



making the right connections



Mill Lane, St Ippolyts

Utility Study
Level 2

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2				
3				

UCML Utility Study – Level 2

Mill Lane,
St Ippolyts,
Hitchin

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1. Introduction

UCML has been appointed by Martin Grant Homes (hereafter referred to as ‘the Client’) to provide a desktop utility study to identify the outline constraints derived from the statutory utility infrastructure on a proposed residential development of 41 no. dwellings. The site is located off Mill Lane, St Ippolyts, as indicated in Figure 1.1 below.

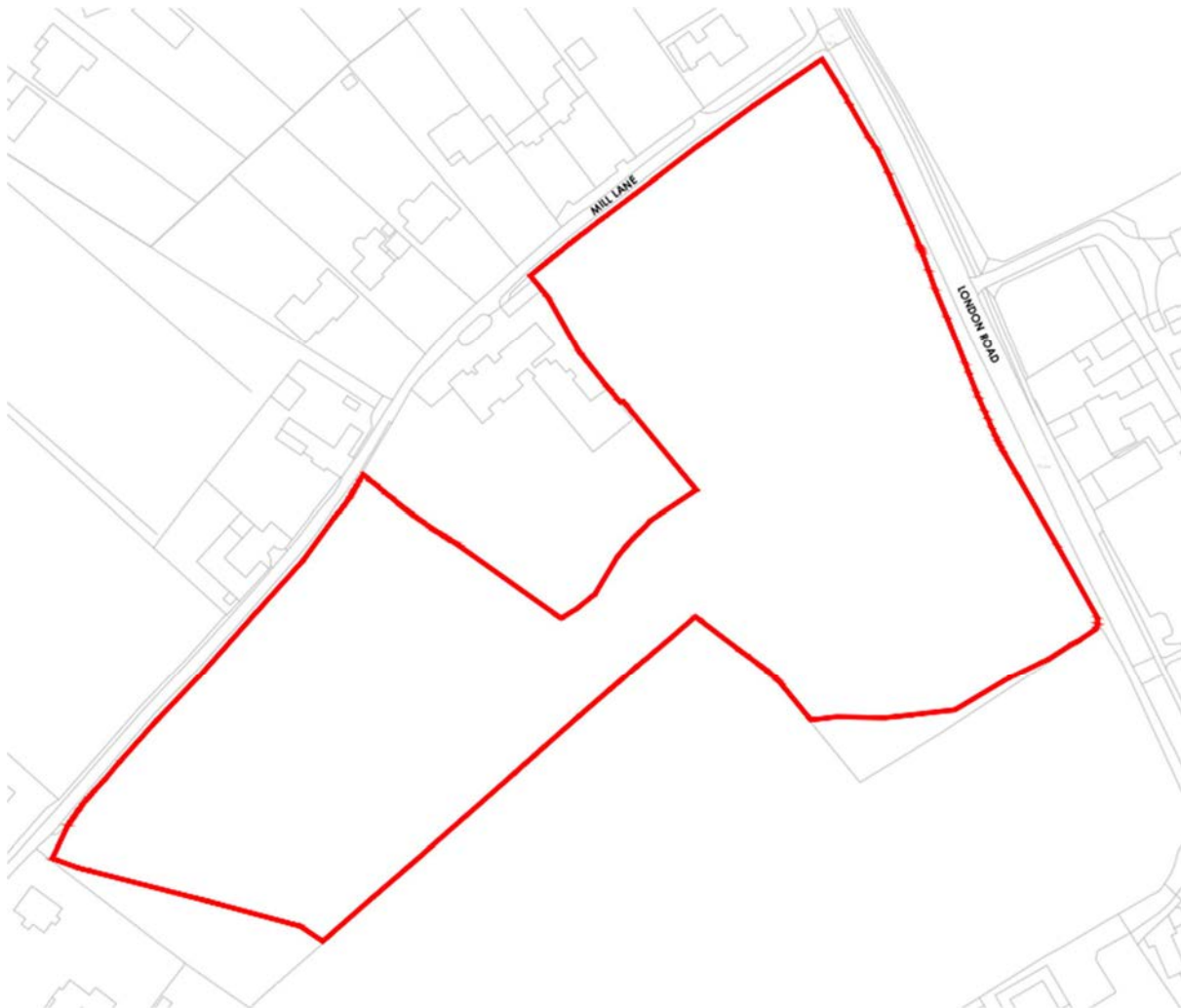


Figure 1.1 – Red Line Boundary Plan

UCML has been commissioned to provide a desktop study defining the potential cost and timescale risks that could impact the overall delivery of the project. The principal aim of this utility study is to identify the key constraints derived from statutory utility infrastructure on the proposed development.

Access to Mill Lane to be diverted through the Site to alleviate existing safety concerns with junction on London Road.

Development of 84 new homes under construction

Proposed new access point taken from 4th arm of realigned roundabout along London Road.

Existing mature trees to be retained and inform the layout, with the trees and their associated root protection areas retained within green spaces.

Grade II Listed Building: The Mill Farm

CARE HOME

Grade II Listed Building: Pound Farm

A small number of houses are proposed along Mill Lane.

StuDS

The western part of the Site will be largely left undeveloped, and will be used for ecological enhancements whilst also allowing informal public access and providing walking routes.

The southern part of the Site is to remain free from development to respect the setting of the Grade II Listed Building opposite, and also create an area for new landscaping and public open space.

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2. Executive Summary

This study comprises the results of the investigation and appraisal undertaken by UCML of the existing utility infrastructure located in the vicinity of the development site, and provides an overview of the likely demand requirements to support the proposed development works along with a review of any network reconfiguration works that are currently anticipated.

The relevant sections of the study will discuss the development requirements and constraints in further detail; however, UCML would highlight the following main site constraints, along with the recommended next steps to be taken;

- It has been assumed that all utility assets affected by the roundabout construction works will be completed by the adjacent developer responsible for the delivery of the highway alteration works. Review of the 'as-laid' plans for the diversionary works undertaken will be required to confirm no further works are required to accommodate the main site entrance construction.
- It is assumed that the utility assets located in the section of Mill Lane to be stopped up will be affected by the highway alteration works. It has been assumed that a service strip can be retained in this area to allow legal agreements to be agreed with each utility network operator to negate the requirement to divert their apparatus. Review of the final layout plans for the site and this area will be required to confirm the viability of this strategy.
- Affinity Water has provided confirmation the existing distribution network currently has sufficient capacity to support the development demand.
- UK Power Networks has provided confirmation the existing 11 kV HV distribution network currently has sufficient capacity to support the development demand. Please note, the use of the provided point of connection will required approximately 550 metres of off-site mains lay to bring capacity to the site.

2.1. Cost Summary

Table 2.1 below summarises the total anticipated budget costs for the required utility works. Please refer to the relevant section of the study for further detail.

Work Type	Budget Cost
Disconnection Works	
Clean Water	N/A
Gas	N/A
Electricity	N/A
Openreach	N/A
Virgin Media	N/A
Total	£N/A
Diversiory Works	
Clean Water	N/A
Gas	N/A
Electricity	N/A
Openreach	N/A
Virgin Media	N/A
Total	£N/A
Connection Works	
Clean Water	£118,000.00
Gas	£N/A
Electricity	£234,118.70
Openreach	£Nil
Virgin Media	£Nil
Total	£352,118.70
All budgetary sums exclude VAT, on-site civils, and principal contractor preliminaries.	

2.2. Risk Matrix

Based upon the anticipated utility works required for this development discussed within this study, UCML has drawn up an indicative risk matrix for the development. For the risk matrix, each item is allocated a ‘traffic light’ score based on the anticipated risk to the development and associated timescales based on the key shown below.

Matrix Key	
	No major issues envisaged
	Delays could be experienced that could be measured in weeks, and could be prevented
	Delays could be experienced that could be measured in months, and may be prevented
	Major delays could be experienced, that may not be mitigated

Table 2.1 – Risk Matrix Key

Work Type	Risk
Disconnection Works	
Clean Water – <i>none currently anticipated.</i>	
Gas – <i>none currently anticipated.</i>	
Electricity – <i>none currently anticipated.</i>	
Openreach – <i>none currently anticipated.</i>	
Virgin Media – <i>none currently anticipated.</i>	
Diversiory Works	
Clean Water – <i>none currently anticipated, provided legal agreement strategy for stopping up order can be delivered.</i>	
Gas – <i>none currently anticipated, provided legal agreement strategy for stopping up order can be delivered.</i>	
Electricity – <i>none currently anticipated, provided legal agreement strategy for stopping up order can be delivered.</i>	
Openreach – <i>none currently anticipated, provided legal agreement strategy for stopping up order can be delivered.</i>	
Virgin Media – <i>none currently anticipated, provided legal agreement strategy for stopping up order can be delivered.</i>	
Connection Works	
Clean Water – <i>off-site mains lay, on-site mains lay, and installation of service connection to each dwelling.</i>	
Gas – <i>none anticipated, based on use of electric heating strategy.</i>	
Electricity – <i>off-site HV mains lay, on-site HV mains lay, installation of on-site substation, on-site LV mains lay, and installation of LV service connection to each dwelling.</i>	
Openreach – <i>FTTP network installation.</i>	
Virgin Media – <i>fibre network installation.</i>	

Table 2.2 – Risk Matrix Table

3. Scope and Objective

Utilities Connections Management Ltd (UCML) is an independent Utility Consultancy providing services relating to the provision of utility disconnections, diversions, and connections for all types of developments. This desktop utility study aims to provide a ‘snapshot’ in time of the current statutory utility networks, and review the potential disconnection, diversion, and connection works that may be required to accommodate the development proposals.

The objective of the commission is to provide a level of information relating to budgetary costs and risks, without incurring significant costs relating to distribution network studies. UCML’s desktop utility studies provide a detailed overview of the statutory clean water, gas, electricity, and telecommunications infrastructure networks located in the vicinity of a proposed site.

This desktop study has been produced using statutory asset records issued to UCML by the relevant utility network owner operating in the location of the development site. The host statutory utility network operators in the vicinity of the development site, and covered in this study, are listed in the table below;

Utility	Statutory Network Operator
Clean Water	Affinity Water
Gas	Cadent Gas
Electricity	UK Power Networks
Telecoms	Openreach
	Virgin Media

Table 3.1 – Statutory Utility Network Operators

It should be noted that, as this study is desktop in nature, no site visits or surveys have been undertaken during its completion unless stated otherwise. UCML is not responsible for the accuracy or quality of the information provided on statutory utility infrastructure records, and as attempted to use reasonable skill and care in investigating the existing utility infrastructure.

Unless stated otherwise, UCML has not made any provision for out-of-area water mains, private networks, unrecorded networks, Liquid Petroleum Gas (LPG) networks, street lighting, CCTV, traffic signals, illuminated signage, data centre networks, electricity generation installation, interconnectors, or drainage or sewerage networks.

4. Assumptions and Exclusions

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

- Any estimated loads have been based on the information provided in network operators' distribution codes and other documented standards.
- The information provided within the desktop study is based on the development site area as identified in the proposed site layout plan shown in Figure 1.2 within the introduction. Any land falling outside of the provided boundary is outside of the scope of this desktop study and, should it be incorporated within the proposed development boundary, this may affect the information and recommendations provided.
- The desktop study has been produced based on the specification provided by the Client/Developer at the time of instruction. Any changes to the size, type, number, or specification of the development (for instance, the extent of Electric Vehicle (EV) charging provision and/or use of low-carbon heating strategies) may affect the information and recommendations provided.
- For any budget costs and timescales advised, no allowance has been made in respect of the following unless stated otherwise;
 - Wayleaves, easements, or access rights.
 - Reinforcement charges.
 - Land transfers or lease arrangements for substations.
 - Abnormal off-site civil requirements.
 - Specialist or non-standard traffic management.
 - On-site civils and builders works.
 - Seasonal embargoes.
 - Value Added Tax (VAT).

5. Terms and Definitions

ADMD	After Diversity Maximum Demand. The development demand considering diversity of usage.
ASHP	Air Source Heat Pump.
CHP	Combined Heat and Power generator.
CSEP	Controlled System Exit Point. Gas mains connection point.
DNO	Distribution Network Operator. This is the licensed electricity distributor for the geographic region.
EV	Electric Vehicle.
FTTP	Fibre to the Premise telecommunications connection.
GT	Gas Transporter. The GT is the licensed gas network operator for a specific geographical area.
GSHP	Ground Source Heat Pump.
ICP	Independent Connection Providers.
IDNO	Independent Distribution Network Operator. Network owners and operators that are not constrained to a geographic area.
IGT	Independent Gas Transporter. A GT that is not governed by its geographic location.
NAV	New Appointment and Variation. Agreements signed by independent water network operators, not governed by geographical area, with Ofwat to adopt water infrastructure within a given boundary.
POC	Point of Connection. This is a formal document submitted by the DNO identifying the location for a new electrical connection.
PV	Photovoltaic generation.

6. Existing Utility Networks

6.1. Clean Water

The local clean water network in the vicinity of the development site is owned and operated by Affinity Water within the terms of its statutory license issued by Ofwat. Figure 6.1 below is an extract from Affinity Water infrastructure record, detailing the current indicated position of existing assets; however, it may be prudent to undertake below ground survey works to ensure there are no unknown services present which are not recorded. Please refer to the copy of the infrastructure record appended to this study for further detail.

