

Report

20 March 2020



TEMPLE

LEADERS IN ENVIRONMENT,
PLANNING & SUSTAINABILITY.

Report for – Fairfax (Reading) Ltd & Reading Golf Course Ltd Reading Golf Club, Emmer Green, Utilities Strategy Final



Document version control

Version	Date	Author	Reviewed by	Reviewed and approved by
1.0	09/11/2018	Daniel Lee	Paul Harding	Paul Harding
1.1	20/03/2020	Mitchell Hartridge	Ben Heede	Ben Heede
1.2	13/05/2020	Mitchell Hartridge	Chris Dry	Chris Dry

Report for: **Andrew Smith**
Fairfax (Reading) Ltd

Main contributors: **Mitchell Hartridge**
Daniel Lee
Paul Harding
Ben Heede
Ridge & Partners LLP

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1.0 INTRODUCTION

- 1.1.1 The Reading Golf Course development will be located in Reading and is to be comprised of 256 new dwellings – including a mix of 1,2, 3, and 4 bed properties.



Figure 1.1: Site Location and Layout



- 1.1.2 This Foul Water and Utilities Strategy report has been produced for Fairfax (Reading) Ltd ('The Applicant') on behalf of Temple Group as part of the planning for this development.
- 1.1.3 The site is located on Reading Golf Course to the north of Reading. The site is bounded to the east and west by residential properties, to the south by residential properties as well as Emmer Green Primary School and existing golf course to the north of the site.
- 1.1.4 The aim of this report is to consider the existing utility infrastructure and its potential capacity to support the new development, including existing routes of incoming services as indicated in the appendices, and possible conflicts with the Proposed Development.

2.0 EXISTING UTILITY SERVICES

Ridge and Partners LLP (Ridge here after) have carried out a desk top review of information gathered from both Statutory Utility Providers and National Facility Providers as listed below:

- Linesearch
- Thames Water (Potable Water)
- Thames Water (Sewerage)
- SGN (Gas)
- SSE (Electricity)
- BT Openreach (Telecom)
- Various fibre optic providers as discussed in Section 2.6

2.1.1 Please note that the budget quotations to be obtained by Ridge and to be included within this report were based upon the initial site plan sketches.

2.1.2 Whilst every effort has been made to ensure accuracy and completeness of information included within this report, Ridge can take no responsibility for erroneous or missing historic record data which has been supplied from each service/facility provider.

2.1.3 Due to the nature of record information being indicative rather than accurate it is therefore advisable that some “opening up” works should be undertaken prior to any ground works or construction. It should also be noted that for the purpose of this report it has been assumed that the roads approaching the site are not private land subject to requiring third party agreement or resulting in the meters for the development being sited remote to the building(s).

2.2 General

- 2.2.1 A Linesearch enquiry, reference: 15723042, has been undertaken for the proposed development site. This has confirmed that only SGN is registered with Linesearch that have any assets within the proposed site boundary.

2.3 Potable Water Infrastructure

- 2.3.1 Thames Water are the potable water provider for the area and their records indicate that there is a 4" CI (Cast Iron) main installed along Kidmore End Road. This serves the existing residential properties to the east of the site. Branches of this service are also installed along Lyefield Court where there is a 100mm DI (Ductile Iron) main installed to the south east of the site. To the north east of the site there are 2no. 4" CI (Cast Iron) mains installed along Brooklyn Drive, these also branch off from the main installed along Kidmore End Road.
- 2.3.2 To the west of the site the mapping records indicate that there is a 4" (unknown material) main installed along Eric Avenue serving the residential properties. From here a 100mm (unknown material) main is installed along Gorselands to the south west of the site serving the properties up to Chiltern Court. There is also a small 3" (unknown material) running along Highdown Hill Road North West of the site.
- 2.3.3 Based on the mapping records received, diversion works may be required for the site. There will also be a degree of new connection, disconnection and extension works required to coordinate with the proposed plans. It is anticipated that these will be discussed in more detail as the scheme progresses.

2.4 Foul Water Infrastructure

- 2.4.1 Thames Water sewerage records indicate that there are 2no. foul rising main sewers installed along Kidmore End Road, all the way to the pumping house located to the north east of the site. Also installed along Kidmore End Road is a surface water sewer which originates at junction to Twinoaks and continues north west along Kidmore End Road.
- 2.4.2 To the north east of the site there is also a foul water sewer and a surface water sewer installed along Brooklyn Drive, where they then combine with the foul and surface water sewers located along Kidmore End Road.
- 2.4.3 Thames Water's records also indicate that there is a foul sewer installed directly across the site. This originates from Eric Avenue, to the west of the site, and is routed north east to the pumping house located along Kidmore End Road.
- 2.4.4 To the south west of the site a foul sewer originates along Gorselands. This is then installed along Eric Avenue, where the foul sewer diverts north east across the site. There is also a surface water sewer installed along Eric Avenue on the opposite side of the highway.
- 2.4.5 Based on the mapping records received, it is assumed that there will be a degree of new connection, diversion, disconnection and extension works required to coordinate with the proposed plans. Diversion works may be avoided if the proposals can be coordinated with the existing foul sewer. It is anticipated that these options will be discussed in more detail as the scheme progresses.

