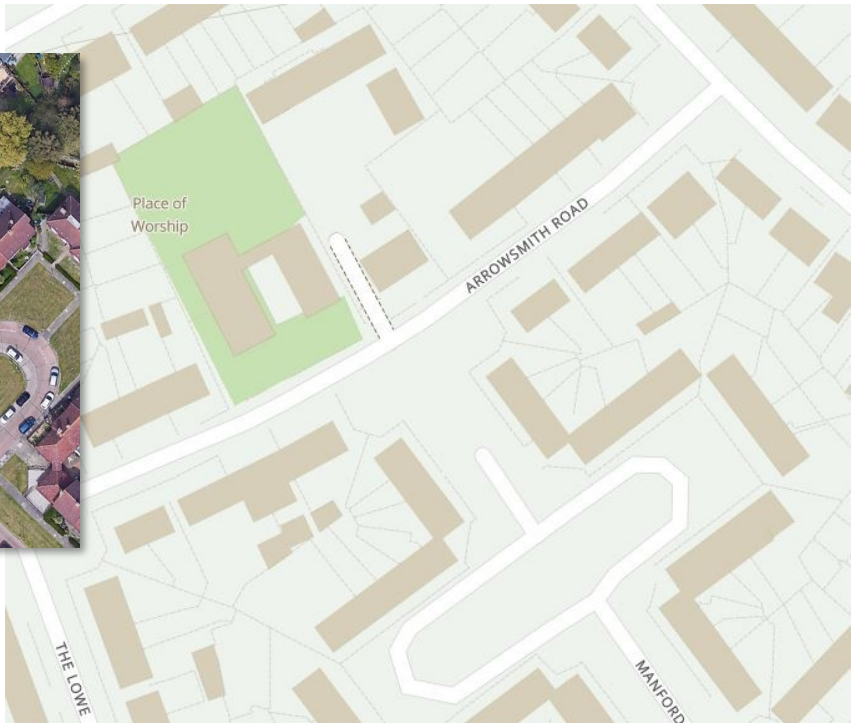
Arrowsmith Road, Hainault, Redbridge.

Date: March 2024

Intersect Surveys is one of the UK's leading survey providers. We offer services from utility detection, survey and engineering and monitoring solutions across a range of sectors.

Site Location



Arrowsmith Road, Hainault, Redbridge.

OS X (Eastings)	546252
OS Y (Northings)	192281
Nat Grid	TQ462922 / TQ4625292281
Nearest Post Code	IG7 4NZ
Lat (WGS84)	N51:36:37 (51.61037115082479)
Long (WGS84)	E0:06:39 (0.11074585148319654)
Lat,Long (WGS84)	51.61037115082479,0.11074585148319654
Lat (OSGB36)	N51:36:36 (51.60986880969728)
Long (OSGB36)	E0:06:45 (0.11238378295814222)
Lat,Long (OSGB36)	51.60986880969728,0.11238378295814222
what3words	admire.brain.gives
Open Loc/Plus code	9F32J466+47X

Enclosures

Utility Type	Company	In-house Search	In Vicinity of Development	Not In Vicinity of Development	No Response Received to date
Water Mains	Thames Water		28/03/2024		
Drainage	Thames Water		28/03/2024		
Gas	Cadent		28/03/2024		
Openreach (BT)	BT	x	28/03/2024		
CATV	Virgin	x	28/03/2024		
Electric	UKPN		28/03/2024		
Communication	CA			28/03/2024	
	Sky			28/03/2024	
	OCU			28/03/2024	
	Sota			28/03/2024	
	Zayo Europe			28/03/2024	
	Last Mile			28/03/2024	
	EU Networks			28/03/2024	
	Turner Townsend			28/03/2024	
	Verizon			28/03/2024	
	Zayo			28/03/2024	
	Neos			28/03/2024	
	Cityfibre			28/03/2024	
	gtc			28/03/2024	
Environment Agency				28/03/2024	
Tunnels & Pipelines	Local District Heating			28/03/2024	
	Thames Water Ring Main			28/03/2024	
	Post Office Tunnels			28/03/2024	
	Cemex (Cement Tunnel)			28/03/2024	
	MOD			28/03/2024	
	Exolum			28/03/2024	
	CHL (Fisher German) Total			28/03/2024	
Transport	TFL			28/03/2024	
	Network Rail			28/03/2024	
	Crossrail			28/03/2024	
	LUHV			28/03/2024	
	Docklands Light Railway			28/03/2024	
	Private Rail Lines			28/03/2024	
	Trams			28/03/2024	
	Traffic Master			28/03/2024	

Also Not Affected

AWE Pipeline Esso Petroleum Company Limited	CATS Pipeline c/o Wood Group
Perenco UK Limited (Purbeck Southampton Pipeline)	PSN Humbly Grove
BOC Limited	Energy Redundant Pipelines - LPDA
Fulcrum Pipelines Limited	Cemex
Petroineos	IGas Energy
BP Midstream Pipelines	RWEnpower (Little Barford and South Haven)
Phillips 66	Centrica Energy
Gateshead Energy Company	Ineos Enterprises Limited
Premier Transmission Ltd (SNIP)	SABIC UK Petrochemicals
Carrington Gas Pipeline	Centrica Storage Ltd

Abbreviations

Apparatus	
Electric:	
DNO	Distribution Network Operator
iDNO	Independent Distribution Network Operator
ICP	Independent Connections Provider
LV	Low Voltage
HV	High Voltage
EHV	Extra High Voltage
kVA	Kilovolt Amperes
MVA	Megavolt Amperes
AC	Alternating Current
S/S	Substation
PMT	Pole Mounted Transformer
Gas:	
GT	Gas Transporter
iGT	Independent Gas Transporter
UIP	Utility Infrastructure Provider
PRS	Pressure Reducing Station (Governor)
LP	Low Pressure
MP	Medium Pressure
IP	Intermediate Pressure
HP	High Pressure
Water:	
SLO	Self Lay Organisation
Incumbent	Local Water only or Water & Sewerage Company
WRAS	Water Regulation Advisory Scheme
Other:	
PE	Polyethylene
DI	Ductile Iron
ST	Steel
CI	Cast Iron
SI	Spun Iron
HPPE	High Performance Polyethylene
MDPE	Medium Density Polyethylene
CATV	Cable Television
GRP	Glass Reinforced Plastic
FTTP	Fibre to the premise
FTTC	Fibre to the cabinet
l/min	Litres per minute
H&S	Health and Safety
HBF	House Builders Federation
TPO	Tree Preservation Order

Desk Research – A cross in this column indicates that the response has been determined In-house.

In Vicinity – *Utility plant is expected to be within, adjacent to or very close to the search area. It is recommended to liaise with the utility in advance of any works taking place.*

Not In Vicinity – *Utility plant is not expected to be within, adjacent to or very close to the search area. It may be located some distance from the search area.*

No Response Received – *No response has been received from the utility to date.*

Relevant Documents

The following documents must be referred to before work commences in the vicinity of existing services

Health and Safety Booklet HS (GS) 6 Avoidance of Danger from Overhead Electric Lines.
General Safety Measures to Avoid Injury and Damage to Gas Apparatus.
HSE Guidance Note HS (G) 47 Avoiding Danger from Underground Services.
National Joint Utilities Group (NJUG) Publications Vol. 1.
CDM Regulations 2007 (Regulation 34 – Energy Distribution Installations).
Electricity at Work Regulations 1989.

Basic Risk Assumption for all Services

When dealing with existing services the following assumptions must always be accepted:

All existing buildings have gas, water electric and telecoms supplies to them until proven otherwise.

Any supply to an existing building, no matter how old the building is or how deteriorated the supply
May appear, is taken to be 'live' until proven otherwise.
All open land, vacant lots and derelict sites are deemed to have services beneath them until proven otherwise.

The only acceptable proof that a service is 'dead' and can be removed is written confirmation from the owner of the service.

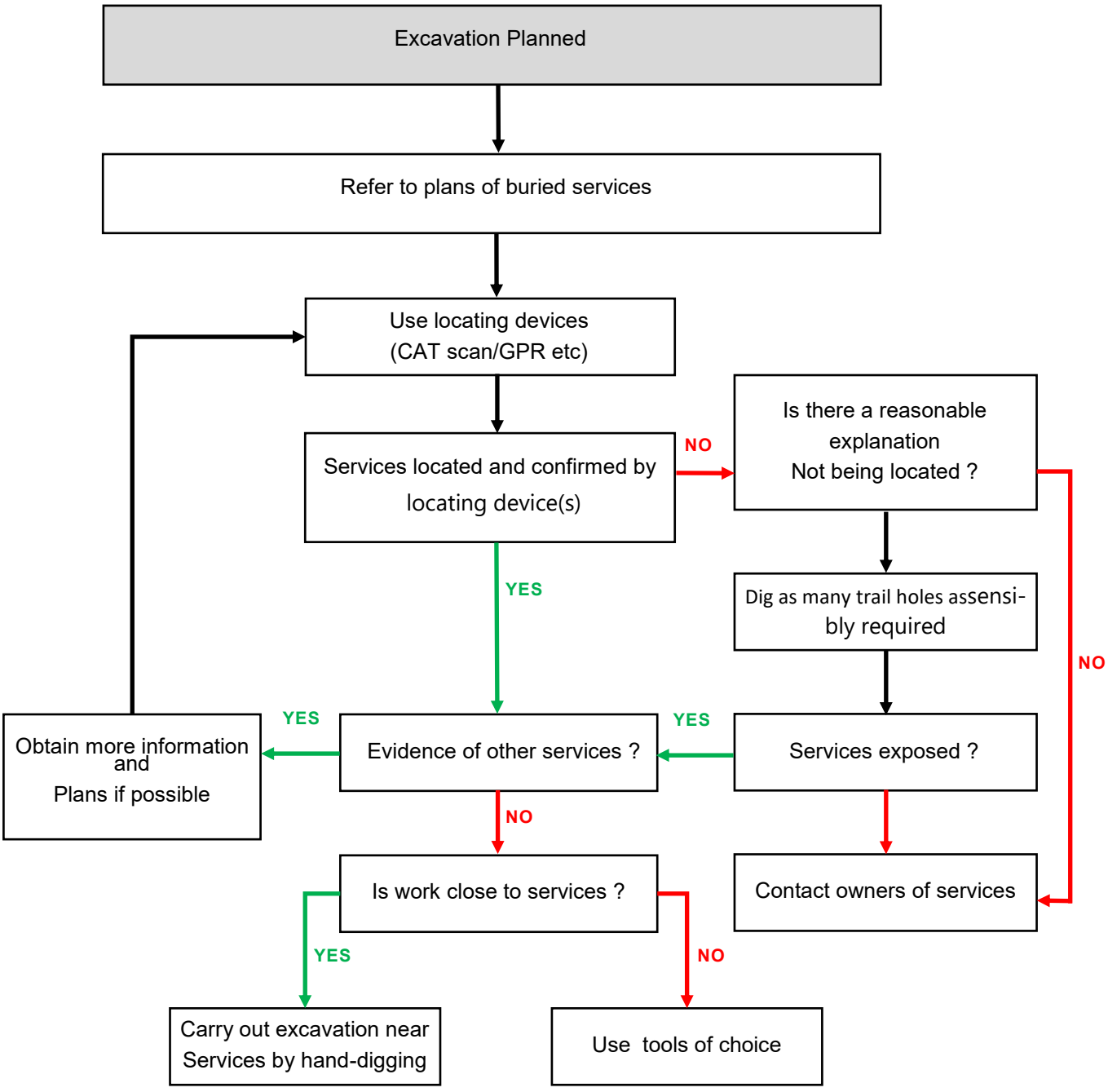
The quality and accuracy of information provided by utilities about their existing plant is indicative and no warranty is made as to its accuracy. Therefore, any utility record plans and/or marked up drawings provided by each utility must only be used as a guide and the actual location of plant should be verified by CAT Scan or trial holes before construction works commence. Please note not all service connections are shown on the utility record plans.

Plant Found Within Site Boundaries

Where utility plant is found within the site boundary, it is recommended for the client to check for legal easements or wayleaves.

Diversions of plant within site boundaries can be expensive and time consuming to relocate.
Further investigation of costs and timescales are recommended. Please ask PES for further details.

This flow diagram is intended to help give an understanding of the process from referring to plans on-site through to the start of excavation.



For example, could services be non-metallic pipes? Please refer to HS (G) 47 text for further information.

† In particular; visual evidence. Ensure that the presence of services, which may be unmarked on plans or for which no plans are available, has been considered, for example service connections.

*** If there is visual evidence of services, but owners cannot be traced, despite all reasonable attempts to do so, any excavation could proceed but using hand-dug trial holes and proceeding with great care.*

Guidelines on the Positioning and Colour Coding of Underground Utilities' Apparatus
Recommended Colour Coding of Underground Utilities Apparatus.
All depths are from the surface level to the crown of the apparatus.

Utility	Duct	Pipe	Cable	Marker Systems	Recommended Minimum Depths	
					Footway Verge	Carriageway
Electricity HV (High Voltage)	Black or red duct or tile	N/A	Red or black	Yellow with black and red legend or concrete tiles	450mm - 1200mm	750m - 1200mm
Electricity LV (Low Voltage)	Black or red duct or tile	N/A	Black or red	Yellow with black legend		750mm
Gas	Yellow	* See row below	N/A	Black legend on PE pipes every linear metre.	600mm footway 750mm verge	750mm
	*** PE - up to 2 bar - yellow or yellow with brown stripes (removable skin revealing white or black core pipe). - between 2 to 7 bar -orange. Steel pipes may have yellow wrap or black tar coating or no coating. Ductile Iron may have plastic wrapping Asbestos & Pit / Spun Cast Iron – No distinguishable colour					
Water non Potable & Grey Water	N/A	Black with green stripes	N/A	N/A	600mm - 750mm	600mm - 750mm
Water - Fire-fighting	N/A	Black with red stripes or bands	N/A	N/A	600mm - 750mm	600mm - 750mm
Oil / fuel pipelines	N/A	Black	N/A	Various Surface markers Marker tape or tiles above red concrete	900mm All work within 3 metres of oil fuel pipelines must receive prior approval	900mm All work within 3 metres of oil fuel pipelines must receive prior approval
Sewerage	Black	No distinguishing colour / material (eg: Ductile Iron may be red; PVC may be brown)	N/A	N/A	Variable	Variable
Communications	Grey, white, green, Black, purple	N/A	Black or Light Grey	Various	250mm - 350mm	750mm minimum
Water	Blue or Grey	Blue polymer or blue or uncoated Iron / GRP. Blue polymer with brown stripe (removable skin revealing white or black pipe)	N/A	Blue or blue/ black	750mm	750mm minimum
Water pipes for special purposes (e.g. contaminated ground)	N/A	Blue polymer with brown stripes (non removable skin)	N/A	Blue or blue/ black	750mm	750mm minimum

*These guidelines describe utility industry practice. However, it should not be Assumed that all apparatus will conform the recommendations for positioning And colour coding contained in this report.

Recommended Colour Coding of Other Underground Apparatus
All depths are from the surface level to the crown of the apparatus.

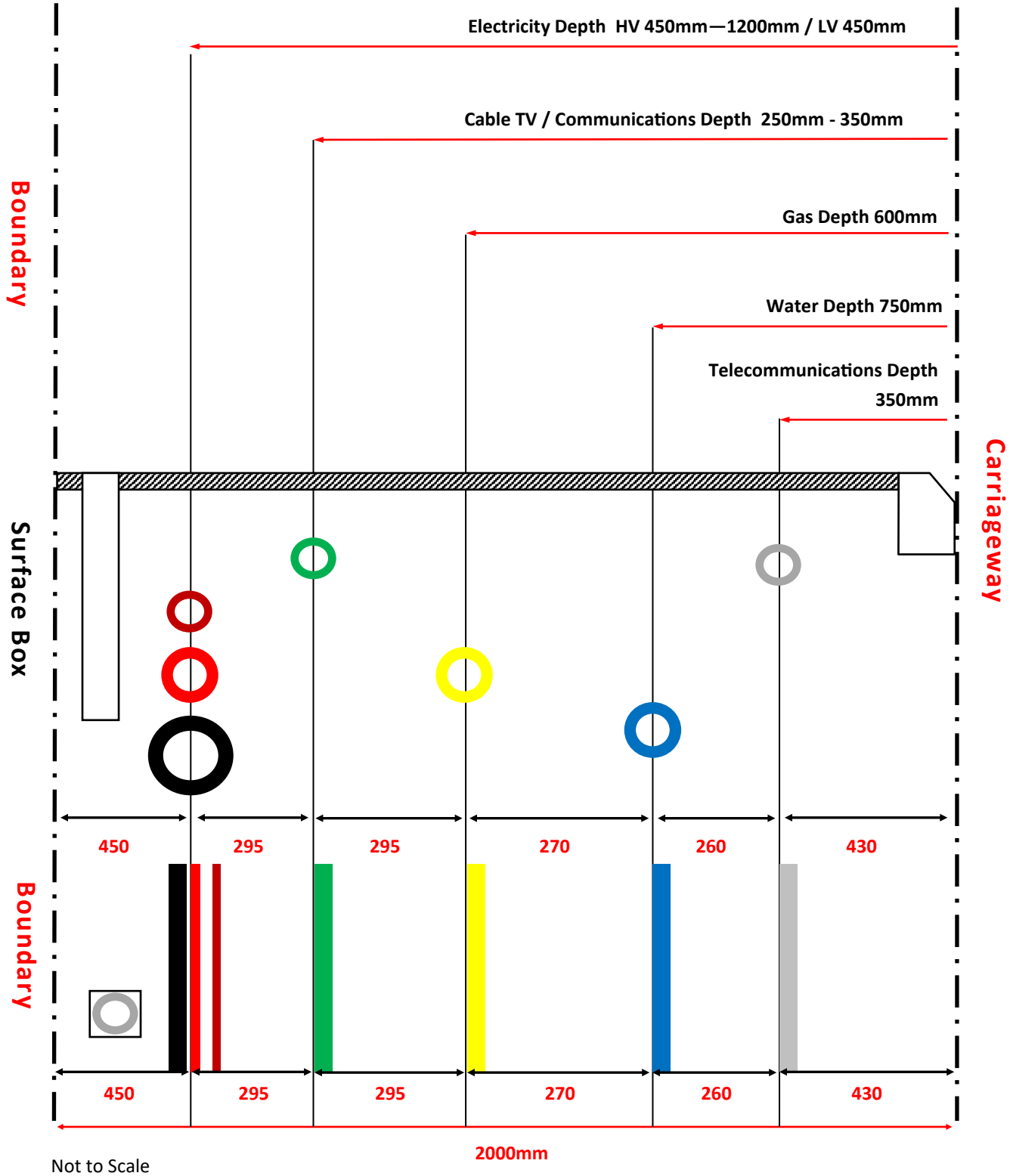
Utility	Duct	Pipe	Cable	Marker Systems	Recommended Minimum Depths	
					Footway Verge	Carriageway
At the time of publication the following were current examples of known highway authority apparatus colour coding but local variations may occur.						
Street Lighting						
England and Wales	Orange	N/A	Black	Yellow with black legend	450mm	600mm
Scotland	Purple	N/A	Purple	Yellow with black legend	450mm	450mm
Northern Ireland	Orange	N/A	Black or orange		450mm	450mm
Other						
Traffic Control	Orange	N/A	Orange	Yellow with black legend		
Street Furniture		N/A	Black	Yellow with black legend	450mm	600mm
Communications		N/A	Light grey or black	Yellow with black legend		
CCTV	Purple	N/A		Yellow with black legend		
Motorways and Trunk Roads England and Wales						
Communications	Purple	N/A	Grey	Yellow with black legend	450mm	
Communications Power	Purple	N/A	Black	Yellow with black legend		
Road Lighting	Orange	N/A	Black	Yellow with black legend		
Scotland						
Communications ○ ●	Black or grey	N/A	Black	Yellow with black legend		
Road Lighting	Purple	N/A	Purple	Yellow with black legend		

*These guidelines describe utility industry practise. However, it should not Be assumed that all apparatus will confirm to the recommendations for Positioning and colour coding contained in this publication.

NJUG Guidelines on the Positioning and Colour Coding of Underground Utilities

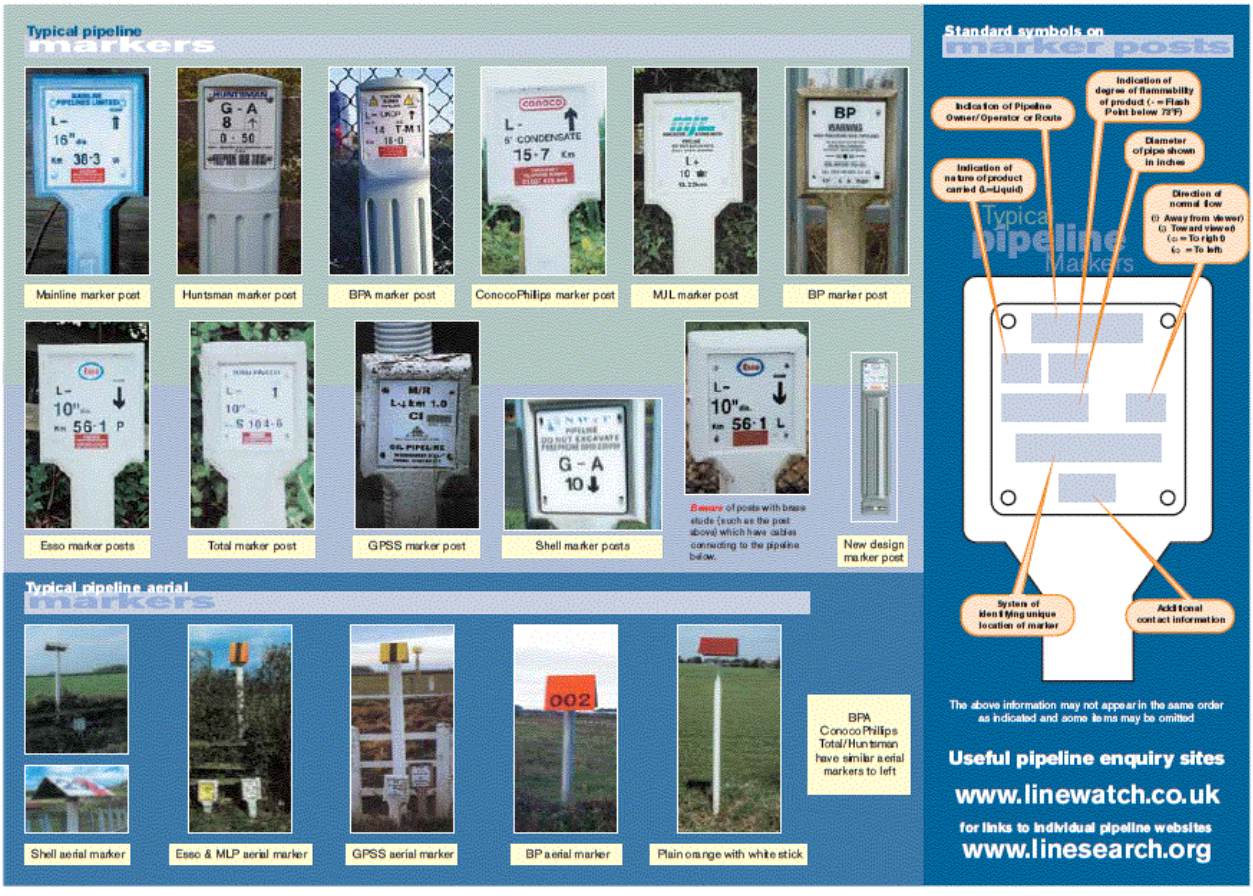
Recommended Positioning of Utility Apparatus in a 2 metre Footway (s)

Note - the same positioning should apply in the carriageway service strip (if safe and practical to do so) where a development has footways). available for services and or the boundary of the property in on the carriageway (please refer to minimum depths in carriageways) For further advise please contact the asset owner.



