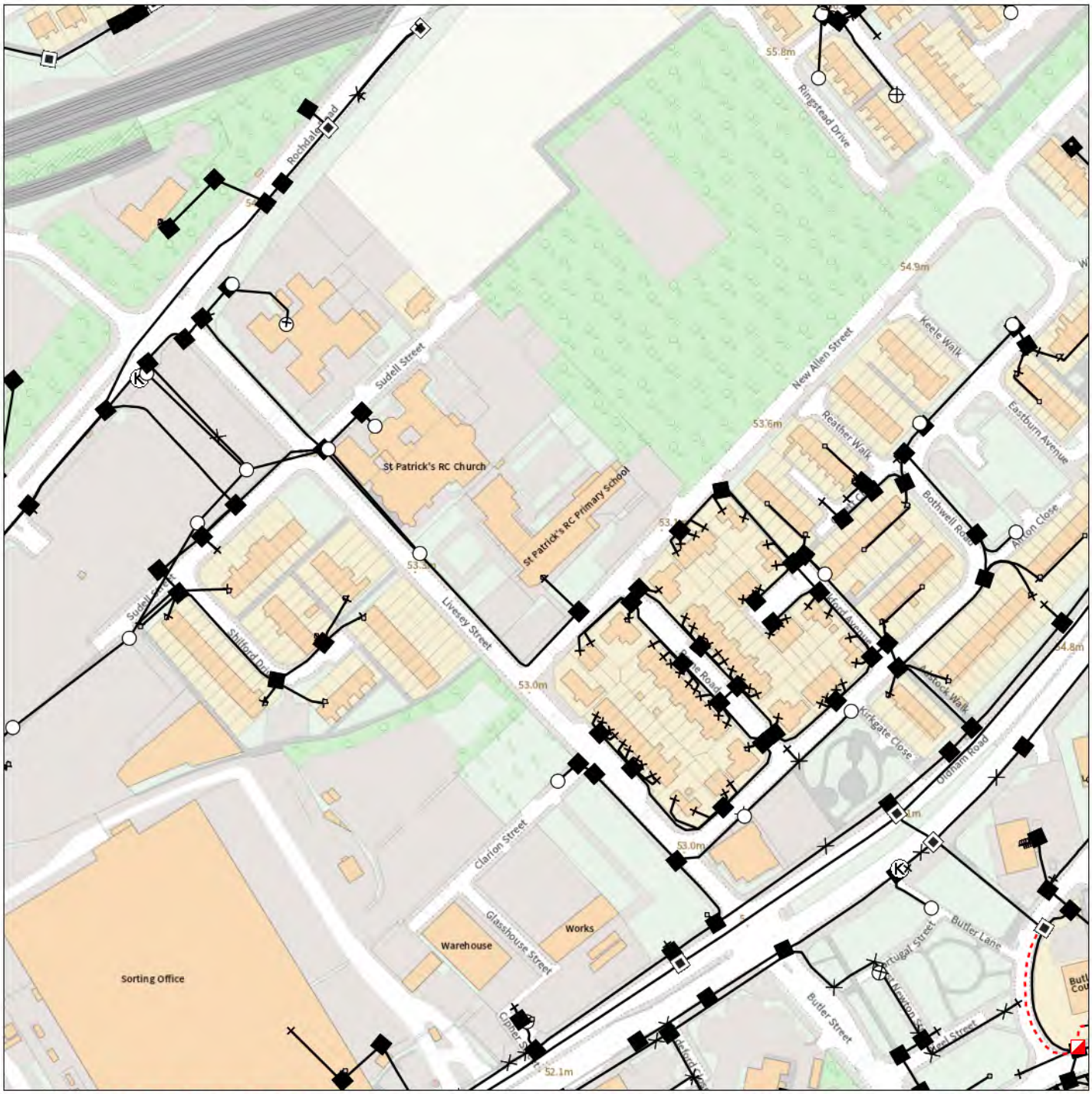
Other proposed plant is shown using dashed lines.
BT Symbols not listed above may be disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

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

BT Ref : IRP11077H
Map Reference : (centre) SJ8468499266
Easting/Northing : (centre) 384684,399266
Issued : 15/06/2021 23:07:28

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

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)
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KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings	
Split Coupling	X	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 : ZNY11078K
Map Reference : (centre) SJ8514999266
Easting/Northing : (centre) 385149,399266
Issued : 15/06/2021 23:07:33

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

United Utilities
Water for the North West

CHECKED

How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Your Ref: 97079
Our Ref: UUPS-ORD-298410
Date: 22/06/2021

Atkins - Utility Solutions

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

FAO:

Dear Sirs

Location: Site off Dantzic Street Manchester

I acknowledge with thanks your request dated 16/06/2021 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

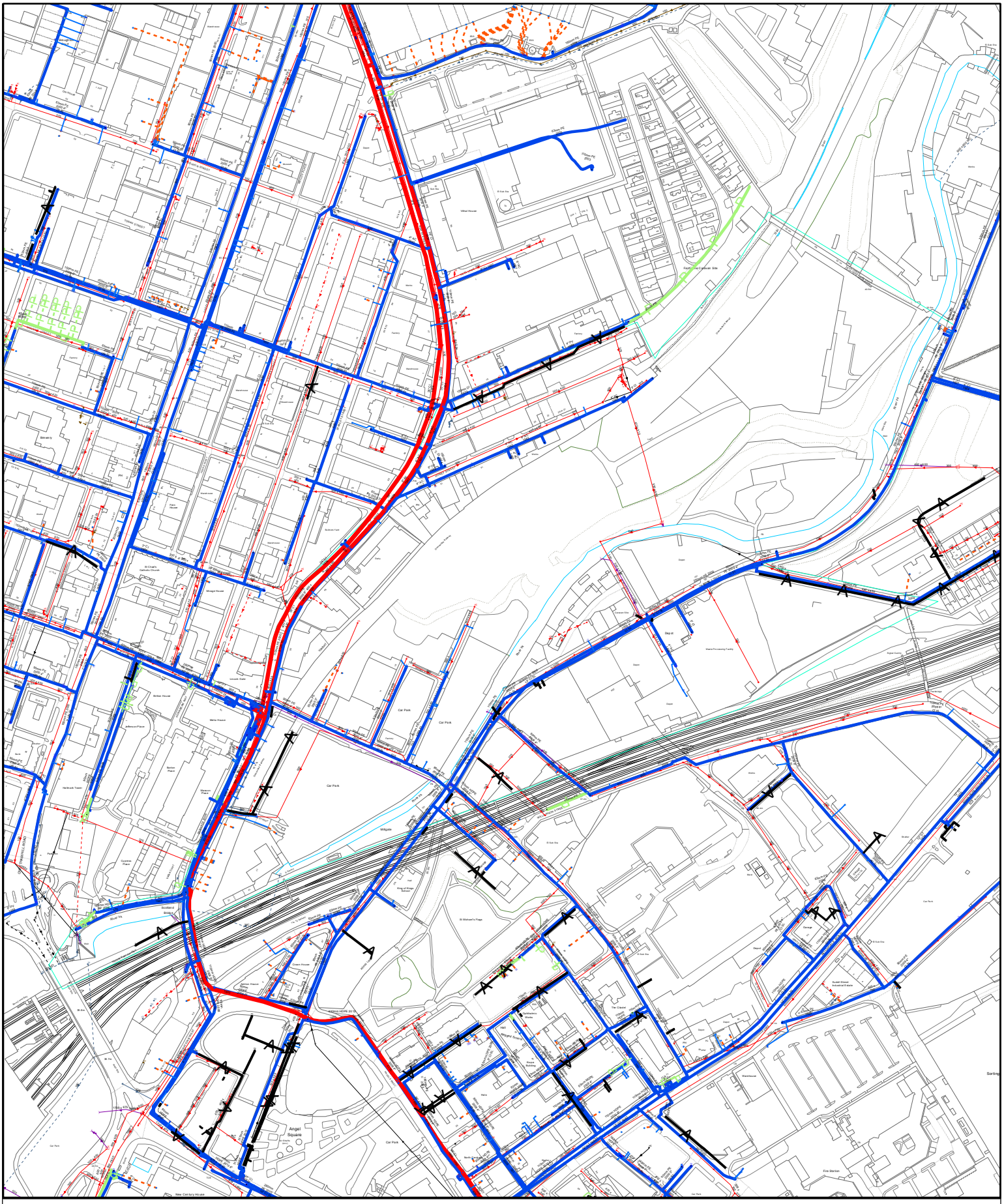
I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP



Date: 22/06/2021

Extract from maps of public sewers and water mains

Printed By:
Property Searches

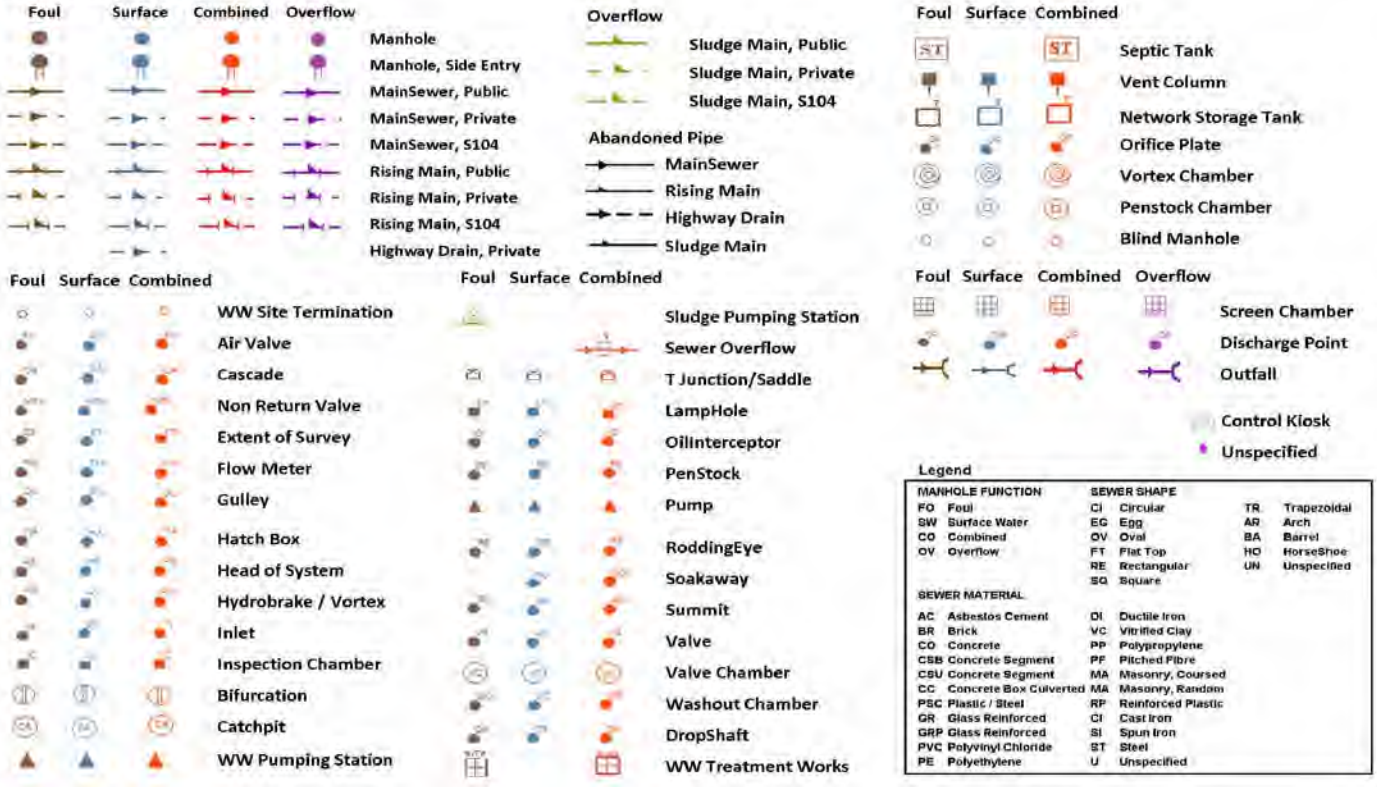
Site off Dantzic Street Manchester

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. United Utilities Water PLC will not accept any liability for any damage caused by the actual positions being different from those shown.

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United Utilities

WASTE WATER SYMBOLOGY



Legend

MANHOLE FUNCTION		SEWER SHAPE			
FO	Foul	CI	Circular	TR	Trapezoidal
SW	Surface Water	EG	Egg	AR	Arch
CO	Combined	OV	Oval	BA	Barrel
OV	Overflow	FT	Flat Top	HO	HorseShoe
		RE	Rectangular	UN	Unspecified
		SQ	Square		

SEWER MATERIAL			
AC	Asbestos Cement	DI	Ductile Iron
BR	Brick	VC	Vitrified Clay
CO	Concrete	PP	Polypropylene
CSB	Concrete Segment	PF	Pitched Fibre
CSU	Concrete Segment	MA	Masonry, Coursed
CC	Concrete Box Culverted	MA	Masonry, Random
PSC	Plastic / Steel	RP	Reinforced Plastic
GR	Glass Reinforced	CI	Cast Iron
GRP	Glass Reinforced	SI	Spun Iron
PVC	Polyvinyl Chloride	ST	Steel
PE	Polyethylene	U	Unspecified

CLEAN WATER SYMBOLOGY

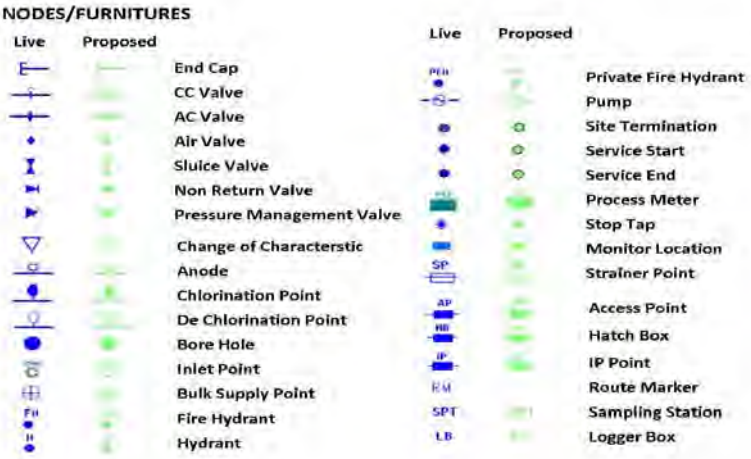
PIPE WORK



ABANDONED PIPE



NODES/FURNITURES



PROPERTY TYPES





Legend

MATERIAL TYPES		LINING TYPES	
AC	ASBESTOS CEMENT	CL	CEMENT LINING
CI	CAST IRON	TB	TAR OR BITUMEN
CU	COPPER	ERL	EPOXY RESIN
CO	CONCRETE		
DI	DUCTILE IRON	INSERTION TYPES	
GI	GALVANISED IRON		
GR	GREY IRON	DD	DIE DRAWN
OT	OTHERS	DR	DIRECTIONAL DRILLING
PB	LEAD	MO	MOLING
PV	uPVC	PI	PIPELINE
SI	SPUN IRON	SL	SLIP LINED
ST	STEEL		
UN	UNKONWN		
PE	POLYETHYLENE		