2.5 Gas Infrastructure

- 2.5.1 SGN are the gas distributors for this area. The mapping records received from SGN indicate that they have a 250mm PE (Polyethylene) LP (Low Pressure) gas main which is installed along Kidmore End Road passing the golf club to the east of the site.
- 2.5.2 To the north east of the site a 4" CI (Cast Iron) LP (Low Pressure) gas main is installed along Kidmore End Road, serving Brooklyn Drive where a 4" SI (Spun Iron) LP (Low Pressure) gas main is installed.
- 2.5.3 Based on the mapping records received, it is not anticipated that any diversion works will be required for the site. However, it is assumed that there will be a degree of new connection, disconnection and extension works required to coordinate with the proposed plans. It is anticipated that these will be discussed in more detail as the scheme progresses.

2.6 Electricity Infrastructure

- 2.6.1 SSE are the electricity distributor for this area. Their mapping records have indicated a number of substations that serve the residential properties surrounding the site.
- 2.6.2 To the east of the site an 11kV High Voltage (HV) underground supply is installed along Kidmore End Road from Kidmore End Road substation. This supply is then routed along Courtenay Drive to Courtney Drive substation to the north east of the site.
- 2.6.3 To the south west of the site an 11kV High Voltage (HV) underground supply is installed along Highdown Hill Road to Eric Avenue substation. To the south of the site there is also a High Voltage Network installed to Chiltern Court substation located adjacent to Emmer Green Primary School.
- 2.6.4 The mapping records we have received from SSE highlight LV (Low Voltage) supplies. Underground cables are installed from Kidmore End Road substation to supply the residential properties to the east of the site. Supplies are installed along Kidmore End Road towards Brooklyn Drive and Coutenay Drive to the north east of the site. From Kidmore End substation there are also underground LV supplies installed along Lyefield Court to the south east of the site.
- 2.6.5 To the west of the site LV supplies are installed from Eric Avenue substation. Underground networks are installed along Eric Drive towards Gorselands where they serve the residential properties. There are also underground networks installed along Highdown Hill Road and Highdown Avenue where LV supplies serve the residential properties.
- 2.6.6 To the south of the site underground LV supplies are installed from Chiltern Court substation supplying Chiltern Court, Gorselands as well as the Emmer Green community centre.
- 2.6.7 Based on the mapping records received, it is not anticipated that any diversion works will be required for the site. However, it is assumed that there will be a degree of new connection, disconnection and extension works required to coordinate with the proposed plans. It is anticipated that these will be discussed in more detail as the scheme progresses.

2.7 Telecommunications Infrastructure

2.7.1 The following telecommunications companies were contacted regarding this scheme:

- | | |
|----------------------------|----------------|
| ● BT Openreach | ● KPN |
| ● City Fibre | ● Sky UK Ltd |
| ● Colt Technology Services | ● Sota |
| ● Energetics | ● Teliasonera |
| ● Engie | ● Verizon |
| ● GTC | ● Virgin Media |
| ● Instalcom | ● Vodafone |
| ● Interoute | |

- 2.7.2 Of the above companies, only BT Openreach and Virgin Media have confirmed that they have apparatus within or in close proximity to the proposed development.
- 2.7.3 A desk based study was undertaken using Linesearch to find fibre optic operators within the area. However, it is recommended that before works commence on site a review of any existing site wayleaves and a radar survey is undertaken to ensure that the development does not impact on any of these services.
- 2.7.4 Openreach's and Virgin Media's records indicate that they have underground and overhead networks in close proximity to the development. To the east and south east of the site, underground networks are indicated along Kidmore End Road and Lyefield Court, where cables then rise and are distributed to the residential properties via an overhead network.
- 2.7.5 To the north east of the site, it appears that the residential properties are served by an underground network.
- 2.7.6 To the west of the site, underground networks are indicated along Eric Avenue, where cables then rise and are distributed to the residential properties via an overhead network. The underground network continues along Gorselands where an underground network serves the residential properties.
- 2.7.7 Based on the mapping records received, it is not anticipated that any diversion works will be required. Once the project is at the appropriate stage, BT Openreach will charge for comprehensive site surveys to allow detailed proposals to be produced. It is anticipated that these will be discussed in more detail as the scheme progresses.

3.0 PROPOSED NEW SERVICES

3.1 Potable & Foul Water Infrastructure

- 3.1.1 The anticipated peak demand for portable water the whole development has been calculated at approximately 16 l/s but it should be noted that this is a preliminary figure based on the assumed sanitary fittings in each nominal building. This figure may change once plans for each individual building are prepared for the detailed planning application.
- 3.1.2 Thames Water have predicted that there will be no anticipated diversions to accommodate the proposal.
- 3.1.3 Thames Water have provided a budget quotation for servicing the proposed development and this comes to circa £786,737. This includes both Potable water and Foul water to the site. The cost above does include an estimated discount from Thames Water.

3.2 Gas Infrastructure

- 3.2.1 There will be no gas on the development site. It is proposed that the homes will be heated via heat pumps.

3.3 Electricity Infrastructure

- 3.3.1 The anticipated electrical load for the development is approximately 926 kVA, based on 473 heat pump heated properties. Two substations will be installed for the whole development.
- 3.3.2 SSE have provided a budget quotation for servicing the Proposed Development and this comes to circa. £360,000.00- £390,000.00 (exclusive of VAT), This cost also includes two new substations that are needed. It should be noted that these substations will need to be located with vehicular access, while the enclosure will require an area of land at least 4m x 4m.
- 3.3.3 It is not possible to reserve capacity on the network until the formal connection application has been made and paid for.