Not to Scale

Other warnings
WARNING
PIPELINE OFFSET BEHIND MARKER
The markers may not always be directly over the pipeline. In which case an additional waring sticker will indicate the direction of off-set.
Studs such as these may be found in footpaths and car parks etc.
Stile warning marker
CAUTION
THIS STRUCTURE IS IN CLOSE PROXIMITY TO A HIGH PRESSURE OIL PIPELINE.
BEFORE COMMENCING ANY EXCAVATION WORK PLEASE CALL
FREEFONE
0800 XXXXXX.
You may find signs such as these on apparatus close to the pipeline.
When the pipeline route has been located it will be marked with location pegs.
Pole warning marker
IMPORTANT
Marker posts only denote the presence of our pipelines. Never presume that the pipeline runs in a straight line between marker posts as there could either be a bend or the posts may have been moved without our knowledge.
DO NOT PRESUME ANYTHING; TELEPHONE OUR AGENTS AND WE WILL SEND SOMEONE TO VERIFY EXACTLY WHERE THE PIPELINE IS SITUATED.
Watch out– there's a pipeline about!
Typical pipeline Markers
LINEWATCH WEBSITE
www.linewatch.co.uk
Awareness and preparation is the key to safe excavation
Revision No 06.1


Typical pipeline markers
Mainline marker post
Huntsman marker post
BPA marker post
ConocoPhillips marker post
MJL marker post
BP marker post
Esso marker posts
Total marker post
GPSS marker post
Shell marker posts
Beware of posts with brass studs (such as the post above) which have cables connecting to the pipeline below.
New design marker post
Typical pipeline aerial markers
Shell aerial marker
Esso & MLP aerial marker
GPSS aerial marker
BP aerial marker
Plain orange with white stick
BPA ConocoPhillips Total/Huntsman have similar aerial markers to left
Standard symbols on marker posts
Indication of Pipeline Owner/Operator or Route
Indication of degree of flammability of product (- = Flash Point below 73°F)
Diameter of pipe shown in inches
Indication of nature of product carried (L=Liquid)
Direction of normal flow
(I) Away from viewer
(J) Toward viewer
(<) = To right
(>) = To left
System of identifying unique location of marker
Additional contact information
The above information may not appear in the same order as indicated and some items may be omitted
Useful pipeline enquiry sites
www.linewatch.co.uk
for links to individual pipeline websites
www.linesearch.org

Asset Location Search

Thames Water Property Searches

Your reference	ARROWBRIDGE ROAD REDBRIDGE
Our reference	ALS/ALS Standard/2024_4965530
Search date	22 March 2024

Notification of Price Changes

From 1st April 2024 Thames Water Property Searches will be increasing the prices of its CON29DW Residential and Commercial searches along with the Asset Location Search. Costs will rise in line with RPI as per previous years, which is sat at 6%.

Customers will be emailed with the new prices by February 28th 2024.

Any orders received with a higher payment prior to the 1st April 2024 will be non-refundable. For further details on the price increase please visit our website at www.thameswater-propertysearches.co.uk.

Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW

searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk

0800 009 4540

Asset Location Search

Property Searches

Search address supplied: St. Pauls Church, Arrowsmith Road, Chigwell, IG7 4NZ

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position, size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0800 009 4540, or use the address below:

Thames Water Utilities Ltd
Property Searches
PO Box 3189
Slough
SL1 4WW

Email: searches@thameswater.co.uk
Web: www.thameswater-propertysearches.co.uk

Asset Location Search

Thames Water Property Searches

Waste Water Services

Please provide a copy extract from the public sewer map.

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority.

Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners.

This report relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus.

The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an ‘as constructed’ record. It is recommended these details be checked with the developer.

Clean Water Services

Please provide a copy extract from the public water main map.

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies.

For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.

For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Payment for this Search

A charge will be added to your suppliers account.

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. For further information please contact our Customer Centre on Tel: 0845 920 0800. Alternatively, a survey can be arranged, for a fee, through our Customer Centre on the above number.

If you have any questions regarding sewer connections, budget estimates, diversions, building over issues or any other questions regarding operational issues please direct them to our service desk. Which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

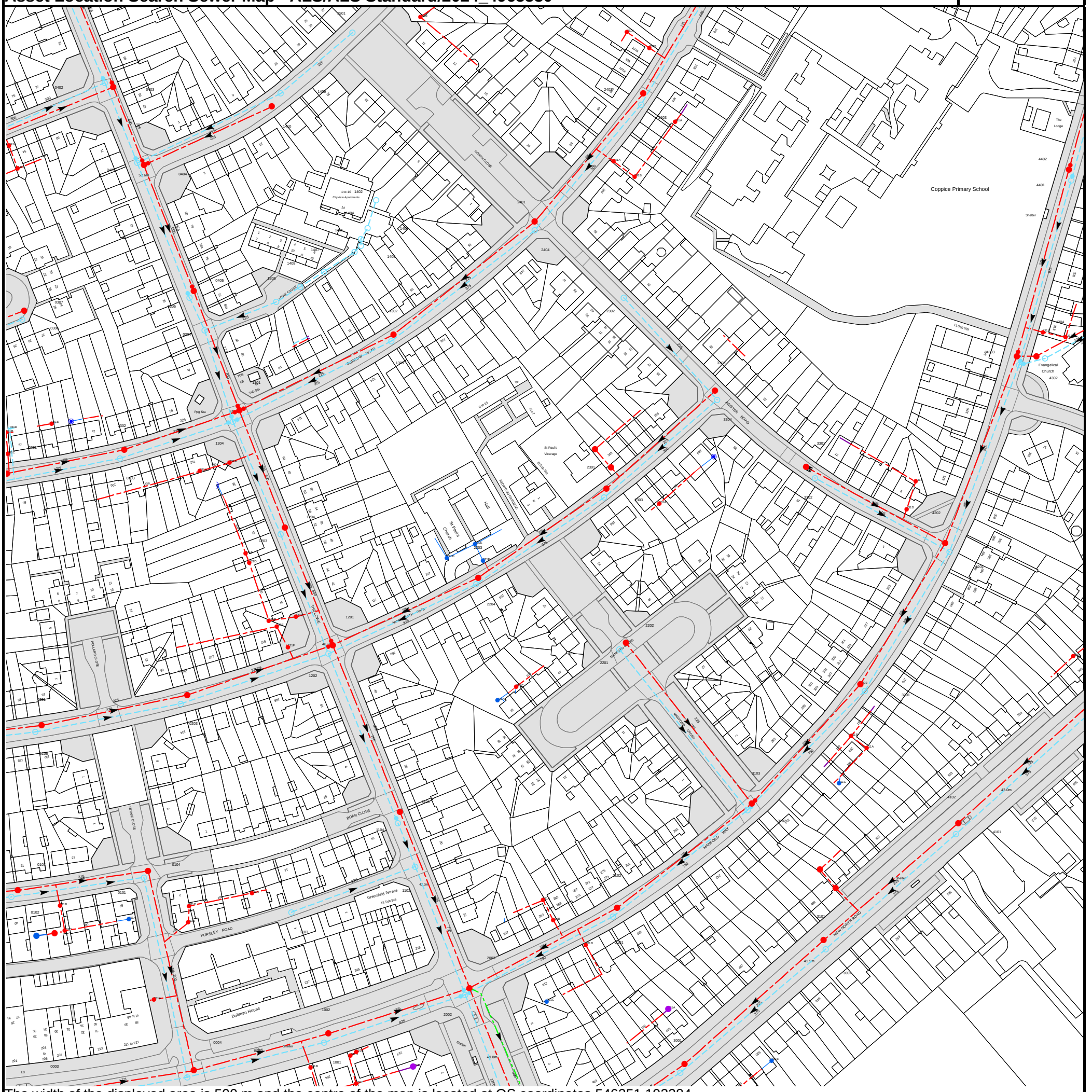
Clean Water queries

Should you require any advice concerning clean water operational issues or clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Asset Location Search Sewer Map - ALS/ALS Standard/2024_4965530



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 546251,192284

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2020) with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
0301	50.28	47.75
031C	n/a	n/a
031B	n/a	n/a
031D	n/a	n/a
031E	n/a	n/a
0102	45.4	43.37
0103	45.43	42.77
0105	48.72	46.2
01ZV	n/a	n/a
0201	48.7	45.78
01ZX	n/a	n/a
011B	n/a	n/a
011C	n/a	n/a
041A	n/a	n/a
041B	n/a	n/a
0306	51.87	49.4
0307	51.91	49.2
4401	48.9	45.48
031A	n/a	n/a
131A	n/a	n/a
0303	49.51	47.69
0302	49.49	46.87
1304	49.15	45.87
1301	49.24	45.42
0304	50.63	47.76
1305	52.12	50.6
0305	51.34	48.02
0405	51.47	47.63
1408	52.85	51.33
1407	53.58	52.26
1406	54.65	52.7
1405	54.72	52.72
1404	54.8	52.98
1403	55.52	54.05
1402	56.44	55.12
0404	53.85	49.81
0401	53.9	50.42
1410	57.25	54.65
1409	57.68	55.58
0403	55.28	51.25
0402	55.34	51.72
1501	59.93	57.69
1303	51.08	48.54
1302	51.14	48.02
151B	n/a	n/a
2404	53.57	50.85
2401	53.62	50.45
23ZX	n/a	n/a
23ZW	n/a	n/a
241A	n/a	n/a
2302	50.55	48
251A	n/a	n/a
241B	n/a	n/a
2403	53.76	51.27
2402	53.75	50.83
251B	n/a	n/a
341A	n/a	n/a
3303	48.03	45.63
3304	47.9	46.08
3301	46.56	44.21
3302	46.48	44.65
431C	n/a	n/a
4303	46.47	42.65
4301	46.3	42.93
4304	46.69	45.41
431A	n/a	n/a
4302	46.68	45.45
431B	n/a	n/a
4402	48.97	44.75
1101	44.08	39.94
3102	43.61	39.99
3103	43.69	39.76
0203	47.82	45.6
221A	n/a	n/a
0202	47.77	45.35
221C	n/a	n/a
1202	46.37	42.47
2201	44.29	41.55
121F	n/a	n/a
1201	46.42	42.04
2202	44.27	41.32
121E	n/a	n/a
121B	n/a	n/a
121C	n/a	n/a
2204	45.34	43.75
2203	45.39	43.22
121D	n/a	n/a
221F	n/a	n/a
221D	n/a	n/a
121A	n/a	n/a
221E	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
1203	47.51	45.09
1204	47.57	44.7
331A	n/a	n/a
2303	46.49	44.47
2301	46.54	43.92
3002	41.45	39.18
3101	41.46	38.82
31ZX	n/a	n/a
31ZY	n/a	n/a
4101	42.41	40.24
4102	42.43	39.81
311C	n/a	n/a
311A	n/a	n/a
311B	n/a	n/a
3201	44.8	41.68
3202	44.86	41.34
421A	n/a	n/a
4201	44.75	42.23
4202	44.81	41.89
431D	n/a	n/a
101C	n/a	n/a
0001	42.43	39.51
0004	42.41	38.85
101B	n/a	n/a
101E	n/a	n/a
101D	n/a	n/a
101A	n/a	n/a
1001	42.08	39.26
1002	42.03	38.61
001A	n/a	n/a
011E	n/a	n/a
011A	n/a	n/a
1103	43.63	41.76
011D	n/a	n/a
111A	n/a	n/a
0101	45.66	42.81
0104	45.72	42.5
1102	43.3	39.98
1104	43.98	40.46
3003	40.47	38.16
3001	40.57	37.87
301B	n/a	n/a
301A	n/a	n/a
201C	n/a	n/a
2002	41.67	37.62
2003	41.72	37.04
201D	n/a	n/a
211B	n/a	n/a
2101	41.38	39.41
2102	41.43	39.01
211A	n/a	n/a

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.

Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.

Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.

- Storm Sewer
- Sludge Sewer
- Foul Trunk Sewer
- Surface Trunk Sewer
- Combined Trunk Sewer
- Foul Rising Main
- Surface Water Rising Main
- Combined Rising Main
- Vacuum
- Thames Water Proposed
- Vent Pipe
- Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

- Sewer
- Culverted Watercourse
- Proposed
- Decommissioned Sewer
- Content of this drainage network is currently unknown
- Ownership of this drainage network is currently unknown

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

- Air Valve
- Meter
- Dam Chase
- Vent
- Fitting

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

- Ancillary
- Drop Pipe
- Control Valve
- Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

- Inlet
- Outfall
- Undefined End

Other Symbols

Symbols used on maps which do not fall under other general categories.

- Change of Characteristic Indicator
- Public / Private Pumping Station
- Invert Level
- Summit

Areas

Lines denoting areas of underground surveys, etc.

- Agreement
- Chamber
- Operational Site

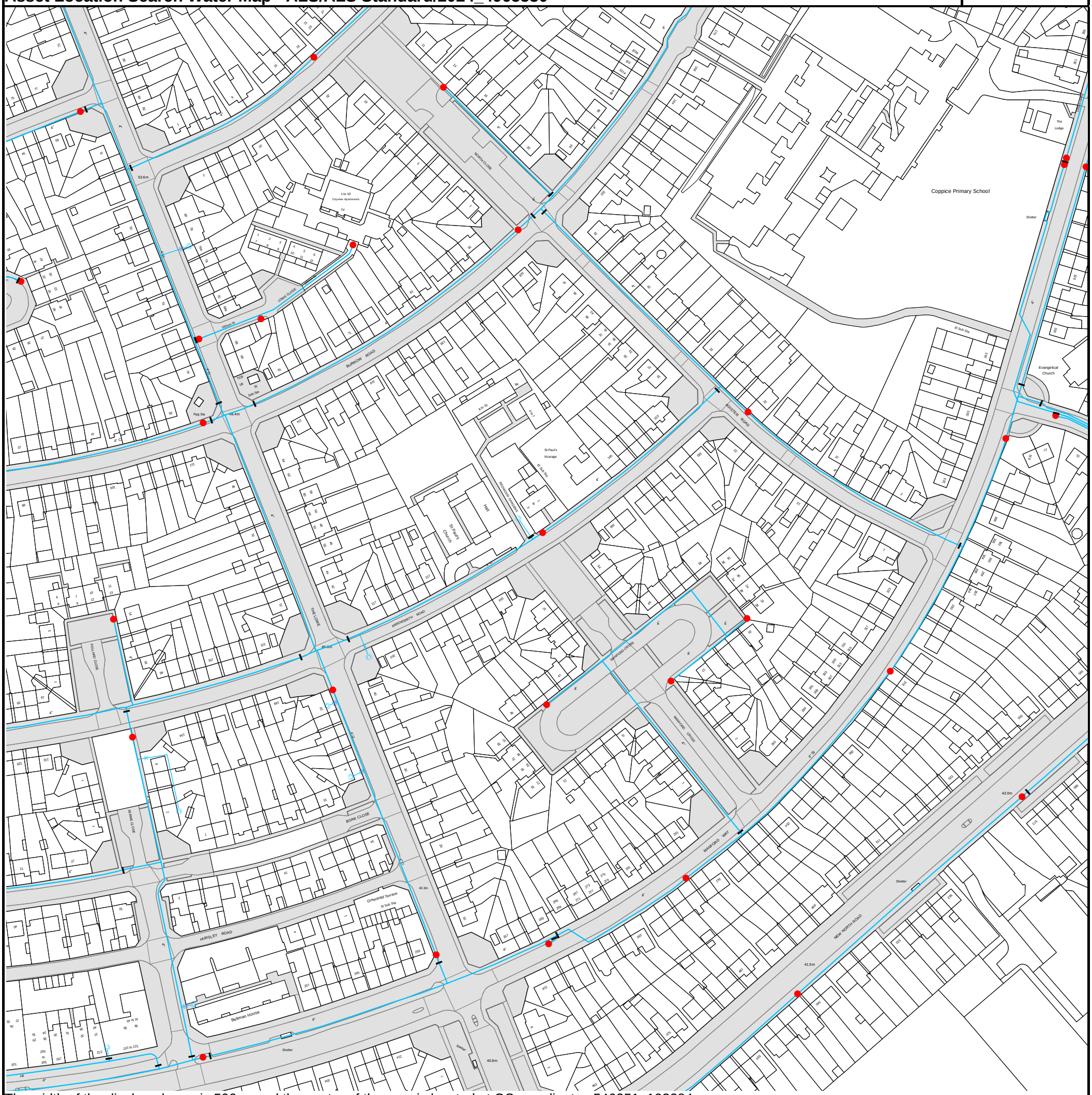
Ducts or Crossings

- Casement — Ducts may contain high voltage cables. Please check with Thames Water.
- Conduit Bridge
- Subway
- Tunnel

Notes:

1) All levels associated with the plans are to Ordnance Datum Newlyn.
2) All measurements on the plan are metric.
3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
5) 'na' or '0' on a manhole indicates that data is unavailable.
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.

Asset Location Search Water Map - ALS/ALS Standard/2024_4965530



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 546251, 192284.

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2020) with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.

Trunk Main: A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.

Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.

Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.

Metered Pipe: A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.

Transmission Tunnel: A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.

Proposed Main: A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger

Casement: Ducts may contain high voltage cables. Please check with Thames Water.

Other Water Pipes (Not Operated or Maintained by Thames Water)

Other Water Company Main: Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.

Private Main: Indiates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Payment Terms and Conditions

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment within 14 days of the date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service or will be held to be invalid.
4. Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
5. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
6. A charge may be made at the discretion of the company for increased administration costs.

A copy of Thames Water's standard terms and conditions are available from the Commercial Billing Team (cashoperations@thameswater.co.uk).

We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 316 9800.

If you are unhappy with our service, you can speak to your original goods or customer service provider. If you are still not satisfied with the outcome provided, we will refer the matter to a Senior Manager for resolution who will provide you with a response.

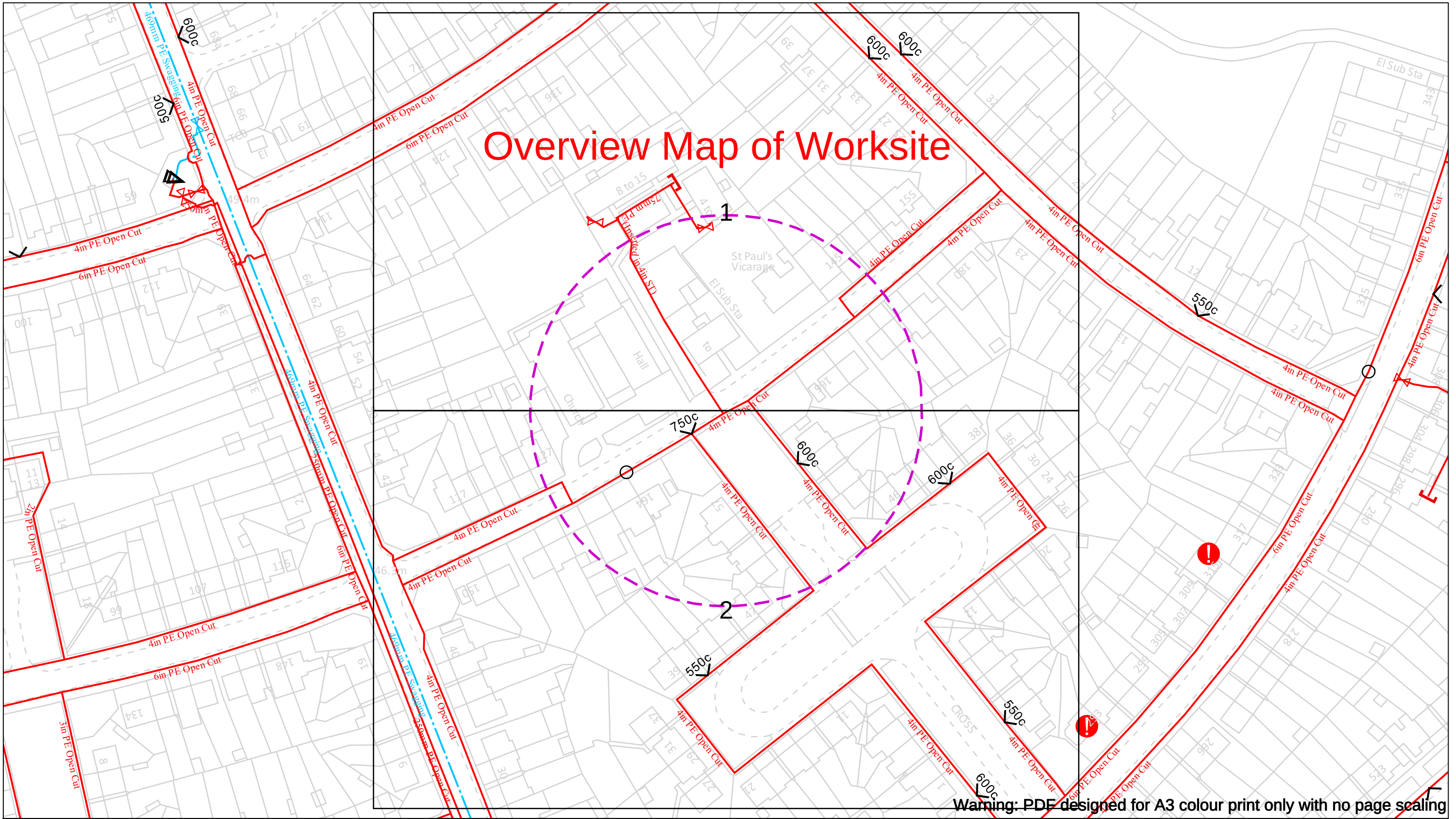
If you are still dissatisfied with our final response, and in certain circumstances such as you are buying a residential property or commercial property within certain parameters, The Property Ombudsman will investigate your case and give an independent view. The Ombudsman can award compensation of up to £25,000 to you if he finds that you have suffered actual financial loss and/or aggravation, distress, or inconvenience because of your search not keeping to the Code. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0300 034 2222 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	**BACS Payment**	**Telephone Banking**
Please Call **0800 009 4540** quoting your invoice number starting CBA or ADS	Account number **90478703** Sort code **60-00-01** A remittance advice must be sent to: **Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW.** or email **ps.billing@thameswater.co.uk**	By calling your bank and quoting: Account number **90478703** Sort code **60-00-01** and your invoice number

Overview Map of Worksite



Warning: PDF designed for A3 colour print only with no page scaling

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

Area: Line:

- LP Mains
- MP Mains
- IP Mains
- LHP Mains
- Valve
- Depth of cover
- Syphon
- Diameter Change
- Material Change
- Out of Standard Service

Where an out-of-standard service is present please contact plant protection 0800 688 588 for further information.
Out-of-standard service symbology may be used to indicate one or more of the following:

- Identification of shallow services
- Identification of dual services
- Recording of non-perpendicular services

A perpendicular service/connection is laid in a straight line from the entry point at the property to the connection at the main – this includes a pipe that has a perpendicular connection and is not straight but does not deviate more than 1m off centre line.