Water for the North West

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

United Utilities
Water for the North West



How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Atkins - Utility Solutions

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

FAO:

Your Ref: 97079 - A1
Our Ref: UUPS-ORD-303180
Date: 01/07/2021

Dear Sirs

Location: 97079 - A1

I acknowledge with thanks your request dated 01/07/2021 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

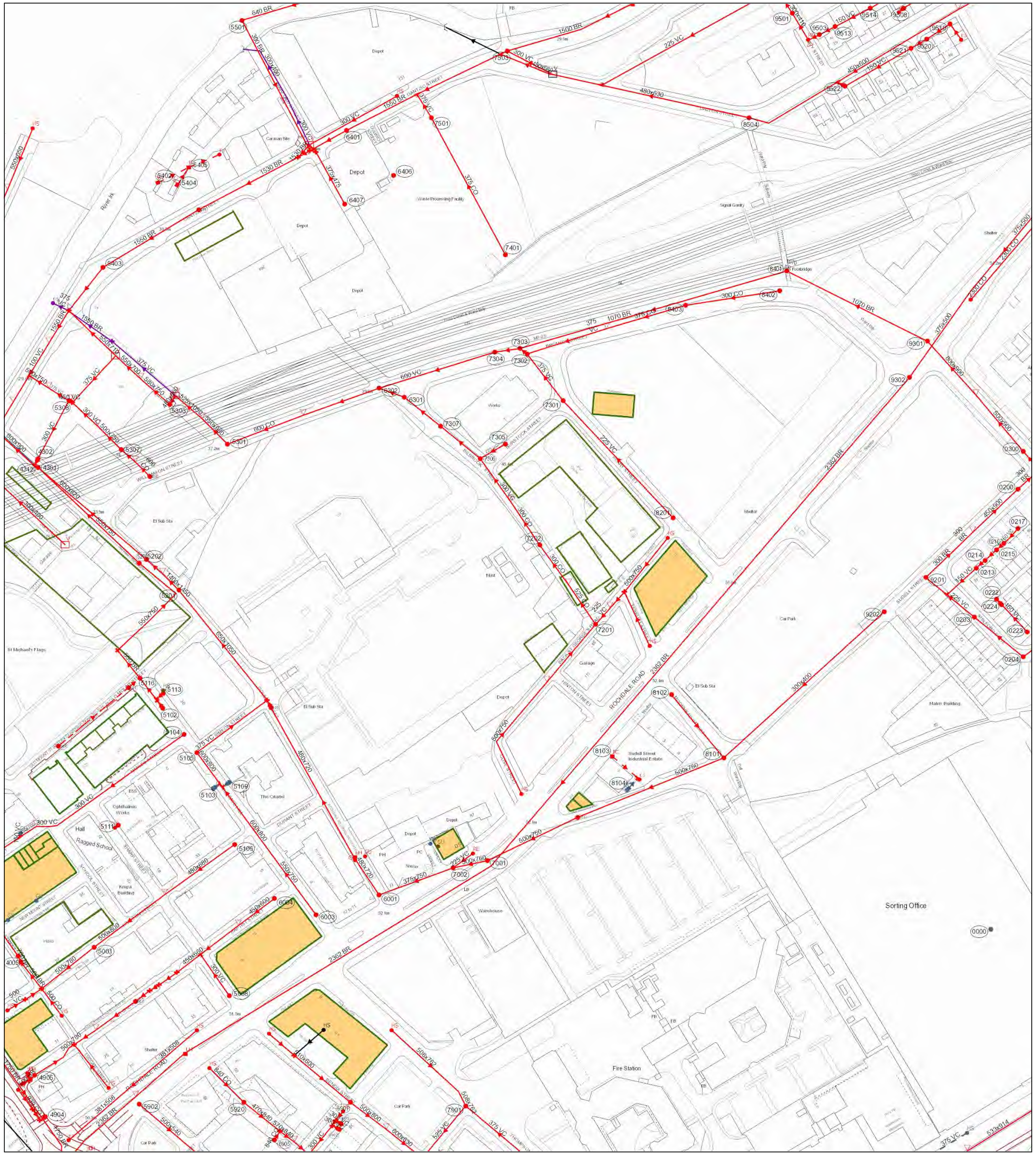
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If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP



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Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
7303	46.04	CO	42.86	1070			BR	14.14214	1 in 236
0213		CO		150			VC	21.88563	
5306	34.57	CO	30.4	600			CO	11.31371	1 in 12
5920		CO	0	470			BR	25.6125	
6902	51.34	CO	48.72	300			VC	4.472136	
0203	53.35	CO	50.97	225			VC	34.82815	1 in 10
7001	52.02	CO	44.38	500			BR	19.41649	
5401	30.55	CO	24.7	1550			BR	61.91123	
5401	30.55	CO	24.7	1550			BR	61.91123	
7101	52.5	CO	46	500			BR	55.4617	1 in 35
7201	50.66	CO	45.9	525			CO	26.62705	1 in 21
5201	39.28	CO	28.45	1400			CSB	12.72792	1 in 40
9503	44.61	CO	43.24	150			VC	6.708204	
9503	44.61	CO	43.24	150			VC	6.708204	
7302	46	CO	43.23	375			VC	5	
8101	53	CO	48.5	500			BR	87.46428	
6302	39.89	CO	37.25	600			VC	44.59821	1 in 22
5403		CO	0	1550			BR	30.61046	
5403		CO	0	1550			BR	30.61046	
4005	47.34	CO	0	450			BR	33.01515	
4005	47.34	CO	0	450			BR	33.01515	
7305	46.61	CO	43.77	225			VC	16.12452	1 in 10
7002	51.92	CO	0	375			BR	43.65776	
5501		CO		300			BR	81.51928	
5501		CO		300			BR	81.51928	
0215		CO		150			VC	8.758789	
6905	51.09	CO	0	840			CO	5.830952	
8403	49.01	CO	46.64	375			CO	45.88028	1 in 27
9508		CO		150			VC	3.465536	
9508		CO		150			VC	3.465536	
5307	32.1	CO	28.44	500			BR	18.38478	
5307	32.1	CO	28.44	500			BR	18.38478	
5007	49.99	CO	46.28	450			BR	27.20294	
5308	30.08	CO	27.5	375			VC	13.0384	
5308	30.08	CO	27.5	375			VC	13.0384	
0300	53.4	CO	45.92	500			BR	40.45986	
6301	41.01	CO	38.13	300			VC	14.86607	1 in 26
0216		CO		150			VC	5.270839	
7401		CO	0	375			CO	86.35392	
6903	51.34	CO	0	300			VC	3.605551	
9301	53.6	CO	44.64	1070			BR	87.20665	
8102	52.4	CO	49.28	500			CO	45.45327	1 in 253
6101	45.7	CO	38.65	480			BR	4.472136	
8201		CO	0	225			VC	89.14034	
8401		CO	0	1070			BR	154.1201	
7301	48.08	CO	43.43	375			VC	32.80244	1 in 182
9509		CO		150			VC	18.71178	
9514		CO		150			VC	22.10397	
9514		CO		150			VC	22.10397	
5303	33.27	CO	28.83	580			BR	21.26029	1 in 44
4904	49.62	CO	0	939			CO	3.605551	
4904	49.62	CO	0	939			CO	3.605551	
5301	36.74	CO	32.93	550			BR	19.79899	1 in 13
6401	31.29	CO	24.77	1530			BR	23.22471	
6401	31.29	CO	24.77	1530			BR	23.22471	
7306	45.48	CO	42.07	300			VC	28.42534	1 in 47
6004	50.54	CO	48.03	450			BR	25	
4905	49.07	CO	0	500			BR	28.30447	
4905	49.07	CO	0	500			BR	28.30447	
0214		CO		150			VC	6.519656	
5902	50.46	CO	46.96	500			BR	44.68781	1 in 73
7307	43.35	CO	41.46	300			VC	25.6125	1 in 12
9201	53.13	CO	47.48	300			BR	36.06938	1 in 82
7202	48.7	CO	43.3	300			CO	28.84441	1 in 48
9302		CO	0	2362			BR	592.1557	
5001	48.51	CO	45.07	500			BR	37.01351	
5001	48.51	CO	45.07	500			BR	37.01351	
9513		CO		150			VC	9.752625	
9513		CO		150			VC	9.752625	
6901	51.35	CO	46.31	500			BR	25	
7304	45.38	CO	42.78	600			VC	67.05222	1 in 12
9202	53	CO	49.62	300			CO	120.3412	1 in 167
0217		CO		150			VC	11.55683	
5308	30.08	CO	27.3	300			VC	36.23534	
5308	30.08	CO	27.3	300			VC	36.23534	
8402	50.89	CO	47.93	300			CO	52.61179	
0200	53.43	CO	46.59	300			BR	17.14061	
5106	49	CO	46.25	480			BR	48.01041	1 in 83
5111		CO		150			VC	2.231356	
5111		CO		150			VC	2.231356	
6001	51.68	CO	42.44	480			BR	120.1335	1 in 32
7901	51.21	CO	44.19	525			VC	36.31802	
6003	51.36	CO	48.22	550			BR	55.80323	1 in 21
5104	44.8	CO	42.51	300			VC	98.22868	
9519		CO		150			VC	15.5569	
9519		CO		150			VC	15.5569	
0501	48.85	CO	0	450			VC	27.29469	
9501	42.64	CO	38.9	300			CO	10.81665	1 in 7
9501	42.64	CO	38.9	300			CO	10.81665	1 in 7
9522		CO		150			VC	4.785507	
9522		CO		150			VC	4.785507	
4301	31.14	CO	26.64	600			CO	30.55567	
4301	31.14	CO	26.64	600			CO	30.55567	
5203	36.71	CO	31.7	550			BR	77.10383	1 in 15
9521		CO		150			VC	42.23491	
9521		CO		150			VC	42.23491	
8504	41.79	CO	37.42	480			BR	111.4201	1 in 13
8504	41.79	CO	37.42	480			BR	111.4201	1 in 13
9520		CO		150			VC	9.927451	
9520		CO		150			VC	9.927451	
0204	53.35	CO	51.43	225			VC	34.82815	1 in 76
5116	42.35	CO	40.25	550			BR	19.69717	
4302	30.81	CO	28.25	300			VC	4.472136	
4302	30.81	CO	28.25	300			VC	4.472136	
4312	31.02	SW	26.48	600			BR	31.14482	
4312	31.02	SW	26.48	600			BR	31.14482	
5202	36.82	CO	27.75	600			CO	78.74643	1 in 72
5101	42.45	CO	40.75	225			VC	8.314363	1 in 139
5101	42.45	CO	40.75	225			VC	8.314363	1 in 139
7501	31.57	CO	29.36	375			VC	15.26434	
7501	31.57	CO	29.36	375			VC	15.26434	
0224		CO		150			VC	4.226566	
7503	30.16	CO	25	1550			BR	99.29091	1 in 473
7503	30.16	CO	25	1550			BR	99.29091	1 in 473
5008	51.32	CO	48.13	300			VC	28.01785	
5102	43.81	CO	40.27	550			BR	5.096149	
5105	45.55	CO	39.3	375			VC	48.60041	
6407	32	CO	28.2	375			CO	33.12099	
6407	32	CO	28.2	375			CO	33.12099	
0223		CO		150			VC	20.76079	
4109	42.86	CO	41.14	225			VC	50.51596	1 in 130
4109	42.86	CO	41.14	225			VC	50.51596	1 in 130
8503	40.57	CO	38.15	225			VC	114.0305	

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned	Foul	Surface Water	Combined	
				Public Sewer
				Private Sewer
				Section 104
				Rising Main
				Sludge Main
				Overflow
				Water Course
				Highway Drain

All point assets follow the standard colour convention:
red - combined, blue - surface water, brown - foul, purple - overflow

- Manhole
- Head of System
- Extent of Survey
- Rodding Eye
- Inlet
- Discharge Point
- Vortex
- Penstock
- Washout Chamber
- Valve
- Air Valve
- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- Control Kiosk
- Change of Characteristic

MANHOLE FUNCTION

- FO Foul
- SW Surface Water
- CO Combined
- OV Overflow

SEWER SHAPE

- CI Circular
- TR Trapezoidal
- EG Egg
- AR Arch
- OV Oval
- BA Barrel
- FT Flat Top
- HO HorseShoe
- RE Rectangular
- UN Unspecified
- SQ Square

SEWER MATERIAL

- AC Asbestos Cement
- BR Brick
- PE Polyethylene
- RP Reinforced Plastic Matrix
- CO Concrete
- CSB Concrete Segment Bolted
- CSU Concrete Segment Unbolted
- CC Concrete Box Culverted
- PSC Plastic / Steel Composite
- GRC Glass Reinforecd Plastic
- DI Ductile Iron
- PVC Polyvinyl Chloride
- CI Cast Iron
- SI Spun Iron
- ST Steel
- VC Vitrified Clay
- PP Polypropylene
- PF Pitch Fibre
- MAC Masonry, Coursed
- MAR Masonry, Random
- U Unspecified

Address or Site Reference:

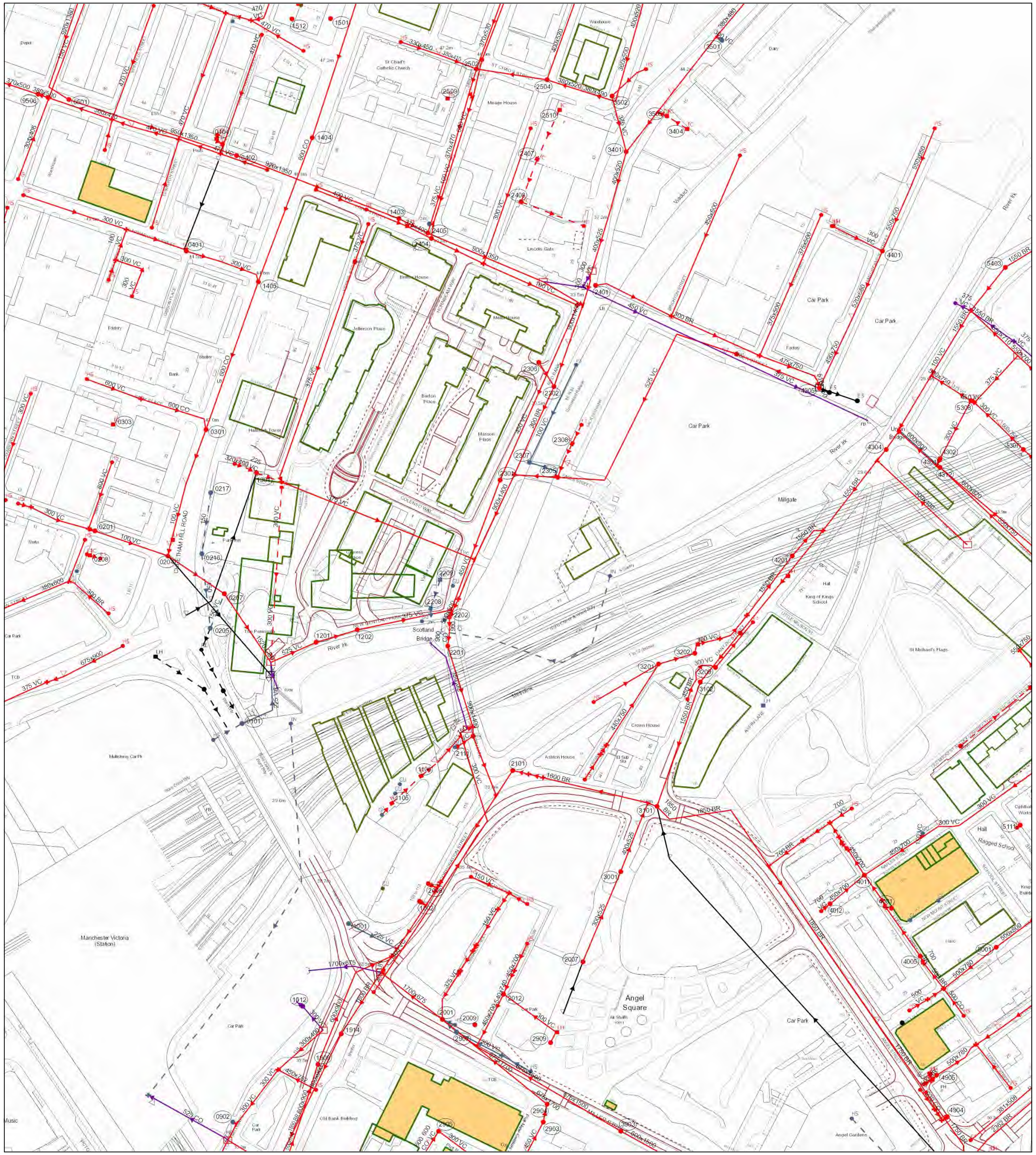
97079 - A1,

OS sheet Number: SJ8499SE
Scale: 1:1250 **Date:** 01/07/2021
Nodes: 123
Sheet: 1 of 4

Printed by: Property Searches

SEWER RECORDS

United Utilities
Water for the North West



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Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
3301	30.59	CO		525			VC	151.1497	
3502	46.91	CO	40.08	375			VC	32.01562	1 in 12
3502	46.91	CO	40.08	375			VC	32.01562	1 in 12
0216		SW		150				41.61008	
1404	46.61	CO	40.72	600			CO	85.44004	1 in 38
1404	46.61	CO	40.72	600			CO	85.44004	1 in 38
2502	46.78	CO	38.82	600			VC	58.27491	
2502	46.78	CO	38.82	600			VC	58.27491	
0217		SW		150				34.24373	
1201	28.65	CO	26.35	375			VC	24.04163	1 in 96
0204	42.02	CO	31.48	1520			CSB	37.69516	1 in 82
2909	39.36	CO	32.69	300			VC	42.51323	1 in 87
2301	29.5	CO	27.03	450			VC	78.89603	
4005	47.34	CO	0	450			BR	33.01515	
4005	47.34	CO	0	450			BR	33.01515	
1914	36.68	CO	0	600			VC	41.14608	
2904	39.72	CO	29.3	675			BR	74.65253	
2007		CO	0	300			VC	54.17366	
3601	48.72	CO	43.09	400			VC	46.57253	
5007	49.99	CO	46.28	450			BR	27.20294	
4012	44.24	CO	41.19	450			BR	24.83949	1 in 59
4904	49.62	CO	0	939			CO	3.605551	
4904	49.62	CO	0	939			CO	3.605551	
2202	29.44	CO	24.06	900			CI	8	1 in 133
1403	41.81	CO	34.61	900			BR	17.88854	1 in 7
1403	41.81	CO	34.61	900			BR	17.88854	1 in 7
2603	48.95	CO	40.19	600			VC	106.0424	1 in 80
2905	38.94	CO	35.73	300			VC	48.60041	1 in 108
5001	48.51	CO	45.07	500			BR	37.01351	
5001	48.51	CO	45.07	500			BR	37.01351	
3001	38.79	CO	34.48	400			VC	26.59569	
4201	30	CO	0	1550			BR	23.43909	
3102	33.5	CO	24.01	1550			BR	73.05477	
1405	44.79	CO	38.43	600			CO	86.97701	1 in 41
5308	30.08	CO	27.3	300			VC	36.23534	
5308	30.08	CO	27.3	300			VC	36.23534	
0501	43.96	CO	34.98	950			BR	98.03061	1 in 654
0501	43.96	CO	34.98	950			BR	98.03061	1 in 654
2305		CO	26.25	525			VC	24.0649	
5401	30.55	CO	24.7	1550			BR	61.91123	
5401	30.55	CO	24.7	1550			BR	61.91123	
0301	43.15	CO	36.3	600			CO	31.95309	
2604	48.74	CO	44.8	400			VC	91.41663	1 in 52
5403		CO	0	1550			BR	30.61046	
5403		CO	0	1550			BR	30.61046	
1012		OV		300			VC	4.564737	
2404	40.29	CO	35.74	100			VC	32.20248	
2404	40.29	CO	35.74	100			VC	32.20248	
9506	43.61	CO	39.34	370			VC	34.78505	
9506	43.61	CO	39.34	370			VC	34.78505	
2201	29.83	CO	23.93	900			BR	52.12749	
5307	32.1	CO	28.44	500			BR	18.38478	
5307	32.1	CO	28.44	500			BR	18.38478	
2001	37.46	CO	35.42	1700			BR	41.83918	
1202	27.71	CO	26.01	375			VC	53.15073	
2907	37.43	SW	35.06	300			VC	10.63015	
5308	30.08	CO	27.5	375			VC	13.0384	
5308	30.08	CO	27.5	375			VC	13.0384	
0402	45.65	CO	34.82	920			BR	96.56604	1 in 508
0402	45.65	CO	34.82	920			BR	96.56604	1 in 508
3401	39.9	CO	35.1	400			VC	34.20526	1 in 17
3401	39.9	CO	35.1	400			VC	34.20526	1 in 17
1301	35.76	CO	29.71	375			VC	14.86607	1 in
1909	36.26	CO	28.1	600			VC	55.15433	
4401	30.58	CO	27.66	520			BR	41.62932	1 in 77
2302	31.07	CO	27.68	300			BR	26.40076	
2401	34.2	CO	30.24	300			BR	46.33199	
2504	46.78	CO	40.97	380			VC	39.45884	1 in 50
2504	46.78	CO	40.97	380			VC	39.45884	1 in 50
1502	48.23	CO	42.76	600			CO	93.60555	1 in 46
4905	49.07	CO	0	500			BR	28.30447	
4905	49.07	CO	0	500			BR	28.30447	
4011	44.27	CO	40.77	450			BR	16.64332	
2307		SW		100			VC	19.19727	
2012	37.82	CO	31.88	450			BR	15.65248	
4305	29.97	CO	26.56	525			VC	49.76947	1 in 172
3202	32.33	CO	27.68	300			VC	18.44068	
3201	32.52	CO	28.02	300			VC	20.88061	1 in 61
0401	44.58	CO	39.72	320			VC	20.88061	
5111		CO		150			VC	2.231356	
5111		CO		150			VC	2.231356	
0205		SW		150			VC	20.60861	
2903	39.8	CO	29.88	450			VC	10.19804	
3501	45.71	SW	41.52	300			VC	3.605551	
3501	45.71	SW	41.52	300			VC	3.605551	
5203	36.71	CO	31.7	550			BR	77.10383	1 in 15
2111		CO		150			VC	10.49285	
3101	37.07	CO	0	1600			BR	65.0509	
0207	41	CO	27.6	1520			CSB	45.86403	1 in 87
5116	42.35	CO	40.25	550			BR	19.69717	
4312	31.02	SW	26.48	600			BR	31.14482	
4312	31.02	SW	26.48	600			BR	31.14482	
5202	36.82	CO	27.75	600			CO	78.74643	1 in 72
2406	40.78	SW	39.4	150			VC	2	
2406	40.78	SW	39.4	150			VC	2	
0101	40.24	SW	36.65	225			VC	45.05404	1 in 6
3903	41.62	CO	31.23	675			BR	116.9921	
2501	46.7	CO	40.17	380			VC	13.60147	1 in 22
2501	46.7	CO	40.17	380			VC	13.60147	1 in 22
2104	31.73	CO	0	900			BR	35.4683	
1001	37.66	SW	36.06	225			VC	30.41381	
3205		CO		1550			BR	35.11536	
1406		CO	0	375			VC	126.2265	
5104	44.8	CO	42.51	300			VC	98.22868	
4304	29.73	CO	24.22	1550			BR	57.01391	
2101	33.56	CO	23.56	1600			BR	73.78349	
4301	31.14	CO	26.64	600			CO	30.55567	
4301	31.14	CO	26.64	600			CO	30.55567	
4302	30.81	CO	28.25	300			VC	4.472136	
4302	30.81	CO	28.25	300			VC	4.472136	
5101	42.45	CO	40.75	225			VC	8.314363	1 in 139
5101	42.45	CO	40.75	225			VC	8.314363	1 in 139
3101	37.07	CO	0	1850			BR	187.392	1 in 62.4639852
3209		CO		450			BR	32.73634	
0902	33.33	SW	31.2	225			VC	2.236068	
2405	40.49	CO	32.12	900			BR	69.45815	1 in 40
2405	40.49	CO	32.12	900			BR	69.45815	1 in 40
4109	42.86	CO	41.14	225			VC	50.51596	1 in 130
4109	42.86	CO	41.14	225			VC	50.51596	1 in 130

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned | Foul | Surface Water | Combined

- Public Sewer
- Private Sewer
- Section 104
- Rising Main
- Sludge Main
- Overflow
- Water Course
- Highway Drain

All point assets follow the standard colour convention:
red - combined   blue - surface water
brown - foul   purple - overflow

- Manhole
- Head of System
- Extent of Survey
- Rodding Eye
- Inlet
- Discharge Point
- Vortex
- Penstock
- Washout Chamber
- Valve
- Air Valve
- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- Control Kiosk
- Change of Characteristic

MANHOLE FUNCTION

FO Foul
SW Surface Water
CO Combined
OV Overflow

SEWER SHAPE

CI Circular
TR Trapezoidal
EG Egg
AR Arch
OV Oval
BA Barrel
FT Flat Top
HO HorseShoe
RE Rectangular
UN Unspecified
SQ Square

SEWER MATERIAL

AC Asbestos Cement
BR Brick
PE Polyethylene
RP Reinforced Plastic Matrix
CO Concrete
CSB Concrete Segment Bolted
CSU Concrete Segment Unbolted
CC Concrete Box Culverted
PSC Plastic / Steel Composite
GRC Glass Reinforecd Plastic
DI Ductile Iron
PVC Polyvinyl Chloride
CI Cast Iron
SI Spun Iron
ST Steel
VC Vitrified Clay
PP Polypropylene
PF Pitch Fibre
MAC Masonry, Coursed
MAR Masonry, Random
U Unspecified

Address or Site Reference:

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OS sheet Number: SJ8499SW
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Nodes: 119
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SEWER RECORDS