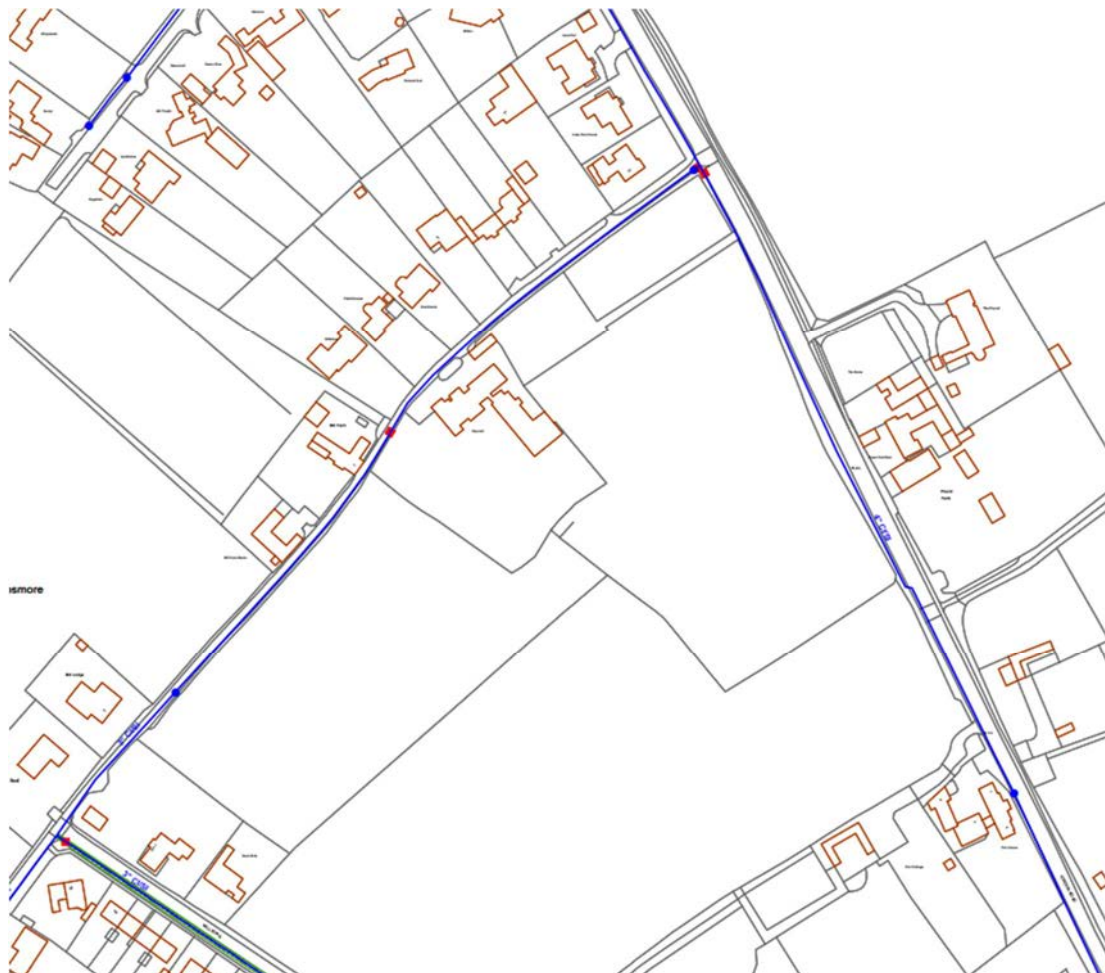
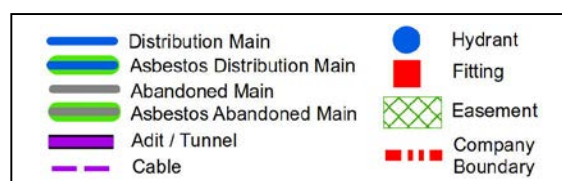


Figure 6.1 – Extract from clean water infrastructure record



6.2. Gas

The local gas distribution network in the vicinity of the development site is owned and operated by Cadent Gas within the terms of its statutory license issued by Ofgem. Figure 6.2 below is an extract from Cadent Gas infrastructure record, detailing the current indicated position of existing assets; however, it may be prudent to undertake below ground survey works to ensure there are no unknown services present which are not recorded. Please refer to the copy of the infrastructure record appended to this study for further detail.

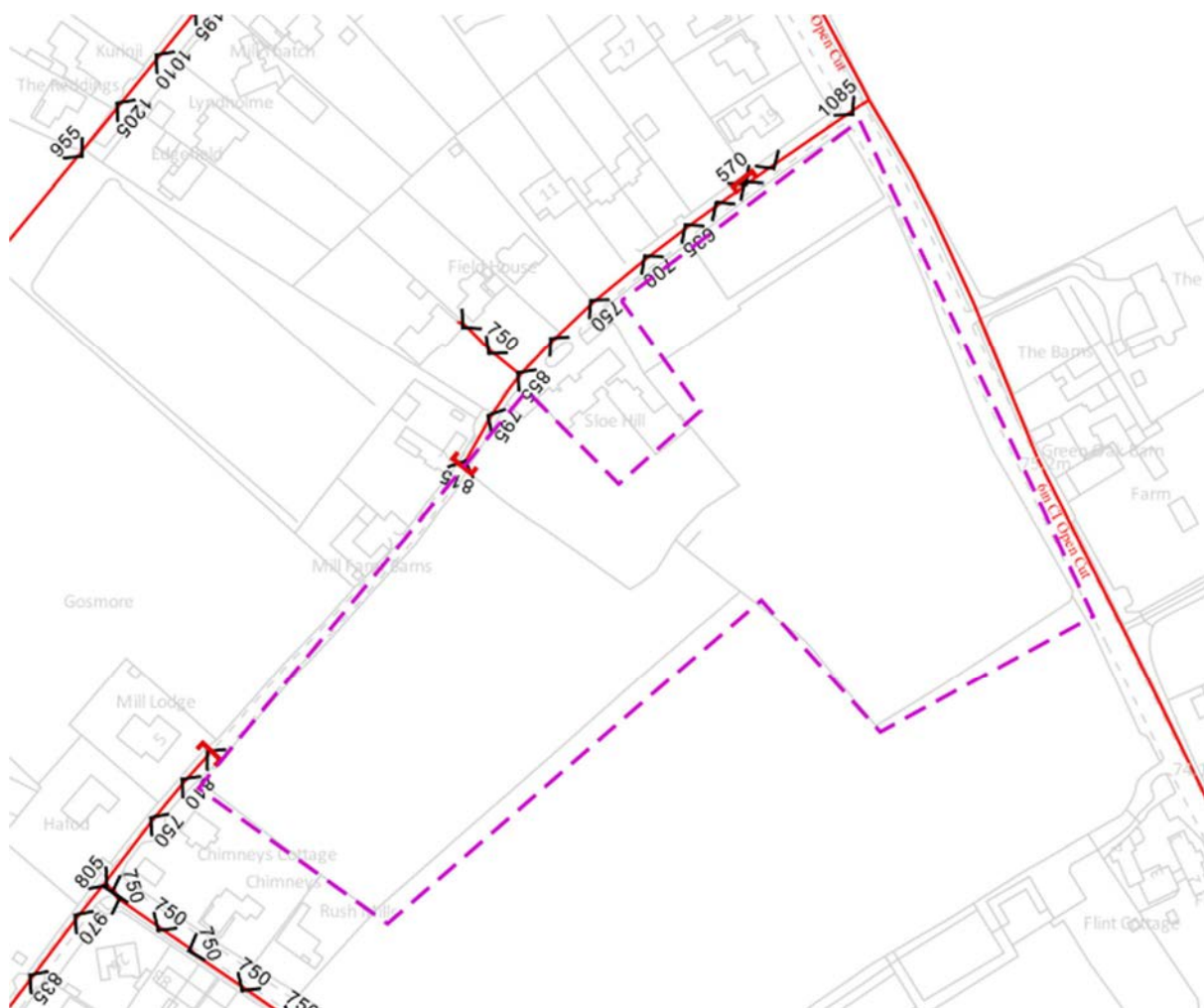
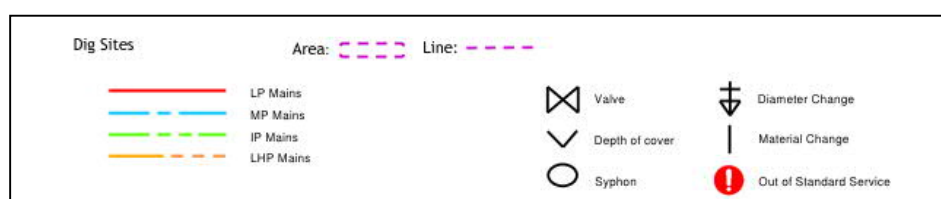


Figure 6.2 – Extract from gas infrastructure record



6.3. Electricity

The local electricity distribution network in the vicinity of the development site is owned and operated by UK Power Networks within the terms of its statutory license issued by Ofgem. Figure 6.3 below is an extract from UK Power Networks infrastructure record, detailing the current indicated position of existing assets; however, it may be prudent to undertake below ground survey works to ensure there are no unknown services present which are not recorded. Please refer to the copy of the infrastructure record appended to this study for further detail.

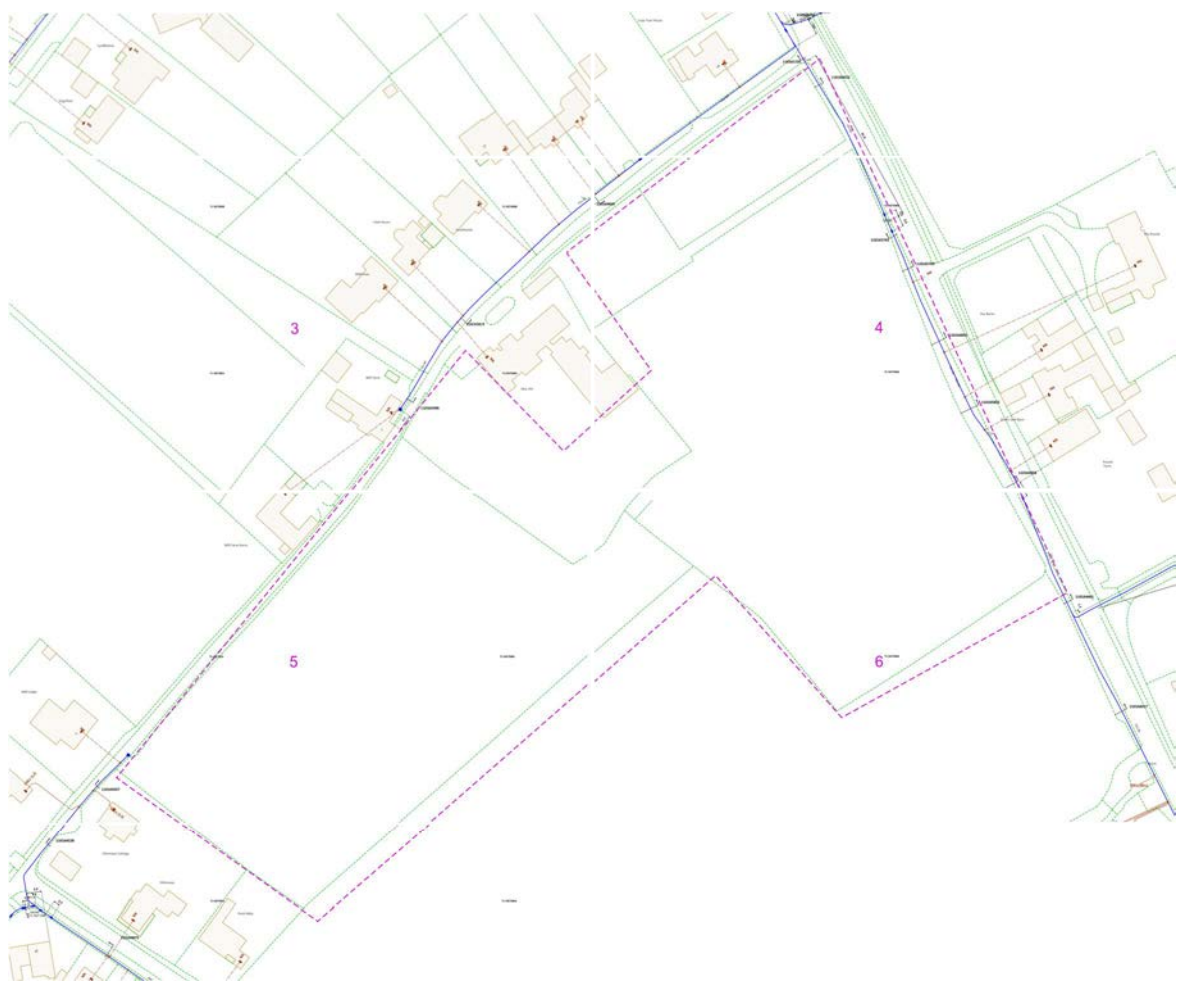


Figure 6.3 – Extract from electricity infrastructure record

Primary distribution cables (1:500 view)			Secondary distribution cables (1:500 view)		
NetMAP system	Scanned image	Description	NetMAP system	Scanned image	Description
		Over 33kV and up to 132kV			Over 230/400V and up to 11kV (HV) cable route
		Over 11kV and up to 33kV			230/400V (LV) cable route
					Pilot cable route
			(Only shown this way if independent from HV cable route)		
			Abandoned cables are shown and labelled as such when applicable		

6.4. Telecoms – Openreach

Openreach own and operate telecommunications apparatus in the vicinity of the development site, within the terms of its statutory license issued by Ofcom. Figure 6.4 below is an extract from Openreach infrastructure record, detailing the current indicated position of existing assets; however, it may be prudent to undertake below ground survey works to ensure there are no unknown services present which are not recorded. Please refer to the copy of the infrastructure record appended to this study for further detail.