Cadent
Your Gas Network

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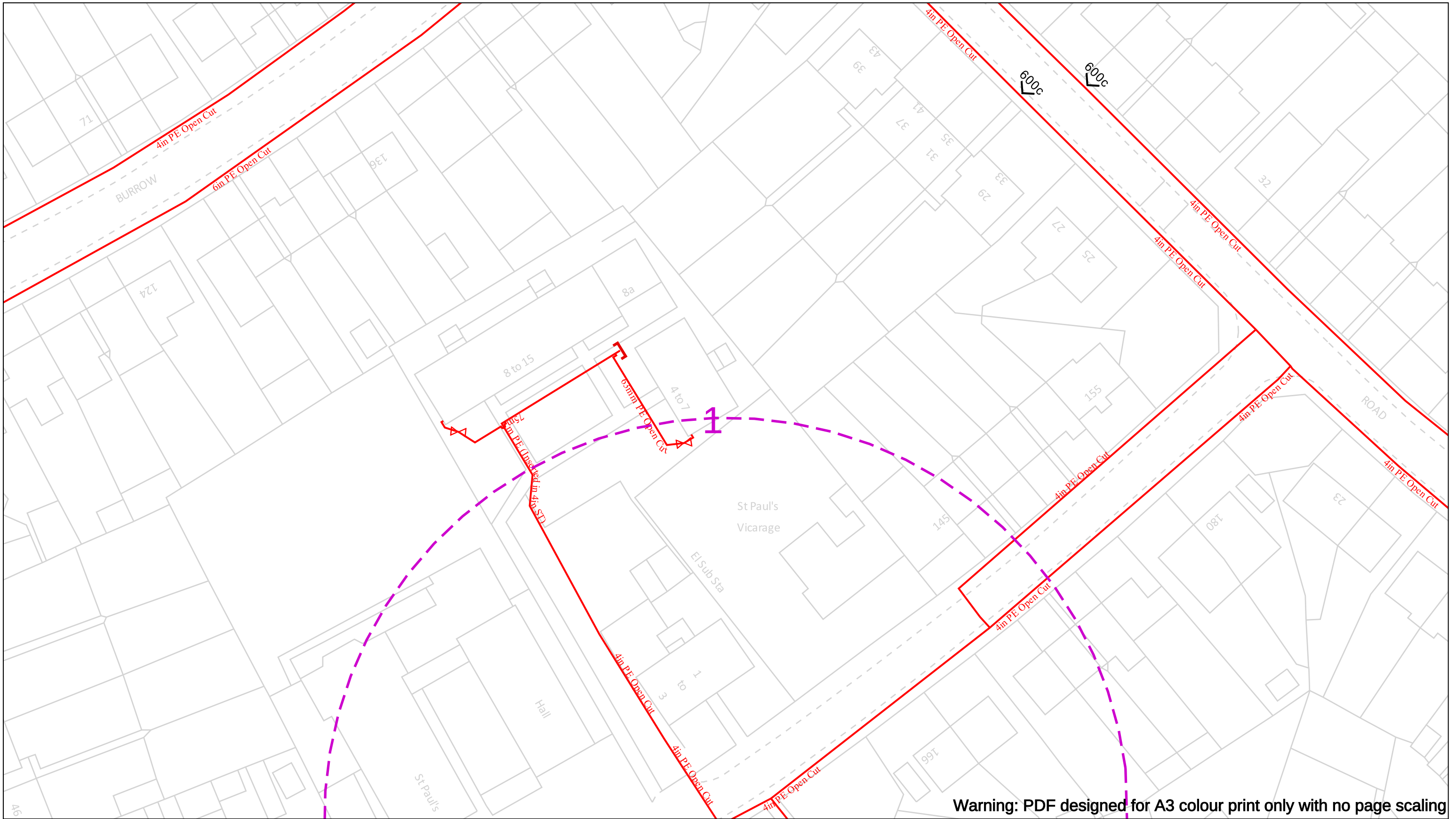

Warning: PDF designed for A3 colour print only with no page scaling

View extent: 200m, 115m

IMPORTANT NOTICES

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In case of an emergency call 0800 111 999

50m

Dig Sites

Area:

Line:

LP Mains
MP Mains
IP Mains
LHP Mains

Valve
Depth of cover
Syphon

Diameter Change
Material Change
Out of Standard Service

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Cadent
Your Gas Network

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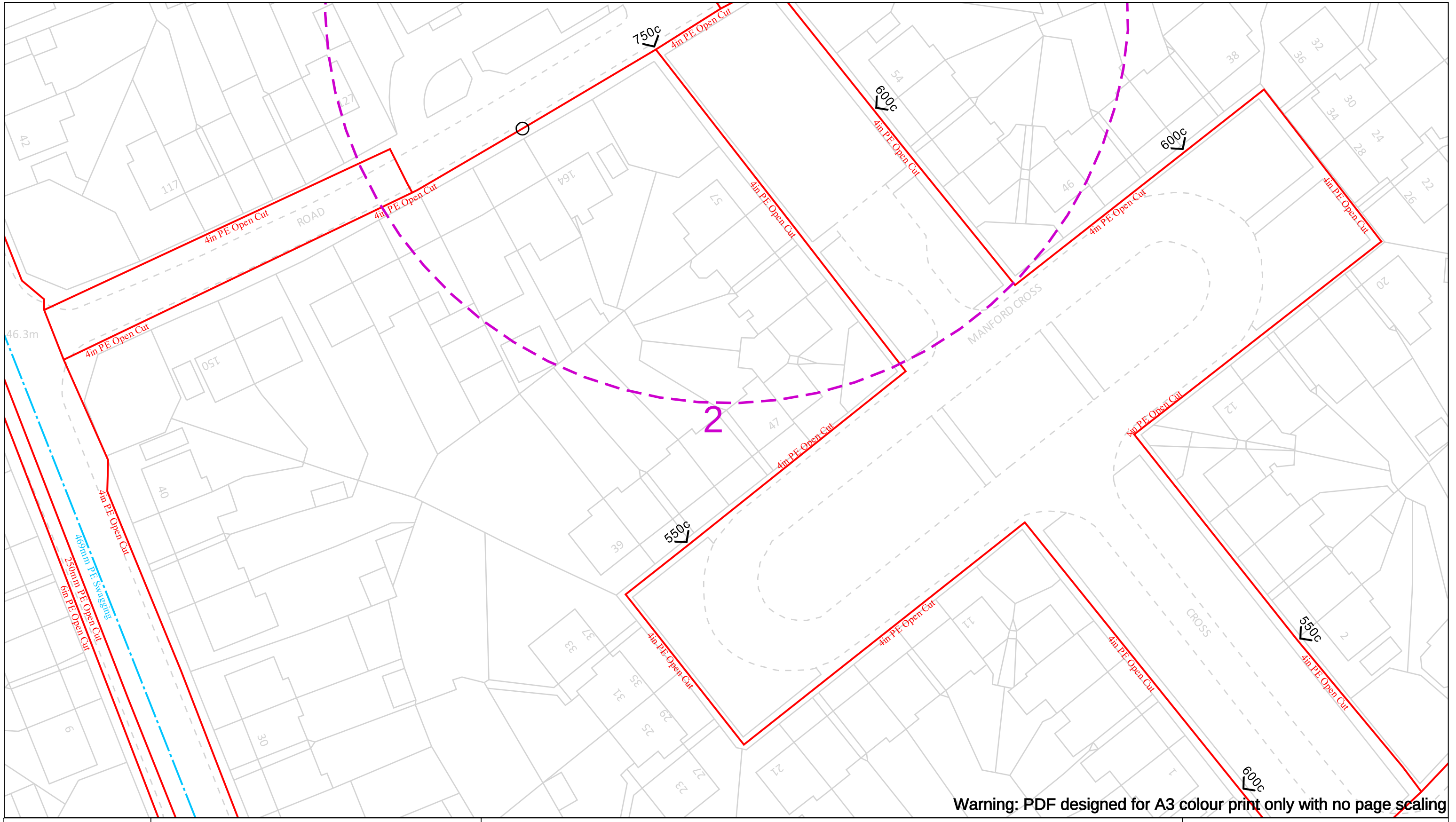
750c
600c
600c
550c
550c
600c
4in PE Open Cut
4in PE Open Cut
4in PE Open Cut

Cadent

Your Gas Network

Specification for safe working in the vicinity of Cadent assets - requirements for third parties

SSW22_v1

Cadent contact details

Disclaimer

This document is provided for use by third parties for safe working in the vicinity of Cadent assets. Where this document is used by any other party it is the responsibility of that party to ensure that this document is correctly applied.

Mandatory and non-mandatory requirements

In this document:

shall: indicates a mandatory requirement.

should: indicates best practice and is the preferred option.

If an alternative method is used then a suitable and sufficient risk assessment shall be completed to show that the alternative method delivers the same, or better, level of protection.

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Smell gas? Call the free, 24 hour National Gas Emergency Service:

0800 111 999*

*All calls are recorded and may be monitored

Introduction

Specification for safe working in the vicinity of Cadent assets – requirements for third parties.

This specification is for issue to third parties carrying out work in the vicinity of Cadent gas assets and associated installations. It is provided to ensure that individuals planning and undertaking work take appropriate measures to prevent damage.

Any damage to a gas asset, or its coating can affect its integrity and can result in failure of the asset with potentially serious hazardous consequences for individuals located in the vicinity.

It is therefore essential that the safety advice outlined in this document is complied with when working near to a Cadent asset. If Cadent consider any work to be in breach of the requirements stipulated in this document, then the Cadent responsible person will request that work is suspended until the non- compliances have been rectified.

Keeping you, your workers and the public safe when working near our pipelines.

The Pipelines Safety Regulations *1996* state that 'No person shall cause such damage to a pipeline as may give rise to a danger to persons' (Regulation 15). Failing to comply with these requirements could therefore result in prosecution by the Health and Safety Executive (HSE). The requirements in this document are in line with the requirements of the Institution of Gas Engineers and Managers (IGEM) recommendations *IGEM/SR/18 Edition 3 Safe Working Practices to Ensure the Integrity of Gas Assets and Associated Installations* and the HSE's guidance document *HS(G)47 Avoiding Danger from Underground Services*. It is the responsibility of the third party to ensure that any work carried out also conforms with the requirements of the Construction and Design Management (CDM) Regulations 2015 and all other relevant health and safety legislation.

Always contact Cadent prior to carrying out any work in the vicinity of Cadent assets

Contact Cadent

Contact Cadent on 0800 688588 to obtain formal consent at least 14 days before starting work. See Section 2 for more details.

Consider safety

Consider the safety requirements – Section 3 of this document.

Inform Cadent and request asset location

For asset location please contact Cadent at least 14 days before work starts to request formal asset location. See Section 4 of this document.

Observe restrictions

Observe Cadent restrictions on the allowed proximity of mechanical excavators and other power tools and the measures to protect the asset from construction vehicles when carrying out the work – Sections 5, 6.1, 6.2,7.1 and 7.2 of this document. Note: Cadent may wish to monitor the work, consult Cadent to confirm whether or not this is the case.

Specific activities

- No-dig techniques
- Change in cover
- Piling
- Seismic surveys
- Hot work
- Blasting
- Demolition
- Surface mineral extraction
- Landfilling
- Pressure testing
- Deep mining
- Wind and solar farms
- Crossing with plant and equipment

See Sections 6.3 & 7.3

Consult Cadent

Consult Cadent prior to any backfilling over, alongside or under the asset and obtain Cadent's agreement to proceed. Normally Cadent requires 48 hours' notice prior to backfilling. See Sections 6.4 & 7.4 of this document.

Important: This flowchart should be used in conjunction with the entire SSW22 document and not in isolation. If, at any time during the works, the asset is damaged even slightly then observe the precautions in Section 9 of this document.

If in doubt, contact Cadent.

1 Scope

This specification sets out the safety precautions and other conditions associated with working in the vicinity of all Cadent assets, located in both negotiated easements (see Section 11) and public highways.

2 Formal consent

Cadent assets are located either, within an easement agreed with the landowner (at the time of installation) or within the highway. As the required arrangements for working within an easement and working within the highway differ, this document highlights the specific requirements for these two types of area.

No work shall be undertaken in the vicinity of the asset without the formal written consent of Cadent.

Any documents handed to contractors, or other individuals undertaking work (e.g. farmer, local authority etc.), on site by Cadent, shall be signed for by the site manager (to be shared with all individuals on site).

2 Formal consent

2.1 Within an easement

The promoter of any works (see Section 11) within an easement (or within 3m of asset location) shall provide Cadent with details of the proposed works including a risk assessment and method statement of how the work is intended to be carried out. Work shall not go ahead until formal written consent has been given by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number. On acceptance of Cadent's requirements, the promoter of the works shall give Cadent at least 14 days notice before commencing work on site.

In addition to formal written consent, an easement crossing agreement (deed of indemnity) may be required. This shall be discussed with the Cadent responsible person prior to the commencement of the works.

2.2 Within a highway

Work shall be notified to Cadent in accordance with the requirements of The New Roads and Street Works Act (NRSWA) and HS(G)47. The promoter of any works within the highway should provide Cadent with details of the proposed works, including a risk assessment and method statement of how the work is intended to be carried out. This shall be submitted at least 14 days before the planned work is to be carried out. If similar works are being carried out at a number of locations in close proximity, a single risk assessment and method statement should be adequate depending on the nature of the works. Work should not go ahead until formal written consent has been given by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number.

3 Health, safety and environmental considerations

3.1 Safe control of operations

All working practices shall be agreed by Cadent prior to work commencing. All personnel working on site shall be made aware of the potential hazard of the asset and the actions they should follow in case of an emergency.

3.2 Deep excavations

Special consideration should be given to the hazards associated with deep excavations when working within or at a close proximity to the asset.

3.3 Positioning of plant

Unless written authority has been given by Cadent, mechanical excavators and any other powered mechanical plant shall not be sited or moved over an asset location. Mechanical excavators and any other powered mechanical plant shall not dig on one side of the asset when the cab of the excavator positioned on the other side. Mechanical excavators, any other powered mechanical plant, and other traffic shall be positioned far enough away from the asset trench to prevent trench wall collapse.

3.4 Risk assessment

Works in the vicinity of gas assets may have an impact on the safety of the general public, site workers, Cadent staff and contractors, and may affect the local environment. Anyone (e.g. contractors, site workers, farmers, local authorities etc.) working close to the asset, shall carry out suitable and adequate risk assessments. The risk assessment must have acceptance from the Cadent responsible person prior to the commencement of work, to ensure that all such issues are properly considered and risks mitigated.

4 Location of gas assets

Cadent asset records shall be consulted to establish the indicative location of the gas assets in relation to the promoters work area.

Prior to site work commencing the gas assets should be located to verify the indicative location.

This should be carried out through non-intrusive methods utilising pipe locators. Once located the gas assets should be marked out at regular intervals using asset location markers with triangular flags (see Appendix A) or other suitable methods.

The requirements for trial holes to locate the asset or determine levels at crossing points shall be determined on site by the Cadent responsible person.

For assets exceeding 2 bar, the excavation of all trial holes shall be monitored by Cadent. For assets not exceeding 2 bar, this monitoring will be at the discretion of the Cadent responsible person. Any changes shall be agreed by Cadent.

Safe digging practices, in accordance with HSE publication HS(G)47 should be followed. Direct and consequential damage to gas plant can be dangerous both to employees and to the general public

5 Temporary and permanent protective measures

No temporary or permanent protective measures, including the installation of concrete slab protection, shall be installed over or near to the Cadent asset without the prior permission of Cadent. Cadent will need to approve the material, dimensions and method of installation of the proposed protective measure.

The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to Cadent. Where permanent slab protection is to be applied over the asset, Cadent will normally carry out a coating survey of metallic assets to check that there is no existing damage to the coating prior to the slab protection being put in place.

Cadent shall therefore be given at least 14 days notice prior to the laying of any slab protection to arrange for this survey to be carried out.

Generally, due to the need for future access to below 2 bar gas assets, permanent slabs are not permitted but, can be approved at Cadent's discretion.

The safety precautions detailed in section 3 and either section 6 or 7 of this document should also be observed during the installation of the asset protection.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.1 Excavation

6.1.1 In proximity to an asset in an easement

Following location and marking of the asset in agreement with the Cadent responsible person, powered mechanical excavation may be used no closer than 3 meters **(see Figure 1)**. The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

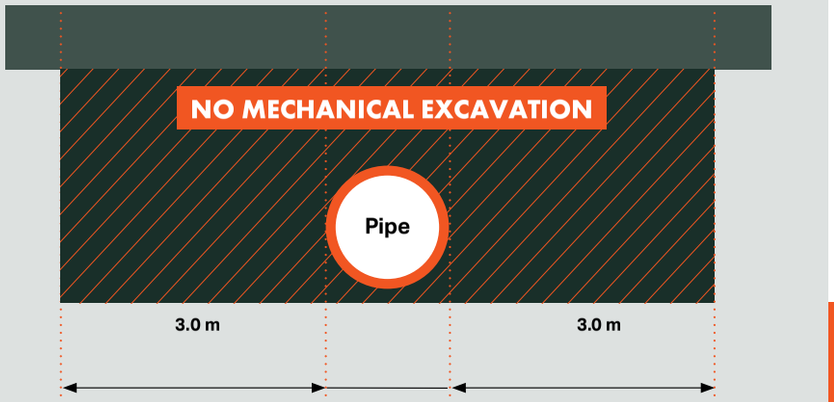
Any fitting, attachment or connecting pipework on the asset shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of the components are in contact with the Cadent asset.

Consideration may be given to a relaxation of these limits or lower risk excavation methods by agreement with the Cadent responsible person on site.

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.) and following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 0.25 metres, using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or close to above ground gas installations.

Figure 1. Excavation restrictions



After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing, unless otherwise agreed by Cadent.

No new service shall be laid parallel to the asset within the easement. In special circumstances, and only with formal written agreement from Cadent, this may be relaxed for short excursions where the service shall be laid no closer than 0.6 metres.

Where work is being carried out parallel to the asset, within or just alongside the easement, suitable barriers shall be erected for protection between the works and the asset to prevent encroachment.

6.1.2 In proximity to an asset in the highway

Following location and marking of the asset in agreement with the Cadent responsible person, powered mechanical excavation may be used no closer than 3 meters **(see Figure 1)**.

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of the components are in contact with the Cadent asset.

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 0.3 metres, unless any attachments or projections are present on the asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers is not permitted within 3 metres of the asset. The Cadent responsible person may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 0.3 metres deep, it shall only be removed by hand-held power assisted tools under the observation of Cadent.

In special circumstances, consideration may be given to a relaxation of these rules by agreement with the Cadent responsible person and only whilst they remain on site.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.1.3 Crossing over an asset (Open cut)

Where a new service is to cross over the asset, a clearance distance of 0.6 metres between the crown of the asset and underside of the service should be maintained. If this cannot be achieved, the service shall cross below the asset, **(see section 6.1.4).**

In special circumstances, this distance may be reduced at the discretion of the Cadent responsible person on site.

6.1.4 Crossing below an asset (Open cut)

Where a service is to cross below the asset, a clearance distance of 0.6 metres between the crown of the service and underside of the asset shall be maintained. Where lengths of pipe greater than one metre are to be exposed, the Cadent responsible person shall be consulted.
The exposed asset/s should be suitably supported and protected by matting and timber cladding.
Any supports shall be removed prior to backfilling.

In special circumstances, this clearance distance may be reduced at the discretion of the Cadent responsible person on site.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.1.5 Cathodic protection

Cathodic protection (CP) is applied to Cadent's buried steel pipe and is a method of protecting assets from corrosion by maintaining an electrical potential between the pipe and anodes placed at strategic points along the asset.

Where a new service is to be laid and similarly protected, the party installing the CP system will undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

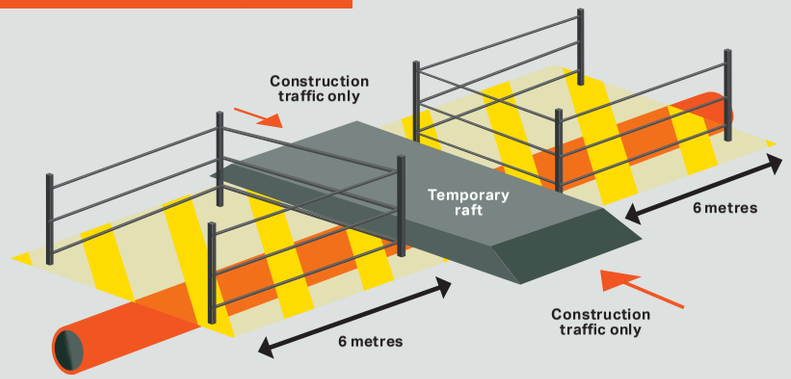
Should any cathodic protection posts or associated apparatus need to be moved to facilitate third party works, at least 14 days notice shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

6.1.6 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment and method statement shall be submitted to Cadent for approval, prior to the works.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's asset. The costs for any stray current mitigation systems required will be borne by the third party promoter.

Figure 2. Construction traffic requirements



6.2 Construction traffic

Where existing roads cannot be used, construction traffic should ONLY cross the asset at agreed locations. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points. The fence should cover the width of the easement and extend a further 6 metres along the length of the easement on both sides. **(See figure 2)**

The asset shall be protected, at the crossing points by a suitable method agreed with the Cadent responsible person prior to installation. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.

For larger scale projects, or permanent solutions, a protection slab may be required.

6.3 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of the asset. The promoter of works is required to consult Cadent when intending to undertake one of the listed activities and/or further advice is required on whether the work has the potential to affect the asset. The table to the right shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought **(see sections 6.3.1 to 6.3.13 for further details)**

Activity	**Distance within which Cadent advice shall be sought**
Piling	**15 m**
Surface mineral extraction	**100m**
Landfilling	**100 m**
Demolition	**150 m or 400m for structure mass >10000 tonnes**
Blasting	**500 m if the MIC is greater than 200 kg** **250 m if the MIC is greater than 10 kg but less than 200 kg** **100 m if the MIC is 10 kg or less.**
Deep mining	**1000 m**
Wind turbine	**Not permitted within 1.5 times the turbine mast height from the nearest edge of a pipeline (please see www.ukopa.co.uk)**

6 Working in the vicinity of a gas asset exceeding 2 bar

6.3.1 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced. This risk assessment and method statement shall be formally agreed with Cadent prior to the commencement of the work. Please provide Cadent with at least 14 days notice as the Cadent responsible person may wish to be present to monitor this work.

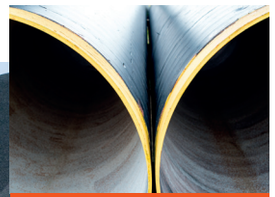
6.3.2 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Cadent shall be consulted for any activity proposed that will lead to a change in cover over the asset. Expert advice may need to be sought, which will be determined by the Cadent responsible person.

6.3.3 Piling

No piling shall be allowed within 15 metres of an asset without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75 mm/ sec. The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.



6.3.4 Demolition

No demolition should be allowed within 150 metres of an asset, or 400 metres for a structure mass greater than 10,000 tonnes, without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.3.5 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500 m if the MIC is greater than 200 kg
- 250 m if the MIC is greater than 10 kg but less than 200 kg
- 100 m if the MIC is 10 kg or less.

The peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.3.6 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of an asset. Consideration should also be given to extraction around other plant and equipment associated with assets (e.g cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined by Cadent. The easement strip should be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope needs to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- bulging,
- the development of tension cracks on the slope or easement,
- any changes in drainage around the slope.

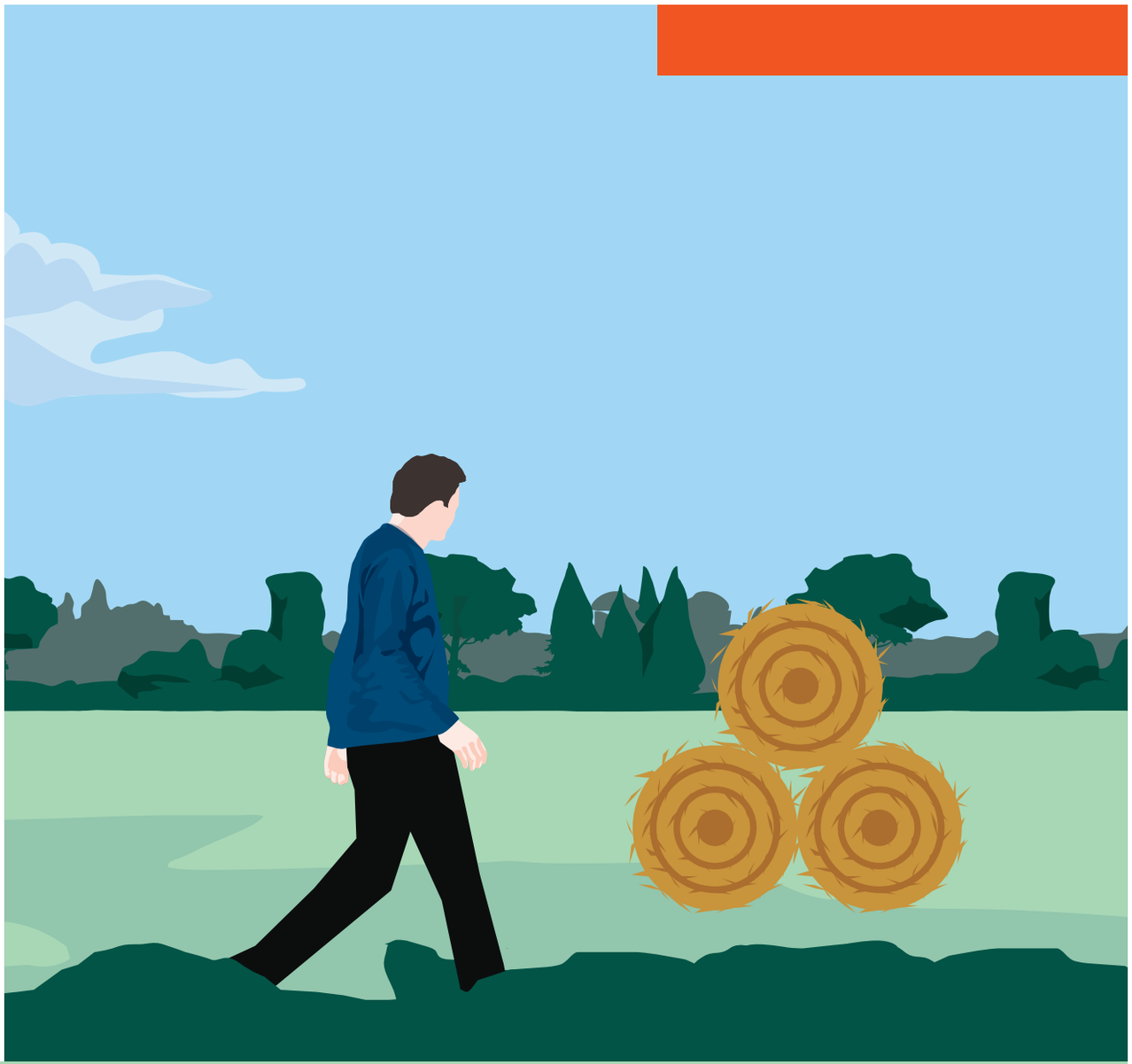
The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100 metres of the asset but do not extend up to the asset easement boundary, Cadent shall assess whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of **section 6.3.5 apply.**

6.3.7 Deep Mining

Assets routed within 1 km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.



6 Working in the vicinity of a gas asset exceeding 2 bar

6.3.8 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100 metres of an asset.
The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

6.3.9 Pressure testing

Hydrostatic testing of a third party asset should not be permitted within 8 metres either side of a Cadent asset, to provide protection against the effects of a burst. Where this cannot be achieved, typically where the third party asset needs to cross a Cadent asset, one of the following precautions would need to be adopted:

a) limiting of the design factor of the third party pipeline to 0.3 at the asset's nominated maximum operating pressure (MOP), and the use of pre-tested pipe, or

b) the use of sleeving, or

c) Cadent conduct risk analysis of pipe failure

In either case, the third party shall submit their site specific risk assessment and safe system of works for consideration by Cadent.