United Utilities
Water for the North West



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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Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
0811	49.67	CO	0	300			VC	3.162278	
0804	50.9	CO	47.4	375			VC	16.76305	
3502	46.91	CO	40.08	375			VC	32.01562	1 in 12
3502	46.91	CO	40.08	375			VC	32.01562	1 in 12
5901	54.83	SW	53.11	300			CO	51.53056	1 in 178
1404	46.61	CO	40.72	600			CO	85.44004	1 in 38
1404	46.61	CO	40.72	600			CO	85.44004	1 in 38
4004	54.75	SW	52.82	375			CO	55.23741	1 in 251
4004	54.75	SW	52.82	375			CO	55.23741	1 in 251
2801	52.78	CO	48.01	600			CO	65.78754	1 in 52
2502	46.78	CO	38.82	600			VC	58.27491	
2502	46.78	CO	38.82	600			VC	58.27491	
9902	50.69	CO	47.52	375			VC	70.83784	1 in 112
0912		CO		150			VC	8.040379	
4712		CO		150			VC	10.2194	
2904	53.1	CO	45.29	600			VC	69.89278	1 in 74
3601	48.72	CO	43.09	400			VC	46.57253	
2903	53.08	CO	48.07	375			VC	58.87275	1 in 1472
4603	49.33	CO	44.46	300			VC	60.00833	1 in 46
1702	51.25	CO	47.86	300			VC	70.87209	1 in 41
4904	54.65	FO	52.42	150			VC	44.18269	1 in 138
1604	49.63	CO	44.33	600			CO	81.27115	1 in 52
4604		SW		100			VC	4.926542	
0701	48.96	CO	44.49	375			VC	3.162278	
3705	49.11	CO	43.86	360			VC	53.14132	1 in 136
0807	49.39	SW	0	300			VC	2.236068	
9704	48.1	CO	44.33	300			VC	117.0043	1 in 43
1403	41.81	CO	34.61	900			BR	17.88854	1 in 7
1403	41.81	CO	34.61	900			BR	17.88854	1 in 7
2603	48.95	CO	40.19	600			VC	106.0424	1 in 80
1606	47.98	CO	44.28	300			VC	4.123106	
3602	48.81	CO	43.11	450			VC	4.24264	
3704	49	CO	45.33	290			VC	56.921	1 in 237
0902	50.88	CO	48.05	225			VC	33.52611	
4602	51.26	CO	45.95	400			VC	5.385165	
4801	52.89	CO	48.49	450			VC	67.6757	1 in 30
0703	48.57	SW	0	450			VC	7.28011	
1509		CO		225			VC	15.28911	
2602	49.35	CO	44.79	300			VC	26.24881	
0501	43.96	CO	34.98	950			BR	98.03061	1 in 654
0501	43.96	CO	34.98	950			BR	98.03061	1 in 654
3603		CO		225			VC	9.917604	
4902	54.7	FO	52.1	150			VC	3.926849	1 in 16
2701	51	CO	42.48	600			VC	70.88018	1 in 76
3907		CO		150			VC	4.283729	
2604	48.74	CO	44.8	400			VC	91.41663	1 in 52
4601	51.1	CO	48.79	300			VC	55.9464	1 in 108
4601	51.1	CO	48.79	300			VC	55.9464	1 in 108
2702	50.84	CO	44.77	400			VC	6.082763	
5001	55.83	FO	53.12	150			VC	51.99477	1 in 124
2800	52.08	CO	46.73	600			CO	70.83784	1 in 76
2803		CO		150			VC	9.219728	1 in
9007	50.87	CO	48.09	450			CO	58.18935	1 in 216
1508		CO		150			VC	24.68755	
4703		CO		150			VC	19.25797	
4703		CO		150			VC	19.25797	
2404	40.29	CO	35.74	100			VC	32.20248	
2404	40.29	CO	35.74	100			VC	32.20248	
9506	43.61	CO	39.34	370			VC	34.78505	
9506	43.61	CO	39.34	370			VC	34.78505	
9603	45.74	CO	35.21	950			BR	48.46648	
0812		CO	0	150			VC	3.605551	
9005	50.82	CO	48.15	450			CO	6.082763	1 in 152
4003	54.75	FO	52.7	150			VC	47.23729	1 in 169
4003	54.75	FO	52.7	150			VC	47.23729	1 in 169
1802	52.22	CO	44.32	600			VC	68.94926	1 in 82
0901	51.58	CO	48.23	375			VC	80.65358	1 in 117
2905	53.43	CO	48.89	600			CO	77.16217	1 in 90
0402	45.65	CO	34.82	920			BR	96.56604	1 in 508
0402	45.65	CO	34.82	920			BR	96.56604	1 in 508
1703	51.14	CO	43.46	600			VC	66.40783	1 in 69
3401	39.9	CO	35.1	400			VC	34.20526	1 in 17
3401	39.9	CO	35.1	400			VC	34.20526	1 in 17
2504	46.78	CO	40.97	380			VC	39.45884	1 in 50
2504	46.78	CO	40.97	380			VC	39.45884	1 in 50
1502	48.23	CO	42.76	600			CO	93.60555	1 in 46
0801	49.61	CO	46.44	300			VC	16.76305	
2901	53.14	CO	46.4	600			VC	89.81091	1 in 82
0601	46.3	CO	41.83	320			VC	50.96193	
3801	53.27	CO	47.9	340			BR	83.57033	1 in 56
4905	54.65	SW	52.6	375			CO	39.59217	1 in 53
2601	50.16	CO	44.81	600			CO	32.89377	1 in 72
3703	50.83	CO	41.53	600			VC	107.2054	1 in 81
2704	51.17	CO	45.78	600			CO	75.96052	1 in 95
1601	49.61	CO	45.27	320			VC	18.97367	1 in 41
4903	54.6	CO	51.85	375			CO	13.27087	1 in 7
4702		CO		150			VC	11.45504	
4702		CO		150			VC	11.45504	
9006	50.66	SW	49.08	150			VC	12.64911	1 in 141
3905	54.55	CO	49.92	375			VC	70.59293	1 in 84
2406	40.78	SW	39.4	150			VC	2	
2406	40.78	SW	39.4	150			VC	2	
1901		CO		150			VC	38.67603	
1902	52.92	CO	49.55	375			VC	108.4666	1 in 83
3906		CO		150			VC	13.96733	
5803	51.95	CO	48.3	300			VC	86.16264	1 in 139
5803	51.95	CO	48.3	300			VC	86.16264	1 in 139
0803	49.42	CO	46.14	300			VC	27.51363	
3501	45.71	SW	41.52	300			VC	3.605551	
3501	45.71	SW	41.52	300			VC	3.605551	
2501	46.7	CO	40.17	380			VC	13.60147	1 in 22
2501	46.7	CO	40.17	380			VC	13.60147	1 in 22
4901	53.85	CO	49.06	375			VC	116.4818	1 in 85
4701	52.46	CO	47.67	375			VC	36.34556	
0603	45.44	CO	35.13	930			BR	13	
5802	51.76	CO	48.44	300			VC	15.23155	1 in 109
2002	53.41	CO	51.63	150			VC	3.162278	
2405	40.49	CO	32.12	900			BR	69.45815	1 in 40
2405	40.49	CO	32.12	900			BR	69.45815	1 in 40

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned	Foul	Surface Water	Combined	
				Public Sewer
				Private Sewer
				Section 104
				Rising Main
				Sludge Main
				Overflow
				Water Course
				Highway Drain

All point assets follow the standard colour convention:
red - combined, blue - surface water, brown - foul, purple - overflow

- Manhole
- Head of System
- Extent of Survey
- Rodding Eye
- Inlet
- Discharge Point
- Vortex
- Penstock
- Washout Chamber
- Valve
- Air Valve
- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- Control Kiosk
- Change of Characteristic

MANHOLE FUNCTION

FO Foul
SW Surface Water
CO Combined
OV Overflow

SEWER SHAPE

CI Circular
TR Trapezoidal
EG Egg
AR Arch
OV Oval
BA Barrel
FT Flat Top
HO HorseShoe
RE Rectangular
UN Unspecified
SQ Square

SEWER MATERIAL

AC Asbestos Cement
BR Brick
PE Polyethylene
RP Reinforced Plastic Matrix
CO Concrete
CSB Concrete Segment Bolted
CSU Concrete Segment Unbolted
CC Concrete Box Culverted
PSC Plastic / Steel Composite
GRC Glass Reinforecd Plastic
DI Ductile Iron
PVC Polyvinyl Chloride
CI Cast Iron
SI Spun Iron
ST Steel
VC Vitrified Clay
PP Polypropylene
PF Pitch Fibre
MAC Masonry, Coursed
MAR Masonry, Random
U Unspecified

Address or Site Reference:

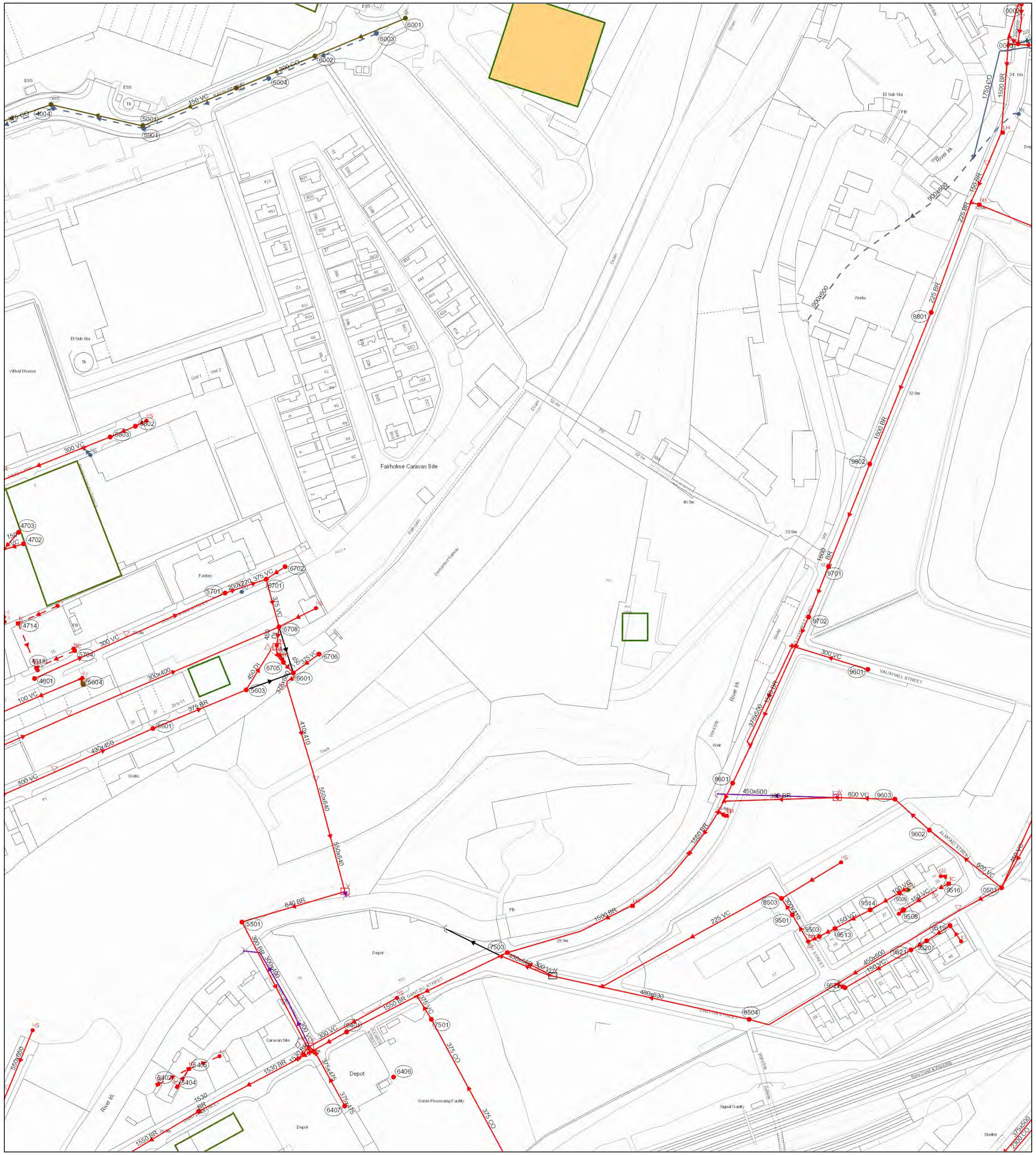
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OS sheet Number: SJ8499NW
Scale: 1:1250 **Date:** 01/07/2021
Nodes: 109
Sheet: 3 of 4

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SEWER RECORDS

United Utilities
Water for the North West



Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
5701	50.79	CO	47.73	200			BR	9.811401	1 in 20
5901	54.83	SW	53.11	300			CO	51.53056	1 in 178
4004	54.75	SW	52.82	375			CO	55.23741	1 in 251
4004	54.75	SW	52.82	375			CO	55.23741	1 in 251
5401	30.55	CO	24.7	1550			BR	61.91123	
5401	30.55	CO	24.7	1550			BR	61.91123	
9602	44.42	CO	34.86	600			VC	25.4951	
4601	51.1	CO	48.79	300			VC	55.9464	1 in 108
4601	51.1	CO	48.79	300			VC	55.9464	1 in 108
9503	44.61	CO	43.24	150			VC	6.708204	
9503	44.61	CO	43.24	150			VC	6.708204	
6004	55.65	SW	54.14	300			CO	74.54328	1 in 72
0002	35.99	CO	31.78	375			VC	9	1 in 41
5001	55.83	FO	53.12	150			VC	51.99477	1 in 124
4703		CO		150			VC	19.25797	
4703		CO		150			VC	19.25797	
6706		CO	0	375			VC	17.64211	
0501	48.85	CO	48.85	600			VC	51.22499	
5501		CO		300			BR	81.51928	
5501		CO		300			BR	81.51928	
6705	46	CO	41.39	450			VC	7.924313	1 in 158
9508		CO		150			VC	3.465536	
9508		CO		150			VC	3.465536	
5603	46.56	CO	41.69	450			DI	26.18863	1 in 131
5601	46.75	CO	41.85	375			BR	55.97403	1 in 622
6002	56.11	FO	53.83	150			VC	47.10017	1 in 143
4003	54.75	FO	52.7	150			VC	47.23729	1 in 169
4003	54.75	FO	52.7	150			VC	47.23729	1 in 169
6701	50.78	CO	46.73	375			VC	27.3889	1 in 10
5002	55.45	FO	53.5	150			VC	55.98797	1 in 147
4603	49.33	CO	44.46	300			VC	60.00833	1 in 46
7401		CO	0	375			CO	86.35392	
9801	32.92	CO	26.03	1600			BR	90.62009	1 in 154
9509		CO		150			VC	18.71178	
6003	56.34	SW	54.61	300			CO	64.73236	1 in 138
9514		CO		150			VC	22.10397	
9514		CO		150			VC	22.10397	
9802	32.59	CO	25.44	1600			BR	61.46544	1 in 1537
9702	32.14	CO	25.46	1550			BR	17.46425	
6401	31.29	CO	24.77	1530			BR	23.22471	
6401	31.29	CO	24.77	1530			BR	23.22471	
6702	50.71	CO	47.44	375			VC	12.6377	1 in 18
9701	32.54	CO	25.4	1550			BR	30.08322	
6601	45.81	CO	41.32	375			MAC	9.262801	
9601	32.65	CO	28.71	300			VC	43.9659	
9513		CO		150			VC	9.752625	
9513		CO		150			VC	9.752625	
4702		CO		150			VC	11.45504	
4702		CO		150			VC	11.45504	
6001		FO	0	150			VC	54.45673	
6708	48.44	CO	43.95	450			DI	10.311	1 in 13
9519		CO		150			VC	15.5569	
9519		CO		150			VC	15.5569	
0501	48.85	CO	0	450			VC	27.29469	
9501	42.64	CO	38.9	300			CO	10.81665	1 in 7
9501	42.64	CO	38.9	300			CO	10.81665	1 in 7
9522		CO		150			VC	4.785507	
9522		CO		150			VC	4.785507	
0003	34.47	CO	31.25	375			VC	6.403124	
5603	46.56	CO	41.69	0			UN	3.544001	1 in 18
9521		CO		150			VC	42.23491	
9521		CO		150			VC	42.23491	
8504	41.79	CO	37.42	480			BR	111.4201	1 in 13
8504	41.79	CO	37.42	480			BR	111.4201	1 in 13
9520		CO		150			VC	9.927451	
9520		CO		150			VC	9.927451	
7501	31.57	CO	29.36	375			VC	15.26434	
7501	31.57	CO	29.36	375			VC	15.26434	
5803	51.95	CO	48.3	300			VC	86.16264	1 in 139
5803	51.95	CO	48.3	300			VC	86.16264	1 in 139
8601	30.23	CO	25.24	1550			BR	17.88854	
7503	30.16	CO	25	1550			BR	99.29091	1 in 473
7503	30.16	CO	25	1550			BR	99.29091	1 in 473
9603		CO	0	600			VC	31.96159	
5802	51.76	CO	48.44	300			VC	15.23155	1 in 109
6708	48.44	CO	43.95	0			UN	0.9112133	1 in 1
6407	32	CO	28.2	375			CO	33.12099	
6407	32	CO	28.2	375			CO	33.12099	
8503	40.57	CO	38.15	225			VC	114.0305	

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned | Foul | Surface Water | Combined

- Public Sewer
- Private Sewer
- Section 104
- Rising Main
- Sludge Main
- Overflow
- Water Course
- Highway Drain