3.4 Telecommunications Infrastructure

- 3.4.1 When the design proposals are further developed, they will be submitted to BT Openreach and alternative providers and a detailed scheme will be put together indicating their proposed routing of the new services.
- 3.4.2 Since November 2016 any new site registered with Openreach that is 30 premises or greater will receive FTTP (Fibre to The Premises) technology free of any additional charge.

4.0 CONCLUSIONS

- 4.1.1 In conclusion this report has found that all the major utility operators have infrastructure in close proximity to the Proposed Development and it cannot be anticipated that there will be any issues with capacity until formal application for new connections has been made.
- 4.1.2 It is recommended that a radar survey is undertaken to confirm the precise location of all utilities within close proximity to the site boundary.
- 4.1.3 The indicative budget estimates for providing new utility services to the Proposed Development, upgrades to the existing network and diversion works are as follows:

Table 4.1: Total Budget Estimates

Utility Provider	Indicative Budget Cost
Thames Water (Potable & Foul Water)	Circa £786,737 (Exclusive of Vat)
SSE	Circa £360,000- £390,00 (Exclusive of VAT)

Appendix A – Linesearch

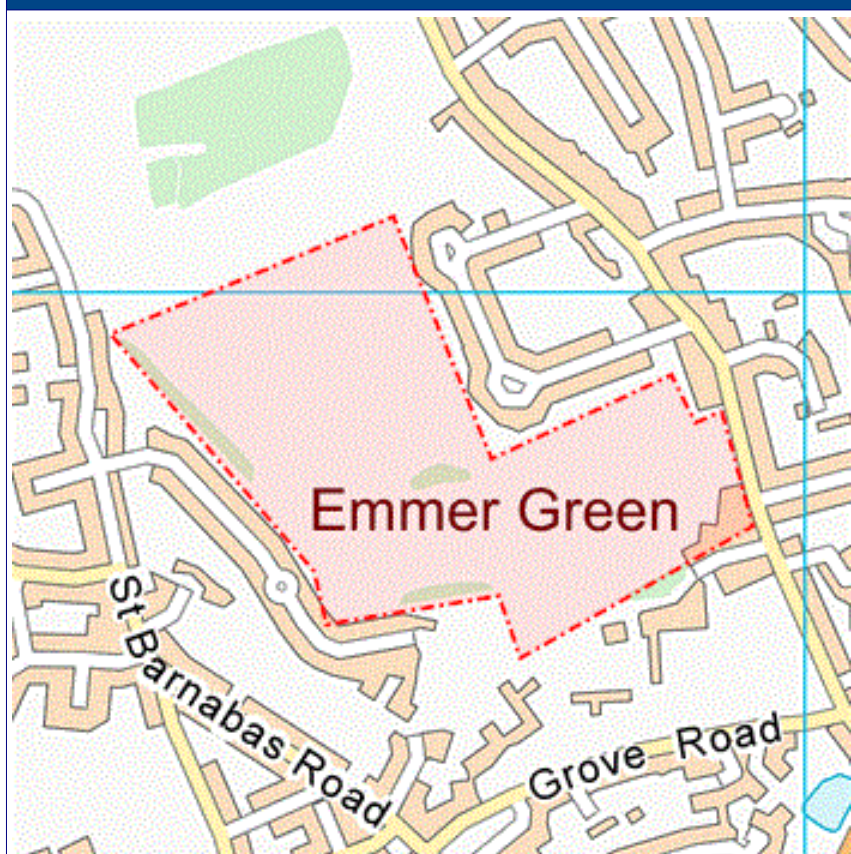
Enquirer

Name	Mr Daniel Lee	Phone	01962834393
Company	Ridge & Partners LLP	Mobile	Not Supplied
Address	Partnership House Moorside Road Winchester Hampshire SO237RX		
Email	dlee@ridge.co.uk		

Enquiry Details

Scheme/Reference	Reading Golf Course		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	01/11/2019	Work type	Commercial/industrial
End date	01/12/2020	Site size	146792 metres square
Searched location	RG4 8SQ	Work type buffer*	25 metres
Confirmed location	471521 176842		
Site Contact Name	Not Supplied	Site Phone No	Not Supplied
Description of Works	Not Supplied		

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

Site Map


Asset Owners

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lineasearchbeforeudig.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.

Notes. Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.

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 of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig 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.

Asset Owners & Responses. Please note the enquiry results include the following:

1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

1. LSBUD Members who have assets registered within your search area. ("Affected")
 - a. These LSBUD Members will either:
 - i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
 - ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
2. LSBUD Members who do not have assets registered within your search area. ("Not Affected")
3. Non LSBUD Members who may have assets within your search area. Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

National Grid. Please note that the LSBUD service only contains information on National Grid's Gas above 7 bar asset, all National Grid Electricity Transmission assets and National Grid's Gas Distribution Limited above 2 bar asset.

For National Grid Gas Distribution Ltd below 2 bar asset information please go to www.beforeyoudig.nationalgrid.com

LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

List of affected LSBUD members

Asset Owner	Phone/Email	Emergency Only	Status
SGN	08009121722	0800111999	Await response

LSBUD Members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD Members make regular changes to their assets and this list may vary for new enquiries in the same area.