6.3.10 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of an asset that will result in peak particle velocities in excess of 50 mm/ sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

6.3.11 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions has been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, should not take place within 0.5 m of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent responsible person to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent responsible person will be present to monitor all welding, burning or other 'hot work' that takes place.

6.3.12 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

6.3.13 Solar farms

Solar farms can be built adjacent to assets but never within the easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

6.4 Backfilling

No backfilling should be undertaken without Cadent's agreement to proceed. The Cadent responsible person will stipulate the necessary consolidation requirements. Some equipment may not be suitable for use over or around the asset due to the adverse effects of excessive compaction and vibration levels. The Cadent responsible person will be able to advise on suitable equipment. Third parties undertaking work shall provide Cadent with 48 hours notice, or shorter only if agreed with Cadent, of the intent to backfill over, under or alongside the asset.

This requirement should also apply to any backfilling operations that:

- are within 3 metres of the asset, or
- could influence the ground stability.

Any damage to the asset or coating shall be reported to Cadent in order that damage can be assessed and repairs can be carried out.

Minor damage to pipe coating and test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent responsible person, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.1 Excavation

7.1.1 Working in vicinity of iron pipework

Where excavation work this is deeper than 1.5 metres is within 8 metres of grey iron mains an integrity assessment will be required by the Cadent responsible person.

Care should be taken to ensure that any cast iron asset is suitably protected and supported during the works. This is due to the susceptibility of the pipe material to fracture and joint leakage.

Precautionary measures should be agreed with the Cadent responsible person before exposing an iron fitting, for example, bend, tee or cap, etc. This is to ensure that fittings that are not self-anchored are adequately protected against failure during excavation.

7.1.2 In proximity to an asset in an easement

Excavation with a powered mechanical excavator should not be carried out until the asset has been located using vacuum or hand excavation. All mechanical excavation should be undertaken whilst utilising a banksman and shall not be permitted within 0.5 metres of the asset.

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of the components are in contact with the Cadent asset.

Consideration may be given to a relaxation of these limits or lower risk excavation methods by agreement with the Cadent responsible person on site.

Where sufficient depth of cover exists and the absence of attachment and projections has been confirmed (e.g. valve spindles, pressure points etc.) and following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 0.25 metres, using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or close to above ground gas installations.

After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing, unless otherwise agreed with by Cadent.

No new service shall be laid parallel to the asset within the easement. In special circumstances, and only with formal written agreement from Cadent, this may be relaxed for short excursions where the service shall be laid no closer than 0.6 metres.

Where work is being carried out parallel to the asset, within or just alongside the easement, suitable barriers shall be erected for protection between the works and the asset to prevent encroachment.

7.1.3 In proximity to an asset in the highway

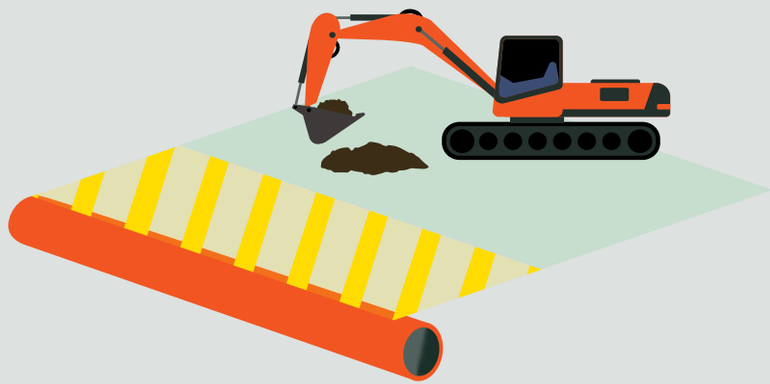
Excavation with a powered mechanical excavator should not be carried out until the asset has been located using vacuum or hand excavation. All mechanical excavation should be undertaken while utilising a banksman and shall not be permitted within 0.5 metres of the asset.

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework on the asset shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of its components are in contact with the asset.

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 0.3 metres, unless any attachments or projections are present on the asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers to do this is not permitted within 3 metres of the asset. The Cadent responsible person may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 0.3 metres deep, it shall only be removed by hand-held power assisted tools under the observation of Cadent.

In special circumstances, consideration may be given to a relaxation of these rules by agreement with the Cadent responsible person on site and only whilst they remain on site.



7 Working in the vicinity of a gas asset not exceeding 2 bar

7.1.4 Crossing over an asset (Open cut)

Where a new service is to cross over the asset, a minimum clearance distance of 1.5 times the diameter or 0.3 metres, whichever is greater should be maintained. If this cannot be achieved, the service shall cross below the asset, see **Section 7.1.4.**

In special circumstances, this distance may be reduced at the discretion of the Cadent responsible person on site.

7.1.5 Crossing below an asset (Open cut)

Where a service is to cross below the asset, a minimum clearance distance of 1.5 times the diameter or 0.3m, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset/s should be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

7.1.6 Cathodic protection

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system will undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, appropriate notice, at least 14 days, shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

7.1.7 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel asset, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment and method statement shall be submitted to Cadent for approval, prior to the works.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's asset. The costs for any stray current mitigation systems required will be borne by the third party promoter.

7.2 Construction traffic

Where existing roads cannot be used, construction traffic should ONLY cross the asset at agreed locations. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points. The fence should cover the width of the easement and extend a further 6 metres along the length of the easement on both sides. **(See figure 2)**

The asset shall be protected, at the crossing points, by a suitable method agreed with the Cadent responsible person prior to installation. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.

For larger scale projects, or permanent solutions, a protection slab may be required.

7.3 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of the asset. The promoter of works is required to consult Cadent when intending to undertake one of the listed activities and/or further advice is required on whether the work has the potential to affect the asset. The table to the right shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought **(see Sections 6.3.1 to 6.3.13 for further details)**

Activity	**Distance within which Cadent advice shall be sought**
Piling	**15 m**
Surface mineral extraction	**100 m**
Landfilling	**100 m**
Demolition	**150 m or 400m for structure mass >10000 tonnes**
Blasting	**500 m if the MIC is greater than 200 kg** **250 m if the MIC is greater than 10 kg but less than 200 kg** **100 m if the MIC is 10 kg or less.**
Deep mining	**1000 m**
Wind turbine	**Not permitted within 1.5 times the turbine mast height from the nearest edge of a pipeline (please see www.ukopa.co.uk)**

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.3.1 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced. This risk assessment and method statement shall be formally agreed with Cadent prior to the commencement of the work. Please provide Cadent with at least 14 days notice as the Cadent responsible person may wish to be present to monitor this work.

7.3.2 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Cadent shall be consulted for any activity proposed that will lead to a change in cover over the asset. Expert advice may need to be sought, which will be determined by the Cadent responsible person.

7.3.3 Piling

No piling shall be allowed within 15 metres of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75 mm/ sec.

For ductile or cast iron assets, the peak particle velocity shall be limited to a maximum level of 25 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

7.3.4 Demolition

No demolition should be allowed within 150 metres of an asset for 400m for a structure mass greater than 10000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

For cast iron or ductile iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

7.3.5 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500 m if the MIC is greater than 200 kg
- 250 m if the MIC is greater than 10 kg but less than 200 kg
- 100 m if the MIC is 10 kg or less.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

For ductile or cast iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.3.6 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of an asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined by Cadent. Where an easement exists, the easement strip should be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope needs to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- bulging,
- the development of tension cracks on the slope or easement,
- any changes in drainage around the slope.

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100 metres of the asset but do not extend up to the asset easement boundary, Cadent shall assess whether this could promote instability in the vicinity of the asset.

This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of **Section 7.3.5** apply.

7.3.7 Deep mining

Assets routed within 1 km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

7.3.8 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100 metres of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

7.3.9 Pressure testing

Pressure testing should not be permitted within 8 m of an asset unless suitable precautions have been taken against the effects of a pipe failure.

7.3.10 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 50 mm/sec at the asset or for ductile or cast iron assets that will result in peak particle velocities in excess of 25 mm/ sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

7.3.11 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions has been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, should not take place within 0.5 metres of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent responsible person to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent responsible person will determine the need to remain on site to monitor all welding, burning or other 'hot work' that takes place.

7.3.12 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

7.3.13 Solar Farms

Solar Farms can be built adjacent to assets but never within the easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

7 Working in the vicinity of a gas asset not exceeding 2 bar

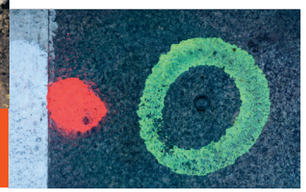
7.4 Backfilling

No backfilling should be undertaken without Cadent's agreement to proceed. The Cadent responsible person will stipulate the necessary consolidation requirements. Some equipment may not be suitable for use over or around the asset due to the adverse effects of excessive compaction and vibration levels. The Cadent responsible person will be able to advise on suitable equipment. Third parties undertaking work shall provide Cadent with 48 hours notice, or shorter notice only if agreed with Cadent, of the intent to backfill over, under or alongside the asset. This requirement should also apply to any backfilling operations that:

- are within 3 metres of the asset, or
- could influence the ground stability.

Any damage to the asset or coating shall be reported to the Cadent responsible person in order that damage can be assessed and repairs can be carried out.

Minor damage to pipe coating and test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent responsible person, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.



8 Working in the vicinity of an Above Ground Installation (AGI)

Where excavations are to be made within 10 metres of the perimeter of an associated gas installation, appropriate protection methods should be determined and recorded by the Cadent responsible person.

At least 14 days notice is required as Cadent may wish to be on site when specific activities are being undertaken.

In addition to this, the safety advice detailed in either section 6 or 7 shall be observed when working in the proximity of an AGI.

Access to the gas asset should be maintained at all times.

9 Action in the case of damage to the asset

If the Cadent asset is damaged, even slightly, and even if no gas leak has occurred, then the following precautions shall be taken immediately:

- Shut down all plant and machinery and extinguish any potential sources of ignition.
- Evacuate all personnel from the vicinity of the asset
- Notify Cadent using the free 24 hour emergency telephone number 0800 111999
- Notify the Cadent responsible person immediately using the contact telephone number provided.
- Ensure no one approaches the asset.
- Do not try to stop any leaking gas.
- Provide assistance as requested by Cadent, or emergency services to safeguard persons and property.

10 References

NRSWA	**New Roads & Street Works Act**
HS(G)47	**HSE Guidance 'Avoiding Danger from Underground Services'**
IGEM/SR/18	**Safe Working Practices to Ensure the Integrity of Gas Pipelines and Associated Installations (Institution of Gas Engineers)**

11 Glossary of Terms

Easement

Easements are negotiated legal entitlements between Cadent and landowners and allow Cadent to lay, operate and maintain assets within the easement strip. Easement strips may vary in width, typically between 6 and 25 metres depending on the diameter and pressure of the pipeline. Consult Cadent for details of the extent of the easement strip where work is intended.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of the soil is reduced by earthquake shaking or other rapid loading. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. When liquefaction occurs, the strength of the soil decreases and the ability of the soil to support assets are reduced.

Promoter of works

The person or persons, firm, company or authority for whom new services, structures or other works in the vicinity of existing Cadent assets are being undertaken.

Cadent responsible person

The person or persons appointed by Cadent with the competencies required to act as the Cadent representative for the purpose of monitoring the particular activity.

Banksman

Another person who assists the machine operator to drive from a position where they can safely see into the excavation and warn the driver of any services or other obstacles.

This person should remain outside of the operating radius of the excavator arm and bucket.

Appendix A

Asset location markers

Emergency

If you hit an asset, whether the damage is visible or not, or in the event of an emergency, call the National Gas Emergency Service immediately on

0800 111 999*

*All calls are recorded and may be monitored

If you are planning to do work near or in the vicinity of an asset, please contact the Plant Protection team for free on:

0800 688 588*
plantprotection@cadentgas.com

Cadent Plant Protection
Block 1
Brick Kiln Street
Hinckley
LE10 0NA

Self service for plant enquiries

beforeyoudig.nationalgrid.com

This is a free online enquiry service giving results within minutes from a grid reference, postcode or street name. This site allows you to submit enquiries about activities and work that you are planning, which may have an impact on the Cadent gas distribution and networks.

linesearchbeforeudig.co.uk

This is a free online enquiry service giving instant results from a grid reference, postcode or street name. If your result is within a zone of interest, you can click directly through to **cadentgas.com/digging-safely.**

Note
Linesearch service is not available for all Cadent assets. Therefore, please click on the Cadent link or call Plant Protection to ensure you have all the available information.

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Registered Office:
Newington House
237 Southwark Bridge Road
London SE1 6NP

Registered in England and Wales No: 3870728

Company:
UK Power Networks (Operations) Limited

Our Ref: 32877133 Your Ref: REDBRIDGE

Friday, 22 March 2024

Thank you for contacting us regarding UK Power Networks equipment at the above site. I have enclosed a copy of our records which show the electrical lines and/or electrical plant. I hope you find the information useful.

I have also enclosed a fact sheet which contains important information regarding the use of our plans and working around our equipment. Safety around our equipment is our number one priority so please ensure you have completed all workplace risk assessments before you begin any works.

Should your excavation affect our Extra High Voltage equipment (6.6 KV, 22 KV, 33 KV or 132 KV), please contact us to obtain a copy of the primary route drawings and associated cross sections.

If you have any further queries do not hesitate to contact us.

Plan Provision
0800 056 5866

Registered Office:
Newington House
237 Southwark Bridge Road
London SE1 6NP

Registered in England and Wales No: 3870728

Company:
UK Power Networks (Operations) Limited

This information is made available to you on the terms set out below. If you do not accept the terms of use set out in this fact sheet please do not use the plans and return them to UK Power Networks.

1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.

2. UK Power Networks does not exclude or limit its liability if it causes the death of any person or causes personal injury to a person where such death or personal injury is caused by its negligence.

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 how for any loss, damage, costs, 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. The information about UK Power Networks electrical plant and/or electric lines provided to you belongs to and remains the property of UK Power Networks. You must not alter it in any respect.

5. The information provided to you about the electrical plant and/or electric lines depicted on the plans may NOT be a complete record of such apparatus belonging to UK Power Networks. The information provided relates to electric lines and/or electrical plant belonging to UK Power Networks that it believes to be present but the plans are not definitive: other electric lines and/or electrical plant may be present and that may or may not belong to UK Power Networks.

6. Other apparatus not belonging to UK Power Networks is not shown on the plan. It is your responsibility to make your own enquiries elsewhere to discover whether apparatus belonging to others is present. It would be prudent to assume that other apparatus is present.

7. You are responsible for ensuring that the information made available to you is passed to those acting on your behalf and that all such persons are made aware of the contents of this letter.

8. Because the information provided to you may not be accurate, you are recommended to ascertain the presence of UK Power Networks electric lines and/or electrical plant by the digging of trial holes. Trial holes should be dug by hand only.

   Excavations must be carried out in line with the Health and Safety Executive guidance document HSG 47. We will not undertake this work. A copy of HSG 47 can be obtained from the Health and Safety Executives website.

   All electric lines discovered must be considered LIVE and DANGEROUS at all times and must not be cut, resited, suspended, bent or interfered with unless specially authorised by UK Power Networks.

   The electric line and electrical plant belonging to UK Power Networks remains so even when made dead and abandoned and any such electric line and/or electrical plant exposed shall be reported to UK Power Networks.

   Where your works are likely to affect our electric lines and/or electrical plant an estimate of the price of any protective /diversionary works can be prepared by UK Power Networks Branch at Metropolitan House, Darkes Lane, Potters Bar, Herts. , EN6 1AG, telephone no. 0845 2340040

Registered Office:
Newington House
237 Southwark Bridge Road
London SE1 6NP

Registered in England and Wales No: 3870728

Company:
UK Power Networks (Operations) Limited

9 Any work near to any overhead electricity lines must be carried out by you in accordance with the Health and Safety Executive guidance document GS6 and the Electricity at Work Regulations.

The GS6 Recommendations may be purchased from HSE Books or downloaded from the Energy Networks Association's website.

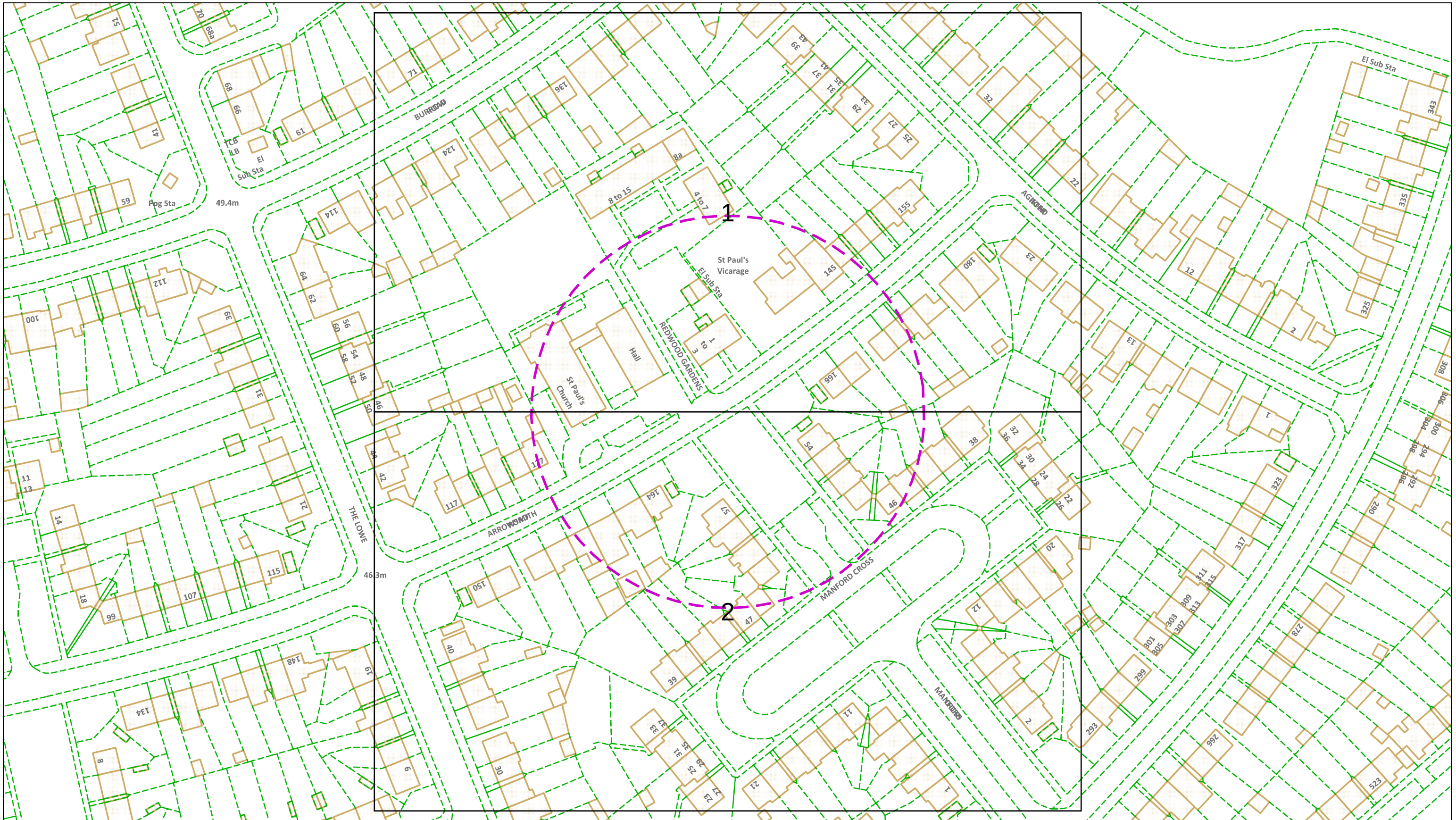
If given a reasonable period of prior notice UK Power Networks will attend on site without charge to advise how and where "goal posts" should be erected. If you wish to use this service, in the first instance please telephone: 0845 6014516 between 08:30 and 17:00 Monday to Friday.

10. 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.

11. If in carrying out work on land in, on, under or over which is installed an electric line and/or electrical plant that belongs to UK Power Networks you and/or anyone working on your behalf damages (however slightly) that apparatus you must inform immediately UK Power Networks by our emergency 24 hour three digit telephone number **105** providing;

- your name, address and telephone number;
- the date, time and place at which such damage was caused;
- a description of the electric line and/or electrical plant to which damage was caused;
- the name of the person whom it appears to you is responsible for that damage;
- the nature of the damage.

12. The expression "UK Power Networks" includes UK Power Networks (EPN) plc, UK Power Networks (LPN) plc, UK Power Networks (SEPN) plc, UK Power Networks and any of their successors and predecessors in title.



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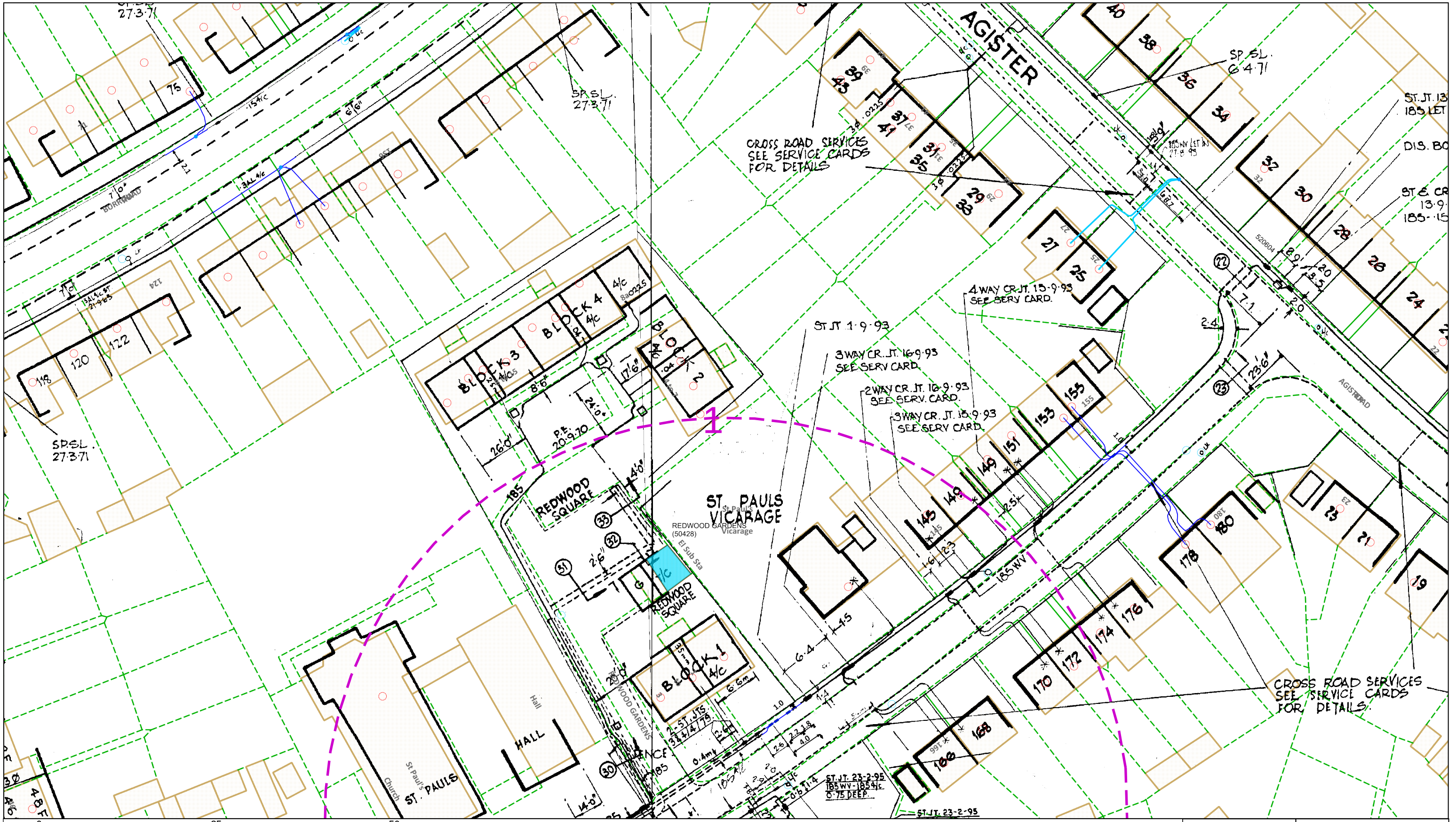