All point assets follow the standard colour convention:
red - combined, blue - surface water, brown - foul, purple - overflow

- Manhole
- Head of System
- Extent of Survey
- Rodding Eye
- Inlet
- Discharge Point
- Vortex
- Penstock
- Washout Chamber
- Valve
- Air Valve
- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- Control Kiosk
- Change of Characteristic

MANHOLE FUNCTION

FO Foul
SW Surface Water
CO Combined
OV Overflow

SEWER SHAPE

CI Circular
EG Egg
OV Oval
FT Flat Top
RE Rectangular
SQ Square
TR Trapezoidal
AR Arch
BA Barrel
HO HorseShoe
UN Unspecified

SEWER MATERIAL

AC Asbestos Cement
BR Brick
PE Polyethylene
RP Reinforced Plastic Matrix
CO Concrete
CSB Concrete Segment Bolted
CSU Concrete Segment Unbolted
CC Concrete Box Culverted
PSC Plastic / Steel Composite
GRC Glass Reinforecd Plastic
DI Ductile Iron
PVC Polyvinyl Chloride
CI Cast Iron
SI Spun Iron
ST Steel
VC Vitrified Clay
PP Polypropylene
PF Pitch Fibre
MAC Masonry, Coursed
MAR Masonry, Random
U Unspecified

Address or Site Reference:

97079 - A1,

OS sheet Number: SJ8499NE
Scale: 1:1250 **Date:** 01/07/2021
Nodes: 79
Sheet: 4 of 4

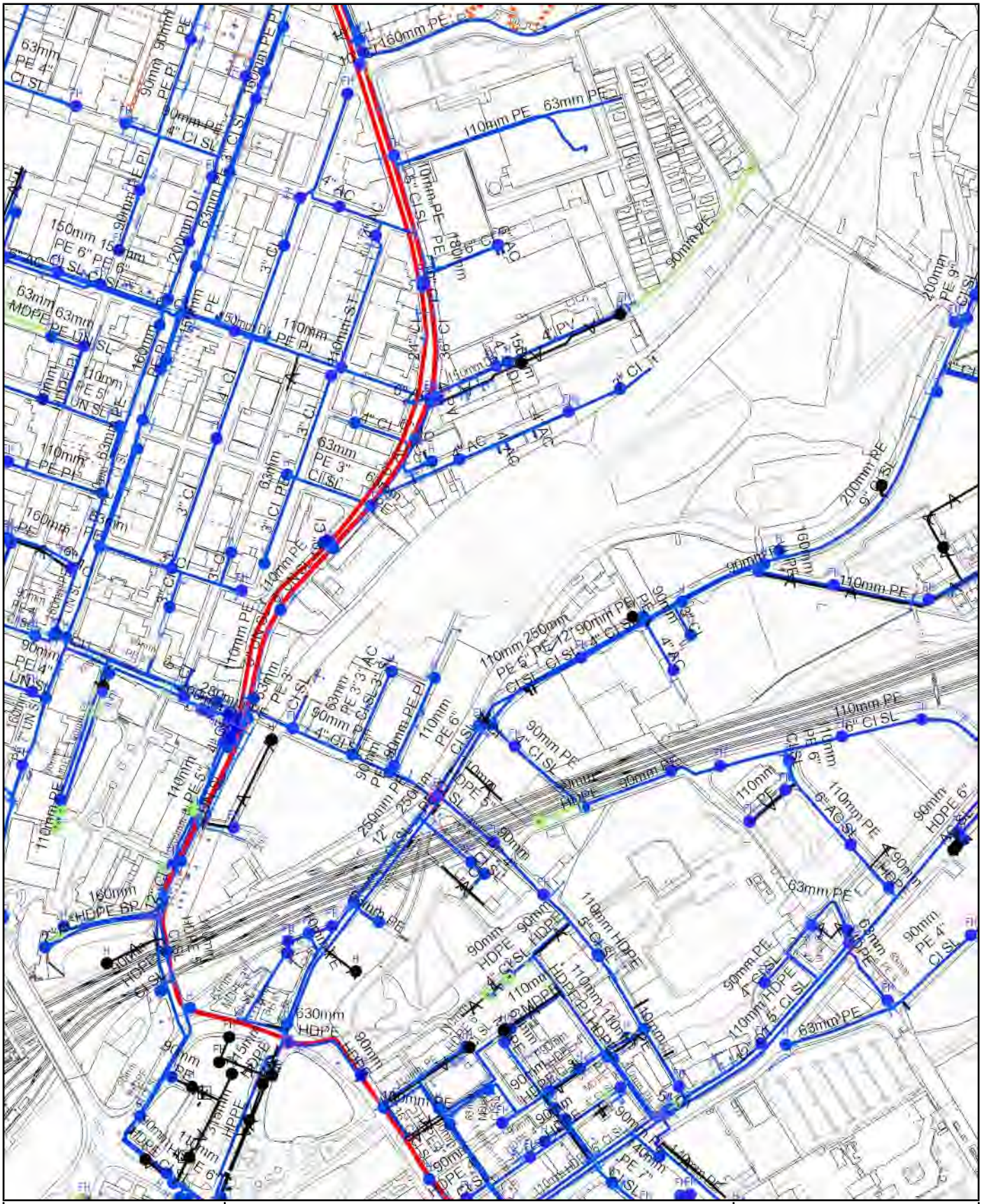
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SEWER RECORDS

United Utilities
Water for the North West

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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Scale:	1:4655	**WATER MAINS RECORDS**	United Utilities Water for the North West
Date:	01/07/2021		
Address or Site Reference:	97079 - A1		
Printed by:	Property Searches		

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United Utilities
Water for the North West

CHARGED

How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Your Ref: 97079 - A3 1:1250
Our Ref: UUPS-ORD-304256
Date: 05/07/2021

Atkins - Utility Solutions

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

FAO:

Dear Sirs

Location: 97079 - A3 1:1250

I acknowledge with thanks your request dated 05/07/2021 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP



LEGEND

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water

- Air Valve
- AC Valve, open
- AC Valve, closed
- CC Valve, open
- CC Valve, closed
- Non Return Valve
- Pressure Management Valve
- OMS Valve
- Stop Tap
- Flow Meter
- Domestic Meter
- Commercial Meter
- Pump
- Hydrant
- Fire Hydrant
- Anode
- Chlorination Point
- De-chlorination Point
- Strainer Point
- Access Point
- Hatch Box
- IP Point
- Sampling Station
- Logger Box
- Bore Hole
- Inlet Point
- Bulk Supply Point
- End Cap
- Site Termination
- Change of Characteristic
- Condition Report

Property Types

- Water Tower
- Valve House
- Booster Pumping Station
- Intake Pumping Station
- Water Treatment Works
- Supply Reservoir
- Service Reservoir
- Impounding Reservoir
- Pipe Bridge

Symbology for proposed assets is the same as above, but shown in green.
Symbology for abandoned assets is the same as above, but shown in black.

Address or Site Reference:

97079 - A3 1:1250,

OS sheet number: SJ8499SE
Scale: 1:1250
Date: 05/07/2021

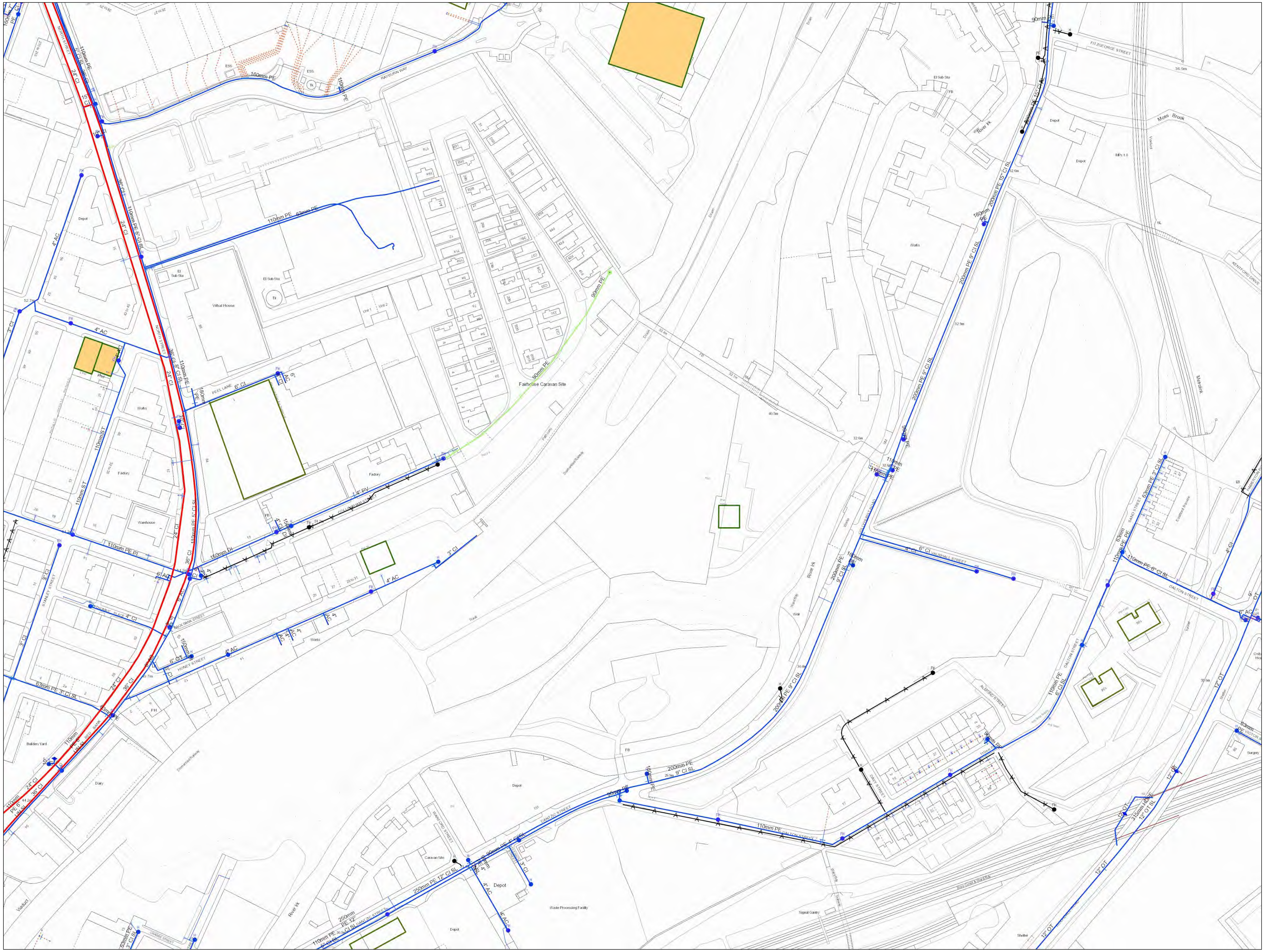
Printed by: Property Searches

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WATER MAIN RECORDS

United Utilities
Water for the North West



LEGEND

Proposed	Abandoned	Live
		Distribution Main
		Trunk Main
		Comms Pipe
		Private Pipe
		Concessionary Service
		Raw Water
		LDTM Raw Water
		LDTM Treated Water

- Air Valve
- AC Valve, open
- AC Valve, closed
- CC Valve, open
- CC Valve, closed
- Non Return Valve
- Pressure Management Valve
- OMS Valve
- Stop Tap
- Flow Meter
- Domestic Meter
- Commercial Meter
- Pump
- Hydrant
- Fire Hydrant
- Anode
- Chlorination Point
- De-chlorination Point
- Strainer Point
- Access Point
- Hatch Box
- IP Point
- Sampling Station
- Logger Box
- Bore Hole
- Inlet Point
- Bulk Supply Point
- End Cap
- Site Termination
- Change of Characteristic
- Condition Report

Property Types

- Water Tower
- Valve House
- Booster Pumping Station
- Intake Pumping Station
- Water Treatment Works
- Supply Reservoir
- Service Reservoir
- Impounding Reservoir
- Pipe Bridge

Symbology for proposed assets is the same as above, but shown in green.
Symbology for abandoned assets is the same as above, but shown in black.

Address or Site Reference:

97079 - A3 1:1250,

OS sheet number: SJ8499NE
Scale: 1:1250
Date: 05/07/2021

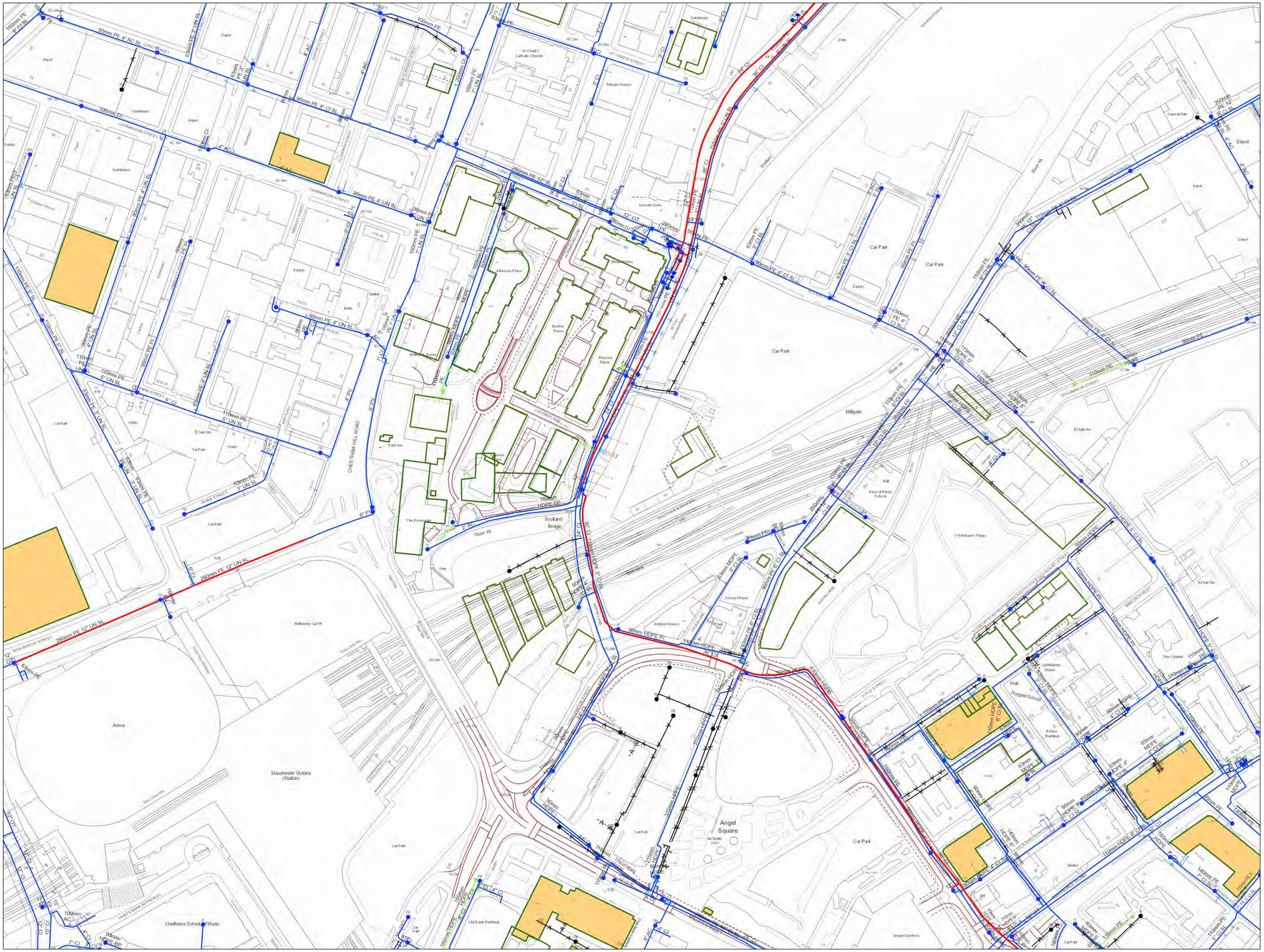
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WATER MAIN RECORDS