List of not affected LSBUD members

AWE Pipeline	Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)
BP Exploration Operating Company Limited	BPA	Carrington Gas Pipeline
CATS Pipeline c/o Wood Group PSN	Cemex	Centrica Storage Ltd
CLH Pipeline System Ltd	Concept Solutions People Ltd	ConocoPhillips (UK) Ltd
DIO (MOD Abandoned Pipelines)	Drax Group	E.ON UK CHP Limited
EirGrid	Electricity North West Limited	ENI & Himor c/o Penspen Ltd
EnQuest NNS Limited	EP Langage Limited	ESP Utilities Group
ESSAR	Esso Petroleum Company Limited	Fulcrum Pipelines Limited
Gamma	Gateshead Energy Company	Gigaclear Ltd
Gtt	Hafren Dyfrdwy	Heathrow Airport LTD
Humbly Grove Energy	IGas Energy	INEOS FPS Pipelines
INEOS Manufacturing (Scotland and TSEP)	INOVYN Enterprises Limited	Intergen (Coryton Energy or Spalding Energy)
Mainline Pipelines Limited	Manchester Jetline Limited	Manx Cable Company
Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited	Murphy Utility Assets
National Grid Gas (Above 7 bar), National Grid Gas Distribution Limited (Above 2 bar) and National Grid Electricity Transmission	Northumbrian Water Group	NPower CHP Pipelines
Oikos Storage Limited	Ørsted	Perenco UK Limited (Purbeck Southampton Pipeline)
Perenco UK Limited (Purbeck Southampton Pipeline)	Petroineos	Phillips 66
Premier Transmission Ltd (SNIP)	Prysmian Cables & Systems Ltd (c/o Western Link)	Redundant Pipelines - LPDA
RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEnpower (Little Barford and South Haven)	SABIC UK Petrochemicals
Scottish Power Generation	Seabank Power Ltd	Severn Trent (Chester area only)
Shell (St Fergus to Mossmorran)	Shell Pipelines	SSE (Peterhead Power Station)
Tata Communications (c/o JSM Construction Ltd)	Total (Colnbrook & Colwick Pipelines)	Total Finaline Pipelines
Transmission Capital	UK Power Networks	Uniper UK Ltd
Vattenfall	Veolia ES SELCHP Limited	Wales and West Utilities
Western Power Distribution	Westminster City Council	Wingas Storage UK Ltd
Zayo Group UK Ltd c/o JSM Group Ltd		

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.

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08009173993	Not Notified
CenturyLink Communications UK Limited	plantenquiries@instalcom.co.uk	02087314613	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified
ENGIE	nrswa@cofely-gdfsuez.com	01293 549944	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
KPN (c/-Instalcom)	kpn.plantenquiries@instalcom.co.uk	n/a	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
Scottish and Southern Energy	asset.data@sse.com	01256337294	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Sota	SOTA.plantenquiries@instalcom.co.uk		Not Notified
Teliasonera	telentelia.plantenquiries@telent.com	0800526015	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
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified

Disclaimer

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Appendix B – Thames Water Mapping Records

Asset location search



Property Searches

Ridge and Partners LLP
Partnership House Partnership House

WINCHESTER
SO23 7RX

Search address supplied Reading Golf Club
Kidmore End Road
Emmer Green
Reading
RG4 8SQ

Your reference Reading Golf Course

Our reference ALS/ALS Standard/2019_4026030

Search date 20 June 2019

Keeping you up-to-date

Notification of Price Changes

From 1 September 2018 Thames Water Property Searches will be increasing the price of its Asset Location Search in line with RPI at 3.23%.

For further details on the price increase please visit our website: www.thameswater-propertysearches.co.uk
Please note that any orders received with a higher payment prior to the 1 September 2018 will be non-refundable.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW
DX 151280 Slough 13



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



0845 070 9148



Search address supplied: Reading Golf Club, Kidmore End Road, Emmer Green,
Reading, RG4 8SQ

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 0845 070 9148, 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

Waste Water Services

Please provide a copy extract from the public sewer map.

The following quartiles have been printed as they fall within Thames' sewerage area:

SU7176NE
SU7177SE
SU7176NW
SU7177SW

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.

The following quartiles have been printed as they fall within Thames' water area:



SU7176NE
SU7177SE
SU7176NW
SU7177SW

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

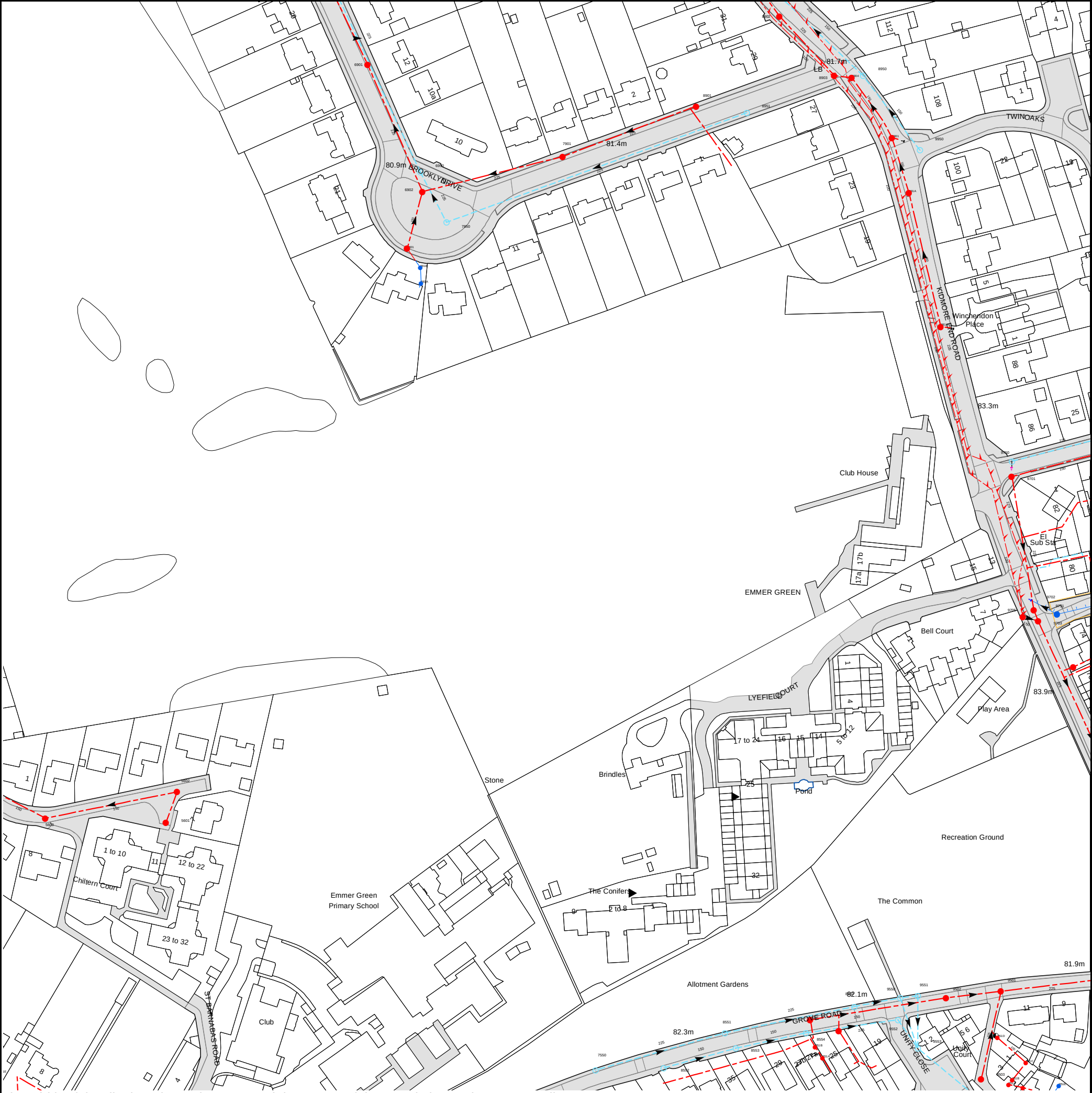
Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