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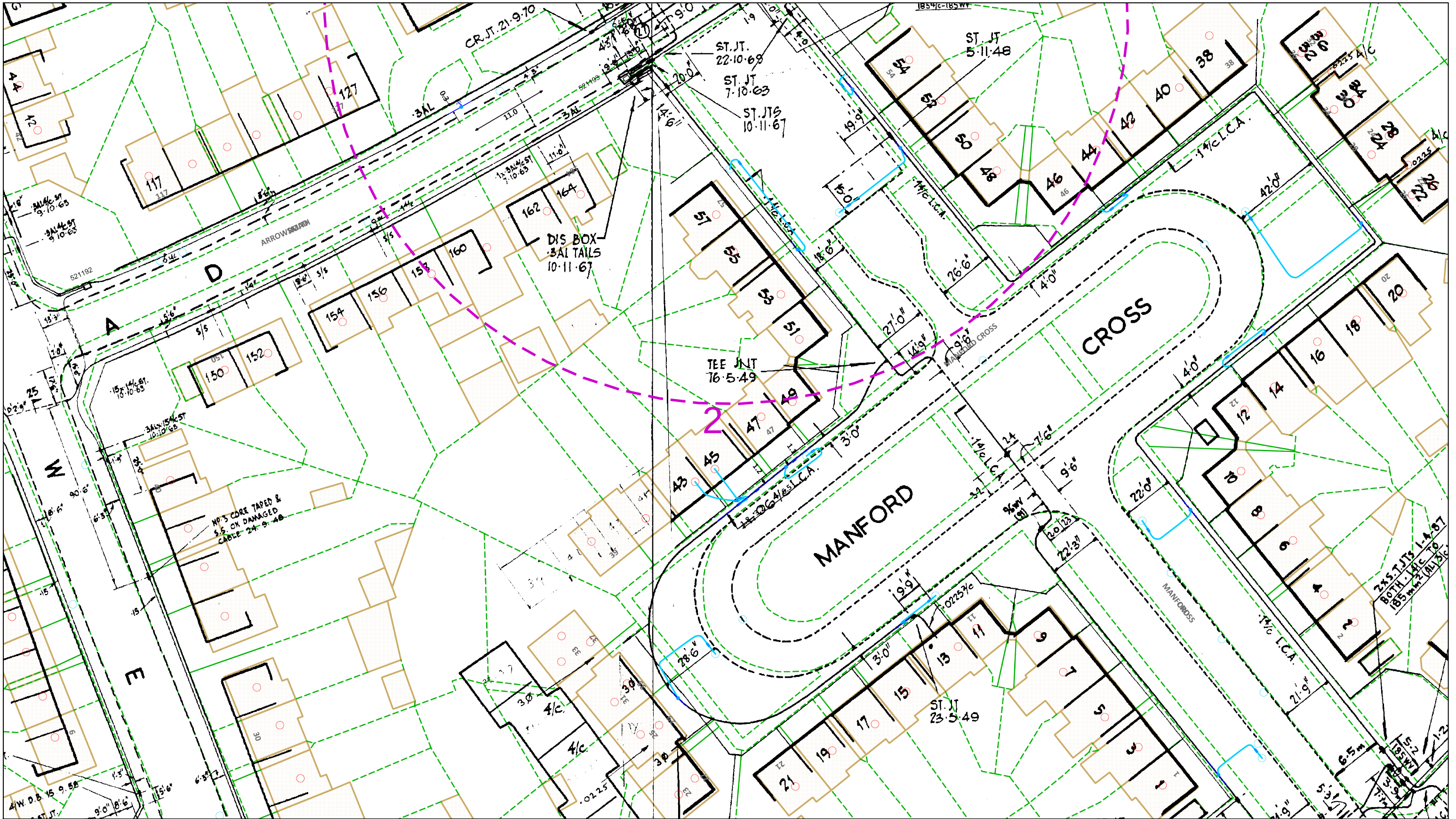

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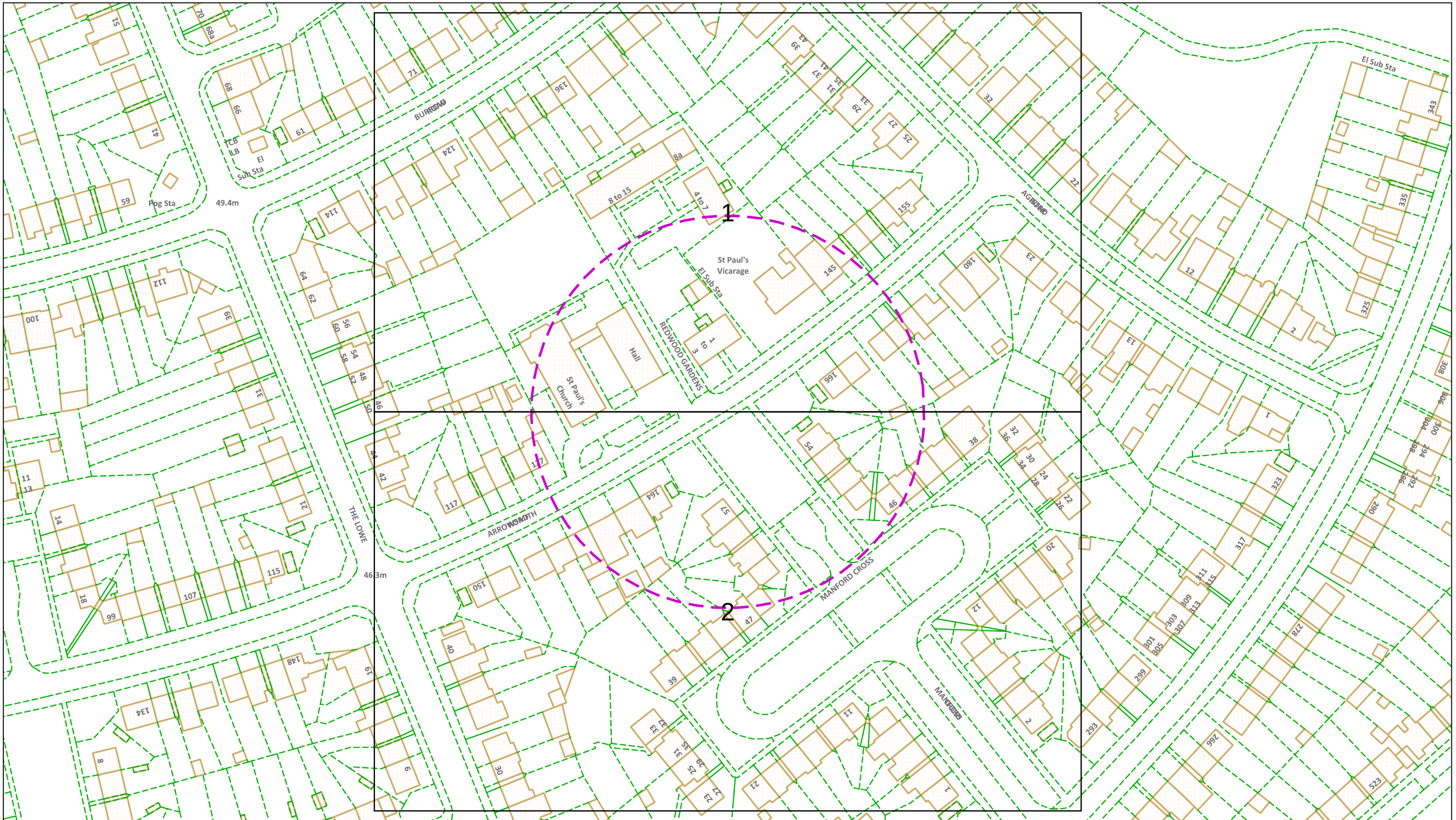

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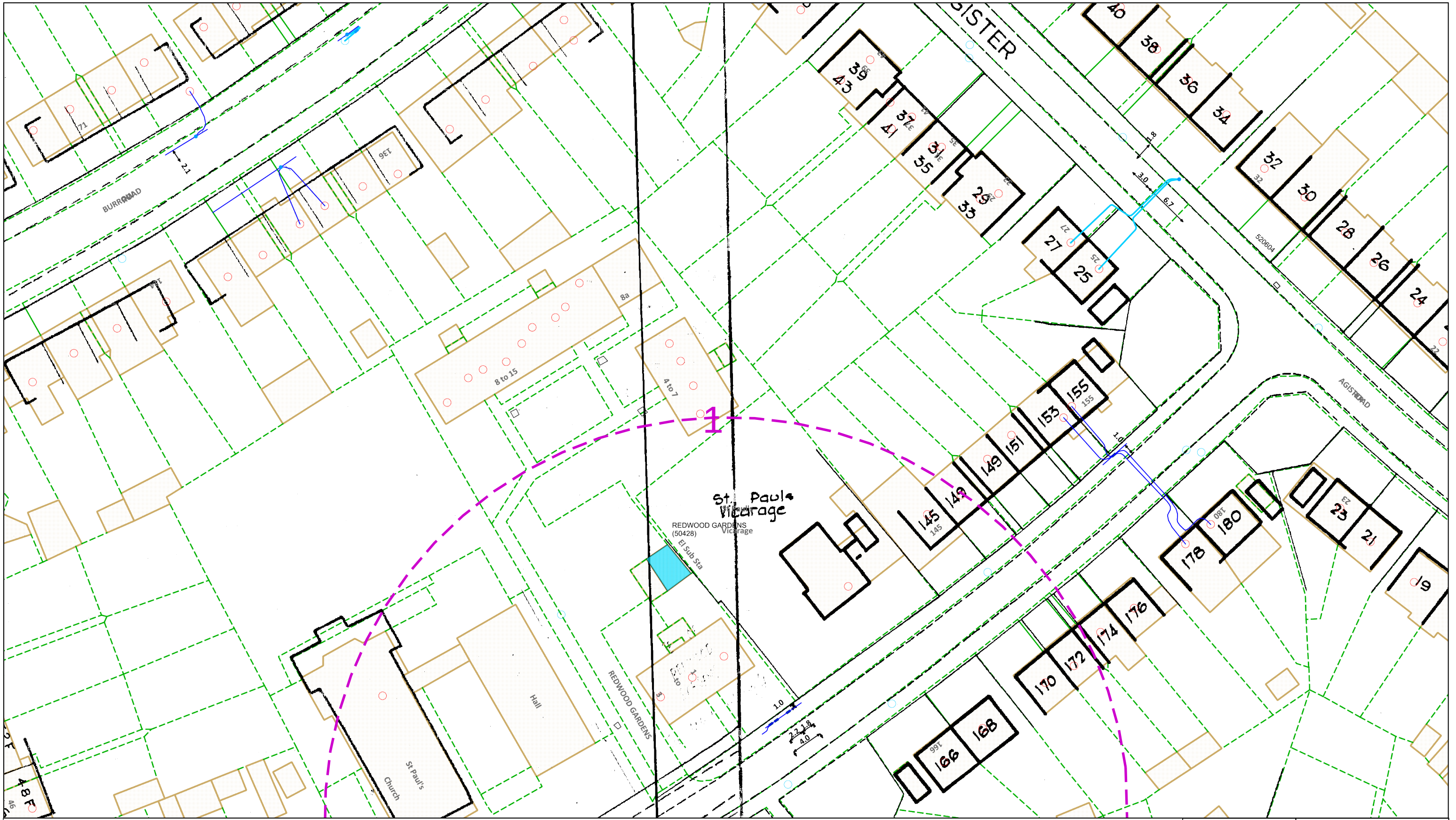

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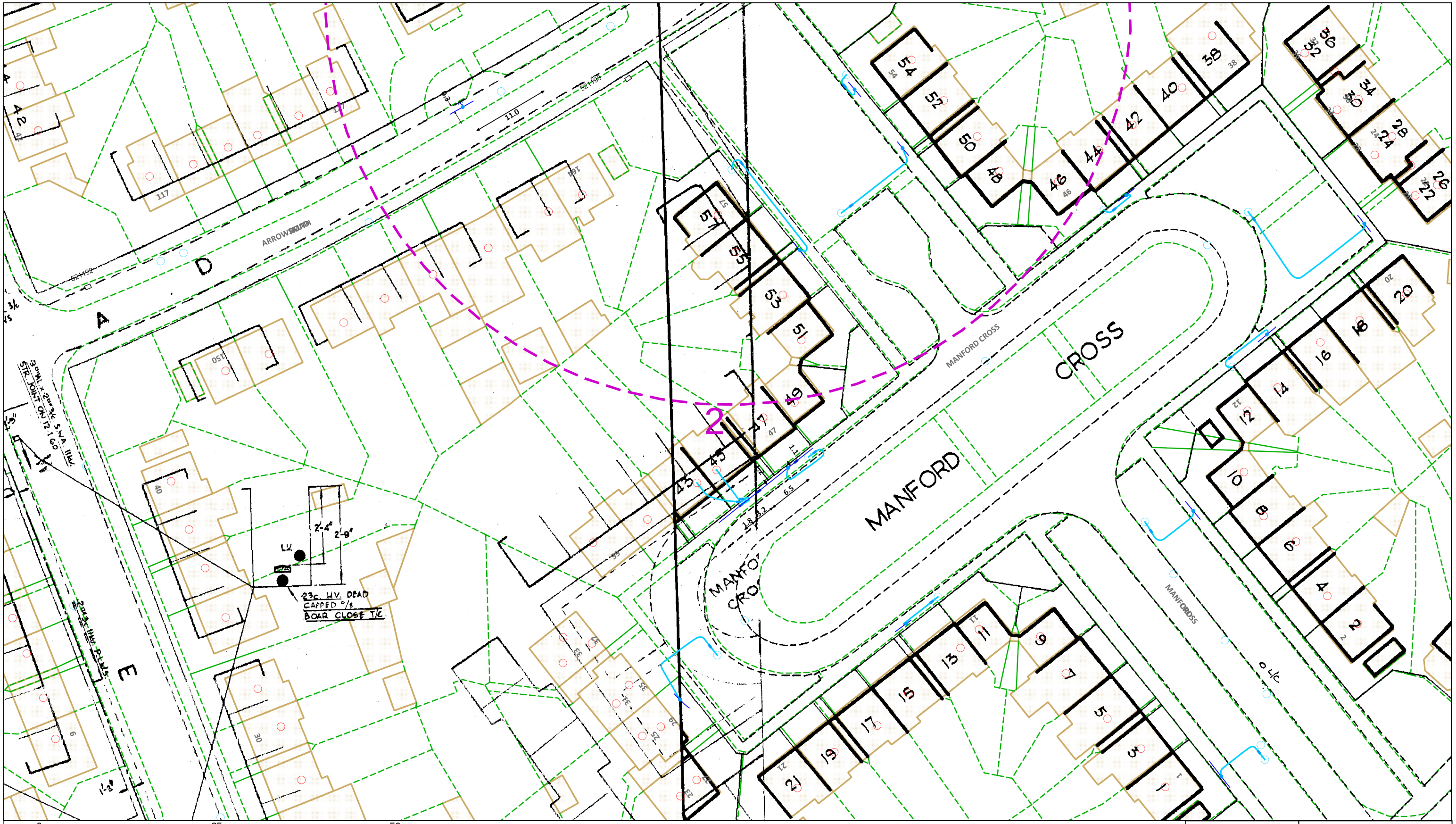

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FOR CONTINUATION SEE 17.T

FOR CONTINUATION SEE 17X

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17Y H.V.

SCALE 1/500

1 INCH = 41·66 FEET

SEE ALSO ILFORD RECORD

17Y M.V.

17T

17Z

17Y

17X

22 D

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17Y M.V.

SCALE 1/500

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CAUTION: ALL SERVICES MAY NOT BE SHOWN.

FOR FURTHER INFORMATION TELEPHONE 01-534 6677

91 BURROW RD TO TO 1

24

17Y. SECTION AND

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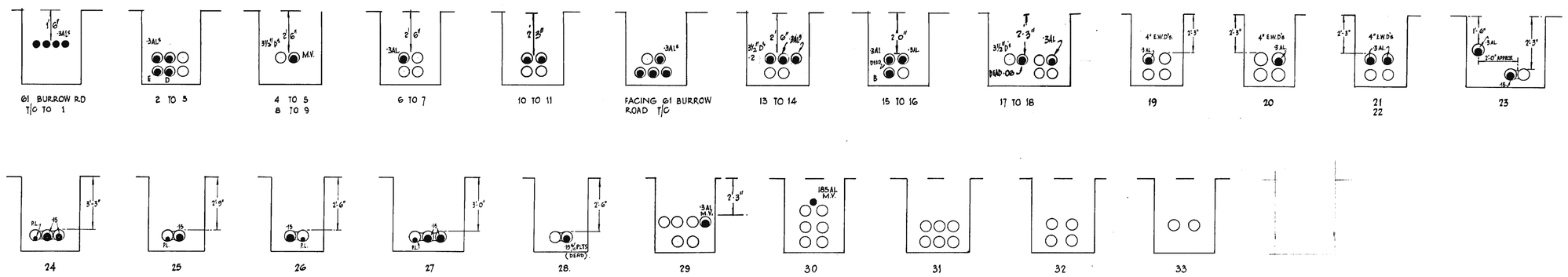

CABLE INDEX

B, D - BROCKET WAY 220 T/C TO BURROW ROAD 61 T/C CRUTCH TO FAWN ROAD T/C

F - 61 BURROW RD T/C TO MANFORD WAY R/O 197 TES. THE LOWE OFF 14.

17Y. SECTION AND ENLARGEMENT SHEET. (H.V. & L.V.)

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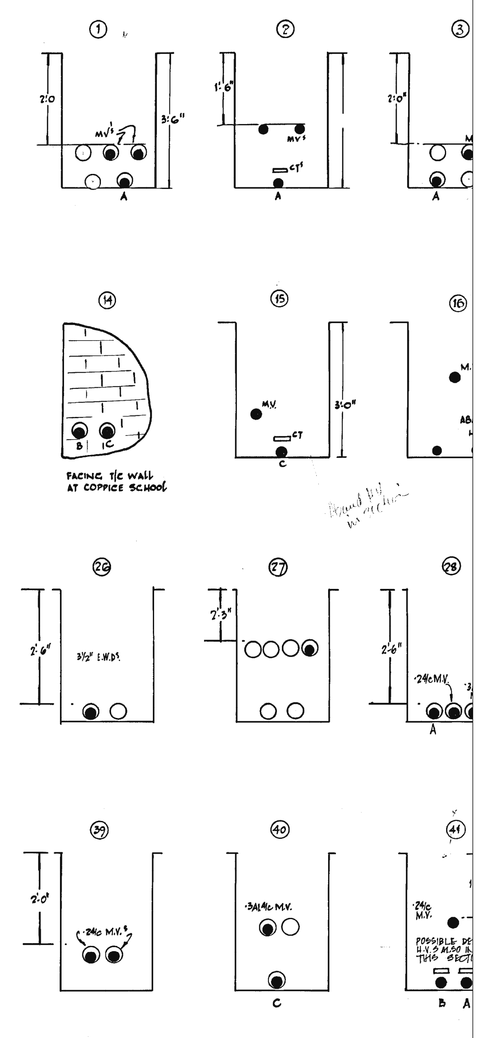
17U

18V

17Y

22E



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17 Z. M.V. 1/500

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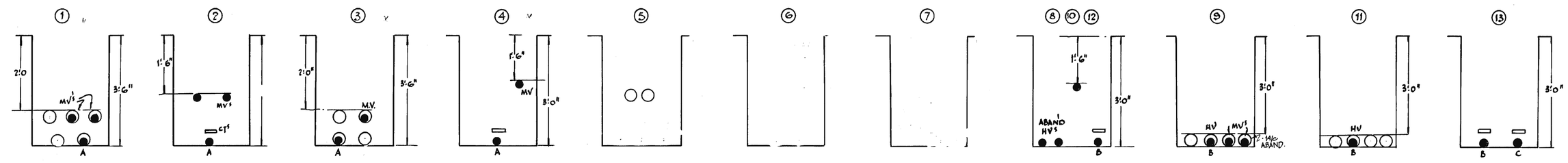
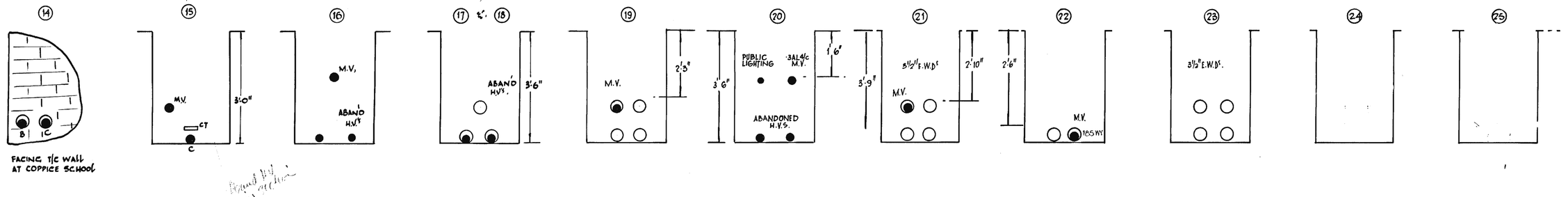
A.D.F.
A.P.S.
1:500
DEC 83

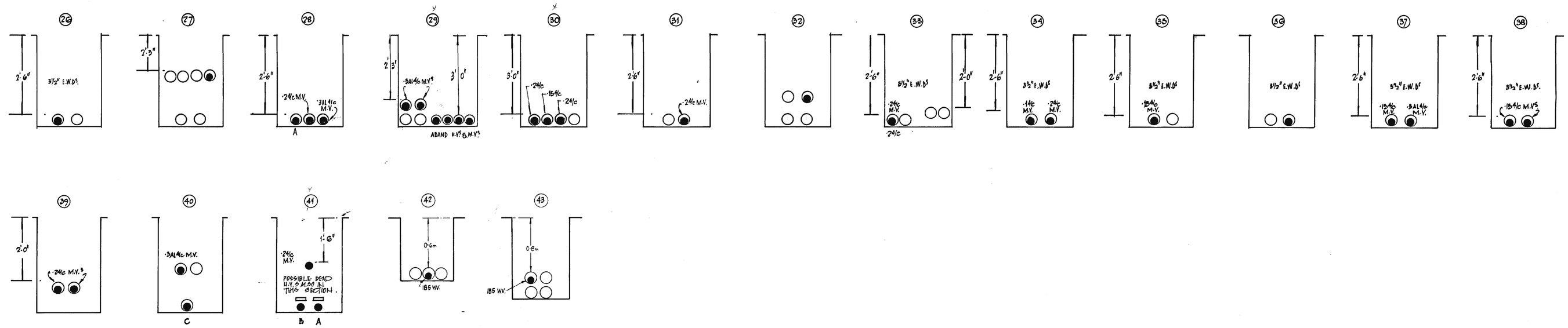
1/2

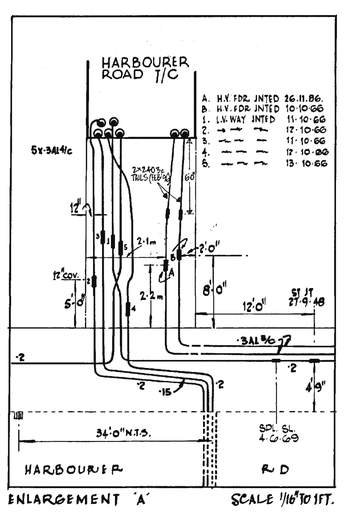
M.V. INDEX.

A. NEW NORTH RD. RIDGE TO HARBOURER RD ADJ 40.
B. HARBOURER RD ADJ 40 TO MANFORD WAY ADJ 343.
C. MANFORD WAY ADJ 343. TO THE RIDGELESS









CAUTION: ALL SERVICES MAY NOT BE SHOWN

FOR FURTHER INFORMATION TELEPHONE 01-534 6677

17.Z. SECTION SHEET.

It should be recognised that cable depths shown on this map may be unreliable as the ground level may have changed since the cables were installed and the relative position of cables may also have changed due to the alteration of original landmarks.

18V

R.D.F.
A.P.O.
1:500
DEC 69

1/4

Network Records NetMAP Symbols Booklet - London

This symbol booklet is intended as a general guide only - some local variations of these symbols may be found.

Version 1.2

Released October 2010

Always check with your local Network Records office or the UK Power Networks server to ensure that you are using the most up to date copy of this booklet.Tel: 08000 565866

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Page no:	Contents:
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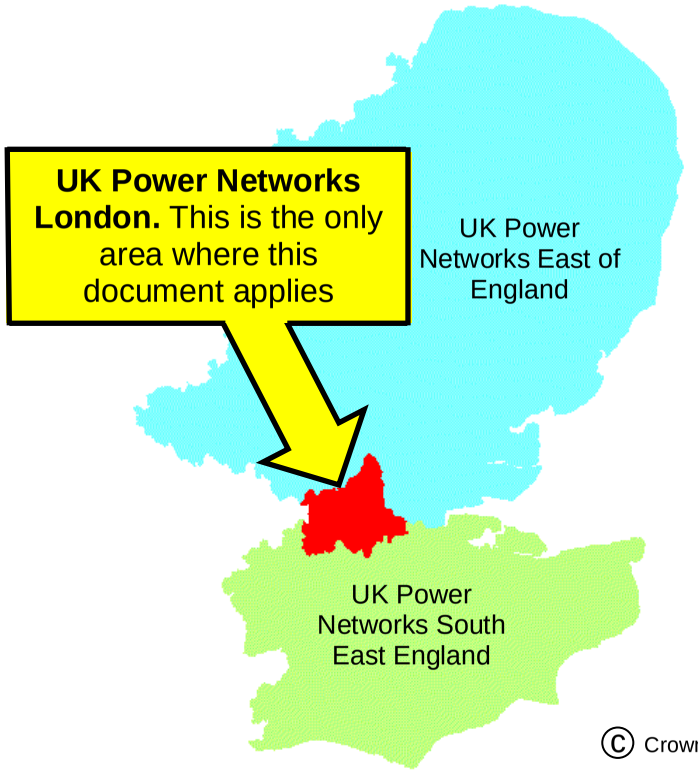
Guidance notes.