Figure 6.4 – Extract from Openreach infrastructure record

KEY TO BT SYMBOLS	
DP	
Planned DP	
PCP	
Planned PCP	
Built	
Planned	
Inferred	
Building	
Kiosk	
Hatchings	
Pole	
Planned Pole	
Joint Box	
Change Of State	
Split Coupling	
Duct Tee	
Planned Box	
Manhole	
Planned Manhole	
Cabinet	
Planned Cabinet	

6.6. Other

In addition to the statutory network operators operating within the vicinity of the development site, UCML has contacted several Independent Network Operators (IDNOs), Independent Gas Transporters (IGTs), telecommunication providers, pipeline operators, and other third parties who own and operate apparatus nationwide to determine whether any apparatus is located within the vicinity of the development site. The companies contacted, and their associated response, are summarised within Table 6.2 overleaf. Table 6.1 below provides further detail on the definitions used within the response table.

Key	Description
Affected	Apparatus is indicated as located in the vicinity of the site.
Not Affected	No apparatus is indicated as located in the vicinity of the site.
No Response	No response received to date.
Desk Research	Indicates where information or asset records have been obtained in-house using mapping software or online search tools provided by the relevant operator.

Table 6.1 – Plant Enquiry Response Key

Utility	Company	Desk Research	Affected (date issued)	Not Affected (date issued)	No Response
IDNO	Leep Utilities	✓		28/07/2025	
IDNO	Eclipse Power Networks Ltd				25/09/2025
IGT	GTC*	✓		28/07/2025	
Comms	Arelion	✓		28/07/2025	
Comms	Cityfibre	✓		24/07/2025	
Comms	CA Telecom			01/08/2025	
Comms	Instalcom				25/09/2025
Comms	MBNL				25/09/2025
Comms	O'Connor Utilities**			29/07/2025	
Comms	Sky UK LTD			30/07/2025	
Comms	SOTA			25/07/2025	
Comms	Telent				25/09/2025
Comms	Verizon			01/08/2025	
Comms	Vodafone			29/07/2025	
Transport	National Highways			28/07/2025	
Transport	Network Rail			24/07/2025	
Other	Mast Data (Mobile Phone Masts)	✓		28/07/2025	

Table 6.2 – Plant Enquiry Responses

*Note GTC includes: GTC Pipelines Ltd, Independent Pipelines Ltd, Quadrant Pipelines Ltd, Electricity Network Company Ltd, Independent Power Networks Ltd, Independent Water Networks Ltd, Independent Fibre Networks Ltd, and Independent Community Heating Ltd.

** O'Connor Utilities respond on behalf of: Lumen Technologies (formerly CenturyLink Communications UK Limited, Level 3, Global Crossing (UK) Ltd, Global Crossing PEC, Fibernet UK Ltd, and Fibrespan Ltd.

LinesearchbeforeUDig

Several asset owners are registered with LinesearchbeforeUDig (LSBUD), an online service used to review the location of utility assets in relation to a development site location. In addition to the searches undertaken and summarised in Table 6.2 overleaf, UCML has undertaken an LSBUD search for this development site, and the response is shown in Figure 6.6 below.

Affected LSBUD members (LSBUD Members who have assets registered on LSBUD within the vicinity of your search area.) Do not proceed until all Members listed below have confirmed that your works can continue.			
Asset Owner	Phone/Email	Emergency Only	Status
Cadent Gas	0800688588	0800111999	Await response
UK Power Networks	08000565866	08000565866	Await response

List of not affected LSBUD members (LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area.)		
Advanced Electricity Networks	Air Products PLC	AllPoints Fibre
Angus Energy	AWE Pipeline	B & D Energy Limited
Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)	Box Broadband
BP Exploration Operating Company Limited	BPA	Burwell 11 Solar Limited
Cambridge Water	Cambridgeshire County Council Climate Change and Energy Services	CATS Pipeline c/o Wood Group PSN
Cemex	Centrica Storage Ltd	CNG Services Ltd
Concept Solutions People Ltd	ConocoPhillips (UK) Teesside Operator Ltd	D.S.Smith
Diamond Transmission Corporation	DIO (MOD Live Pipelines)	Drax Power Limited
Eden Estuary Energy Limited	EDF Energy Renewables Ltd	EET Fuels
EirGrid	Electlink Limited	Electricity North West Limited
Energy Assets Networks	ENI & Himor c/o Penspen Ltd	EnQuest Heather Ltd
EP Langage Limited	ESB CCGT Power station (Carrington Gas Pipeline)	ESP Utilities Group
Esso Petroleum Company Limited	euNetworks Fiber UK Ltd	EXA Infrastructure
Exolum Pipeline System	Fulcrum Electricity Assets Limited	Fulcrum Pipelines Limited
G.Network Communication Ltd c/o JSM Group Ltd	Gamma	Gas Networks Ireland (UK)
Gateshead Energy Company	Gigaclear Ltd	Greenlink Interconnector Ltd
Harbour Energy	Heathrow Airport LTD	Humbly Grove Energy
IGas Energy	Impala Terminals Infrastructure Ltd	INEOS FPS Pipelines
INEOS Manufacturing (Scotland and TSEP)	INOBYN ChlorVinyls Limited	INOBYN Enterprises Limited
Intergen (Coryton Energy or Spalding Energy)	Kensa Utilities	Last Mile
Liverpool City Region Connect	Mainline Pipelines Limited	Manchester Jetline Limited
Manx Cable Company	Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited
MUA Group Limited	Mutual Energy	National Gas Transmission
National Grid Electricity Distribution	National Grid Electricity Transmission	National Grid Ventures
Neos Networks	Northern Gas Networks Limited	Northumbrian Water Group
NPower CHP Pipelines	NTT Global Data Centers EMEA UK Ltd	NYnet Ltd
Ogi	Oikos Storage Limited	Ørsted
Palm Paper Ltd	Perenco UK Limited (Purbeck Southampton Pipeline)	Petroineos
Phillips 66	Portsmouth Water	Redundant Pipelines - LPDA
RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEnpower (Little Barford and South Haven)	SABIC UK Petrochemicals
SAS Utility Services Ltd	Scottish and Southern Electricity Networks	Scottish Power Generation
Seabank Power Ltd	SES Water	SGN
Shell	Shell NOP	South Staffs Water
SP Energy Networks	Spring Fibre Limited	Squire Energy Networks
SSE Generation Ltd	SSE Transmission	SSE Utility Solutions Limited
Storengy	Sutton Bridge Power Generation	Tata Communications (c/o JSM Construction Ltd)
TfL – London Underground HV Cables (Road & Track Side Cables)	toob Limited	Total (Colnbrook) c/o Penspen
Total Finaline Pipelines	Transmission Capital	Trojan Energy Limited
UK Power Distribution	Uniper UK Ltd	University of Cambridge Granta Backbone Network
Vattenfall	Veolia ES SELCHP Limited	Veolia ES Sheffield Ltd
Virgin Media O2	Voneus Limited	VPI Power Limited
Wales and West Utilities	Welsh Power	West of Duddon Sands Transmission Ltd
West Sussex OpenNetwork (Cooperative National Infrastructure)	Westminster City Council	Winnington CHP Ltd
Zayo Group UK Ltd c/o JSM Group Ltd		

Figure 6.6 – LSBUD search result

7. Site Enabling Works and Constraints

7.1. Disconnection Works

Desktop review of the development site indicates that it is greenfield, with no existing units present. Therefore, no utility service disconnection works are anticipated as no demolition or site clearance works are currently expected to accommodate the development works.

7.2. Diversionary Works – Site Access

Review of the current site concept plan indicates the site access will be taken from the fourth arm of the proposed realigned roundabout on London Road. As the roundabout works are indicated as being part of the adjacent development works, it is assumed that any required utility diversionary works required to form the roundabout will be completed by the adjacent developer and their highway contractor as part of the highway alteration works. Review of all utility diversion designs and 'as-laid' plans will be required following completion of the roundabout construction works to confirm all required access diversionary works have been completed.

The current concept plan indicates the access to Mill Lane from London Road will be diverted through the development site which will involve a stopping up order being put in place for a section of Mill Lane.

The concept plan also indicates a smaller parcel of land within the site boundary located on the western side of the site where a small number of properties will be constructed. A separate site access is not shown to this parcel; however, it can be assumed one will be constructed to access this parcel based on review of the current concept plan.

7.2.1. Clean Water

Affinity Water infrastructure record indicates a 4" cast iron or spun iron distribution main routed within the site side footpath of London Road which will be affected by the roundabout construction. As noted above, it is assumed that the required diversion of this main, which will be triggered by the highway alteration works, will be

completed by the adjacent developer responsible for the delivery of the roundabout works.

Affinity Water infrastructure record indicates a 3” spun iron or cast iron distribution main routed within the site side carriageway of Mill Lane. This main will be affected by the proposed stopping up of a section of Mill Lane proposed as part of the highway alteration works. It is likely that Affinity Water may object to the stopping up order; however, provided a service strip can be maintained to allow the distribution main to be retained in situ, it is assumed that an agreement can be obtained with Affinity Water to enable the stopping up to go ahead without diversionary works being required. Review of the detailed drawings for the area will be required to confirm the viability of this strategy, once available.

Affinity Water infrastructure record indicates the 3” spun or cast iron main continues westwards within Mill Lane, and it is assumed that it will be affected by the construction of a secondary site access to the smaller parcel of development proposed to the west of the existing care home. As the main is indicated as being located within the carriageway of Mill Lane, and assuming the line and level of the existing carriageway will be maintained, the main may not be affected to the extent diversionary works are required. Review of the detailed layout and associated access drawings will be required to confirm.

7.2.2. Gas

Cadent Gas infrastructure record indicates a 6” cast iron Low Pressure (LP) main routed within the adjacent side footpath of London Road which will be affected by the roundabout construction works. As noted overleaf, it is assumed that the required diversion of this main, which will be triggered by the highway alteration works, will be completed by the adjacent developer responsible for the delivery of the roundabout works.

Cadent Gas infrastructure record indicates a 63mm polyethylene LP main, inserted within a 3" cast iron main, routed within the carriageway of Mill Lane. This main will be affected by the proposed stopping up of a section of Mill Lane proposed as part of the highway alteration works. It is likely that Cadent Gas may object to the stopping up order; however, provided a service strip can be maintained to allow the distribution main to be retained in situ, it is assumed that a legal easement agreement can be obtained with the relevant landowner to enable the stopping up to go ahead without diversionary works being required. Review of the detailed drawings for the area will be required to confirm the viability of this strategy, once available.

Cadent Gas infrastructure record does not indicate any mains apparatus located in the section of Mill Lane fronting on to the western parcel of land where a secondary site access is assumed. Review of the layout plan and associated access drawings will be required to confirm no diversionary works will be required to accommodate the secondary access.

7.2.3. Electricity

UK Power Networks infrastructure record indicates a Low Voltage (LV) cable routed within the site side footpath of London Road, which will be affected by the roundabout construction works. As noted overleaf, it is assumed that the required diversion of this apparatus, which will be triggered by the highway alteration works, will be completed by the adjacent developer responsible for the delivery of the roundabout works.

UK Power Networks infrastructure record indicates an LV cable routed within the adjacent side grass verge of Mill Lane to the development site. This cable will be affected by the proposed stopping up of a section of Mill Lane proposed as part of the highway alteration works. It is likely that UK Power Networks may object to the stopping up order; however, provided a service strip can be maintained to allow the cable to be retained in situ, it is assumed that a legal easement agreement can be obtained with the relevant landowner to enable the stopping up to go ahead without

diversionary works being required. Review of the detailed drawings for the area will be required to confirm the viability of this strategy, once available.

UK Power Networks infrastructure record does not indicate any apparatus located in the section of Mill Lane fronting on to the western parcel of land where a secondary site access is assumed. Review of the layout plan and associated access drawings will be required to confirm no diversionary works will be required to accommodate the secondary access.

7.2.4. Telecoms - Openreach

Openreach infrastructure record indicates underground duct and associated apparatus routed within the adjacent side footpath of London Road, which will be affected by the roundabout construction works. As noted overleaf, it is assumed that the required diversion of this apparatus, which will be triggered by the highway alteration works, will be completed by the adjacent developer responsible for the delivery of the roundabout works.

Openreach infrastructure record indicates underground duct and associated apparatus routed within the adjacent side grass verge of Mill Lane to the development site. This apparatus will be affected by the proposed stopping up of a section of Mill Lane proposed as part of the highway alteration works. It is likely that Openreach may object to the stopping up order; however, provided a service strip can be maintained to allow the apparatus to be retained in situ, it is assumed that a legal easement agreement can be obtained with the relevant landowner to enable the stopping up to go ahead without diversionary works being required. Review of the detailed drawings for the area will be required to confirm the viability of this strategy, once available.

Openreach infrastructure record indicates overhead line apparatus routed along Mill Lane in the area where a secondary site access location is assumed. As the existing overhead line is shown as crossing the existing carriageway, it can be assumed that

it is already located with sufficient height clearance for vehicles passing underneath. The associated carrier poles also appear not to be positioned on the site side verge fronting the site boundary in this area, so it is assumed they will not require relocation as part of any site access construction works. Review of the layout plan and associated access drawings will be required to confirm if any diversionary works will be required to accommodate the secondary access.