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



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 471750,176750

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 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
6901	80.51	78.46
6801	81.44	79.48
6950	n/a	n/a
681B	n/a	n/a
681A	n/a	n/a
6902	81.54	78.87
7850	81.57	80.07
7901	81.53	79.19
8901	81.49	79.49
8951	81.48	80.59
8902	80.29	78.43
8903	81.45	79.56
8904	81.63	79.62
8950	81.73	80.16
9901	82.08	79.98
991A	82.41	80.57
9950	82.75	81.32
981A	82.69	81.23
9701	84.16	83.5
9750	84.09	83.25
9705	83.98	82.72
9702	84.1	82.91
9703	84.11	82.54
9751	n/a	n/a
96ZX	n/a	n/a
8550	82.2	81.34
9552	82.07	80.3
9550	82.16	81.27
9553	n/a	n/a
9551	n/a	n/a
9502	82.07	80.44
9503	80.77	80.27
951D	n/a	n/a
9501	82.01	80.02
951A	n/a	n/a
951B	n/a	n/a
95ZS	n/a	n/a
951C	n/a	n/a
951E	n/a	n/a
7550	82.51	81.84
8552	82.48	81.2
851A	n/a	n/a
8553	82.34	80.75
851B	n/a	n/a
8554	82.24	80.48
8551	82.35	81.61
85ZV	n/a	n/a
8501	82.15	81.02
5601	83.78	81.58
5602	83.57	81.52
5603	83.1	81.08
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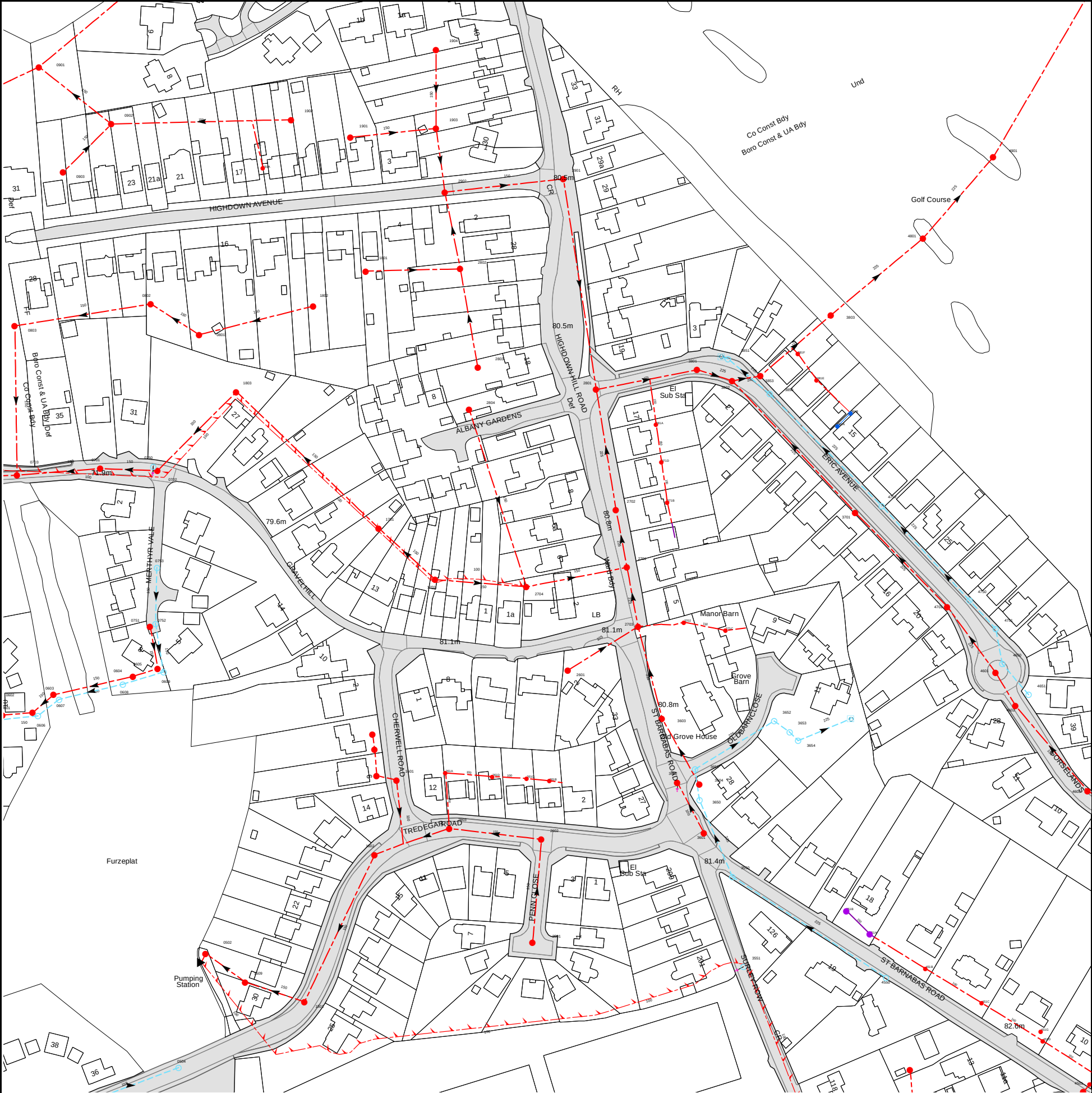
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NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
8302	86.89	84.44
8351	86.93	84.39
9301	88.48	86.41
8350	84.59	83.33
9302	88.65	87.33
9350	90.13	87.06
9351	89.54	86.71
9352	90.64	89.04
9303	n/a	n/a
9451	91.8	90.14
9401	n/a	n/a
621C	n/a	n/a
6002	77.71	75.39
6208	63.89	62.73
6250	n/a	n/a
6204	64.39	62.67
621A	n/a	n/a
621D	n/a	n/a
6207	64.33	62.44
621B	n/a	n/a
6203	64.3	63.15
6150	65.94	65.05
621E	n/a	n/a
6202	67.03	65.75
6201	69.09	67.97
6101	69.8	67.62
611A	n/a	n/a
7002	77.28	74.61
711B	n/a	n/a
7051	77.18	75.71
7201	n/a	n/a
7153	70.74	70.1
711A	n/a	n/a
7101	73.37	71.58
7152	73.46	72.78
7050	75.06	73.88
7151	73.52	73.1
7150	74.27	73.44
90ZX	n/a	n/a
921C	n/a	n/a
7001	74.57	72.94
70YY	n/a	n/a
8002	77.09	75.41
81ZY	n/a	n/a
8051	77.12	75.29
80ZS	n/a	n/a
8251	84.41	82.93
8202	84.38	82.8
8301	85.67	84.81
8250	83.35	81.96
8201	83.24	81.25
8001	80.04	78.08
9051	80.1	78.38
9150	81.75	80.4
9101	81.78	80.08
9151	81.73	80.61
9152	81.95	80.81
90ZR	n/a	n/a
9050	81.32	79.89
9001	81.2	79.45
9153	84.25	82.82
90ZV	n/a	n/a
921D	n/a	n/a
921A	n/a	n/a
9154	85.57	84.1
90ZW	n/a	n/a
921B	n/a	n/a
6050	78.64	76.48
6001	78.65	74.9
8052	79.51	78.68
80ZP	n/a	n/a
90ZS	n/a	n/a
90ZT	n/a	n/a

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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 471250,176750