Important notice:
If you do not understand the NetMAP record that you are using, please contact UK Power Networks Network Records for guidance
Tel: 08000 565866.

- The position of apparatus shown on NetMAP is believed to be correct, but the original landmarks may have altered since the apparatus was installed.
- It must be assumed that there is at least one service to each property, lamp column, street sign etc. A separate record may be available.
- When excavations are to be carried out near Extra High Voltage (EHV) cables, further details must be obtained before commencement of work.
- Third party cables are not usually shown.
- When two or more maps are supplied for the same area, the maps must be read in conjunction with each other and with this symbol booklet.
- All LV cables are assumed to be 4 core, and all HV cables assumed to be 3 core – unless otherwise stated.
- All Imperial cable sizes are assumed to be copper and all metric cable sizes are assumed to be aluminium – unless otherwise stated.

Plan Provision Team
Fore Hamlet
Ipswich
Suffolk IP3 8AA
Tel: 08000 565866

The area covered by this guide:



Please see the anomalies map at the end of this safety booklet for greater map area detail, and a breakdown of the more significant anomalies within the London area.

Scenery

NetMAP system	Scanned image	Description
		100 metre Ordnance Survey grid line (on O/S based maps only)
		Property fence line
		Building line
		Kerb line
		Kerb line on majority of ways & mains maps
TUNNEL		Cable tunnel or subway
NOT APPLICABLE	or	Borough or City boundary and UK Power Networks boundary
	or	UK Power Networks or Electrical boundary

Scenery for UK Power Networks use only - boxed in red

NetMAP system	Scanned image	Description
Inset Network – Contact xxxx IDNO for further information	Not applicable	Area of inset network - not the asset of UK Power Networks (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Proposed Cross Rail route (only visible to of UK Power Networks and their immediate contractors)
	Not applicable	High pressure pipelines in the general vicinity (only visible to of UK Power Networks and their immediate contractors)

Note: Pipelines are only viewable on NetMAP by UK Power Networks staff and their immediate contractors. Do not carry out any excavation without consent from the relevant agency - legally protected high pressure petroleum products pipeline route in the general vicinity - consult www.linewatch.co.uk for contacts and guidance. Pipeline contact numbers can also be found on the intranet – out of hours, contact our Control Centre.

	Not applicable	Water - surface water (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Water - Source Protection Zone 1 (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Water - Source Protection Zone 2 (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Water - Source Protection Zone 3 (only visible to UK Power Networks and their immediate contractors)

section continued on next page

Scenery for UK Power Networks use only - boxed in red

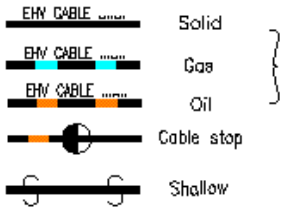
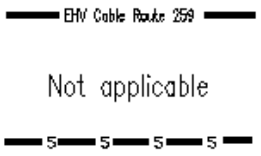
NetMAP system	Scanned image	Description
	Not applicable	Historical - Scheduled Monuments (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Historical - Parks and Gardens (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Historical - Areas of Archaeological Potential (AAP) (only visible to UK Power Networks and their Immediate contractors)
	Not applicable	Nature - Ramsar Wetlands of International Importance (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Nature - Special Area of Conservation (SAC) (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Nature - Special Protected Area (SPA) (only visible UK Power Networks and their immediate contractors)
	Not applicable	Nature - Site of Special and Scientific Interest (SSSI) (only visible to UK Power Networks and their immediate contractors)

section continued on next page

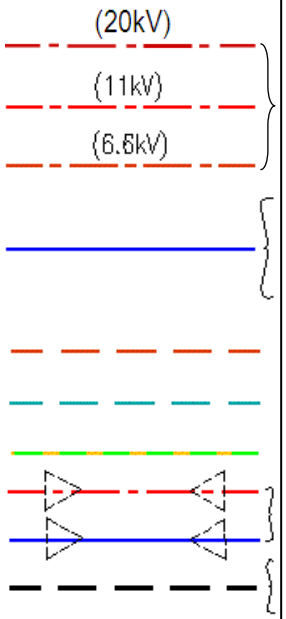
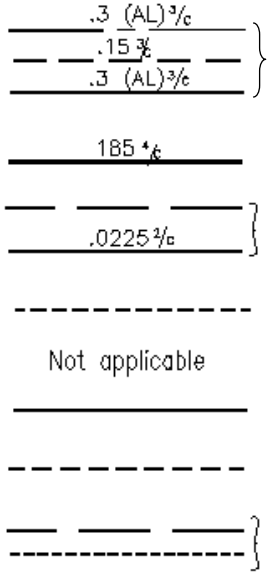
Scenery for UK Power Networks use only - boxed in red

NetMAP system	Scanned image	Description
	Not applicable	Nature - Local Nature Reserve (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Nature - National Nature Reserve (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Nature - Area of Outstanding Natural Beauty (AONB) (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Nature - National Park (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Fluid filled cables - very high sensitivity (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Fluid filled cables - high sensitivity (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Fluid filled cables - medium sensitivity (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Fluid filled cables - low sensitivity (only visible to UK Power Networks and their immediate contractors)

Primary distribution cables

NetMAP system	Scanned image	Description
		UK Power Networks route (11,000 , 22,000 to 132,000 volts) Oil/gas cable stop Part of UK Power Networks cable route where cover is less than normal

Secondary distribution cables

NetMAP system	Scanned image	Description
		HV cable (up to 20kV) 3 phase LV cable (230V or 400/230V) 1 or 2 phase LV cable (230V or 400/230V) Pilot or Telephone cable, often not shown in plan if running with other cables Fibre-optic cable Earth cable HV or LV cable in duct Duct route(s) not containing live cables

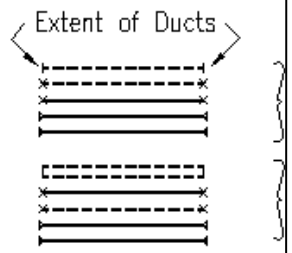
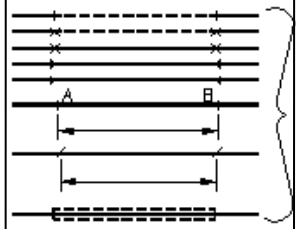
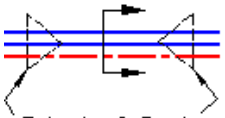
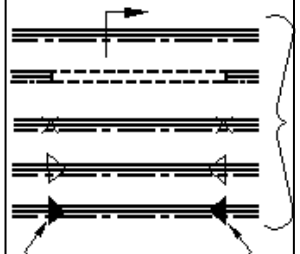
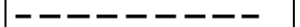
Cable terminology

NetMAP system	Scanned image	Description
PL	PL	Paper Lead
PLS	PLS	Paper Lead Served
PLST or PLSW	PLA	Paper Lead Armoured
PLSTS	PLTS	Paper Lead Steel Tape Served
PLSTS	PLDT	Paper Lead Double Tape
PLSWS	PLWS	Paper Lead Steel Wire Served
PLSW	PLBW	Paper Lead Bright Wire
PLS	LC & H	Lead Covered & Hessian
PLST or PLSW	LC & A	Lead Covered & Armoured
PLSW	LC & BA	Lead Covered & Bright Armoured
PLST	DSTA	Double steel tape armoured
PLST	STA	Steel Tape Armoured
PLSW	SWA	Steel Wire Armoured
Al	Al	Aluminium
Cu	Cu	Copper
WV	WV	Waveconal
CS	CS	Consac
PVC	PVC	Polyvinyl Chloride
EPR	EPR	Ethylene Propylene Rubber
XLPE	XLPE	Cross Linked Polyethylene
SOL	SOLIDAL	Solid Aluminium
ax	TRIPLEX	Triplex (aluminium)
cx	TRIPLEX	Triplex (copper)

Cable size abbreviations

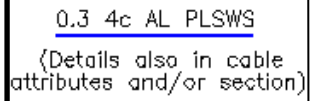
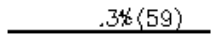
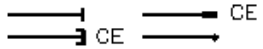
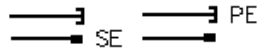
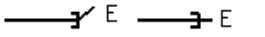
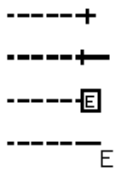
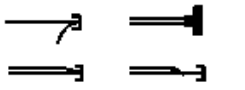
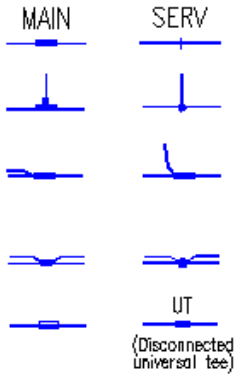
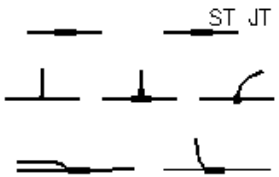
NetMAP system	Scanned image	Description
1c	1c	Single core.
c/c	cc	Concentric cores
t/c	Tc or T/cc	Triple concentric cores
4c	4c	Four cores
3c CNE	3c (CN)	Three cores and concentric neutral – not of the Waveconal type
2c	2c (or Tw)	Two cores (or twin)
s/c	sc	Split concentric cores
3c	3c	Three cores
DC	DC	Direct current
P	P	Pilot
Pr	Pr	Number of telephone pairs

Cable ducts

NetMAP system	Scanned image	Description
		Single empty ducts
		Cluster of empty ducts (two or more)
		Cable in single duct
		Group of cables shown in a cluster of ducts, plus one or more empty (shown in section)
		Ex-Western area 'ways' maps: This symbol indicates one or more ducts.

On City of London area maps "extent of ducts" symbols are not in general use as most duct runs are between pits or boxes

Other NetMAP symbols

NetMAP system	Scanned image	Description
		Cable size (and year laid)
		Cable capped end
		Cable pressure (or pot) end or signal end
		Pressure/pot end & earth cable/electrode
		Earth rod (vertical) Earth rod (horizontal) Earth plate Earth plate or end
		Bottle or trouser joint or combined crutch & pressure end – (CPE)
		Straight joints Tee joints Crutch (or spur) joints (CJ) straight & crutch joints combined (S&CJ) Double crutch (or spur) joint Sleeve

section continued on next page

Other NetMAP symbols

NetMAP system	Scanned image	Description
		Four way underground disconnecting boxes(DB)
		Link boxes(LB)
		Network boxes(NB) or (NWB)
		4 way 6 entry
		6 way box
		6 way 8 entry
		Split bus-bar
123456	LB123456	Link box with identification number
	or	3 way underground disconnecting boxes
	or	2 way underground disconnecting boxes
		1 way underground disconnecting boxes
123456 0.3 4c PLSWS TAILS DISTRIBUTION PILLAR		Feeder pillars
		Split bus-bar distribution pillar
		Double bus-bar distribution pillar
		Blind pit/pit
		Pit with access

section continued on next page

Other NetMAP symbols

NetMAP system	Scanned image	Description
	or or	Transformer chambers (T/C) & transformer compounds
		Underground transformer chamber
CAUTION Missing Information	Not applicable	Missing data in or near this location
U/G TANK		Underground tank
12 14 ROYAL MEWS	12 14 ROYAL MEWS	Indicates service between separate buildings is looped
Phasing details are in the joint 'world'	29 29	Jointing schedule numbers or phasing diagram
Contaminated Land refer to SHE 01 016	Not applicable	Contaminated land reference
(Cable size/type) ITC	(Cable size/type) Cable traced using CAT	Instrument traced cable or ITC - cable traced electronically using Cable Avoidance Tool (CAT) or similar

Services

NetMAP system	Scanned image	Description

SRC = Service Record Card

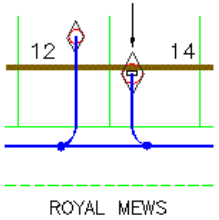
To a property/metered supply (also see SRC)

Address point

Supply point

Also see SRC and joint/cable attributes

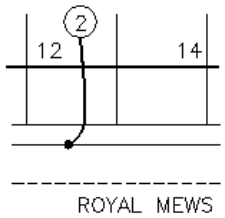
Service in external cabinet



Also see SRC and joint/cable attributes

Also see SRC

W	Single phase service
1	Connected to 1 core & neutral
R	Connected to red core & neutral
	Three phase service
+	Connected to inner & outer cores of triple conc cable
−	Connected to middle & outer cores of triple conc cable
±	Connected to all three cores of triple conc cable



Existence of a service with its core connection shown in circle

section continued on next page

Services

NetMAP system	Scanned image	Description

To street furniture/un-metered supply (also see SRC)

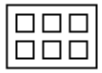
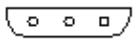
Please note that newly edited street furniture no longer has an address point or an SRC

(Street furniture general)

(Street furniture feeder pillar or cabinet)

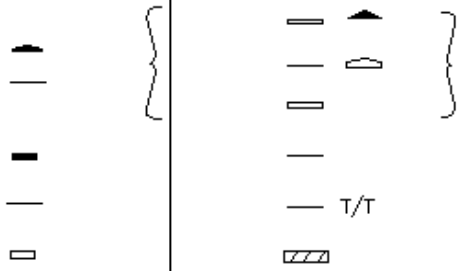
R LC P.L.S.261 S.L.261	Public lighting Street lighting
R WB	Wall bracket
R TL	Traffic light control
1 FB	Flashing beacon
3 TS	Traffic sign
Y B IGP	Bollard/illuminated guard post
R TK TCB ☐ TK,TC FP	Telephone kiosk, traffic controller, feeder pillar

Symbols used in cross sections

NetMAP system	Scanned image	Description
		Cable laid direct
		Cable laid in duct
		Blocked duct (sometimes used for unidentified cables)
		Single earthenware duct
2½" S		Single steel pipe
		Square cable duct
		Group of circular ducts
		Group of circular ducts (Sykes)
		Group of square ducts (Doulton)
		Cable trough
		Bitumen casing (Crompton)
		Bitumen filled iron trough (Trunks)
		Bitumen casing (Tri-case)

section continued on next page

Symbols used in cross sections

NetMAP system	Scanned image	Description
Timber		Protective slab Tiles. Concrete slabs Steel plate Plastic tile tape Timber

Abbreviations used in cross sections

NetMAP system	Scanned image	Description
EW	E.W.D(s) or EW.	Earthenware ducts
F	F.P or F or F.D	Fibre duct
A	ASB or A	Asbestos
P	P	Plastic or pitch fibre
S	S.P or S	Steel
C	C.I or C or C.I.P	Cast iron
WI	W.I	Wrought iron pipe
F	F or F.D	Fibre duct
PRD	PRD	Plastic Rigiduct
Left blank – means NR	D.N.K or D:NR	Depth not known
	N.R or (N.R)	No record
E.V	E.V.P or E.V	Everite pipe
T/T	T/T	Tape Tile
N/A	3/62 or NOV 79	Date cable laid
N/A–destination now only shown in cable attribute	ABCD etc	HV cable destination (See section sheet HV ref)

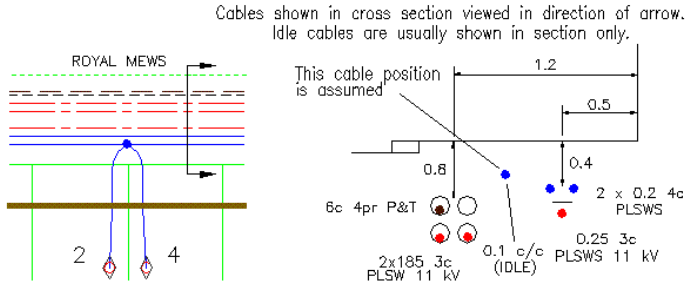
Please note:

Ducts are assumed to be 4"/100mm earthenware – unless otherwise stated

Typical plan and cross section representations

Multi-line composite NetMAP/vector representation

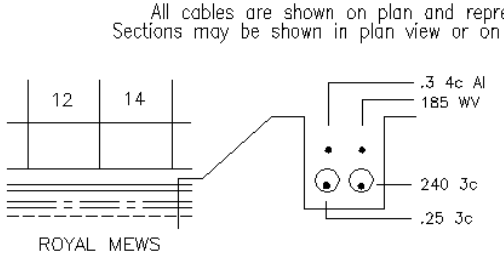
All areas – drawn/redrawn using NetMAP GIS



Applies to all composite vector records in both shaded and unshaded areas of the anomalies map.

Multi-line representation - general composite raster (style 1)

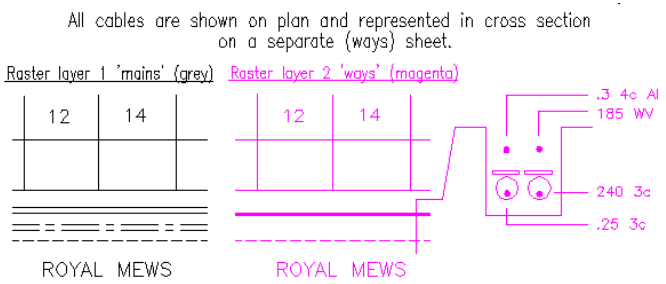
All areas



Applies to all composite raster records within the unshaded areas of the anomalies map.
Can also be found in some shaded areas – in particular the ex–North Eastern shaded areas 3 (b) and 3 (c)

Main and ways representation – dual layer raster

Ex Western area Holborn and parts of Ex-South Eastern Area only



Applies to area 1(a) of the anomalies map.

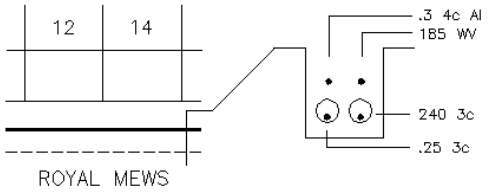
Applies to area 2(a) of the anomalies map.

Typical plan and cross section representations

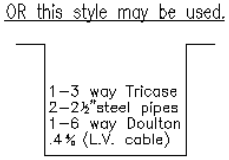
Single line representation - raster or vector data

The City of London only

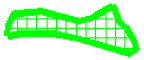
All cables are shown as a single line in plan.
Sections may be written and not drawn.



OR this style may be used.



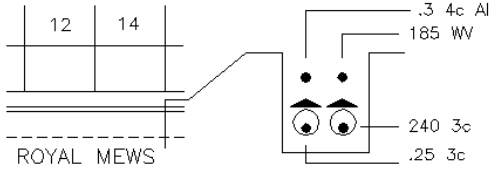
Applies to area 2(b) on the anomalies map.



Multi-single line representation general (style 1)

Finsbury and Shoreditch only

Only the top cables in a vertical cable run are shown in the plan view. See the example below.
Note that the two lower cables that are in ducts (in this instance), are not shown in plan.
Therefore cross sections are particularly important, as each line represents one or more cables.



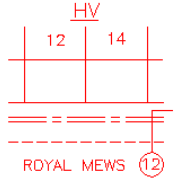
Applies to area 2 (c) of the anomalies map.

HV and LV map representation – dual layer raster

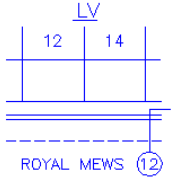
Ex-North Eastern area only

HV and LV cables are shown on separate raster layers. These layers MUST be read in conjunction with each other. Sections are shown on a combined supplementary section sheet in numerical sequence.

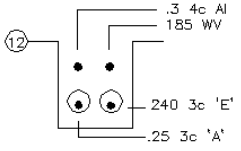
Raster layer 1 HV (red)



Raster layer 2 LV (blue)



Separate raster section sheet



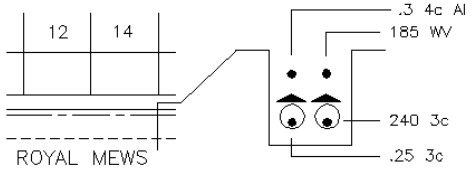
Applies to area 3(a) of the anomalies map.

Typical plan and cross section representations

Multi-single line representation general (style 2)

Ex-North Eastern area only

In this area each voltage (HV and LV) is represented as an individual line. For example, three HV cables and four LV cables in the same run will be indicated by a single HV line and a single LV line. Therefore cross sections are particularly important, as each line represents one or more cables of that voltage.

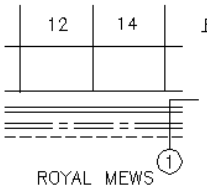


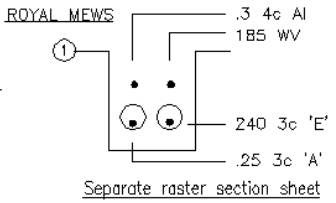
Applies to area 3 (b) of the anomalies map.

Multi-line representation - composite raster (style 2)

Ex North Eastern area only

All cables are individually shown in plan.
Sections are shown on a supplementary section sheet and recorded under the relevant road name.





Separate raster section sheet

Applies to area 3(c) of the anomalies map.

Important note regarding sections:

It does not follow that if the number of cables shown in the cross section have been located, that all live cables have been found. You may have found an unrecorded cable, or a cable belonging to another authority.

Regional NetMAP Anomalies - general overview:

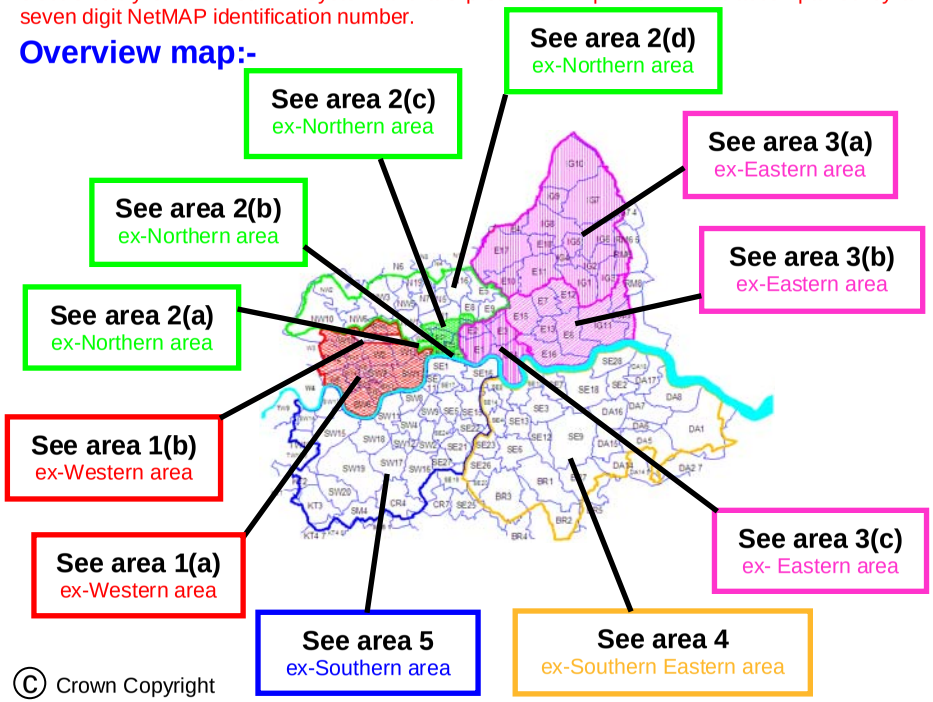
The following pages explain the various major map style anomalies found within the London area. These styles are a legacy from the five individual London Electricity areas which were again formed from seventeen separately organised LEB districts. Areas with significant anomalies are shown in the following pages as cross-hatched areas. Areas with standard composite vector and raster layer information are shown as un-hatched areas.

Cautionary note: - any region or sub-region, either shaded or un-shaded, may contain some local anomalies not mentioned in the following pages – if in doubt, please contact the UK Power Networks Plan Provision team on telephone number 08701 963797.

All regions (1-5) will contain recently created composite vector (NetMAP/AutoCAD) data.

Recent work created using the NetMAP system and previously created using the AutoCAD system (as opposed to raster/scanned data) are recorded in the composite vector style shown on the UK Power Networks London area symbol sheet - see the first example on page 18 of this document. Recent data will be indicated by the existence of multi-coloured cables on the NetMAP system, but this may not be reflected on printed matter produced with a black and white printer. AutoCAD data looks similar to the coloured NetMAP data, but does not hold any cable 'attributes' when selected using the NetMAP system. These cables will be represented individually (multi-line representation). New NetMAP cross sections may be accessed electronically on the NetMAP system and are presented in printed format accompanied by a seven digit NetMAP identification number.

Overview map:-



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See following pages for further details.