United Utilities
Water for the North West

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LEGEND

Proposed	Abandoned	Live
		Distribution Main
		Trunk Main
		Comms Pipe
		Private Pipe
		Concessionary Service
		Raw Water
		LDTM Raw Water
		LDTM Treated Water

- Air Valve
- AC Valve, open
- AC Valve, closed
- CC Valve, open
- CC Valve, closed
- Non Return Valve
- Pressure Management Valve
- OMS Valve
- Stop Tap
- Flow Meter
- Domestic Meter
- Commercial Meter
- Pump
- Hydrant
- Fire Hydrant
- Anode
- Chlorination Point
- De-chlorination Point
- Strainer Point
- Access Point
- Hatch Box
- IP Point
- Sampling Station
- Logger Box
- Bore Hole
- Inlet Point
- Bulk Supply Point
- End Cap
- Site Termination
- Change of Characteristic
- Condition Report

Property Types

- Water Tower
- Valve House
- Booster Pumping Station
- Intake Pumping Station
- Water Treatment Works
- Supply Reservoir
- Service Reservoir
- Impounding Reservoir
- Pipe Bridge

Symbology for proposed assets is the same as above, but shown in .
Symbology for abandoned assets is the same as above, but shown in black.

Address or Site Reference:

97079 - A3 1:1250,

OS sheet number: SJ8499SW
Scale: 1:1250
Date: 05/07/2021

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WATER MAIN RECORDS

United Utilities
Water for the North West

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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LEGEND

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water

- Air Valve
- AC Valve, open
- AC Valve, closed
- CC Valve, open
- CC Valve, closed
- Non Return Valve
- Pressure Management Valve
- OMS Valve
- Stop Tap
- Flow Meter
- Domestic Meter
- Commercial Meter
- Pump
- Hydrant
- Fire Hydrant
- Anode
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- Access Point
- Hatch Box
- IP Point
- Sampling Station
- Logger Box
- Bore Hole
- Inlet Point
- Bulk Supply Point
- End Cap
- Site Termination
- Change of Characteristic
- Condition Report

Property Types

- Water Tower
- Valve House
- Booster Pumping Station
- Intake Pumping Station
- Water Treatment Works
- Supply Reservoir
- Service Reservoir
- Impounding Reservoir
- Pipe Bridge

Symbology for proposed assets is the same as above, but shown in green.
Symbology for abandoned assets is the same as above, but shown in black.

Address or Site Reference:

97079 - A3 1:1250,

OS sheet number: SJ8499NW
Scale: 1:1250
Date: 05/07/2021


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WATER MAIN RECORDS

United Utilities
Water for the North West

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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(c) Crown copyright and database rights 2021 Ordnance Survey 100019209 | Date: 16/06/21 | Scale: 1:1250 | Map Centre: 384506,399505 | Data updated: 01/06/21 | Our Ref: 579121 - 1 | Telecoms Plan A0

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 2021 Ordnance Survey 100019209.

Duct, Trench | Chamber | Cabinet

jordan.beresford-cooke@atkinsglobal.com

97079

Virgin media

CHECKED

CHECKED

From: Gopalakrishnan, Roshni
Sent: 16 June 2021 12:16
To: Utility Solutions GDC Requests
Subject: RE: Plant Enquiry - 97079 - Site off Dantzic Street, Manchester - Please respond by 17/06/2021
Attachments: Special-Requirements.pdf; 97079 3.pdf; 97079 4.pdf; 97079 5.pdf; 97079.pdf; 97079 2.pdf

Please accept this email as confirmation that Vodafone: Fixed **does** have apparatus within the vicinity of your proposed works detailed below.

Please see attached network information.

Please also note that according to our records there is leased and/or third party network within your proposed works. However, because the plant is leased/third party we strongly recommend you contact all other utility providers to gather the extent of services within that area. Unfortunately, we are unable to advise who the plant is leased to or who the third party is.

Note: Only affected parts are printed and our network is not present in the remaining areas of your proposed works.

IMPORTANT - PLEASE READ = Your Next Step?:-
Where apparatus is affected and requires diversion, please send all the scheme related proposals that affects the Vodafone Network to c3requests@vodafone.com with a request for a 'C3 Budget Estimate'. Please ensure you include a plan showing proposed works. (A location plan is insufficient for Vodafone to provide a costing). These estimates will be provided by Vodafone directly, normally within 20 working days from receipt of your request. Please include proof of this C2 response when requesting a C3 (*using the 'forward' option*). Diversionary works may be necessary if the existing line of the highway/railway or its levels are altered.

If you require a quote for new development, commercial site connections - please email your requirements and associated plans to c3requests@vodafone.com and a budget estimate will be returned, within 10 working days of receipt

Plant Enquiries Team
T: +44 (0)1454 662881
E: osm.enquiries@atkinsglobal.com

This response is made only in respect to electronic communications apparatus forming part of the Vodafone Limited electronic communications network formerly being part of the electronic communications networks of Cable & Wireless UK (now re-named Vodafone Enterprise UK), Energis Communications Limited, Thus Group Holdings Limited and Your Communications Limited.

ATKINS working on behalf of Vodafone: Fixed

PLEASE NOTE:

The information given is indicative only. No warranty is made as to its accuracy. This information must not be solely relied upon in the event of excavation or other works carried out in the vicinity of Vodafone plant. No liability of any kind whatsoever is accepted by Vodafone, its servants, or agents, for any error or omission in respect of information contained on this information. The actual position of underground services must be verified and established on site before any mechanical plant is used. Authorities and contractors will be held liable for the full cost of repairs to Vodafone's apparatus and all claims made against them by Third parties as a result of any interference or damage.

Please consider the environment before printing this e-mail



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Legend

- Access Chamber.Location Active Carriageway Chamber
- Access Chamber.Location Active Footway Chamber
- Underground Route.Route Act. - Owned
- Underground Route.Route Act. - Leased

vodafone

Vodafone Limited (No01471587) registered office is at Vodafone House, The Connection, Newbury, Berkshire, RG142FN

Plot Date : 16/06/2021	Scale : 1:1250

This plan shows apparatus owned by members of the Vodafone Group of companies (including legacy telecommunication companies currently within the group)

Information with regard to such apparatus should always be obtained from Vodafone or its appointed agents.



N

W E

S

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Legend

- Access Chamber.Location Active Carriageway Chamber
- Access Chamber.Location Active Footway Chamber
- Underground Route.Route Act. - Owned
- Underground Route.Route Act. - Leased
- Underground Route.Route Act. - Third Party

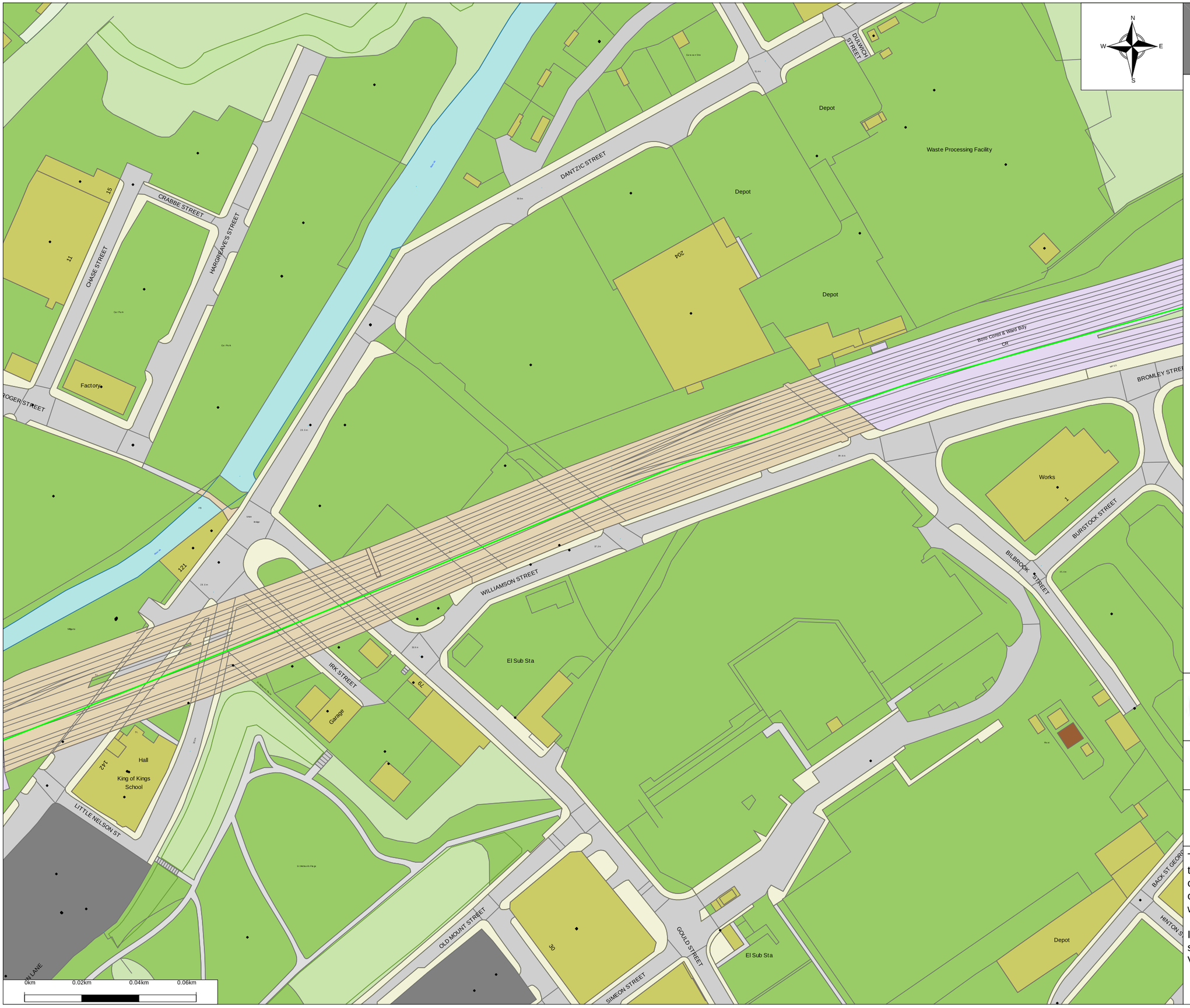
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Legend

Underground Route.Route Act. - Leased

vodafone

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Legend

Underground Route.Route Act. - Leased

vodafone

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Legend

- Access Chamber.Location Active Footway Chamber
- Underground Route.Route Act. - Owned
- Underground Route.Route Act. - Leased

vodafone

Vodafone Limited (No01471587) registered office is at Vodafone House, The Connection, Newbury, Berkshire, RG142FN

Plot Date : 16/06/2021	Scale : 1:1250

This plan shows apparatus owned by members of the Vodafone Group of companies (including legacy telecommunication companies currently within the group)

Information with regard to such apparatus should always be obtained from Vodafone or its appointed agents.

Special Requirements relating to the External Plant Network of Vodafone

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2. Purpose of document 1
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4. Vodafone Network and Apparatus 2
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9. Separation 4
10. Jointing chambers 5
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12. Excavation and backfill 5
13. Foam concrete 6
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17. Appendix B – What constitutes Vodafone Network 8
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1. Introduction

This document sets out the procedure that will apply when Other Parties intend or are undertaking works in the vicinity of Vodafone apparatus (see Appendix B for further information on what constitutes Vodafone apparatus).

2. Purpose of document

This document provides a means by which the Vodafone specific special requirements relating to their apparatus, regardless of it being situated in the public highway / road, private street, land or any other areas, is made aware to Other Parties.

3. Scope

This document will be presented to Other Parties or Contractors to encourage those undertaking works within the vicinity of Vodafone apparatus to refer to and comply with. This is in order to protect where necessary the Vodafone apparatus and to avoid damage to the apparatus and loss of service.

A National Joint Utilities Group (NJUG) document NJUG Volume 3 Guidelines on the Management of Third Party Cable Ducting provides useful reference material.

It should be noted that, where appropriate, additional information on avoiding danger from underground apparatus is contained within the HSG47 guidance book titled "Avoiding Danger from Underground Services."

4. Vodafone Network and Apparatus

Damage to Vodafone apparatus is extremely disruptive and can be expensive to repair, especially where long lengths of cable have to be replaced.

In order to maintain the network integrity and minimise disruption to service, it is essential that disturbances are absolutely minimal. When working within the vicinity of Vodafone apparatus, extreme care is necessary in order to avoid costly repairs. The Other Parties / Contractor shall make every effort to ensure that disturbance of Vodafone apparatus is no more than is absolutely necessary for the completion of the works in accordance with their contract. It should be noted that it is an offence to interfere with Vodafone apparatus without first contacting the company for advice.

5. Plant records

It is the responsibility of the Other Parties undertaking works which may affect Vodafone apparatus to obtain all relevant Vodafone plant records from our agent Atkins Global prior to works commencing. This may be done by contacting the Atkins Global Plant Enquiries Team listed in Appendix B.

Plant records for such enquiries will generally be provided within 10 working days of receipt and in compliance with the New Roads and Street Works Act 1991 [NRSWA] requirements.