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Manhole Reference	Manhole Cover Level	Manhole Invert Level
4501	82.88	81.02
451F	n/a	n/a
451E	n/a	n/a
45ZV	n/a	n/a
451D	n/a	n/a
451G	n/a	n/a
451C	n/a	n/a
4550	82.06	80.44
451B	n/a	n/a
0504	74.29	72.44
0502	74.36	72.76
1509	78.42	76.37
1501	78.31	76.95
1602	81.23	77.82
2501	81.14	79.09
2602	81	78.62
3550	81.65	80
3551	81.88	80.23
351B	n/a	n/a
351A	n/a	n/a
1701	n/a	n/a
0703	67.84	66.46
0702	73.65	72.5
0701	70.85	70.35
0750	73.43	n/a
1803	n/a	n/a
0801	n/a	n/a
0803	n/a	n/a
1802	80.7	79.76
0802	n/a	n/a
1801	n/a	n/a
2902	80.75	78.86
0903	n/a	n/a
191A	n/a	n/a
1901	n/a	n/a
1903	n/a	n/a
0902	77.84	76.13
1902	80.48	79.39
0901	n/a	n/a
1904	n/a	n/a
4750	80.83	79.58
2704	81.27	79.03
2701	80.86	78.12
3701	79.99	78.31
2702	80.85	77.98
4752	79.99	78.61
371B	n/a	n/a
371D	n/a	n/a
381A	n/a	n/a
281A	n/a	n/a
381B	n/a	n/a
2804	n/a	n/a
3850	79.17	77.63
2801	80.63	77.53
3802	79.08	77.13
381E	n/a	n/a
3853	n/a	n/a
3801	79.37	77.28
2803	n/a	n/a
3851	79.38	77.33
3852	n/a	77.06
381F	n/a	n/a
3803	78.64	76.88
2802	n/a	n/a
4801	78.26	76.56
2901	80.65	78.42
4901	77.45	76.3
1601	81.28	79.45
16ZS	n/a	n/a
16ZT	n/a	n/a
16ZV	n/a	n/a
0606	54.79	51.55
0601	51.96	49.28
0602	54.77	51.54
0607	58.54	55.35
0603	58.41	55.08
0608	66.12	64.77
0604	67.27	65.72
0609	70.15	68.74
0605	69.84	66.48
0751	70.82	67.78
0752	70.85	69.3
1702	n/a	n/a
0753	72.79	70.84
261A	n/a	n/a
2603	81.1	78.18
261D	n/a	n/a
261C	n/a	n/a
261B	n/a	n/a
2601	81.18	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
2703	80.79	78.19
3603	n/a	n/a
3602	80.56	79.18
3702	80.64	78.16
3651	80.65	79.41
3604	n/a	n/a
3650	80.76	79.49
3601	80.97	79.75
371C	n/a	n/a
3652	80.06	78.1
3653	80.04	77.72
3654	n/a	n/a
3655	n/a	n/a
4701	80.78	79.23
4751	81.14	79.94
4601	81.57	80.25
4650	81.43	n/a
4602	81.63	80.5
4651	81.82	n/a
4603	82.56	80.79
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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
1001	n/a	n/a
0001	n/a	n/a
1003	n/a	n/a
1002	n/a	n/a
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ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

	Foul: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Trunk Surface Water
	Trunk Foul
	Storm Relief
	Trunk Combined
	Vent Pipe
	Bio-solids (Sludge)
	Proposed Thames Surface Water Sewer
	Proposed Thames Water Foul Sewer
	Gallery
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Sludge Rising Main
	Proposed Thames Water Rising Main
	Vacuum

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate 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 level indicates that data is unavailable.

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
	Dam Chase
	Fitting
	Meter
	Vent Column

Operational Controls

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

	Control Valve
	Drop Pipe
	Ancillary
	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.

	Outfall
	Undefined End
	Inlet

Other Symbols

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

	Public/Private Pumping Station
	Change of characteristic indicator (C.O.C.I.)
	Invert Level
	Summit