7.2.5. Telecoms – Virgin Media

Virgin Media infrastructure record indicates underground duct and associated apparatus routed within the adjacent side footpath of London Road, which will be affected by the roundabout construction works. As noted overleaf, it is assumed that the required diversion of this apparatus, which will be triggered by the highway alteration works, will be completed by the adjacent developer responsible for the delivery of the roundabout works.

Virgin Media infrastructure record indicates underground duct and associated apparatus routed within the adjacent side grass verge of Mill Lane to the development site. This apparatus will be affected by the proposed stopping up of a section of Mill Lane proposed as part of the highway alteration works. It is likely that Virgin Media may object to the stopping up order; however, provided a service strip can be maintained to allow the apparatus to be retained in situ, it is assumed that a legal easement agreement can be obtained with the relevant landowner to enable the stopping up to go ahead without diversionary works being required. Review of the detailed drawings for the area will be required to confirm the viability of this strategy, once available.

7.3. Diversionary Works – On-Site Works

As noted with the introduction, the development works will include the construction of up to 41 no. dwellings along with the construction of associated on-site access roads, landscaping works, and open space.

7.3.1. Clean Water

Affinity Water infrastructure record does not indicate any mains apparatus located won-site within the development site boundary. No on-site diversionary works are anticipated.

7.3.2. Gas

Cadent Gas infrastructure record does not indicate any mains apparatus located won-site within the development site boundary. No on-site diversionary works are anticipated.

7.3.3. Electricity

UK Power Networks infrastructure record does not indicate any mains apparatus located won-site within the development site boundary. No on-site diversionary works are anticipated.

7.3.4. Telecoms - Openreach

Openreach infrastructure record does not indicate any mains apparatus located won-site within the development site boundary. No on-site diversionary works are anticipated.

7.3.5. Telecoms – Virgin Media

Virgin Media infrastructure record does not indicate any mains apparatus located won-site within the development site boundary. No on-site diversionary works are anticipated.

7.4. Cost & Risk Summary

Costs relating to the reconfiguration of the existing utility distribution networks are identified in the following table;

Type	Utility	Cost
Disconnections	Clean Water	N/A
	Gas	N/A
	Electricity	N/A
	Telecoms – Openreach	N/A
	Telecoms – Virgin Media	N/A
	Total	£N/A
Diversion	Clean Water	N/A
	Gas	N/A
	Electricity	N/A
	Telecoms – Openreach	N/A
	Telecoms – Virgin Media	N/A
	Total	£N/A

Table 7.1 – Cost Summary

The main risks associated with the procurement of proposals and required works are as follows;

- Provisional sums have been applied based on previous projects of similar size and UCML's experience.
- Disconnection and diversionary works, where required, are not regulated by Ofgem, it is therefore advised that a work commencement date is identified as early as possible as this may have a significant impact on any construction programme.
- Any excavation works undertaken within the vicinity of utility apparatus must be completed in compliance with HSG47.
- It has been assumed that all utility assets affected by the roundabout construction works will be completed by the adjacent developer responsible for

the delivery of the highway alteration works. Review of the 'as-laid' plans for the diversionary works undertaken will be required to confirm no further works are required to accommodate the main site entrance construction.

- It is assumed that the utility assets located in the section of Mill Lane to be stopped up will be affected by the highway alteration works. It has been assumed that a service strip can be retained in this area to allow legal agreements to be agreed with each utility network operator to negate the requirement to divert their apparatus. Review of the final layout plans for the site and this area will be required to confirm the viability of this strategy.
- Openreach infrastructure records currently do not differentiate between copper and fibre optic cables, and as such the type of infrastructure present cannot be determined through desktop review of their statutory infrastructure records. Please note, the presence of fibre optic cables could multiply anticipated diversion costs significantly.
- Virgin Media infrastructure records currently do not differentiate between coaxial and fibre optic cables, and as such the type of infrastructure within the ground cannot be determined by reviewing their statutory infrastructure records. Please note, the presence of fibre optic cables could multiply anticipated diversion costs significantly.

8. Connection Works

The information provided within this desktop study is based on the development consisting of up to 41 no. residential dwellings. All utility load requirements have been estimated by UCML based on all dwellings being electrically heated through the installation of Air Source Heat Pumps (ASHPs). An allowance for 1 no. 7.4 kW rated Electric Vehicle (EV) charging point per dwelling has also included within the estimate produced for the electricity demand. The load estimate has been produced through the use of current IDNO After Diversity Maximum Demand (ADMD) load allowances per dwelling.

The table below summarises the estimated loads used for the study. Please note, these estimated loads are intended for use as a guide only to produce this study, and it is recommended that a Mechanical and Electrical Consultant is employed to calculate the actual load required based on the final layout design and proposed heating method. Please note, the load estimations does not include a figure for individual clean water load requirements for the residential element of the development. As residential clean water connections are standardised by the relevant water network operator, no individual load assessment is required.

Utility	Total load
Electricity	143.5 kVA

Table 8.1 – Load summary

8.1. Clean Water

UCML has sourced a pre-development response from Affinity Water to establish the availability of capacity within the local distribution network, and confirm the likely point of connection for the development.

Affinity Water has advised that a connection point for the development can be provided from the 4" main routed within the site side footpath of London Road to the development site. Affinity Water has also confirmed that this main has sufficient capacity to supply the development without the requirement for associated off-site reinforcement works.

Please see Figure 8.1 below for further detail on the location of the provided point of connection (note, the final connection point location will be affected by any diversionary works required to accommodate the roundabout construction; however, it is assumed that if the main is diverted, a connection point can be taken from the main in its new location).

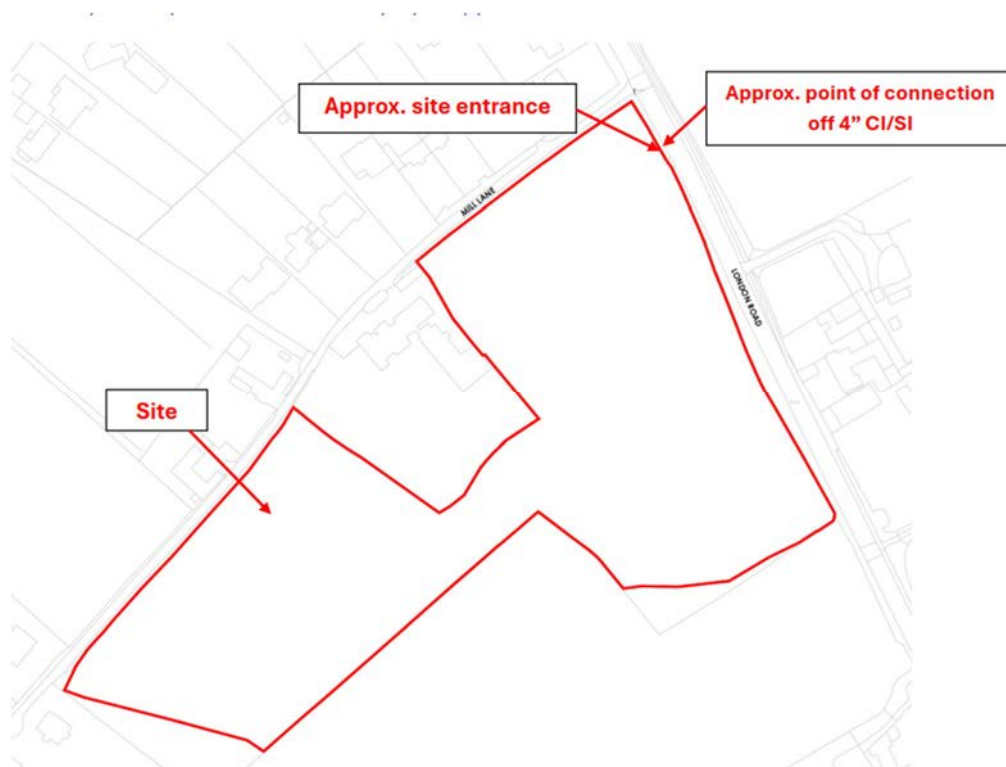


Figure 8.1 – Proposed clean water point of connection

From April 2018, off-site network reinforcement costs have been funded through the collection of infrastructure charges applicable to each new connection. Infrastructure charges are calculated based on the estimated costs of all off-site reinforcement works required to facilitate connections to new developments within Affinity Water's supply area over a rolling 5-year period, based on the total anticipated number of new connections within that supply area. Please note, the infrastructure charge costs can vary year on year and therefore long-term developments may be affected by the possible variance in infrastructure charges. Each water company has a differing infrastructure charge based on their individual network and anticipated levels of reinforcement works, and the cost of the infrastructure charges for clean and waste water are likely to differ.

The clean water infrastructure charge applicable to developments within Affinity Water's region for the 2025 – 2026 scheme of charges is £601.00 per plot. As Affinity Water is a clean water network operator only, the sewerage infrastructure charge will be levied by the waste water operator for the region, Anglian Water, and the waste water infrastructure charge applicable to developments within their region for the 2025 – 2026 scheme of charges is £403.00 per plot. Both infrastructure charges are applied to the clean water connection costs.

In addition to infrastructure charges, an environmental component charge will also be applicable to each new connection for both clean and waste water. As with infrastructure charges, the environmental component will vary from year to year and the cost is likely to differ between clean and waste water. The environmental component charges applicable to developments within Affinity Water's region for the 2025 – 2026 scheme of charges is £127.00 per plot for clean water.

Based on the aforementioned infrastructure charges and environmental component charge, allow a **budget cost of £118,000.00** for mains and connections.

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

8.1.1. Environmental Incentive Scheme

Following the introduction of an Environmental Incentives Common Framework (EICF) by OfWat, all water companies in England must offer at least one environmental incentive where new dwellings can demonstrate they achieve water efficiency beyond the mandatory usage level of 110 litres of water per person per day as set out in Building Regulations Part L.

The Environmental Incentive is a payment to the customer made by Affinity Water, subject to eligibility and demonstrating compliance with their relevant qualifying criteria.

The Affinity Water Environmental Incentive payment mechanism is based on a three-tier system: 'Basic', 'Enhanced', and 'Premium', alongside a bespoke incentive, 'Water Neutral'.

To qualify, customers must state at the time of application submission if they want to be considered for the Environmental Incentive payment alongside providing the relevant evidence. As a minimum requirement and to achieve the Basic incentives payment, customers must meet the criteria set for the basic criteria for maximum consumption for water fittings, as summarised in Table 8.1 overleaf.

Water Fittings	Maximum Consumption
WC	≤ 4 / 2.6 litres dual flush
Shower	≤ 7 l/min
Bath	≤ 170 litres
Basin Taps	≤ 5 l/min
Sink Taps	≤ 6 l/min
Dishwasher	≤ 1.0 l/place setting
Washing Machine	≤ 6 l/kilogram

Table 8.2 – Basic Incentive Qualifying Criteria

To be eligible for the Enhanced incentive payment customers must exceed the minimum requirements demonstrated in Table 8.2 as well as providing evidence, via the Affinity Water water efficiency calculator, that a water usage per person per day of between 90 – 81 litres is achieved per dwelling.

To be eligible for the Premium incentive payment, customers must exceed the minimum requirements set for the basic tier as well as providing evidence, via the water efficiency calculator, that a water usage per person per day of between 80 litres or less is achieved per dwelling.

For information on the Water Neutral bespoke incentive, please refer to Affinity Water's 2025/2026 charging document which is available at the below link;

<https://www.affinitywater.co.uk/docs/developer/2025/2025-26-New-Connections-Charging-Arrangements.pdf>

8.2. Gas

It is currently anticipated that the development will utilise a low-carbon electrical heating strategy; therefore, no mains gas connections works are currently anticipated.

8.3. Electricity

Electricity connection works are split between non-contestable and contestable connection works. The non-contestable element of the connection works include the works required to accommodate the provision of capacity for a development, which can only be undertaken by the relevant DNO. The cost of the non-contestable works are covered within a Point of Connection (POC) quotation.

The contestable element of the connection works are works required to construct the proposed new network for the development, which can be undertaken by the relevant DNO or alternatively, an ICP can be appointed to complete the works.

Based on the demand estimate outlined at the beginning of this section, and shown in Table 8.1, UCML requested a POC quotation from UK Power Networks to confirm the availability of electricity capacity and the location of the POC in relation to the development site boundary.

8.3.1. Non-Contestable Works

UK Power Networks has provided a POC quotation for a load of 143.5 kVA, confirming the requested capacity can be provided from the 11 kV HV distribution network. The POC provided is located from an existing 11 kV HV cable located at the junction of London Road and Waterdell Lane, to the south east of the development site. Figure 8.5 overleaf is an extract from the POC plan provided by DNO, indicating the location of the POC on their network.