Region 1 ex-Western area

This region includes Westminster, Kensington, Chelsea, Hammersmith and Fulham. The region is covered by two map layer systems – **region 1(a)** mains and ways dual layer raster, and **region 1(b)** composite raster. The following explains this in greater detail.

Region 1(a) (hatched)

Mains and ways representation:

This system consists of two maps layers for the same area.

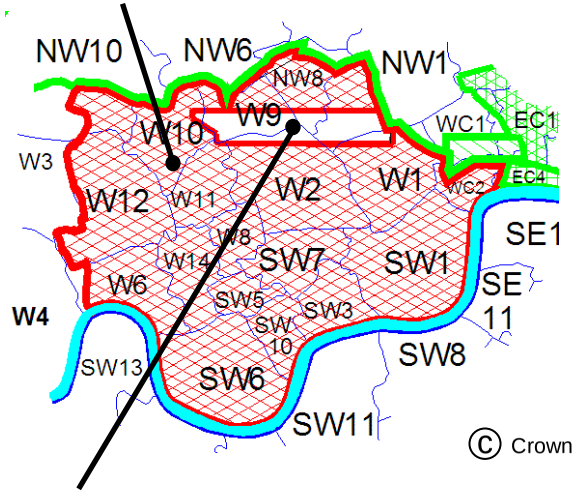
i) The mains map shows all cable routes.

ii) The ways map shows pipe and duct routes with cross sections.

There are some enlargement sheets, cross sections and jointing details. EHV routes are shown on either the mains or the ways map.

It is important that all these maps are read in conjunction with each other.

Caution: - It is also important to note that the kerb line detail on these maps is a dash/dot line, which on the majority of UK Power Networks Central (London) records would refer to an HV cable route. HV cables are shown as a solid line when laid direct and a dashed line when in a duct.



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Region 1(b) (un-hatched)

Composite single layer (style 1) maps:

Whenever possible, all the information is on one map layer. There are some enlargement sheets in the Aberdeen Place area. Please note that the kerb line is shown as a dotted line and HV cables are shown as dash/dot lines.

Region 2 ex-Northern area

This region includes Islington, Hackney, the City of London and parts of Brent, Camden and Ealing. The region is covered by four map layer systems - **Region 2(a) -** mains and ways dual layer raster (Holborn area), **Region 2(b)** - single line representation (City of London), **Region 2(c) -** multi-single line representation (Finsbury and Shoreditch) and **Region 2(d)** - composite multi-line maps (all other areas). This following explains this in greater detail.

Region 2(a) (hatched)

Covers part of WC1 and WC2 (Holborn).

Mains and ways representation:

This system consists of two maps layers for the same area.

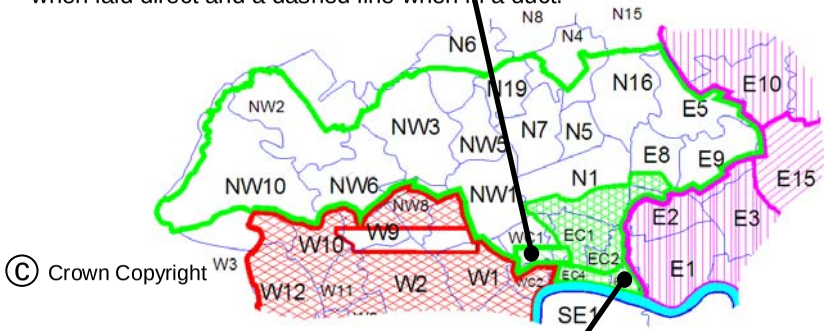
i) The mains map shows all cable routes.

ii) The ways map shows pipe and duct routes with cross sections.

Where needed, extra sheets have been added for enlargements, cross sections and jointing details. EHV routes are shown on the mains map layer.

It is important that all these maps are read in conjunction with each other.

Caution: - It is also important to note that the kerb line detail on these maps is a dash/dot line, which on the majority of UK Power Networks Central (London) records would refer to an HV cable route. HV cables are shown as a solid line when laid direct and a dashed line when in a duct.



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Region 2(b) (hatched)

Covers parts of postal areas EC1, EC2 and all of postal areas EC3 and EC4.

Single line representation maps:

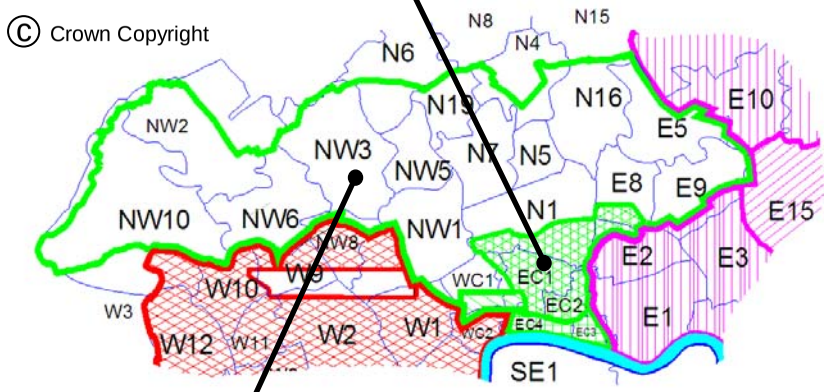
Whenever possible, all the information is on one map layer .One line can represent any number of cables or ducts. It is therefore very important to use cross sections. In some cross sections details may be written and not drawn. In complex and redrawn areas, some detail may be drawn using multi-line representation. There are some enlargement sheets.

Region 2(c) (hatched)

Covers parts of postal areas EC1, EC2, N1, E1, E2 and E8.

Multi-single line representation (style 1) maps:

Whenever possible, all the information is on one map layer. When cables lay immediately above/below each other, it is shown as a single line. For example if six cables lay three on three, only three lines would indicate the six cables. If the cables were laid flat, six separate lines would be shown. It is therefore important not to assume that the lines drawn indicate the number of cables, at any point. **Cross sections must be used.**



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Region 2(d) (un-hatched)

Covers all other postal areas in this region

Composite single layer (style 1) maps:

Whenever possible, all the information is on one map layer. There are some enlargement sheets.

Region 3 ex-North Eastern area

This region includes Tower Hamlets, Newham, Redbridge, Waltham Forest, Loughton (Epping) and Barking and Dagenham. This region is covered by three mapping systems.

Region 3(a) (hatched)

Separate HV and LV representation maps:

This system consists of two maps layers for the same area.

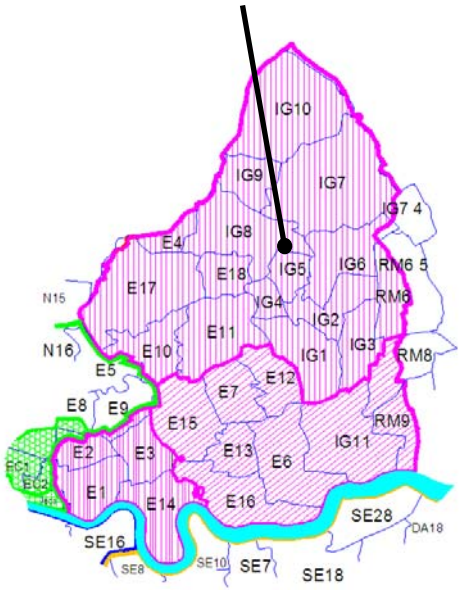
i) The HV map layer showing HV cables and duct routes.

ii) The LV map layer showing LV cables and duct routes.

Cross sections for both HV and LV cable routes are shown on a separate sheet.

EHV cable routes are shown on the HV map layer.

It is important that all these maps are read in conjunction with each other.



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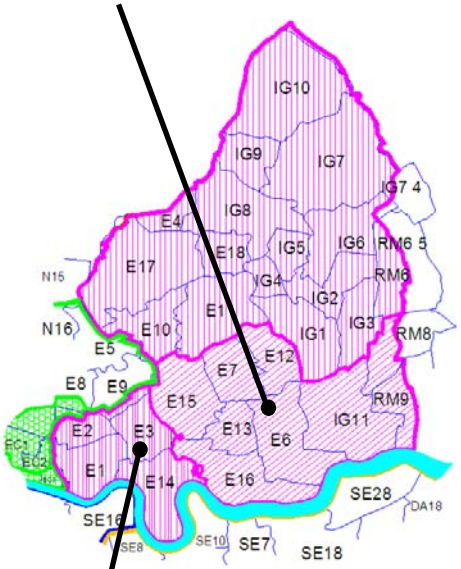
Region 3(b) (hatched)

A combination of composite single layer (style 1) and multi-single line (style 2):

Whenever possible, all the information is on one map layer. There are some enlargement sheets. There is a combination of map styles used in this area. Some areas may be conventional multi-line line representation with many areas of multi-single line representation. In the multi-line areas each (live) cable is shown individually in plan. In the multi-single line map areas, there is a single line for each voltage type, with a single HV line and a single LV line representing more than one cable run of each voltage (when applicable). Therefore a cable run containing three HV cable and four LV cables will be represented by one HV line and one LV line.



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Region 3(c) (hatched)

A combination of composite single layer (style 2) and multi-single line (style 2):

Whenever possible, all the information is on one map layer. There are some enlargement sheets. In this area (postal code areas E1, E2, E3, E14 and part of E9), the cross sections are listed under each road name. It is therefore extremely important that you have the correct cross sections for the road you are working in.

There is a combination of map styles used in this area. Most areas are composite single layer (style 2) with some areas of multi-single line representation, as described in region 3(b).

Region 4 ex-South Eastern area

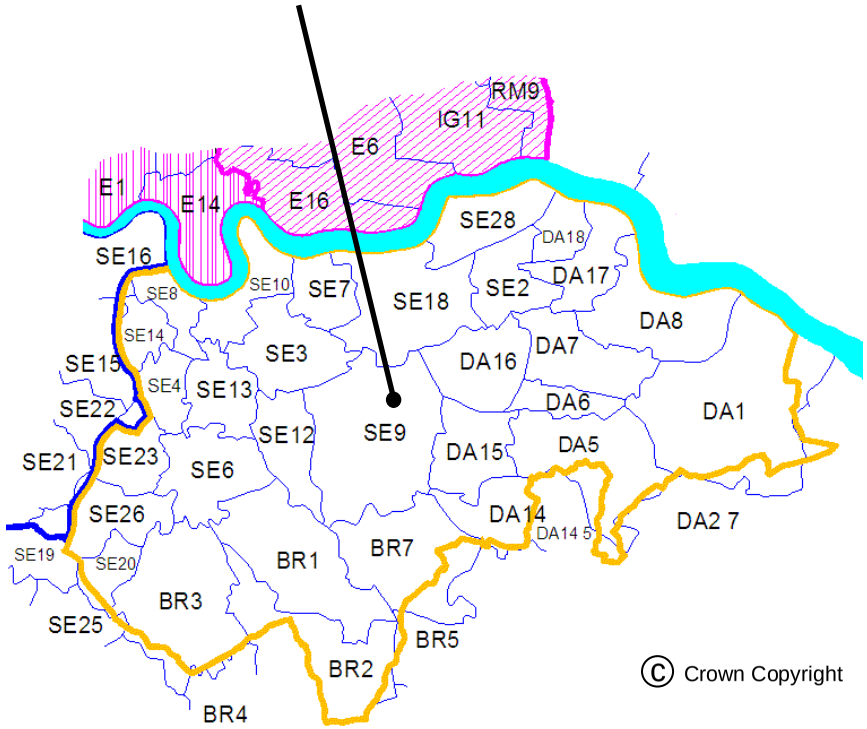
This region includes Lewisham, Greenwich, Bromley, Bexley and Dartford.

Nearly all maps are drawn in one style – single layer composite raster/vector.

Region 4 (un-hatched)

Composite single layer (style 1) with a small number of mains and ways representation maps :

Mainly composite maps - whenever possible, all the information is on one map layer. There are some enlargement and cross section sheets. Some maps do not show single phase services unless they are long and deviating. There are however some maps drawn using the mains and ways style. These are rare, but please be aware that they exist.



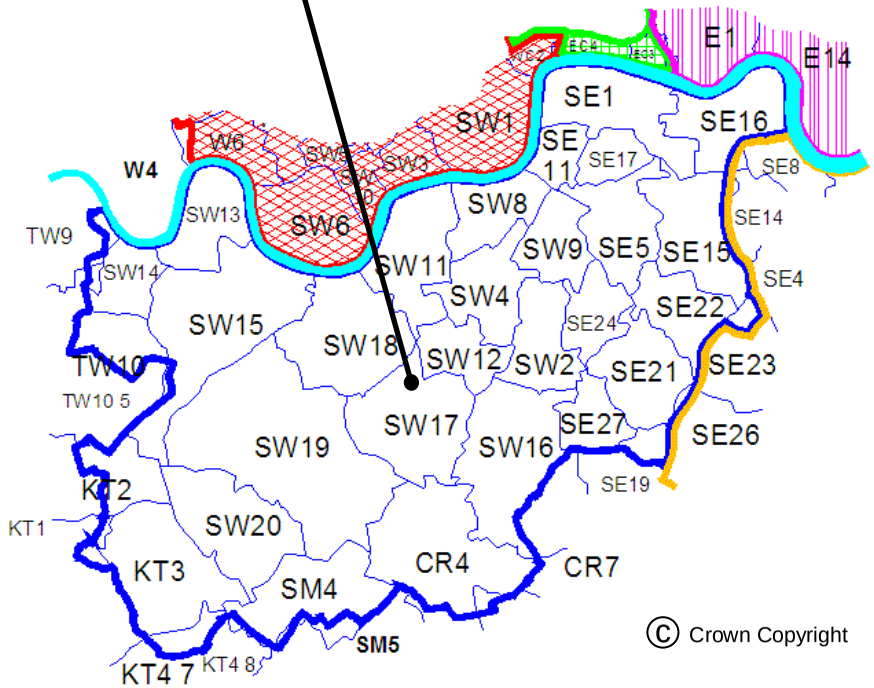
Region 5 ex-Southern area

This region includes Southwark, Lambeth, Wandsworth, Merton, Kingston upon Thames and Richmond upon Thames. All maps are drawn to one style - single layer composite raster/vector.

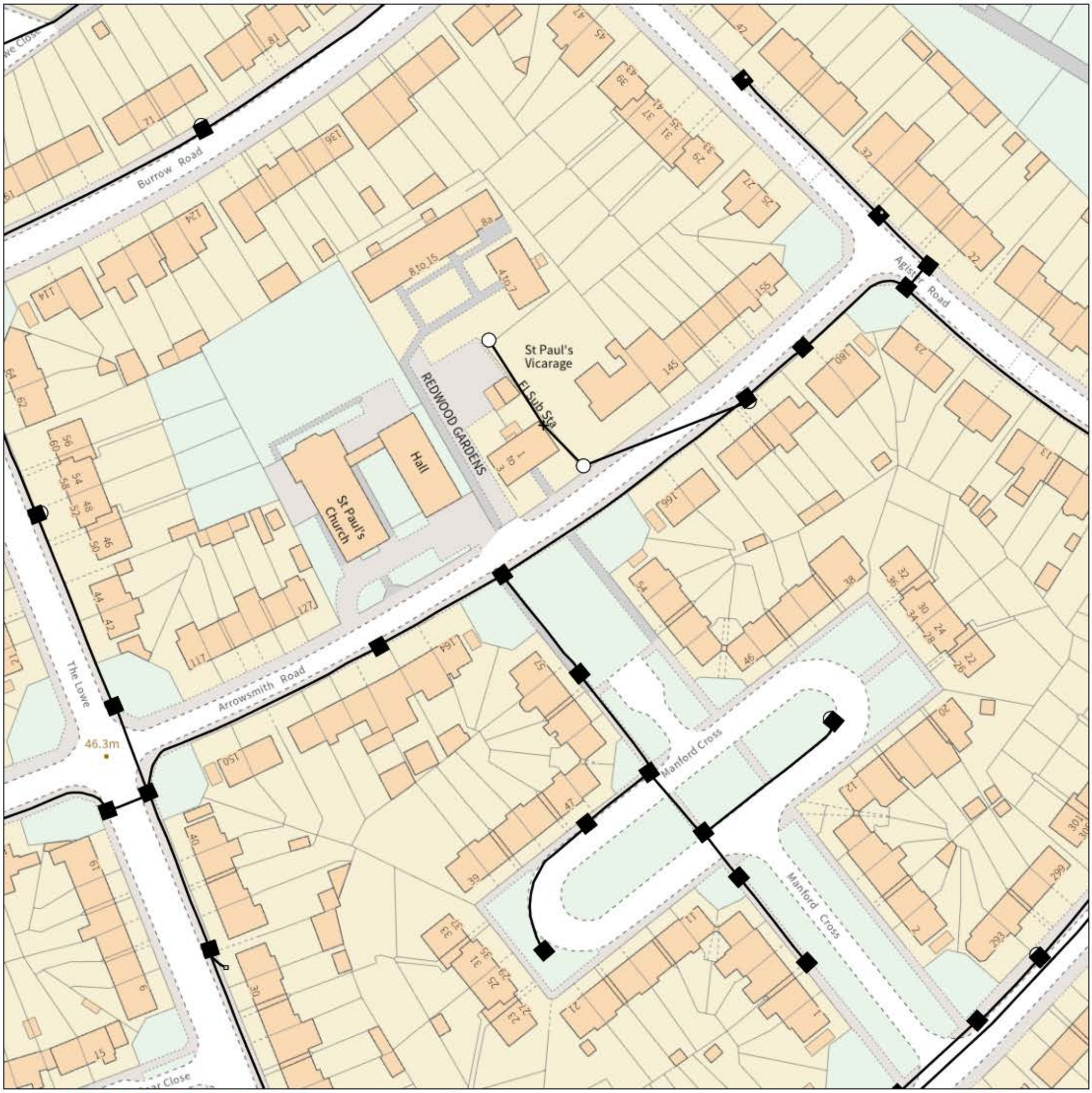
Region 5 (un-hatched)

Composite single layer (style 1) maps:

Composite maps - whenever possible, all the information is on one map layer. There are some enlargement and cross section sheets. A small number of maps may not show services.



Maps by email Plant Information Reply



IMPORTANT WARNING

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

openreach

CLICK BEFORE YOU DIG

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

email cbyd@openreach.co.uk

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

Accidents happen

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

Reproduced from the Ordnance Survey map by BT
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Controller of Her Majesty's Stationary Office
(C) Crown Copyright British Telecommunications plc 100028040

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 : NBD09258U
Map Reference : (centre) TQ4625192284
Easting/Northing : (centre) 546251,192284
Issued : 28/03/2024 09:25:22

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

openreach

Identifying our equipment

If you're planning or building a new development, working on a regeneration project or undertaking roadworks it's likely that you'll come across some of our network infrastructure.

This guide includes images and descriptions of the most common types of equipment (past and present) to help you identify what's on your site so we can best advise you if you need anything moved or removed.

If you're not sure, please contact us – ideally sending a photo of the plant on your site – before you start work.

Poles and attachments

There are currently three materials used for poles: wood, steel and fibreglass.
Wooden poles vary in length from 7 to 15m depending on the span the lines need to cover.

There are two types of pole in use:

- **Radial Distribution Poles:** typically to serve a number of properties in a street
- **Carrier Poles:** typically found in more rural locations, these are often used to provide an overhead route from A to B.

Pole markings

Owner of the pole – In this case BT. Older poles may also be marked as GPO or PO

Pole length and class (light, medium or stout) – 10L = 10m light

Year of preservation – 97

Supplier marker and type of wood – 2I = supplier 2 and Imported (I)

The punch hole sign is a testing cycle sign. This label is for internal Openreach use.

The pole reference number:

Distribution Pole – The letters DP, plus a number, in this case 19.

Carrier Pole – No letters, just a number will be shown.

You may also see square metal labels with a letter on a pole, i.e. C, D, H, SD and Z. These indicate the status of the pole to a visiting engineer.

Street covers and cabinets

Street covers and cabinets (PCP) have changed over the years, from cast iron to fibreglass to pressed steel. Sizes vary and all are made in single door versions. The most common examples are:

Cast iron cabinet

Fibreglass cabinet

Single door cabinet (with replacement steel door)

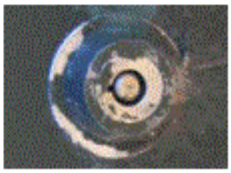
Steel cabinet

All-in-one cabinet

How to spot one of our cabinets: keys and markings

Openreach and Virgin Media both have street cabinets and they look quite similar. Often the only difference is the type of key needed to open them. Openreach cabinets have a triangular or star shaped insert, while Virgin Media use conventional keys (see below).

Openreach keys



Virgin Media key

All Openreach cabinets, frames and covers, are marked to show who owns them. Examples of these markings and the materials cabinets are made of are shown below.

Cast iron GPO marking

Fibreglass Telecom marking

Steel BT marking

Carriageway covers

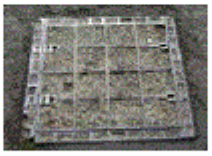
These boxes generally contain small customer connections. The old type of covers were made of concrete with a concrete lid while current covers are made of fibreglass and have a steel lid.

There are generally two types of carriageway covers. Those with a T-shaped key, the Silent Night, and those with a D-shaped key, the Elkington. Both types were supplied in all sizes and while the design varied slightly all have ownership markings on them.

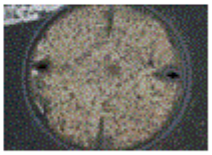
All sizes are approximate.

Carriageway covers with two triangular lids

CW No.1
Silent Night
680mm x 680mm



CW No.1
old type (Elkington)
inserts vary



Very old round
CW no.1

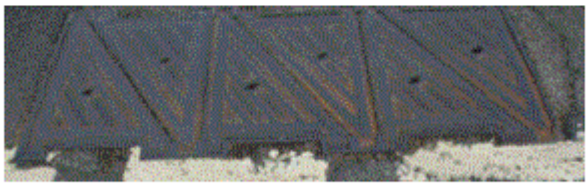
Carriageway covers with four triangular lids

CW No.2 Silent Night
1220mm x 680mm

CW No.2 old type
(Elkington)

Carriageway covers with six triangular lids

CW No.3 current type



CW No.3 Silent Night type

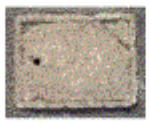
CW No.3 Elkington type

Footway covers

Footway covers come in six basic sizes: small, medium, large, square, twin and triple, although there are size variants within some types. All sizes are approximate.

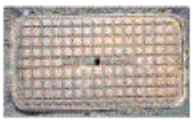
Small covers

These lids cover boxes which generally contain small customer connections. Previously the boxes and lids were made of concrete, but the current footway boxes are made of fibreglass and have steel lids.



JB21 31x41cm

JB22 41x61cm



JB23 28x50cm

Medium covers

There is only one size of cover in this category. This lid can be found on a fibreglass preformed box, JB26, as well as a concrete/brick chamber, JF2. As with the JB 23 small footway box above the JB26 will have a thin white edge around the cover while the JF2 has a fillet.

Old style cast iron and concrete 38x80cm

JF2/JB26 34x80cm

Large covers

Along with the twin, this is probably the most common footway type in the network. Originally the covers were made of cast iron and concrete but now they're just made of concrete.

JF4 current type 55x100cm

JF4 old type 55x100cm

Square covers

These covers are placed over manholes and are found in the footways and verges.

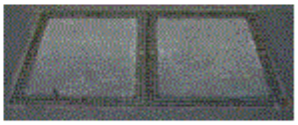
JF5 70x70cm

JF5 old type 70x70cm

Twin covers

This cover shown in the section is probably the most common footway type in our network. Originally the cover was made of cast iron and concrete but now they're just made of concrete. You can see variations to the inserts and markings below.

JF6
70x140cm

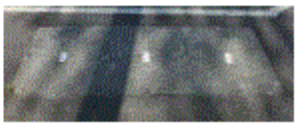


JF6 old cast and concrete type 70x140cm

Triple covers

The two sizes of triple lid covers are shown here.

JF10 80x240cm



JF11 80x140cm

Inserts and markings

In this section you can see examples of the markings that you would expect to find on our equipment.

Footway

Examples of the current JF4 and JF5 inserts are shown below. The number '4' or '5' shown on the right hand side of the insert identifies the type. The letters 'DW' shown on the top right hand corner of the JF5 box indicate that this is a drive way lid built to stand further loading.