6. Definitions

The following definitions are applicable in this document:

a) **Apparatus -** means all surface or sub-surface equipment and plant used by Vodafone including any associated cables or ducts owned, leased or rented by Vodafone.

b) **Cable** - means any polythene or other sheath containing optical fibres or metallic conductors.

c) **Depth of cover** - means the depth from the surface to the topmost barrel of the duct nest, in the case of ducts encased in concrete, to the top of the concrete, and in the case of directly buried cable, the top of the cable.

d) **Jointing chamber** - means any manhole, surface box or other chamber giving access to Vodafone apparatus or their network.

e) **Utility** - means an organisation licensed to provide gas, water, electricity, Cable TV or telecommunications services.

f) **Developer** - means an organisation licensed to develop industrial/residential premises or given license to connect to utility apparatus.

C2 General

g) Contractor - means the individual, firm or company contracted to undertake the work for a Utility or Other Parties.

h) Other Parties - means the Utilities, Highway or Roads Authorities, Developers, Street/Roads Authority Section 50/109 licensees

i) Site - means the location of, or in the vicinity of, the various works.

7. Requirements

Prior to commencing any work or moving heavy plant or equipment over any portion of the site, the Other Parties or Contractor shall notify Vodafone of their intentions. This may be done by contacting Vodafone via the contact list in Appendix B.

Upon receipt of this notification, Vodafone will identify if their apparatus is affected. If any Vodafone apparatus is affected by the works then they will arrange for the necessary records to be provided and confirm details of Vodafone apparatus and network operated within the affected area or adjacent to the proposed work site.

7.1 Location of Plant

It is the responsibility of the Other Parties or Contractors to undertake adequate plant location procedures. These may include searches for metallic cables which must be performed by actively inducing a signal in a cable conductor via a transmitter. A passive search is not considered sufficient.

Before applying a tracing signal to the Vodafone apparatus, the Other Parties or Contractors shall seek confirmation from Atkins Global that the Vodafone apparatus will not suffer any disruption to its networks normal workings as a result of the nature of the signal being induced.

7.2 Trial excavations

Optic fibre cables are very susceptible to damage from excavation tools. They are not electrically conductive and cannot be located by radio induction methods. Once an approximate location is known, the exact location must be ascertained by means of hand dug pilot holes. Where the work to be carried out by the Other Party or Contractor involves excavation in the vicinity of our apparatus, the Other Party or Contractor shall, by trial excavation at his own expense, determine the exact location and depth of the Vodafone apparatus. All excavations adjacent to the Vodafone apparatus are to be carried out by hand until the extent and /or location of the apparatus is known.

All excavation work shall be executed in accordance with the current issue of Health and Safety series booklet HSG47, Avoiding danger from underground services.

8. Depths of cover

The Other Party or Contractor should note that the minimum depths of cover for Vodafone apparatus shall be maintained together with specified separation requirements. Where the minimum depths of cover specified by Vodafone cannot be maintained, the Other Party or Contractor shall at their own expense, carry out the instructions of Vodafone requirements for the protection or diversion of their apparatus.

The Other Party or Contractor should have particular regard to the possibility of encountering Vodafone apparatus (including ducts and cables), at depths of cover other than that reported.

Surface cables (such as cables on bridges or walls) which are liable to be placed in danger from the Other Parties or Contractors works shall be protected, at the Other Parties expense, as directed by the Vodafone representative.

9. Separation

Reference should be made to HSG47 to ensure that adequate separation is achieved. The following details outline the specific requirements of Vodafone and capture the HSG47 requirements.

9.1 High voltage cables

High voltage single core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 500 mm.

High voltage multi-core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 350 mm.

In exceptional circumstances where the above clearances cannot be maintained, the separating distance may be reduced to a minimum of 175 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the High Voltage cable and the Company Apparatus, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.2 Low voltage cables

Low voltage cables of less than 1000 V shall have a minimum clearance from Company Apparatus of 180 mm. In exceptional circumstances where the above clearance cannot be maintained, the separating distance may be reduced to a minimum of 75 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the services, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.3 Ancillary electrical apparatus

Street furniture such as lamp posts, traffic posts and other such ancillary electrical apparatus shall have a minimum clearance of 150 mm from underground Company Apparatus and 600mm clearance from above ground Company Apparatus.

9.4 High pressure gas mains and other Undertakers plant/equipment

High pressure gas mains shall have a minimum clearance of 450 mm from Company Apparatus. All other undertakers' plant and equipment, when running in parallel with Company Apparatus, shall have a minimum clearance of 200mm. Where gas mains cross Company Apparatus, the minimum clearance shall be 200mm. All other undertakers' plant and equipment, when running across Company Apparatus, shall have a minimum clearance of 100 mm. NJUG Volume 1, Guidelines on the positioning and colour coding of underground utilities' apparatus refers.

9.5 Other Undertakers plant

Other undertakers' plant and equipment which runs in parallel with Company Apparatus shall have a minimum clearance of 200mm. All other undertakers' plant and equipment when running across Company Apparatus shall have a minimum clearance of 100mm.

9.6 Tramways

Each separating distance shall be individually agreed with the Company Representative.

10. Jointing chambers

10.1 Protection

Footway type jointing chambers are not designed to withstand carriageway loadings.

Where such chambers are liable to be placed at risk, either temporarily or permanently, from vehicular traffic or from the movement of plant and/or equipment, they will need to be adequately protected. Alternatively, they may have to be demolished and rebuilt to carriageway standards, at the Other Parties or Contractors expense under supervision of Vodafone representative.

All Vodafone jointing chambers and / or other access points shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and / or any further equipment required by Vodafone for the maintenance of its apparatus, must be maintained at all reasonable times.

10.2 Access

The covers to Vodafone jointing chambers and / or apparatus shall only be lifted by means of the appropriate keys and under the direct supervision of a Vodafone representative. Other Parties or Contractors shall not enter any Vodafone jointing chamber and / or apparatus unless under the supervision of a Vodafone representative and in any case not before the mandatory gas test has been carried out in the presence of Vodafone representative and such checks have shown it to be safe to enter the Vodafone chamber and / or apparatus. The Other Parties or Contractors shall be given reasonable access to Vodafone apparatus and chambers when required.

11. Notification periods

Where the Other Parties or Contractors works or the movement of plant or equipment may endanger Vodafone apparatus, the Other Party or Contractor shall give **Vodafone at least 7 working days' notice in writing** of the intended date to commence operations.

No excavation should be made without first consulting the relevant Vodafone apparatus layout drawings, which will be made available from the Vodafone agent Atkins Global on request and allowing 28 working days for processing the relevant drawings. However, should this not be possible, direct contact should be made to the Atkins Global Plant Enquiries Team as soon as possible to assess the situation.

When excavating, moving or backfilling (including use of Foamed Concrete for Reinstatements – FCR) around Vodafone apparatus, **Vodafone shall be given adequate prior written notice of the Other Parties or Contractors intentions, in order that the works may be adequately supervised. Such notice shall not be less than 3 working days.**

12. Excavation and backfill

All excavations adjacent to Vodafone apparatus are to be carried out by hand until the extent and or location of the Vodafone apparatus is known.

Use of mechanical borers and / or excavators shall not be used without the supervisory presence of a Vodafone representative or a given exemption.

Shuttering of the excavation or support to Vodafone apparatus, at the Other Parties or Contractors expense, shall be used as directed by the Vodafone representative.

At least 7 working days' notice must be given to Vodafone in order that any special protective measures which may be required to protect Vodafone apparatus, at the Other Parties or Contractors expense, when equipment such as pile driving, explosives, laser cutting high powered RF equipment or RF test gear, is to be used in conjunction with the works.

Other Parties or Contractors are advised to refer to the National Joint Utilities Group publication: NJUG Volume 1- Guidelines on the Positioning and Colour Coding of Underground Utilities' Apparatus

13. Foam concrete

If foam concrete is being used as the backfill material, it shall not be used either above or within 500 mm of any Company Apparatus. A suitable material in accordance with the specification for the Reinstatement of Openings in Highways shall be substituted.

14. Attendance of Company Representative

If a situation requires the attendance on site of a Vodafone representative for a continuous period of more than 6 hours, suitable facilities shall be provided by the Other Party or Contractor, at their expense, to meet the office and ablution requirements. If a situation arises that requires urgent attention Vodafone will endeavour to attend site within 2 hours for all other occasions arising, 24 hours.

15. Damage reports

In the event of any damage whatsoever occurring to Vodafone apparatus, the Other Party or Contractor shall immediately inform Vodafone by contacting their 24/7 number , (for contact details please refer to Appendix A).

All relevant costs of any subsequent repair and / or removal of the Vodafone apparatus shall be charged to the Other Party or Contractor, irrespective of who affects the repair.

The above requirements do not relieve the Other Party or Contractor of any of their obligations under their contract.

16. Appendix A – Street Works Team Contacts for Vodafone

Function	Address	Phone	Email Address
Streetworks Team	Vodafone, Street Works, Faraday House, Ground Floor, The Connection, Newbury, RG14 2FN	0333 304 0759	utilitiescentre@vodafone.com
Customer Complaints	n/a	0333 304 0762	n/a
Liability Claims Or Damage to Vodafone Apparatus	Vodafone Damage Claims, 1-2 Berkeley Square, 99 Berkeley Street Glasgow G3 7HR	0333 304 1104	claims@vodafone.com
Diversionary Works C2/C3	Atkins Global, PO Box 290, 500 Aztec West, Almondsbury, Bristol, BS32 4RZ.	01454 662881	osm.enquiries@atkinsglobal.com
Diversionary Works C4 / Escalations Networks Manager	Vodafone, Diversionary Works, 1-2 Berkeley Square, 99 Berkeley Street Glasgow G3 7HR	0141 303 2855	c3requests@vodafone.com
Emergencies 24 Hour – Defects & Faults	n/a	0333 304 0762	n/a
Vodafone Plant Enquiries includes: Cable & Wireless; Mercury Comms; Thus plc; Scottish Telecoms; Your Comms; Norweb Comms; Energis	Atkins Global PO Box 290 500 Aztec West, Almondsbury, Bristol, BS32 4RZ	01454 662881	osm.enquiries@atkinsglobal.com

17. Appendix B – What constitutes Vodafone Network

Vodafone own fibre network dedicated to business and residential users of telecommunications and has an international cable network that provides connectivity to 153 countries, either directly or indirectly through partners, reaching across the Atlantic Ocean, through Europe and on to India and throughout Asia. Spanning approximately 500,000 km in length, including interests in more than 69 major global cable systems, our next-generation network improves the quality and performance of telecommunications services through our use of advance optical and IP transmission.

In the UK & Ireland Vodafone's overall network includes the following legacy networks now owned through acquisitions or Company name changes.

Below are examples of what you could see on the streets and should be aware of:



[redacted]

Cable & Wireless became Cable & Wireless Worldwide in 2010



Mercury Communications – changed its name to Cable & Wireless in 1996



Energis – was acquired by Cable Wireless in 2005



Thus plc was acquired by Cable & Wireless in 2008





Scottish Telecom

Scottish Telecom demerged from its parent company Scottish Power to become Thus plc in 2002



your communications

Your Communications was integrated into Thus plc in 2006



NORWEB COMMS

Norweb Communications became Your Communications in 2000





Our apparatus is installed in roads and streets of UK and Ireland, however in some places is undistinguishable from other operators' apparatus, for example in City Centres where high quality infill modular paving chamber covers are found; some with labels and some without.

See below as examples:









The apparatus shown here is now owned, maintained and still in operation by Vodafone and includes.

Vodafone

Cable & Wireless

Mercury Communications

Energis

Thus plc

Your Communications

Norweb Communications

Scottish Telecom

Please see the Contact Details in Appendix A for Plant Enquiries and help on site.

18. About this Document

Content Owner
Chris Nesbitt

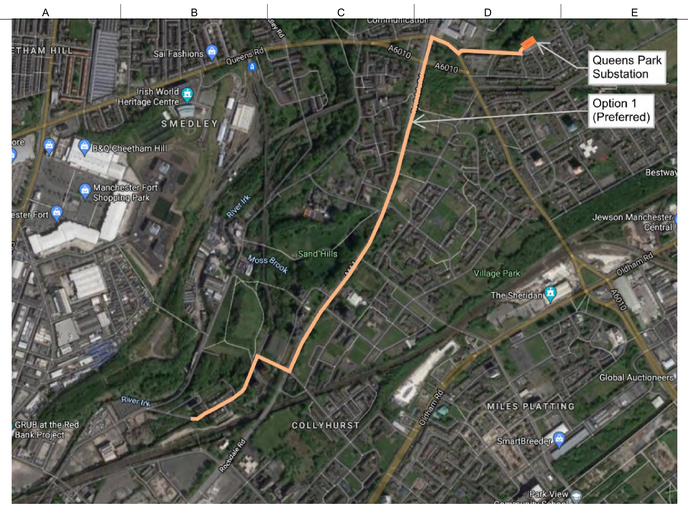
Changes since last version
Reformatted using the current Vodafone template to include updated Contact Details .

End of Document

Appendix C

HIF WORK UTILITIES DRAWINGS

A1



Extent of Street Works for HV Ring Mains to Queens Park Primary Substation

Scale NTS

N

Proposal that the 4th (green) ring main has HIF ducting but future ENWL/Developer cable pulling - due to occupation dates and loads. Flexibility is offered with the proposed ring mains that if phasing of plots changes in future, early plots will be able to connect to the energised ring main.

Secondary substation for 4th ring main to be developer funded and installed when & where required.

Secondary substation loctions tbc with FEC team. Capacity tbc - assumed 0.5MVA.

Secondary substation loctions tbc with FEC team. Capacity tbc - assumed 0.5MVA.

19.22MVA site total

Ducting provision for future LV feed for street lighting and EV charging

EV Charging RB01-4 & 12(b) 0.34MVA 2028

EV Charging RB05 0.22MVA 2026

RB05a 1.24MVA 2026

RB05b 0.62MVA 2026

RB05c 0.62MVA 2026

RB04 1.29MVA 2026

RB03 0.78MVA 2027

Park 0.25MVA 2024

RB02 0.80MVA 2028

RB01 0.55MVA 2029

0.64MVA 2029 RB12b

RB12a

RB11 & 12a 0.43MVA 2026

RB11

RB06 0.61MVA 2026

0.60MVA 2026 RB08

RB07 1.51MVA 2027

RB09 1.38MVA 2026

RB10 0.83MVA 2032

RB17 0.69MVA 2031

0.55MVA 2030 RB16

NT04 1.56MVA 2028

NT03 1.52MVA 2027

NT02 2.20MVA 2026

Proposed utilities to cross proposed footbridge. Buried 'U-Tube' trench crossing as a potential alternative

Extent of HIF ducting for 4th ring main. Due to Queens Park primary capacity exceeding demand required by HIF and Collyhurst, this ring main may connect to the future VN primary substation (location unconfirmed).