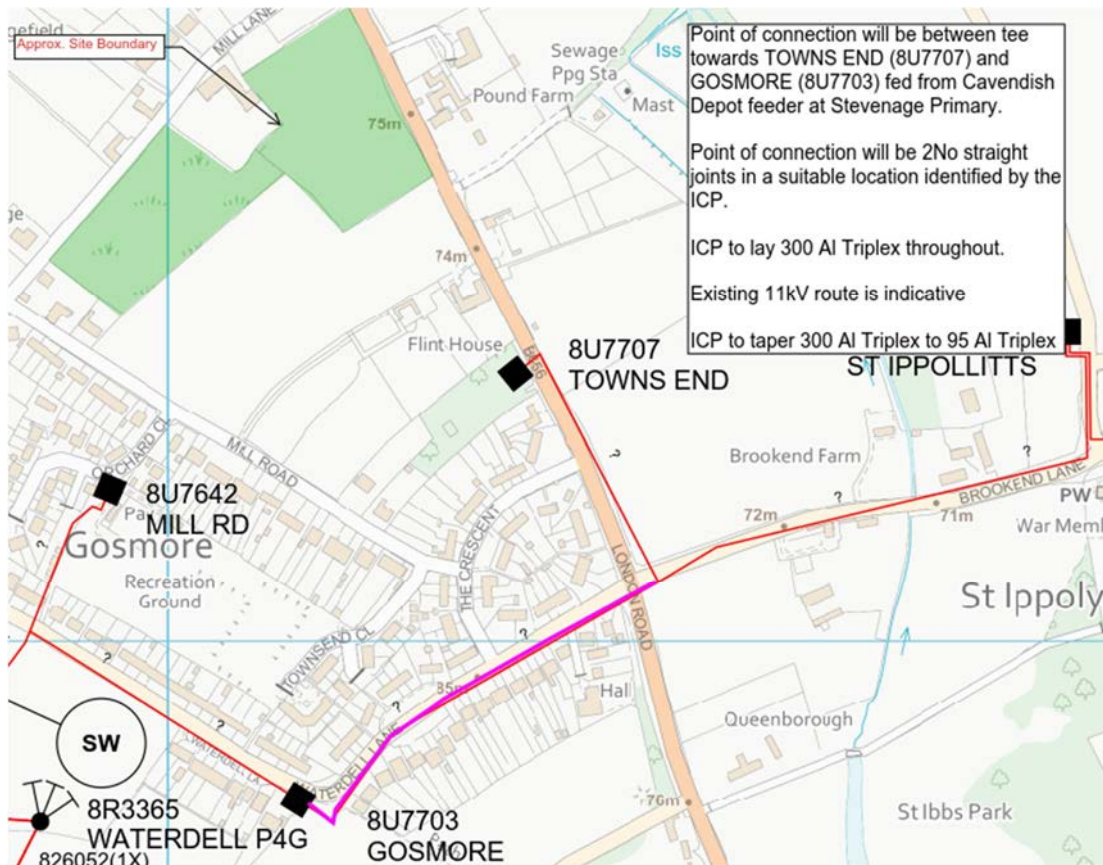


Figure 8.2 – Proposed electricity POC

UK Power Networks has advised that, based on current network availability, no network reinforcement works are currently anticipated to provide the requested demand. However, it should be noted that no capacity can be reserved until formal acceptance and payment is submitted for a valid POC offer.

As part of the non-contestable POC works, UK Power Networks will undertake all required ICP design approvals, inspections, and typically will also undertake the cable jointing works. Please refer to Section 8.3.2 for further detail on the contestable connection works required to utilise the POC provided.

The cost of the non-contestable POC works is detailed below;

Item	Cost
Assessment Charges	£663.00
Jointing Works	£3,519.77
Substation Locks and Notices	£5,440.79
HV Shutdown Notification	£495.14
Total	£10,118.70

Table 8.3 – Cost Summary

Based on the POC location provided by UK Power Networks, no abnormal legal requirements are currently anticipated to utilise the proposed electricity connection point as the POC appears to be located in public road/footpath. Figure 8.3 below is an extract from the Hertfordshire County Council adopted road mapping service confirming the above.

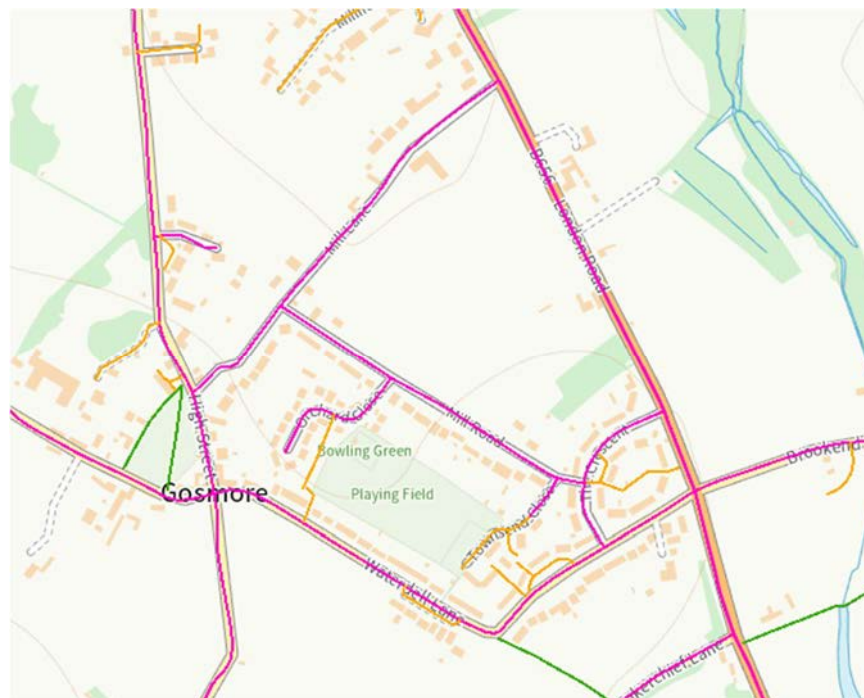


Figure 8.3 – Adopted Road Enquiry

Maintenance
— Hertfordshire County Council Rights of Way Service
— Hertfordshire County Council as Highways Authority
— National Highways
— Not Maintainable
— Not Maintainable but Highway rights may exist

8.3.2. Contestable Works

Based on the POC provided by DNO, as outlined in the preceding section, it is anticipated that the following contestable connection works will need to be undertaken to provide connections for the development;

- Lay HV cabling from the POC location to the proposed on-site substation location.
- Excavate, backfill, and permanently reinstate public highway and footpath to the Local Authority standard.
- Supply, install, and commission the following within the substation housing;
 - HV Ring Main Unit
 - 11 kV/433V distribution transformer
 - LV distribution board
- Lay LV mains infrastructure on-site.
- Install LV service connections to each dwelling, and connect each service connection to LV mains infrastructure.

Allow a **budget cost of £224,000.00** for the contestable connection works.

The cost provided is based on an estimated 550 metres of off-site mains lay required from the POC location to the site entrance. It is also based on the on-site substation being located within 50 metres of the site entrance. All costs assume the developer will undertake all on-site excavation, reinstatement and civils works; including the construction of the substation concrete plinth and housing to the DNO, or appointed Independent Network Operator (IDNO), standard.

As discussed above, the use of a HV POC will trigger the requirement for a secondary substation to be constructed on-site. To accommodate the construction of a secondary substation, a parcel of land of approximately 5m x 5m, along with suitable access and egress, will need to be allowed within the development boundary to accommodate the substation compound.

It should be noted that the use of an ICP to undertake the contestable connection works discussed in this section provides the opportunity to open the contestable element of the works to competitive tender, which may provide significant cost savings in comparison to the DNO undertaking the works.

If an ICP is appointed, the network can then be adopted by an Independent Distribution Network Operator (IDNO). The license of an IDNO allows for an asset value to be offered to the appointed ICP for the adoption of the constructed network. The asset value offered by the IDNO reflects the anticipated value in adopting the newly constructed network, based on the expected revenue that may be generated from the acquisition of new customers. The cost incurred by the ICP in constructing the network may be offset by any asset value offered by the IDNO, which could provide further cost savings.

8.4. Telecoms

8.4.1. Openreach

Openreach provide a Fibre to the Premise (FTTP) connection design as standard for new developments. FTTP connections provide ultrafast broadband speeds to each new dwelling, and deliver a level of future proofing for broadband as demand increases. Openreach advises that their full fibre FTTP network is fully compliant with current building regulations as it meets the definition of ‘Gigabit’ ready.

Openreach provide an allowance of £3,400.00 per residential plot to undertake the works required to construct the FTTP network for a development. Any cost incurred above this allowance would be chargeable to the developer. For developments of this size (of over 20 no. dwellings), Openreach currently provide FTTP network installations at no cost to the developer.

Openreach FTTP network is constructed as an Open Access Network, allowing multiple Internet Service Providers (ISPs) to provide services to future residents and customers utilising the same infrastructure. The installation of Open Access Networks mitigate the requirement for multiple service providers installing duplicate infrastructure within the development site.

Typically, the work undertaken by the developer as part of an Openreach FTTP network installation will consist of laying on-site duct and tubing, building all joint boxes, and providing a cable from a designated joint box to each dwelling (with cappings and covers over external entry points). Openreach will carry out all excess construction works outside of the site boundary and in the public highway.

For a FTTP installation, the developer will need to sign a contract and Wayleave agreement with Openreach. This is a legal requirement for Openreach to install and access its infrastructure. However, if the installation of an independent fibre network is being considered for the development site, exclusivity may be required

and therefore the Openreach wayleave should not be signed until it is confirmed an independent third party fibre provider will not be used.

As part of the contract for the installation of Openreach connections, the developer may receive a rebate of up to £140.00 per house for carrying out on-site works as detailed within the contract provided with their connection proposal. The rebate is in line with the Home Builders Federation (HBF) rates and are payable by BT Plc through its Openreach division.

For the installation of FTTP within an individual dwelling, an Optical Network Termination (ONT) will be installed. The ONT is the Openreach demarcation point and replaces the traditional copper master socket. The Openreach ONT will sit in a wall mounted enclosure along with a Battery Backup Unit (BBU) and the associated wiring. The ONT will include an optical port which connects to the external Customer Splice Point (CSP), an Ethernet port which connects to the communications provider's router, and a telephony port to connect to the voice call network. Figure 8.4 below shows an example of the Openreach ONT equipment.



Figure 8.4 – Openreach ONT equipment

The ONT is typically installed by an Openreach engineer, with the position of the ONT typically being at the position of the incoming fibre cable. Figure 8.5 below illustrates the typical FTTP installation for a domestic dwelling, where the ONT is located adjacent to the outside wall where the incoming fibre cable is located.

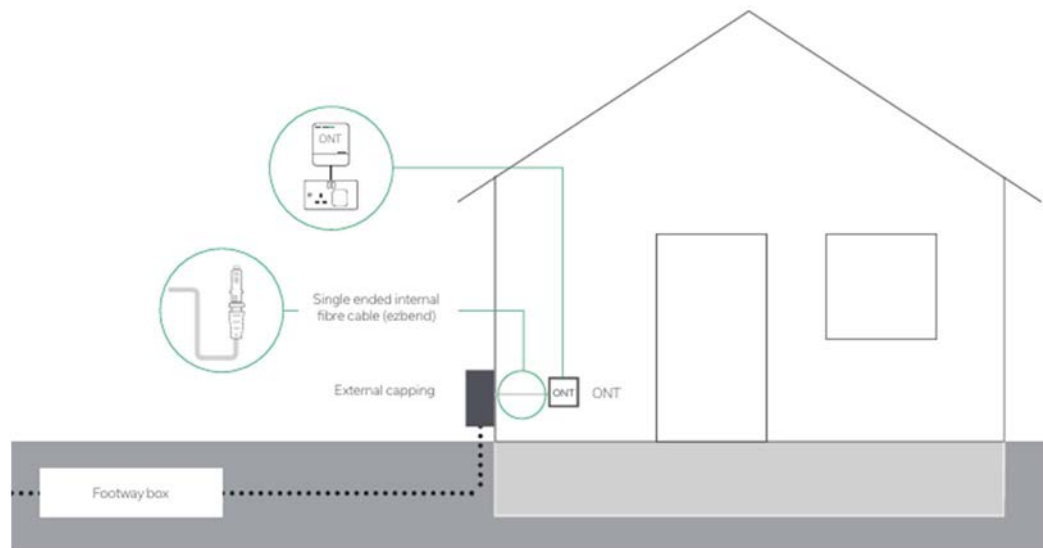


Figure 8.5 – Typical FTTP installation

8.4.2. Virgin Media

At the time of writing, Virgin Media is undertaking a multi-year programme to upgrade their existing Hybrid-Fibre-Coax (HFC) network to a full fibre network. Should the development programme fall in line with the completion of the network upgrade works, it is anticipated that a FTTP Virgin Media network design can be procured for the development. Further consultation will be required with Virgin Media to confirm the availability of a FTTP network installation on the development site once a start on site date is set.

As part of the provision of new connections for a development, Virgin Media will typically complete all off-site works required for the network installation; however, it will be the responsibility of the developer's main contractor to undertake the on-site works detailed by Virgin Media to their specification. Typically, the works undertaken by the developer will include the installation of all on-site duct and construction of on-site chambers as per the network design and layout that Virgin Media will provide. The on-site works will also include the internal wiring installation to be completed to Virgin Media's specification.

Should all on-site works be completed to Virgin Media standard specification, and within the agreed timescales, Virgin Media may offer a rebate payment per plot. Any rebate payment will be provided by Virgin Media as part of their network proposal.

Please note, Virgin Media networks are constructed as Closed Access Networks. The infrastructure installed within the development site as part of a Virgin Media installation can only be utilised by Virgin Media as the ISP, and cannot be utilised by alternative ISP's.

8.5. Conclusion

Based on the information currently available for review, the existing utility infrastructure within the vicinity of the development site appears to be capable of supporting the additional demand required to provide connections for the proposed development of 41 no. residential dwellings. As discussed within the study, UCML has undertaken capacity checks with the relevant statutory network operators who have provided confirmation that the existing clean water, electricity, and telecoms in the wider vicinity of the development site currently have sufficient capacity to serve the development.

Figure 8.6 below indicates the locations of the points of connection provided by the statutory utility operators in relation to this development.



Figure 8.6 – Location Plan indicating position of points of connection

The figure overleaf includes indicative routes from the points of connection to the development site, which have been included for information and guidance only, and are subject to change. The final routes of utility apparatus to the development site will be provided by the relevant appointed utility provider and are subject to design approval from the adopting network owner, highway authority, or landowner and the completion of relevant legal searches.