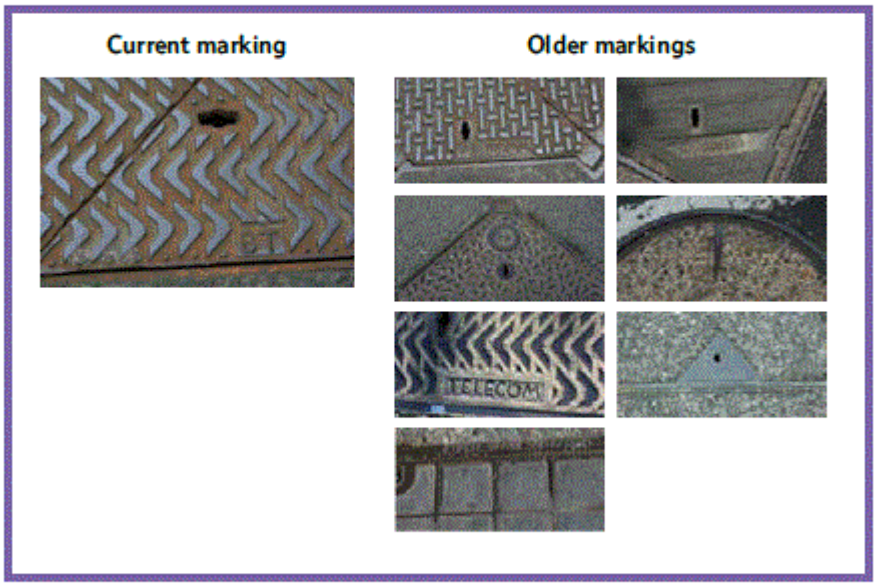
JF4

JF5

The following examples show the changes undertaken from GPO to BT.

Carriageway

The current marking is shown below, with some of the older versions beneath.



Non-standard plant

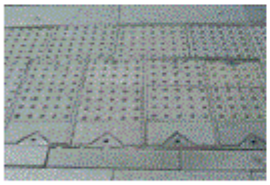
Some locations have used bespoke cover infills which improve the aesthetics of the area, enhance paving designs or accommodate high tactile surfacing. The scope of these type of covers is endless.

Maintenance for these covers may not reside with Openreach as often the responsibility remains with the Authority.

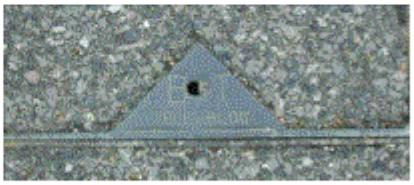
A small selection of non-standard footway and carriageway covers are shown below.

FW No.4

CW No.3 insert type



FW No.6



Detail of legend built into frame

National Telephone Company Limited

Please note,

Crossrail is not affected by these works.

Best regards,

Will Orlik
Safeguarding Officer (Crossrail)
CRL_Safeguarding@tfl.gov.uk

Infrastructure Protection Team
Floor 7 B5 : 5 Endeavour Square : London : E20 1JN

OFFICIAL

With regards to your enquiry, Network Rail does not believe there is any Network Rail owned apparatus or underground services within the area you have defined. As there is always the possibility that new works could be planned and undertaken in this area by Network Rail this information is valid as at today's date and is supplied for general guidance only.

Please be aware that this response is based on Network Rail's records and knowledge and no guarantee can be given regarding accuracy or completeness. CAT scans, safe digging practices (as contained in HSE publications) and other appropriate investigative techniques should always be carried out.

There may be other apparatus or underground services owned or operated by Utility Companies and accordingly you should contact individual utilities for information.

If, in connection with your investigations and/or work, you become aware of Network Rail apparatus or underground services within your area of work, please ensure these are notified to our Asset Protection team via the following link as a matter of urgency so that appropriate measures for avoidance of risk and damage can be put in place.

Contact details can be found in the following link: Network Rail Asset Protection Teams

If you require any further clarification on any of the information please contact opburiedservicesenquiries@networkrail.co.uk.

Regards,

Stephen Elcock
Distribution Administrator

NetworkRail
Route Services

Worksite Survey
National Records Centre, Audax Rd, York, North Yorkshire, YO30 4US
T: 01904 386375

Dear Customer

You may need an environmental permit if you intend to carry out work in, under, over or near to a main river flood or sea defence. You can find more information about this at:

https://www.gov.uk/guidance/flood-risk-activities-environmental-permits

Although the Environment Agency is classed as a statutory undertaker for certain purposes, we do not generally have plant equipment or pipelines situated in the public highway.

We have drafted this reply without conducting a specific search of our records. We ask that you make the necessary checks and if you have reason to think that your proposal will affect land or equipment which we own or is close to a watercourse as defined above, please resubmit your enquiry making this clear in your reply.

Kind regards

Liam Morris

Environment Agency

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Environment Agency

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UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 546263,192229

This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

London Bomb Risk

Low — High

- Miltary
- Industry
- UXO find
- Airfields
- Transport
- Docks
- Luftwaffe target
- Other
- Utilities
- Abandoned bomb
- Bombing decoy

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

During WWII, London was bombed more times than any other city in the UK. The bombing densities across the city are generally moderate to high in comparison to the rest of the UK.
You will receive two map downloads for sites on the boundary of London: one to demonstrate the bombing density in relation to the rest of the UK, and another to reflect the bombing density of the site in relation to the rest of London.
Typically, we recommend that a detailed UXO desk study and risk assessment is commissioned for sites in London.

Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to uxo@zetica.com.

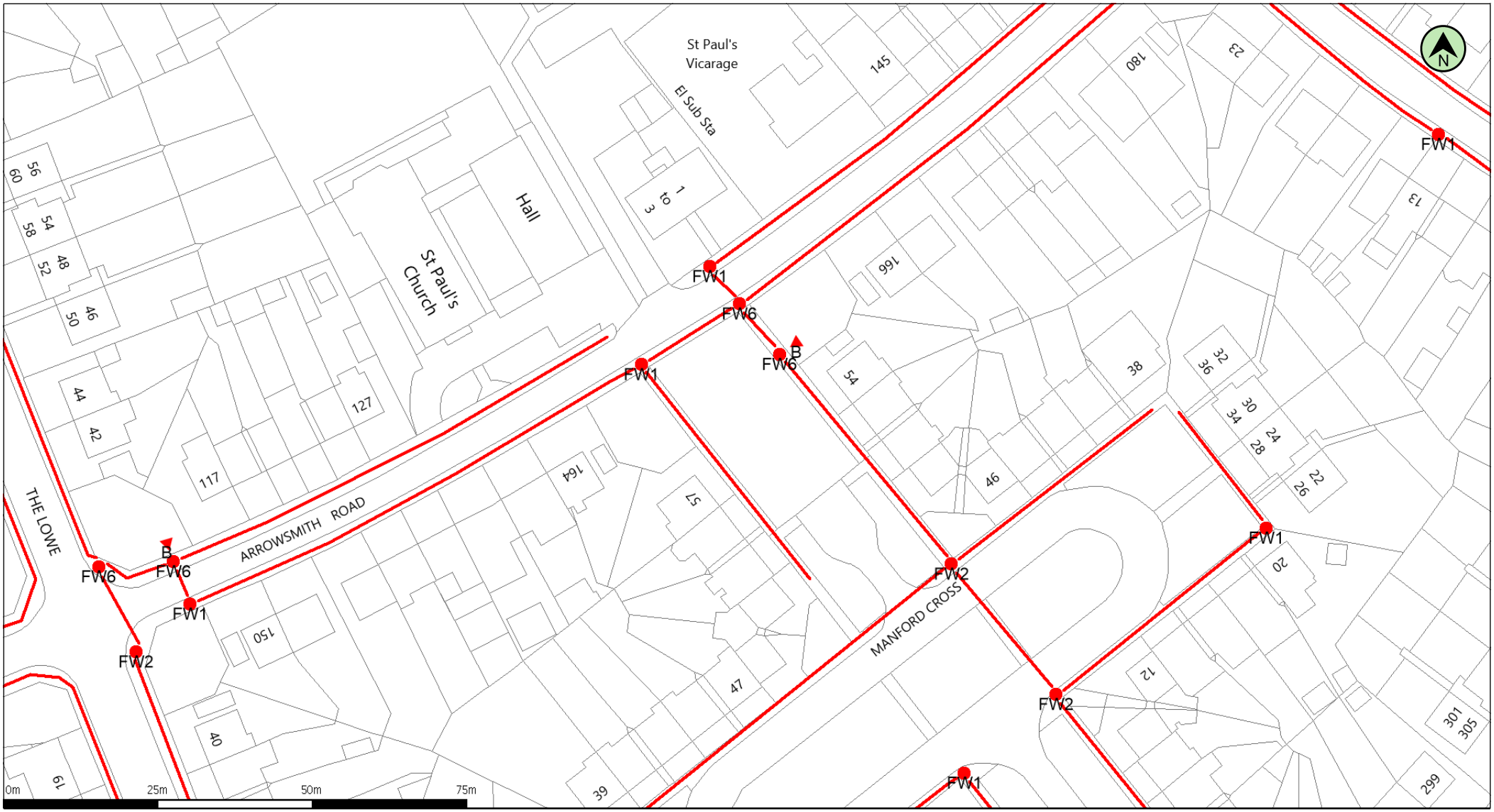
You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.



(c) Crown copyright and database rights 2024 Ordnance Survey 100019209 Date: 22/03/24 Scale: 1:869 Map Centre: 546258,192271 Data updated: 01/02/24 Telecoms Plan A4

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 2024 Ordnance Survey 100019209.

Duct, Trench

Chamber / Pole

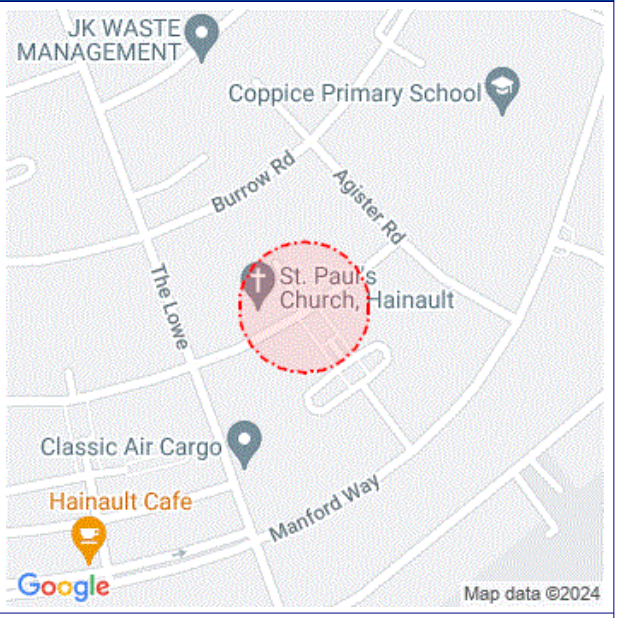
Cabinet

Communications (None Affected)

Enquiry Details	
Enquiry type	Initial Enquiry
Work category	Utility Works
Work type	Multiple excavations site (deeper than 1.5m)
Work type buffer*	50 metres
Start date	23/03/2024
End date	23/03/2024
Scheme/Reference	REDBRIDGE
Search location	XY= 546251, 192284
Confirmed location	546251 192282
Site size	115 metres diameter
Site Contact Name	Not Supplied
Site Phone No.	Not Supplied
Description of Works	

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.

Site Map



Please note that the above map only displays the location of the proposed work site and will not display any of the Members' pipes and cables. It is imperative that this area accurately reflects the proposed work site.

Affected LSBUD members
(LSBUD Members who have assets registered on LSBUD within the vicinity of your search area.)

Asset Owner	Phone/Email	Emergency Only	Status
Cadent Gas	0800688588	0800111999	Await response
UK Power Networks	08000565866	08000565866	Await response

Status explanation

Await Response means that the asset owner will contact you. This is typically by sending the plan response but they may ask for further information before being able to do so, particularly if any payments or authorisations are required.

Email Additional Info means that the asset owner needs further information about your works to assess your enquiry before providing a response. Please provide any details you have available including plans, method statements etc. if available.

Important notices

It is very important that you correctly understand what the service does and the procedures in order for you to work safely. Please refer to the LSBUD Support Page (www.lsbud.co.uk/linesearchbeforeudig-support) for further guidance.
This information includes how to provide additional information to the LSBUD Members who request it to provide a response to your enquiry.
Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date and time of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LinesearchbeforeUdig (LSBUD) accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.
Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lsbud.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

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.)

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	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 Abandoned Pipelines)
DIO (MOD Live Pipelines)	Drax Power Limited	E.ON UK CHP Limited
EDF Energy Renewables Ltd	EirGrid	Eleclink Limited
Electricity North West Limited	Energy Assets Networks	ENI & Himor c/o Penspen Ltd
EnQuest NNS Limited	EP Langage Limited	ESB CCGT Power station (Carrington Gas Pipeline)
ESP Utilities Group	ESSAR	Esso Petroleum Company Limited
euNetworks Fiber UK Ltd	EXA Infrastructure	Exolum Pipeline System
Fulcrum Electricity Assets Limited	Fulcrum Pipelines Limited	Gamma
Gas Networks Ireland (UK)	Gateshead Energy Company	Gigaclear Ltd
Harbour Energy	Heathrow Airport LTD	Humbly Grove Energy
IGas Energy	INEOS FPS Pipelines	INEOS Manufacturing (Scotland and TSEP)
INOVYN ChlorVinyls Limited	INOVYN Enterprises Limited	Intergen (Coryton Energy or Spalding Energy)
Jurassic Fibre Ltd	Kensa Utilities	Last Mile
Mainline Pipelines Limited	Manchester Jetline Limited	Manx Cable Company
Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited	MUA Group Limited
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
Premier Transmission Ltd (SNIP)	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	SP Energy Networks	Spring Fibre Limited
Squire Energy Networks	SSE Generation Ltd	SSE Transmission

SSE Utility Solutions Limited	Storengy	Tata Communications (c/o JSM Construction Ltd)
TfL – London Underground HV Cables (Road Side Cables)	toob Limited	Total Colnbrook Pipelines
Total Finaline Pipelines	Transmission Capital	Trojan Energy Limited
Uniper UK Ltd	University of Cambridge Granta Backbone Network	Vattenfall
Veolia ES SELCHP Limited	Veolia ES Sheffield Ltd	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
Zayo Group UK Ltd c/o JSM Group Ltd		

Non-LSBUD members (Asset owners not registered on LSBUD)
(The following Non-LSBUD Members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding.
Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.)

Asset Owner	Preferred contact method	Phone	Status
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08000232023	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
Equans	nrswa.uk@equans.com	0800 130 3600	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Lumen Technologies	plantenquiries@ocugroup.com	02087314613	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Sota	sota.plantenquiries@ocugroup.com		Not Notified
Thames Water	http://www.digdat.co.uk	08450709145	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified

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The results of this Enquiry are personal to the Enquirer and shall not be shared with or relied upon by any other party. The asset information on which the Enquiry results are based has been provided by LSBUD Members, therefore LSBUD will provide no guarantee that such information is accurate or reliable nor does it monitor such asset information for accuracy and reliability going forward. There may also be asset owners which do not participate in the enquiry service operated by LSBUD, including but not exclusively those set out above. Therefore, LSBUD cannot make any representation or give any guarantee or warranty as to the completeness of the information contained in the enquiry results or accept any responsibility for the accuracy of the mapping images used. LSBUD and its employees, agents and consultants accept no liability (save that nothing in this Enquiry Confirmation excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by English law) arising in respect thereof or in any other way for errors or omissions including responsibility to any person by reason of negligence.

Dear Sir/Madam,

Thank you for submitting your recent plant enquiry.

Based on the information provided, I can confirm that Energetics **does not** have any plant within the area(s) specified in your request.

If you require further assistance with outstanding enquiries, please call 03300 587 443.

Please ensure all plant enquiries are sent to plantenquiries@energetics-uk.com

Regards

Plant Enquiries

E: plantenquiries@energetics-uk.com

W: www.energetics-uk.com

energetics

WE DESIGN • WE BUILD • WE CONNECT

Dear Sir or Madam,

Thank you for your plant enquiry below.

We can confirm that Level 3, Global Crossing (Uk) Ltd, Global Crossing PEC, Fibernet UK Ltd and Fibrespan Ltd do not have any apparatus within the indicated works area.

Instalcom responds to plant enquiries for all of the above and therefore you only need send one plant enquiry to cover all of these companies.

Please note that this response is only valid for 3 months. If your works do not commence within this time period, please resubmit your plant enquiry for assessment before any works commence.

Regards

Plant Enquiries Dept

Instalcom Limited

Borehamwood Ind. Park

Rowley Lane

Borehamwood

WD6 5PZ

Office: +44 (0)208 731 4613

Fax: +44 (0)208 731 4601

Email: plantenquiries@instalcom.co.uk

Web: http://www.instalcom.co.uk

Thank you for your enquiry.

Please be advised that Sky Telecommunications Services Ltd will not be affected by your proposal.

Best endeavours have been made to ensure accuracy, however if you require further information, please contact us by email at nrswa@sky.uk.

Regards

NRSWA Department
Tech UK - Implementation
sky | TECHNOLOGY
nrswa@sky.uk +44 20703232234

Hi, thanks for the advance notice however I can confirm on this occasion we have NO apparatus in the vicinity of the proposed works. (Gtt formerly Hibernia Networks). We are now a member of LSBUD, for all future requests please contact LSBUD directly.

Regards

Owen Maguire

Networks Operations Manager NI
office: +44 (0) 28 70380028 | mobile: +44 754-553-2224

www.gtt.net

Dear Sir/Madam

Verizon is a licensed Statutory Undertaker.

We have reviewed your plans and have determined that Verizon (Formally known as MCI WorldCom, MFS) has no apparatus in the areas concerned.

If you have any further queries, please do not hesitate to get in touch.

Yours faithfully

Plant Protection Officer (GB) Email osp-team@uk.verizon.com

Dear Sir/Madam,

Please note that KCOM only own apparatus within the Public Highway in East Yorkshire and Lincolnshire.

Apparatus in the Public Highway, which was previously owned by KCOM outside of East Yorkshire and Lincolnshire, is now owned by City Fibre.

All future Plant enquiries or NRSWA C2, C3 or C4 Inquiries, regarding this apparatus outside of East Yorkshire and Lincolnshire, should be directed to City Fibre not KCOM.

Please forward your enquiry to asset.team@cityfibre.com

PLEASE NOTE THIS EMAIL HAS NOT BEEN FORWARDED

Regards

Jarod Gillespie

Apprentice Planning and Design Consultant– Field Engineering

Tel: +44 (0)3316 646302

Mob: +44 (0)7484 032622

Email: jarod.gillespie@kcom.com

Web: www.kcom.com

KCOM

Thank you for recently contacting Utility Assets plant record department. We will check whether we have any plant present at your site and contact you within 5 - 7 working days ONLY if we own any plant in the vicinity.

If we do not reply, we do not have any apparatus in the area of your works. However, PLEASE TAKE CARE when excavating around electricity cables in the event that not all cables present may be accurately shown. We recommend you use detecting equipment to map the site before excavating and fully comply with HSG47. DO NOT assume that a cable is dead if you don't have a record of its presence. The cable must be treated as live unless PROVEN DEAD by the cable owner. In case of emergency please contact your local electricity distribution company.

This is an automated reply from our dedicated asset records email address. If you receive further correspondence from us, it will be from asset.manager@utilityassets.co.uk quoting a site reference number.

Asset Manager - Utility Assets Ltd

Thank you for your recent enquiry regarding your proposed work at the above location.

euNetworks Fiber UK Limited do not have plant in the vicinity of your proposed works and no strategic additions to our existing network are envisaged in the immediate future.

This information is only valid for a period of 3 months so, if your start date is 3 months or more from the date of this email, please re-apply for updated information at our generic email address: plantenquiries@psgservices.co.uk.

Kind regards

ALL PLANT ENQUIRIES AND DIVERSIONARY REQUESTS SHOULD BE ADDRESSED BY EMAIL TO THE OPERATIONS

TEAM AT plantenquiries@psgservices.co.uk **, WITH A PLAN AND FULL POSTAL ADDRESS OF YOUR ENQUIRY,**

THANK YOU

For and on behalf of euNetwork Fiber UK Limited

Regards

Stuart Green

M 07796 696810 | **T** 01257 433166 | **E** plantenquiries@psgservices.co.uk

Telecommunications Survey, Planning, Engineering & GIS Services

GTC Apparatus Not Found In Search Area

Thank you for your enquiry concerning apparatus in the vicinity of your proposed work. GTC can confirm that we have no apparatus in the vicinity but please note that other asset owners may have and ensure all utility owners have been consulted. For your records, the search area is shown in the attached map.

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.

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

Good Morning,

I can confirm there are no assets in the area.

Kind Regards

Claire Phillips

Distribution Administration Assistant

0844 800 1813

Harlaxton
Energy Networks Limited

Toll Bar Road, Marston, Grantham, Lincolnshire, NG32 2HT Registered Company Number : 7330883

Dear Sir or Madam,

With reference to your plant enquiry below, we can confirm that SOTA do not have any apparatus within the immediate proximity of your proposed works.

If you require any further information, please do not hesitate to contact us.

Please note that this response is only valid for 3 months. If your works do not commence within this time period, please resubmit your plant enquiry for assessment before any works commence.

Regards

Plant Enquiries Dept.
Instalcom Limited
Borehamwood Ind. Park
Rowley Lane
Borehamwood
WD6 5PZ

Office: +44 (0)208 731 4613
Fax: +44 (0)208 731 4601
Email: sota.plantenquiries@instalcom.co.uk
Web: http://www.instalcom.co.uk

Dear Sir/Madam

Turner & Townsend Project Management are appointed on behalf of MBNL to conduct Plant (apparatus) Searches in accordance with the relevant NRSWA Act 1991- Diversionary Works

legislation. These searches considered plant belonging to EE (T-Mobile and Orange sites) and the HG3 mobile telecommunication networks.

Further to your plant enquiry please see the response below to the NRSWA request submitted

MBNL do not have any plant that would be affected by the proposed work please see attached. Should you have any further queries please use the contact details below.

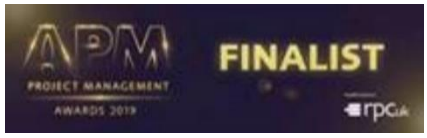
PS: Please can you send all future Plant enquiries for EE or H3G to this email address mbnlplantenquiries@turntown.com

Thank you,

Kind regards,

MBNL SHQE Team

Turner & Townsend
t: 0121 262 3663 | www.turnerandtownsend.com



Please Note: Our search criteria has changed. We previously searched for Colt Network which was within 200 metres, this has now changed to 50 metres. The negative response will be for all enquiries that the network is 50 metres or more away from the place of enquiry.

Dear Sir/Madam,

Thank you for your enquiry for the above reference.

We can confirm that Colt Technology Services do not have apparatus near the above location as presented on your submitted plan, if any development or scheme amendments fall outside the 50 metre perimeter new plans must be submitted for review.

Search is based on Overseeing Organisation Agent data supplied; we do not accept responsibility for O.O. Agent inaccurate data.

If we can be of any further assistance please do not hesitate to contact us.

Kind regards,

Plant Enquiry Team

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To whom it may concern

With regard to your request for details of existing services in the specified area;

We can confirm that, based on the details provided to us, we have no buried plant or equipment in the identified area.

Kind regards

EQUANS

NRSWA

Urban Energy

UK & IRELAND

T +28 2216530

White Post Lane
London E15 2GP

www.engie.co.uk

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Part of the ENGIE Group

Thank you for your correspondence enclosing details of your proposals as per your reference below.

Our client's apparatus, Teliasonera, is not located within the vicinity of the above reference and we therefore have no further interest in this current location.

Please note that all enquiries relating to the Teliasonera line plant should be forwarded to:

By post – to, telent,

Teliasonera line plant enquiries, Mayne

House,

Fenton Way,

Basildon, Essex,

SS15 6TD

By email - to, telenttelia.plantenquiries@telent.com

By phone – to, 01268 269096

Yours faithfully

Telent CCO Basildon

Arrowsmith Road, Redbridge - March 2024

Dear Sir,

Our records show we have no equipment at this location.

Linda
Linda Francomb Delivery Administrator
Clear Channel United Kingdom Unit 9, Newtons Court, Galleon Boulevard, Crossways Business Park Park, Dartford, Kent DA2 6QL
D 0044 1322 620 707
M N/A

Leep Electricity Networks Ltd & Leep Utilities have no apparatus in this area.

Regards
Hayley

Leep Electricity Networks
Take a look at our **website**

e: lenl@leeputilities.co.uk
w: **www.leeputilities.co.uk**
Privacy Notice

Thank you for your email.
I can confirm we have no assets in the area.

Kind Regards

Raghu Sharma
Engineering Support Administrator

Tel: 0333 666 2008

Web: www.energyassetsnetworks.co.uk

Hello,

We can confirm we do not have anything in this area at present.

Thank you for your email.

Please do not hesitate to contact me with any queries

Victoria Coles
Eclipse Power
Office: +44 (0) 1234 486487
Mobile: +44 (0) 7860927197

www.eclipsepower.co.uk
https://www.linkedin.com/company/eclipse-power-networks/

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Disclaimer

This record pack has been compiled from information provided by statutory utility providers.
Whilst every effort has been made to ensure the accuracy
and completeness of information included within this report.

Intersect Surveys Ltd take responsibility for erroneous or missing historic
record data which has been supplied to us from a utility provider.
Due to the nature of record Information being indicative rather than accurate it is advisable
that a full site utility survey to be undertaken.

Warning: PDF designed for colour print only with no
page scaling. This Information is given as a guide
only and its accuracy cannot be guaranteed.

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Surbiton KT6 4AG,
United Kingdom

0208 399 3851

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