Route proving for 3No. ring mains beyond the HIF site back to Queens Park primary substation to be undertaken by the contestable works undertaker (Utilities subconsultant / ENWL)

Proposed electricity routing aims to avoid diversion requirements in the 'Full Aspiration' to widen Dantzic Street within the FEC Developer Design (Application 4) - dependant on full GPR results, utility trail hole findings and extent of 'Full Aspiration' drainage infrastructure to be installed by HIF

Buried 'U-Tube' trench crossing beneath river bed for proposed utilities

Key

- HIF Site Boundary
- Plot Boundary
- Ring 1 - 5.28MVA total demand, 4.3km length (HIF funded)
- Ring 2 - 4.75MVA total demand, 5.0km length (HIF funded)
- Ring 3 - 5.01MVA total demand, 5.5km length (HIF funded)
- Ring 4 - 4.18MVA total demand, 1.6km length (HIF ducting only)
- 6.6kV Secondary (HIF funded)
- 6.6kV Secondary (future developer funded)
- Ring 1 - LV cables (HIF funded)
- Ring 2 - LV cables (HIF funded)
- Ring 3 - LV cables (HIF funded)
- Ring 4 - LV cables (HIF ducting only)
- HIF drainage and utility infrastructure networks sized to accommodate these plots, however geotechnical/remedial works to be designed and undertaken by the developer

Notes

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   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
5. Plot boundaries developed in conversations with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to changes as the FEC masterplan is developed.
6. Utility demands have been calculated base on parking, residential and non-residential numbers, as per FEC's 'VN Housing Delivery Plan September 2021 v2' received 05-10-21. Occupation dates have been taken from v3 received 22-11-2021. Non-FEC third party plot details have been assumed from the Northern Gateway SRF.
7. Extents of landscaping and new roads are based on WS3 designs.
8. Geo-environmental and geotechnical assessments will address the areas within the red line boundary (excluding grey hatched developer plots).
9. WS3 HIF Utilities design developed in conjunction with FEC team discussions.
10. Due to H&S hazards associated with cables being energised far ahead of need, and the later plots likely requiring capacity from a future new primary substation, not all cables and ducting will be provided by HIF. This strategy has been developed in discussion with ENWL.
11. HV and LV to ducted, due to HIF programme constraints.
12. Future plot connections to the HIF network are to be undertaken by developer.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		EC	RG	RG	---
P03	01/02/22		EC	EC	RG	---
P04	18/02/22	Amended for planning	EC	RG	RG	---

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Client

MANCHESTER CITY COUNCIL

bam nuttall

Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Electrical Demands & 6.6kV Circuits

Scale at A1	Arup Job No
1:1250	282022-00

Role: Consultant for Utilities

Suitability: S3 - Issued for Review and Comment

Rev	By	Chkd	Appd	
P04	EC	RG	RG	---
	Date 18/02/22	Date 18/02/22	Date 18/02/22	---

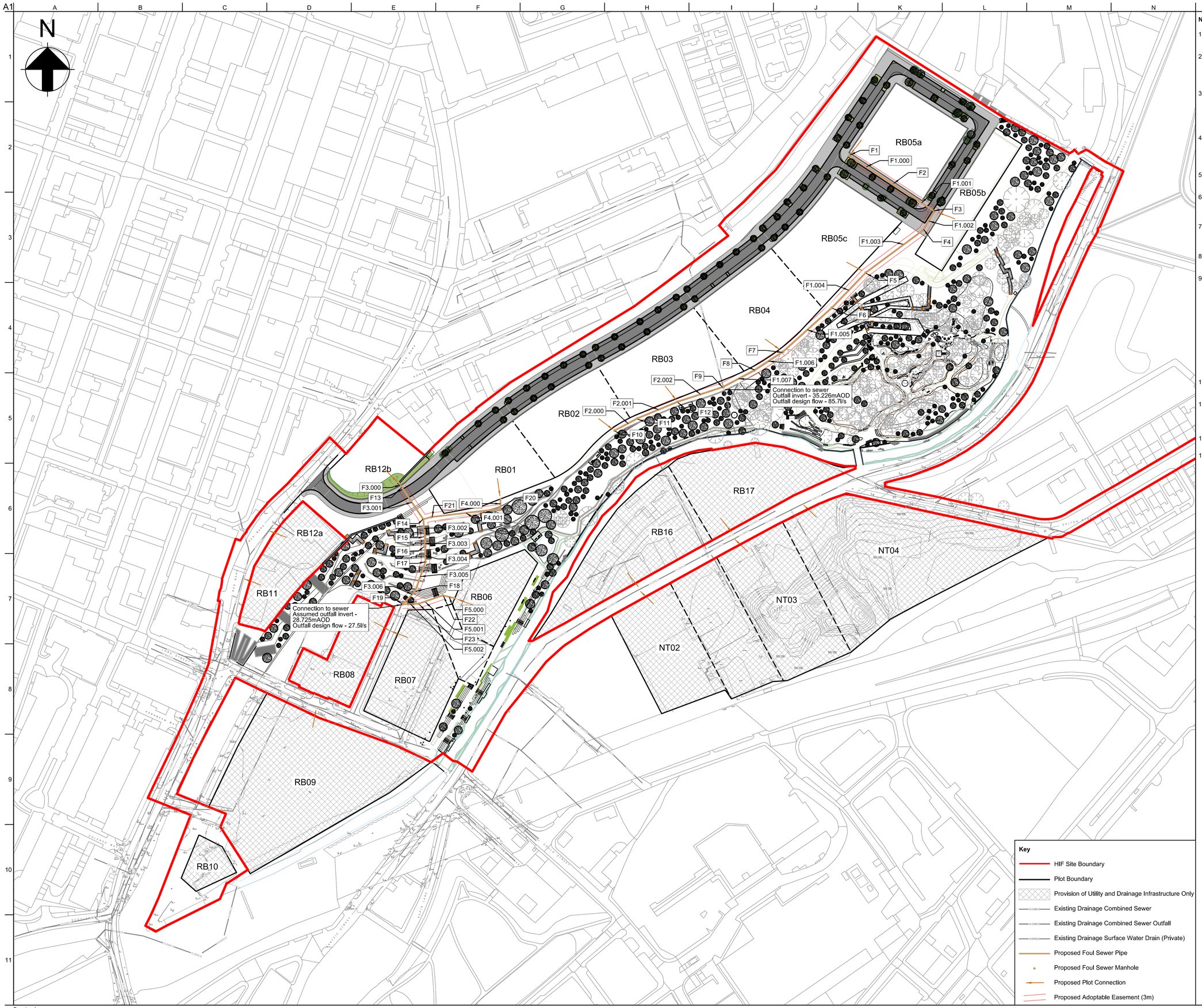
Name: VNIF - ARP - 00 - YYY - DR - CU - 1002

(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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A1



Notes

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3. Layout is based on:
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   • Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
4. No guarantee is given for the accuracy of the information contained herein, which is provided for general guidance only and must not be relied upon for excavation or detailed design until apparatus locations are verified / validated through further site investigation works.
5. Extents of road refurbishments, new roads, and street works are WIP based on WS3 Design.
6. Existing Drainage layout based on the following information:
   - Utility Search Map drawing 97079 undertaken by Atkins dated 24/06/2021.
7. For the Standard Drainage Specification refer to the "Design and Construction Guidance for foul and surface water sewers offered for adoption" - Rev 2.1 - dated 25th May 2021.
8. This drawing should be read with reference to the Arup Stage 3 Report and Drainage Strategy.
9. Utilities have been drawn to PAS128 standard. The Located Service Classification table below gives a brief overview. For further details refer to document 'PAS 128:2014 Specification for underground utility detection, verification and location'.

Located Service Classification	Certainty/Risk
Type A Verification - Visual Identification	
Type B Detection - Typically GPR and EML techniques are used	Depth
Type C Site reconnaissance + Physical surface features identified	
Type D Desktop utility records search	

10. A connection point has been provided for each plot within the HIF Boundary at a minimum depth of 2.0-2.5m as agreed with WSP.
11. Drainage construction materials, unless otherwise stated:
    - Drainage pipes - Polyethylene in accordance with BS 13476
    - Manholes - Precast Concrete
    - Inspection Chambers - Polypropylene in accordance with BS 7158
12. For drainage diversions and abandonments, refer to drawing VNIF-ARP-00-YYY-DR-CU-1001
13. The finalised location of trees is to be confirmed at the next design stage.

Key

- HIF Site Boundary
- Plot Boundary
- Provision of Utility and Drainage Infrastructure Only
- Existing Drainage Combined Sewer
- Existing Drainage Combined Sewer Outfall
- Existing Drainage Surface Water Drain (Private)
- Proposed Foul Sewer Pipe
- Proposed Foul Sewer Manhole
- Proposed Plot Connection
- Proposed Adoptable Easement (3m)

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		DH	RG	RG	---
P03	01/02/22		DH	RG	RG	---
P04	17/02/22	Amended for Planning Comments	DH	RG	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed Foul Drainage
General Arrangement

Scale at A1	Arup Job No
1:1250	282022-00

Role: Civil - Drainage

Suitability: S3 - Issued for Review and Approval

Rev	By	Chkd	Appd	
P04	DH	RG	RG	---
	Date 17/02/22	Date 17/02/22	Date 17/02/22	---

Name: VNIF - ARP - 00 - YYY - DR - CD - 0003
(Project | Originator | Volume | Location | Type | Role | Number)

Do not scale

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A1

RB01
RB02
RB03
RB04
RB05a
RB05b
RB05c
RB06
RB07
RB08
RB09
RB10
RB11
RB12a
RB12b
RB16
RB17
NT02
NT03
NT04

2No. 200PE
200PE
250PE
160PE
160PE

Likely 2 No. 200PE water mains (or 1 No. 400PE) - 2nd installed by HIF but only brought online in later phases

Easement required along non-adopted road - mains positioned in carriageway

Likely 1 No. 200PE water main for cross connectivity (worst case 2 No. 200PE or 1 No. 400PE)

Easement required through parkland

Proposed utilities to cross proposed footbridge. Buried 'U-tube' trench crossing as potential alternative.

Tie in to existing 200mm PE distribution water main

Water main required for play feature (private supply)

Connection to existing 36" CI trunk water main in Red Bank

Connection to existing 36" CI trunk water main in Red Bank

Existing water mains to be upsized to 160PE

Aim to tie into existing main prior to bridge, with no new river crossing required in this location, as these plots are to be supplied from Red Bank distribution mains.

Cross connection may be required in future, when the Dantzic Street plots and wider Victoria North plots are developed. Exact routing dependant on NT building footprints and UU upgrades of wider network. Not to be undertaken by HIF.

Key

- HIF Site Boundary
- Plot Boundary
- Indicative boundary between adjacent plots
- Future water main to improve resilience (outisde HIF)
- New water main
- Existing water mains to be replaced (up-sized or replaced due to cast iron material)
- Water main wayleave required
- HIF drainage and utility infrastructure networks sized to accommodate these plots, however geotechnical/remedial works to be designed and undertaken by the developer

Notes

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   - Topographical Survey drawing PS-2158-TS by Paragon Surveys dated September 2021.
5. Plot boundaries developed in conversation with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to change as the FEC masterplan is developed.
6. Extents of landscaping and new roads are based on WS3 designs.
7. WS3 HIF Utilities design developed in conjunction with FEC team discussions.
8. Future plot connections to the HIF network are to be undertaken by developers.

Rev	Date	Description	By	Chkd	Appd	Auth
P01	26/08/21		AS	AS	AS	---
P02	17/12/21		EC	RG	RG	---
P03	01/02/22		EC	EC	RG	---
P04	18/02/22	Amended for planning	EC	RG	RG	---
P05	24/02/22	Amended for Planning	TW	TW	RG	---
P06	04/03/22		AS	EC	RG	---

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed HIF Potable Water Network Upgrade

Scale at A1		Arup Job No	
	1:1250		282022-00

Role: Consultant for Utilities

Suitability: S3 - Issued for Review and Comment

Rev	By	Chkd	Appd	
P06	AS	EC	RG	---
	Date 03/03/22	Date 03/03/22	Date 04/03/22	---

Name: VNIF - ARP - 00 - YYY - DR - CU - 1003
(Project - Originator - Volume - Location - Type - Role - Number)

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A1

RB01
RB02
RB03
RB04
RB05a
RB05b
RB05c
RB06
RB07
RB08
RB09
RB10
RB11
RB12a
RB12b
RB16
RB17
NT02
NT03
NT04

Provision for BT Openreach duct bank and Virgin Media and others (shared) duct bank

Proposed utilities to cross proposed footbridge. Buried 'U-Tube' Trench crossing as potential alternative

Tie in with existing Virgin Media and Openreach networks (subject to capacity and fibre routing)

Less/no HIF ducting may be possible along Red Bank subject to existing Virgin Media and Openreach networks (capacity and fibre routing)

Tie in with existing Virgin Media and Openreach networks (subject to capacity and fibre routing)

Buried 'U-Tube' trench crossing beneath riverbed for proposed utilities

Tie in with existing Openreach network (subject to capacity and fibre routing)

Tie in with existing Virgin Media network

Notes

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5. Plot boundaries developed in conversation with FEC Winter 2021/2 - boundaries between adjacent plots are indicative only and are subject to change as the FEC masterplan is developed.
6. Extents of landscaping and new roads are based on WS3 designs.
7. WS3 HIF Utilities design developed in conjunction with FEC team discussions.
8. Future plot connections to the HIF network are to be undertaken by developers.

Key

- HIF Site Boundary
- Plot Boundary
- Indicative boundary between adjacent plots
- Primary Distribution Route (6 No. Ducts x2)
- Secondary Distribution Route (4 No. Ducts x2)
- Tertiary Distribution Route (4 No. Duct x1)
- Network Expansion (by provider)
- HIF drainage and utility infrastructure networks sized to accommodate these plots, however geotechnical/remedial works to be designed and undertaken by the developer

Rev	Date	Description	By	Chkd	Appd	Auth
P01	11/11/21		TW	TW	TW	—
P02	17/12/21		EC	RG	RG	—
P03	01/02/22		EC	EC	RG	—
P04	18/02/22	Amended for planning	EC	RG	RG	—
P05	23/02/22		EC	EC	RG	—
P06	04/03/22		AS	EC	RG	—

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Client

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Project Title

Victoria North HIF Infrastructure & Enabling Works

Drawing Title

Proposed HIF Telecoms Network

Scale at A1	1:1250	Arup Job No	282022-00
Role	Consultant for Utilities		
Suitability	S3 - Issued for Review and Comment		

Rev	By	Chkd	Appd	
P06	AS	EC	RG	—
	Date 03/03/22	Date 03/03/22	Date 04/03/22	—

Name: VNIF - ARP - 00 - YYY - DR - CU - 1006
(Project | Originator | Volume | Location | Type | Role | Number)

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