8.6. Cost & Risk Summary

Costs relating to the proposed new utility connections for the development are identified in the following table;

Utility	Cost
Clean Water	£118,000.00
Gas	£N/A
Electricity	£234,118.70
Telecoms – Openreach	£Nil
Telecoms – Virgin Media	£Nil
Total	£352,118.70

Table 8.4 – Cost Summary

The connection costs provided within the connections section of this study are based on individual connection proposals being appointed, as an anticipated ‘worst-case’ scenario. It may be possible to instruct a multi-utility connection provider to undertake the connection works as part of a single contract for clean water and electricity. This can often provide a more cost-effective option for the development; therefore, it is recommended that a competitive tender is undertaken to include multi-utility connection providers for the connection works.

The main risks associated with the procurement of proposals and required works are as follows;

- Some costs are provided by the relevant utility network operator, and some have been estimated based on previous projects of similar size and UCML’s experience.
- The electricity POC is valid for 6 months from submission. Network capacity can only be reserved through acceptance of a valid POC offer and subsequent submission of a network design from an ICP for the contestable works.
- Legal agreements associated with the proposed substation installation may cause delays; however, to mitigate any potential impact on programme, it is

prudent to ensure solicitors representing all relevant parties begin communication at the earliest appropriate opportunity.

- If the development reverts to requiring mains gas connections, consultation will be required with Cadent Gas to confirm the availability of capacity within the local network and confirm a connection point for the development.
- The pre-development response is valid for only 12 months from submission. The available network capacity can vary continually, due to proposed developments taking capacity from the water distribution network within the vicinity of this specific scheme.
- The developer cannot reserve any water capacity and pressure until a formal order has been placed with the relevant water Network Operator.
- The position of any required fire hydrants will be determined and implemented upon the advice and requirements of the Local Fire Authority.

9. Health & Safety Information

When on-site, the contractor must use safe digging practices, in accordance with HSG 47, to verify and establish the actual position of mains, pipes, services, and any other apparatus on-site before any mechanical plant is used. The responsibility for locating the apparatus precisely before commencing any works rests entirely upon the person undertaking or directly responsible for those works.

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

- The use of asset location equipment to trace all underground plant.
- The use of hand dug trial excavations to confirm the location of underground assets.
- The use of suitable paint or markers on the ground surface to clearly indicate the position of underground assets.

The Contractor is to refer to the following documents before works commence within the vicinity of existing services;

- Health and Safety Guidance HSG 47 Avoiding Dangers from Underground Services.
- Health and Safety Guidance GS6 Avoiding Danger from Overhead Electric Lines.
- Street Works UK (formerly NJUG) Guidelines.
- General Safety Measures to Avoid Injury and Damage to Gas Apparatus.
- CDM Regulations 2015 (Regulation 25 – Energy Distribution Installations).

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

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

9.1. Street Works UK

Existing and new utilities are assumed to be located in accordance with the Street Works UK (formerly the National Joint Utility Group) guidelines. However, in reality, existing utilities are often not laid to these guidelines. Where new road entrances are being formed it is recommended that trial hole investigations are carried out to verify the precise position and depth of infrastructure. In some cases, if the utility infrastructures are sufficiently deep, this may enable the extent and cost of diversions to be reduced.

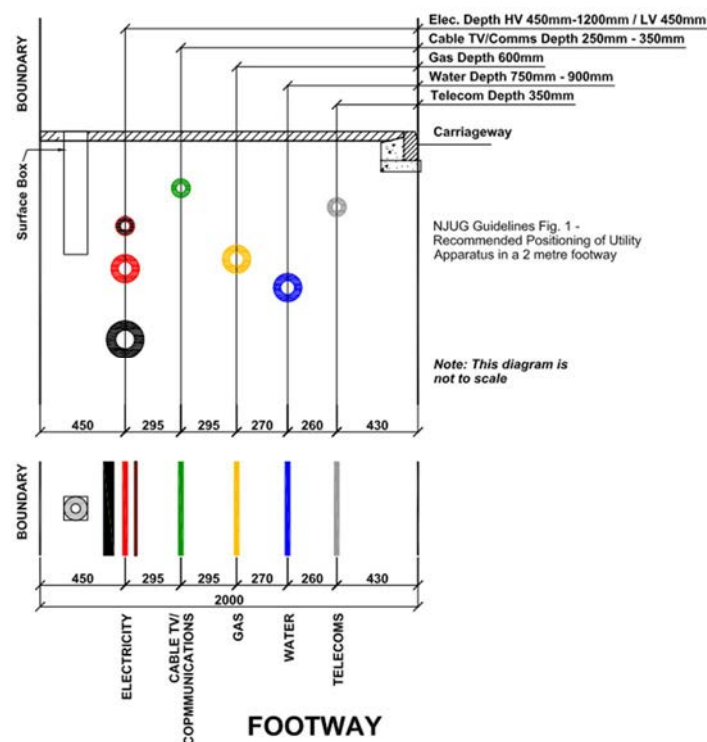
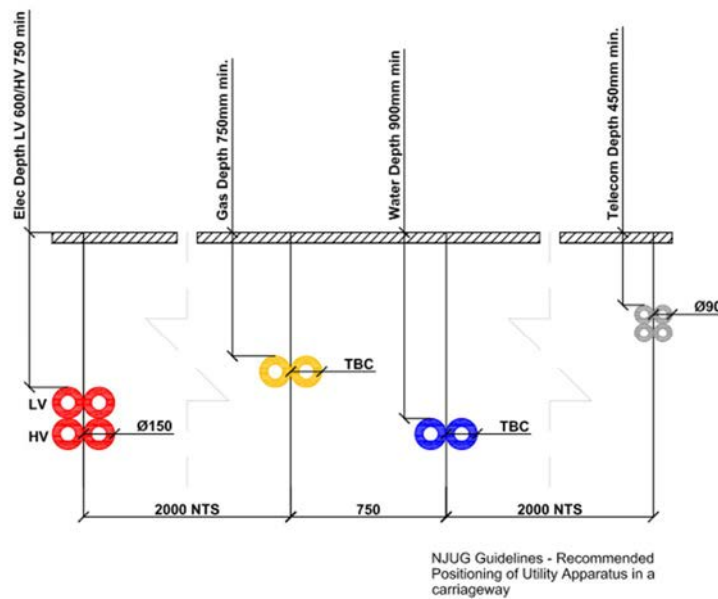


Figure 9.1 – Recommended positioning of utility apparatus in a footpath

The position and depths of underground and overhead apparatus as indicated on infrastructure records included within the utility study are approximate and may deviate from the marked route. The plan information shown is given without warranty and is derived from statutory network information provided by others. The accuracy thereof must not be relied upon in the event of any development or works without further below ground investigations taking place.



CARRIAGEWAY

Figure 9.2 – Recommended positioning of utility apparatus in carriageway

When on-site, the contractor must use safe digging practices, in accordance with HSG 47, to verify and establish the actual position of mains, pipes, services, and any other apparatus on-site before any mechanical plant is used. The responsibility for locating the apparatus precisely before commencing any works rests entirely upon the person undertaking or directly responsible for those works.

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

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

Due care and effort is made to locate all Utility companies in a search area, however, due to the existence of redundant utilities, emergence of new companies and the combining of, takeover or sale of existing companies, UCML cannot guarantee to provide details on all utilities in a given area. There may be a time delay between the physical installation, repair or upgrading of utilities networks and the subsequent recording of the works on utility infrastructure records. Therefore, it should be noted there may be utilities present that are not shown on the records.

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

10. Appendices

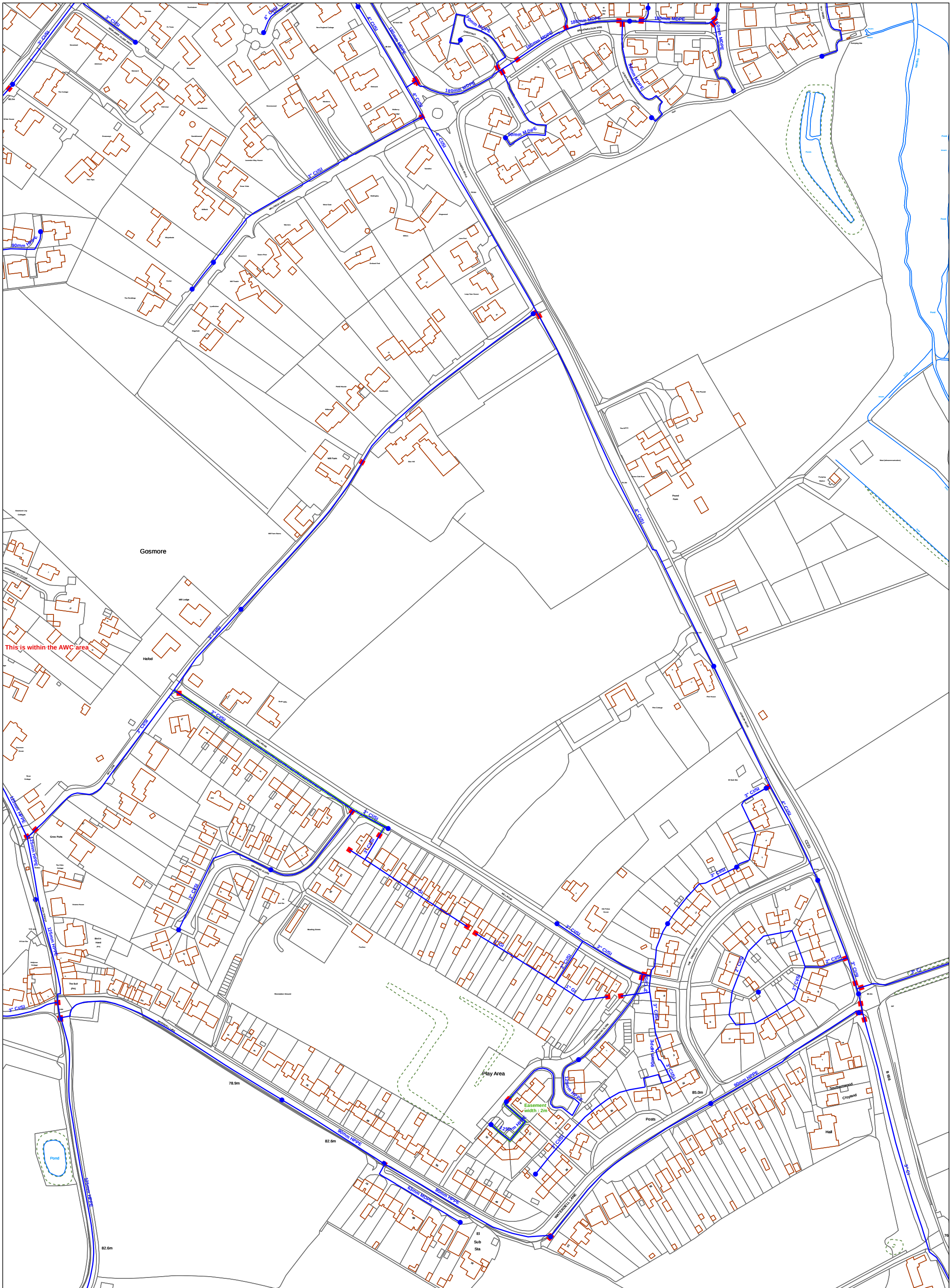
Appendix 1 - Affinity Water infrastructure record

Appendix 2 - Cadent Gas infrastructure record

Appendix 3 - UK Power Networks infrastructure record

Appendix 4 - Openreach infrastructure record

Appendix 5 - Virgin Media infrastructure record



Mill Lane, St Ippolyts, SG4 7NN

AffinityWater

X519091,Y227316
28/07/2025

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Plans are the property of Affinity Water Limited and may not be reproduced or distributed in any form (or any part) without the written permission of Affinity Water Limited.
Plans are continuously being updated, so out of date plans should be destroyed and not relied upon. The position of apparatus shown on this plan is provided for guidance only and should not be relied upon as being precise.
Therefore the Company accepts no responsibility in the event of inaccuracy. Service pipes are not necessarily shown on this plan. Cover is normally 915mm for mains and 750mm for communication pipes but this may vary.
The actual position of apparatus must be determined on site by making hand dug trial holes. The Company requires a minimum of two working days notice of the intention to excavate trial holes.
Except where prior written permission has been obtained, it is an offence under Section 174 of the Water Industry Act 1991 to operate or interfere with any valves, hydrants or other apparatus vested in Affinity Water.

1:1,250
This map was created by the Affinity Water Asset Information Team, Tamblin Way, Hatfield, AL10 9EZ
Page Size = A1

- Distribution Main
- Asbestos Distribution Main
- Abandoned Main
- Asbestos Abandoned Main
- Adit / Tunnel
- Cable
- Hydrant
- Fitting
- Easement
- Adit / Tunnel
- Company Boundary



In case of an emergency call 0800 111 999



Dig Sites	Area:	Line:	Valve	Depth of cover	Diameter Change	Material Change	Out of Standard Service
LP Mains							
MP Mains							
IP Mains							
LHP Mains							

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Your Gas Network

IMPORTANT NOTICES

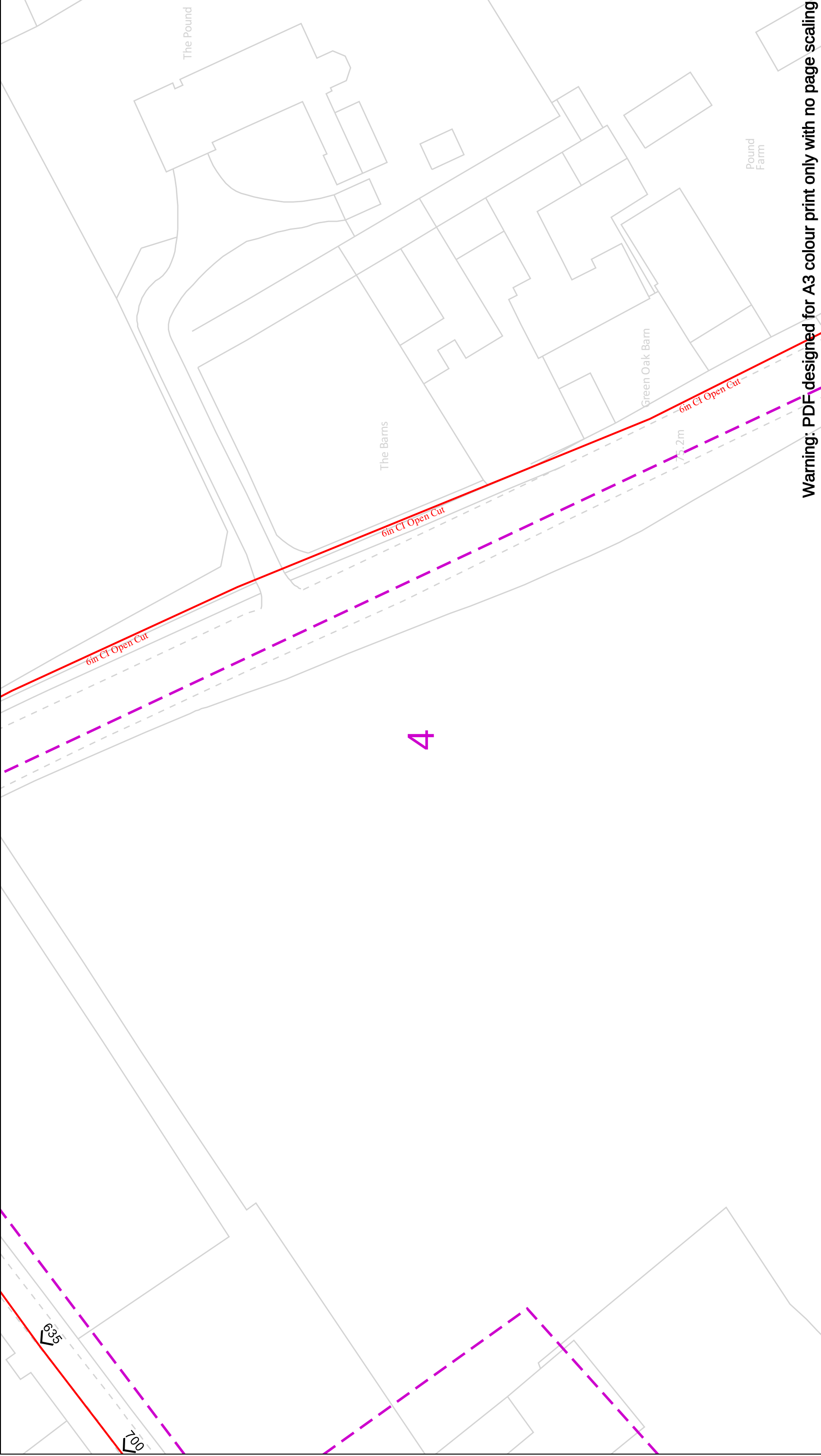
IMPORTANT NOTICES

This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards 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, synphons, stub connections etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any errors or omission. Safe digging practices, in accordance with HSG47, 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.

Date Requested: 28/07/2025
Job Reference: 38143207
Site Location: 519092 227411
Requested by:
Mrs Joanne Blackburn
Your Scheme/Reference: PR

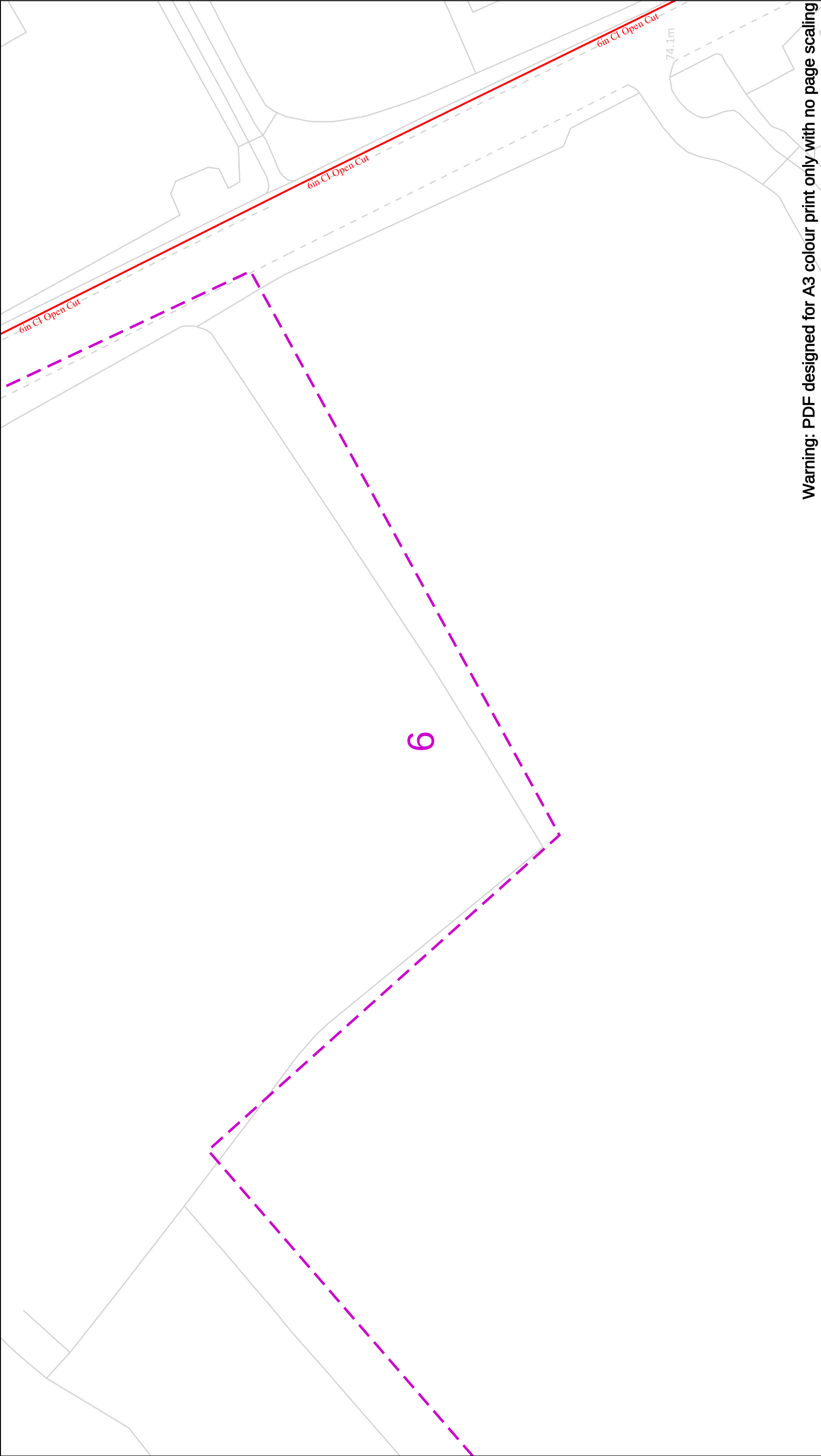
Scale: 1:500 (When plotted at A3)

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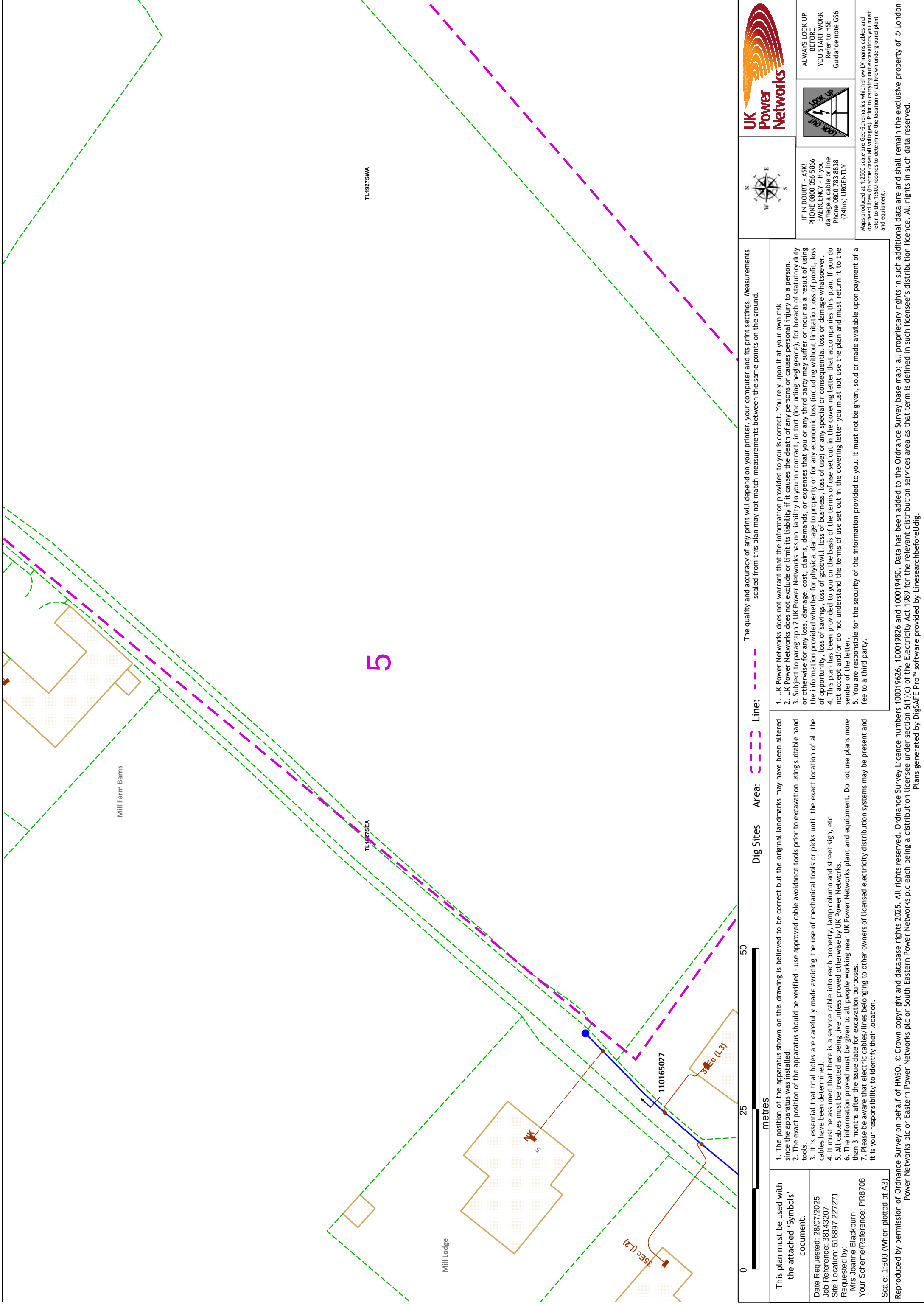
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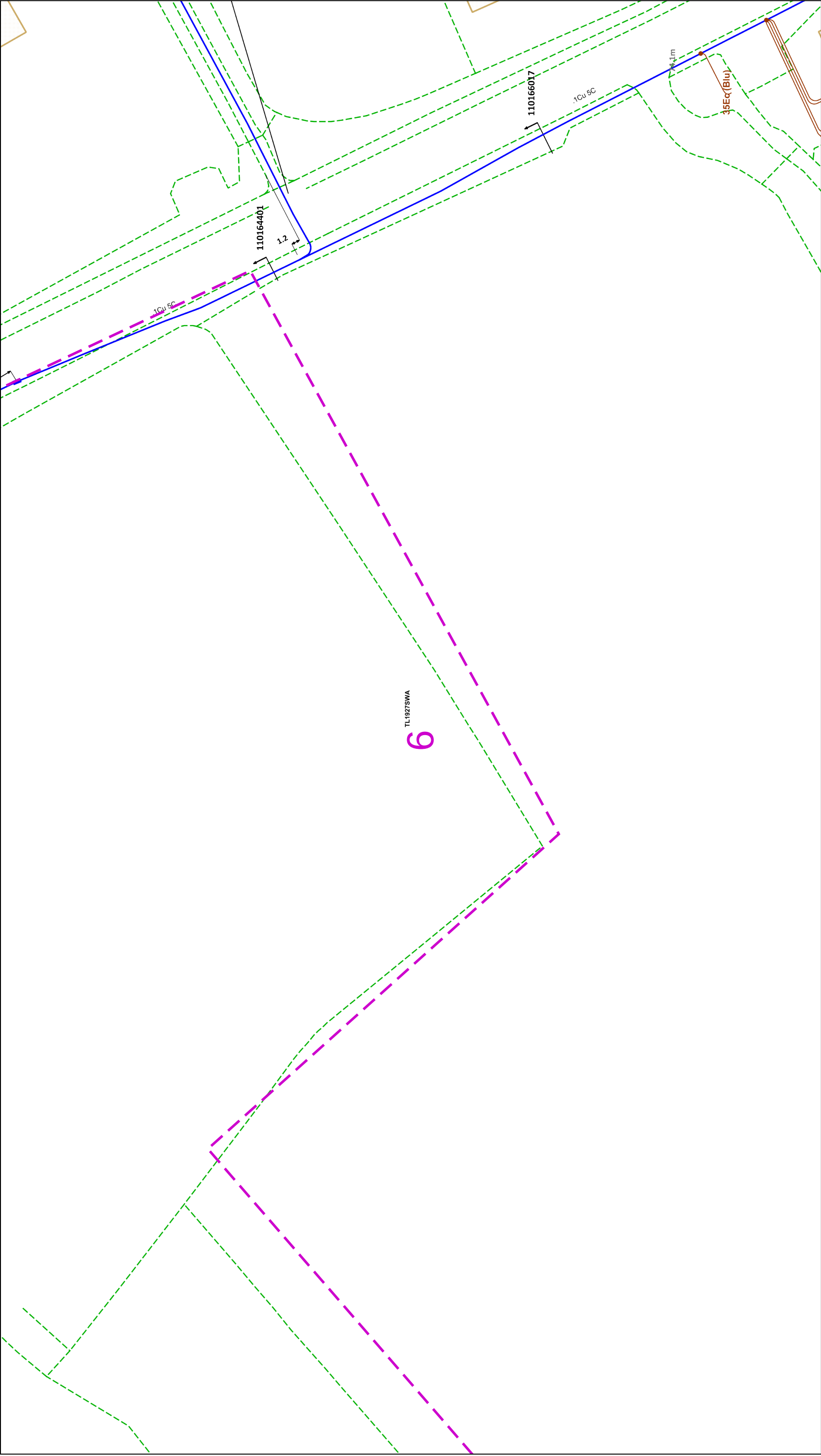
Date Requested: 28/07/2025 Job Reference: 38143207 Site Location: 519092 227412 Requested by: Mrs Joanne Blackburn Your Scheme/Reference: PR8708 Scale: 1:500 (When plotted at A3)		View extent: 200m, 115m IMPORTANT NOTICES This plan shows these pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GT's or otherwise privately owned may be present in this area. Information with regards 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 Limited or their agents, servants or contractors for any errors 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.	In case of an emergency call 0800 111 999 Dig Sites LP Mains MP Mains IP Mains LHP Mains Area: Line: Valve Depth of cover Syphon Diameter Change Material Change Out of Standard Service	Cadent Your Gas Network
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Date Requested: 28/07/2025 Job Reference: 38143207 Site Location: 519092 227412 Requested by: Mrs Joanne Blackburn Your Scheme/Reference: PR8708 Scale: 1:500 (When plotted at A3) View extent: 200m, 115m





IF IN DOUBT - ASK!
PHONE 0800 056 5866
EMERGENCY - If you
damage a cable or line
Phone 0800 783 8838
(24hrs) URGENTLY

ALWAYS LOOK UP
BEFORE
YOU START WORK
Refer to HSE
Guidance note G56

Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (red) and cables (blue). Plans are produced at 1:500 scale and refer to the 1:500 records to determine the location of all known underground plant and equipment.

This plan must be used with the attached 'Symbols' document.

Date Requested: 28/07/2025
Job Reference: 38143207
Site Location: 518897 227271
Requested by:
Mrs Joanne Blackburn
Your Scheme/Reference: PR8708
Scale: 1:500 (When plotted at A3)

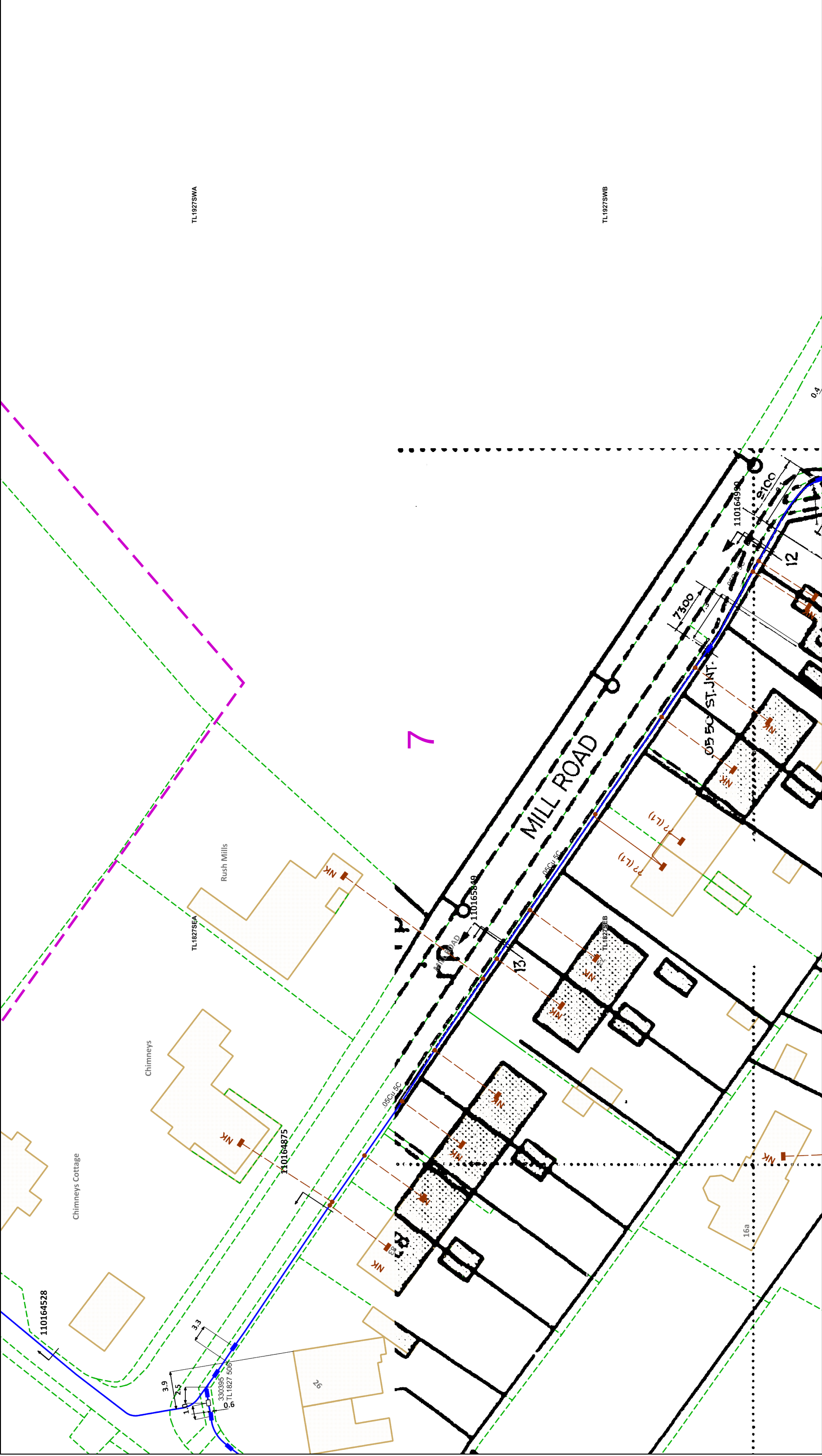
1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
2. The exact position of the apparatus should be verified - use approved cable avoidance tools prior to excavation using suitable hand tools.
3. It is essential that trial holes are carefully made avoiding the use of mechanical tools or picks until the exact location of all the cables have been determined.
4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information proved must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

Dig Sites Area: Line:

The quality and accuracy of any print will depend on your printer, your computer and its print settings. Measurements scaled from this plan may not match measurements between the same points on the ground.

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3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.
5. You are responsible for the security of the information provided to you. It must not be given, sold or made available upon payment of a fee to a third party.

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Dig Sites **Area:**  **Line:** 

0 25 50 metres

This plan must be used with the attached 'Symbols' document.

Date Requested: 28/07/2025
Job Reference: 38143207
Site Location: 518897/227271
Requested by:
Mrs Joanne Blackburn
Your Scheme/Reference: PR8708
Scale: 1:500 (When plotted at A3)

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4. It must be assumed that there is a service cable into each property, lamp column and street sign, etc.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks plant and equipment. Do not use plans more than 3 months after the issue date for excavation purposes.
7. Please be aware that electric cables/lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.

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3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
4. This plan has been provided to you on the basis of the terms of the terms of use set out in the covering letter that accompanies this plan. If you do not accept and/or do not understand the terms of use set out in the covering letter you must not use the plan and must return it to the sender of the letter.
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Maps on Demand 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 cbjd@openreach.co.uk

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

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	Change Of State	+	Hatchings	
			Split Coupling	×	Built	
PCP			Duct Tee	▲	Planned	
Pole			Building		Inferred	
Box			Kiosk	Ⓚ	Duct	
Manhole			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.			
Cabinet						
	Pending Add	In Place	Pending Remove	Not In Use		
Power Cable						
Power Duct				N/A		

BT Ref : WXA11102R

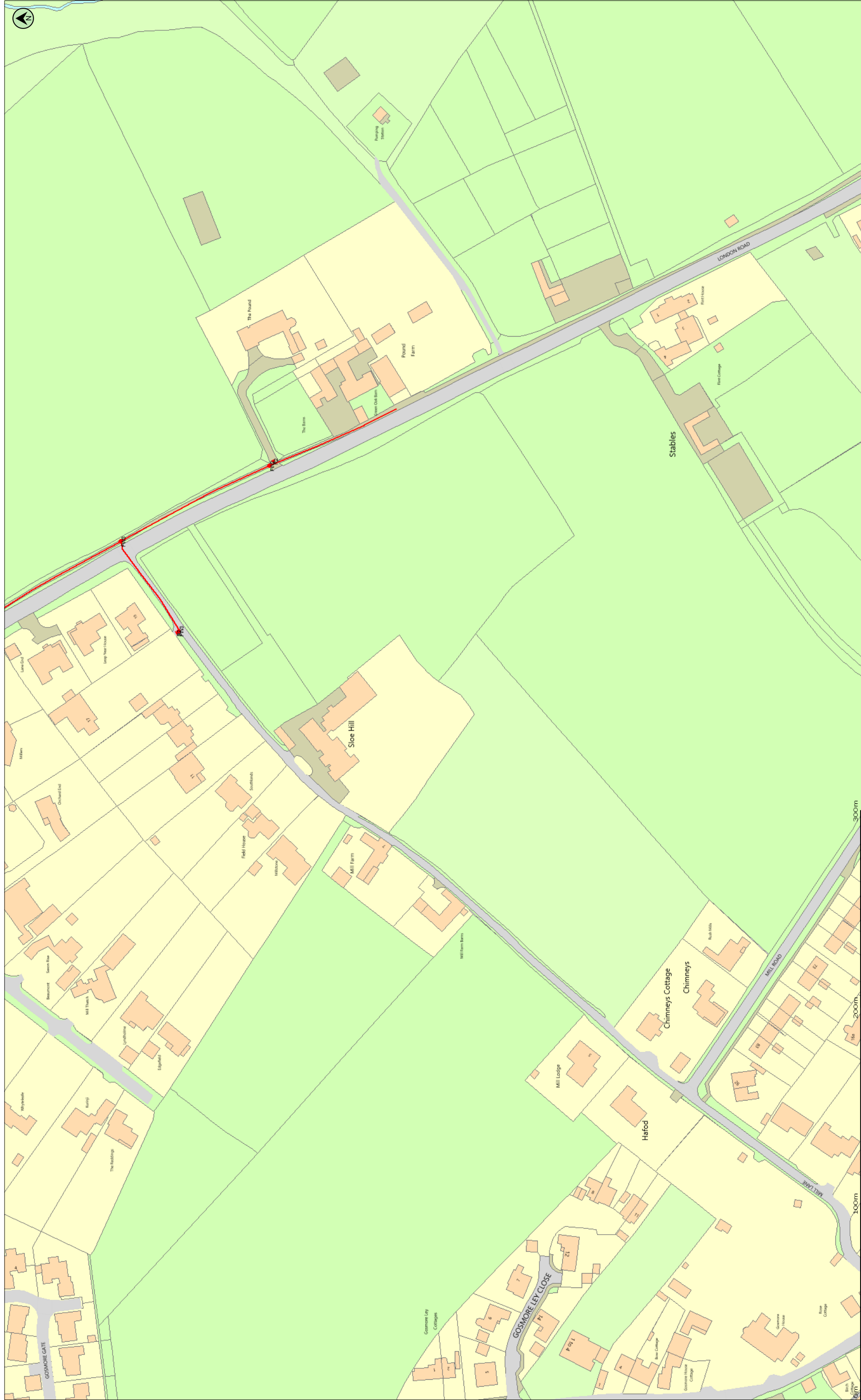
Map Reference : (centre) TL1908427347

Easting/Northing : (centre) 519084,227347

Scale : 1:500

Issued : 28/07/2025 11:10:18

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



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Date: 28/07/25

Scale: 1:1250

Map Centre: 519064,227415

Data updated: 02/06/25

Our Ref: 1835860 - 1

Telecoms Plan A2

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. [Click here to download Affected Postcodes, pdf](#). This plan is intended to be used in conjunction with the Virgin Media network map, which is available on our website. [Click here to view the network map](#). The actual position of any underground service must be verified by cable detection equipment, set and established on site before any mechanical plan 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 (Crown copyright and database rights 2025 Ordnance Survey ACO000001819557).

Duct, Trench

Chamber / Pole

Cabinet

joanne.pugh@ucml.co.uk

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