Areas

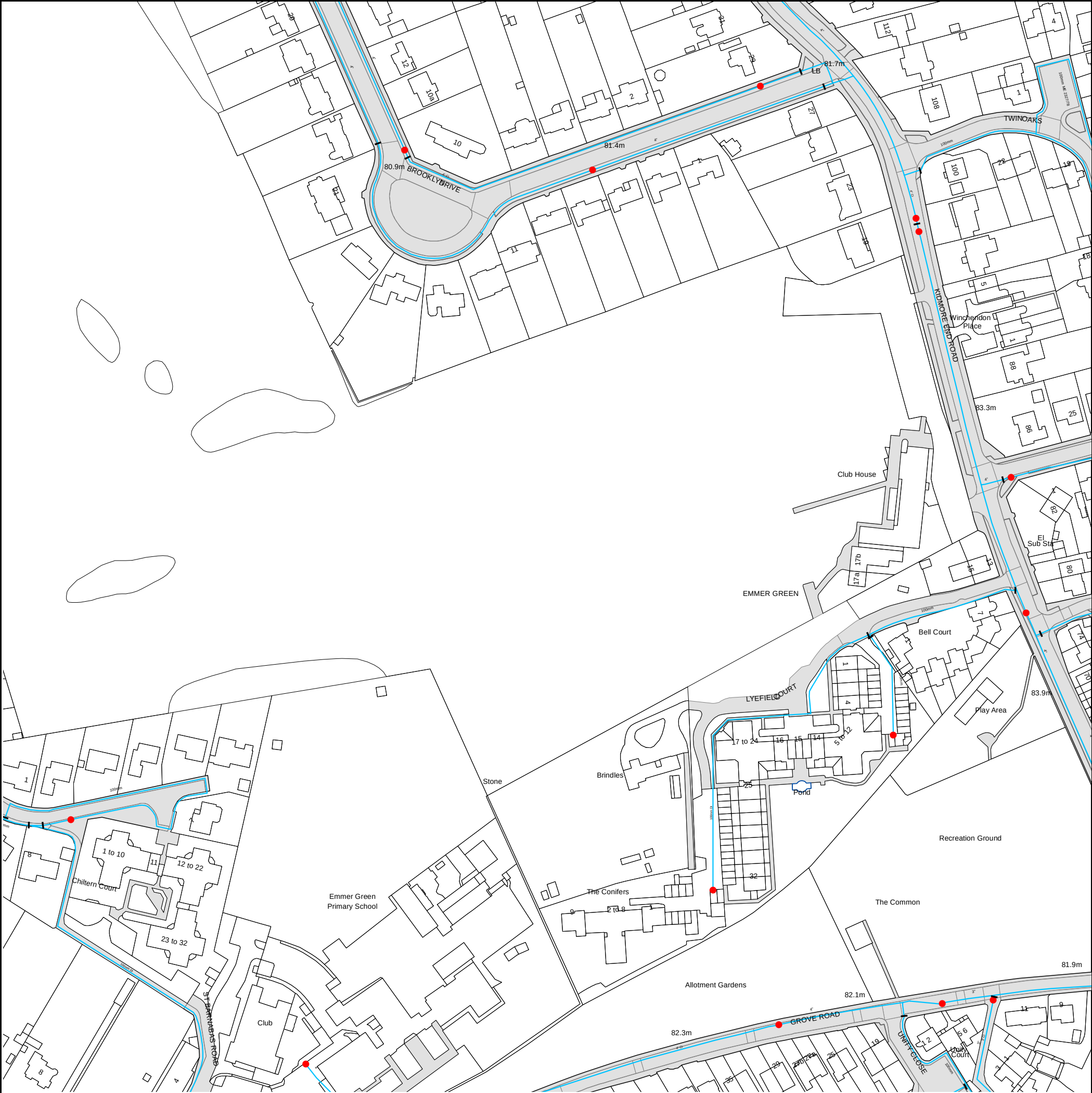
Lines denoting areas of underground surveys, etc.

	Agreement
	Operational Site
	Chamber
	Tunnel
	Conduit Bridge

Other Sewer Types (Not Operated or Maintained by Thames Water)

	Foul Sewer
	Surface Water Sewer
	Combined Sewer
	Gully
	Culverted Watercourse
	Proposed
	Abandoned Sewer

- 6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimetres. 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 present on the plan, please contact a member of Property Insight on 0845 070 9148.



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 471750,176750

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ALS Water Map Key

Water Pipes (Operated & Maintained by Thames Water)

4"	Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
16"	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.
3" SUPPLY	Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.
3" FIRE	Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
3" METERED	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
--	-------------

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: Indicates 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.

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 14 days from due 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. Thames Water does not accept post-dated cheques-any cheques received will be processed for payment on date of receipt.
5. In case of dispute TWUL's terms and conditions shall apply.
6. 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'.
7. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
8. 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 not satisfied with the response, your complaint will be reviewed by the Customer Services Director. You can write to her at: Thames Water Utilities Ltd. PO Box 492, Swindon, SN38 8TU.

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 0121 345 1000 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	Cheque
Call 0845 070 9148 quoting your invoice number starting CBA or ADS / OSS	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	Made payable to ' Thames Water Utilities Ltd ' Write your Thames Water account number on the back. Send to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW or by DX to 151280 Slough 13

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.



Search Code

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Thames Water Property Searches, Clearwater Court, Vastern Road, Reading RG1 8DB, which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered search firms maintain compliance with the Code.

The Search Code:

- provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom
- sets out minimum standards which firms compiling and selling search reports have to meet
- promotes the best practise and quality standards within the industry for the benefit of consumers and property professionals
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

The Code's core principles

Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports
- act with integrity and carry out work with due skill, care and diligence
- at all times maintain adequate and appropriate insurance to protect consumers
- conduct business in an honest, fair and professional manner
- handle complaints speedily and fairly
- ensure that products and services comply with industry registration rules and standards and relevant laws
- monitor their compliance with the Code

Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award compensation of up to £5,000 to you if the Ombudsman finds that you have suffered actual loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the code.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

TPOs Contact Details

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP
Tel: 01722 333306
Fax: 01722 332296
Web site: www.tpos.co.uk
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk

PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE

Appendix C – SGN Mapping Records



SGN
Your gas. Our network.

Contact Us

Mapping Enquiries:
All areas

General Enquiries:
All areas

Date Requested: 18/06/2019
Job Reference: 15785443
Site Location: 471611 176849
Requested by:
Mr Daniel Lee
Your Scheme/Reference:
Reading Golf Course

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. 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 plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 111 999

Low Pressure Mains

Medium Pressure Mains

Intermediate Pressure Mains

High Pressure Mains

LAs

GTs



SSSIs



Some Examples Of Plant Items

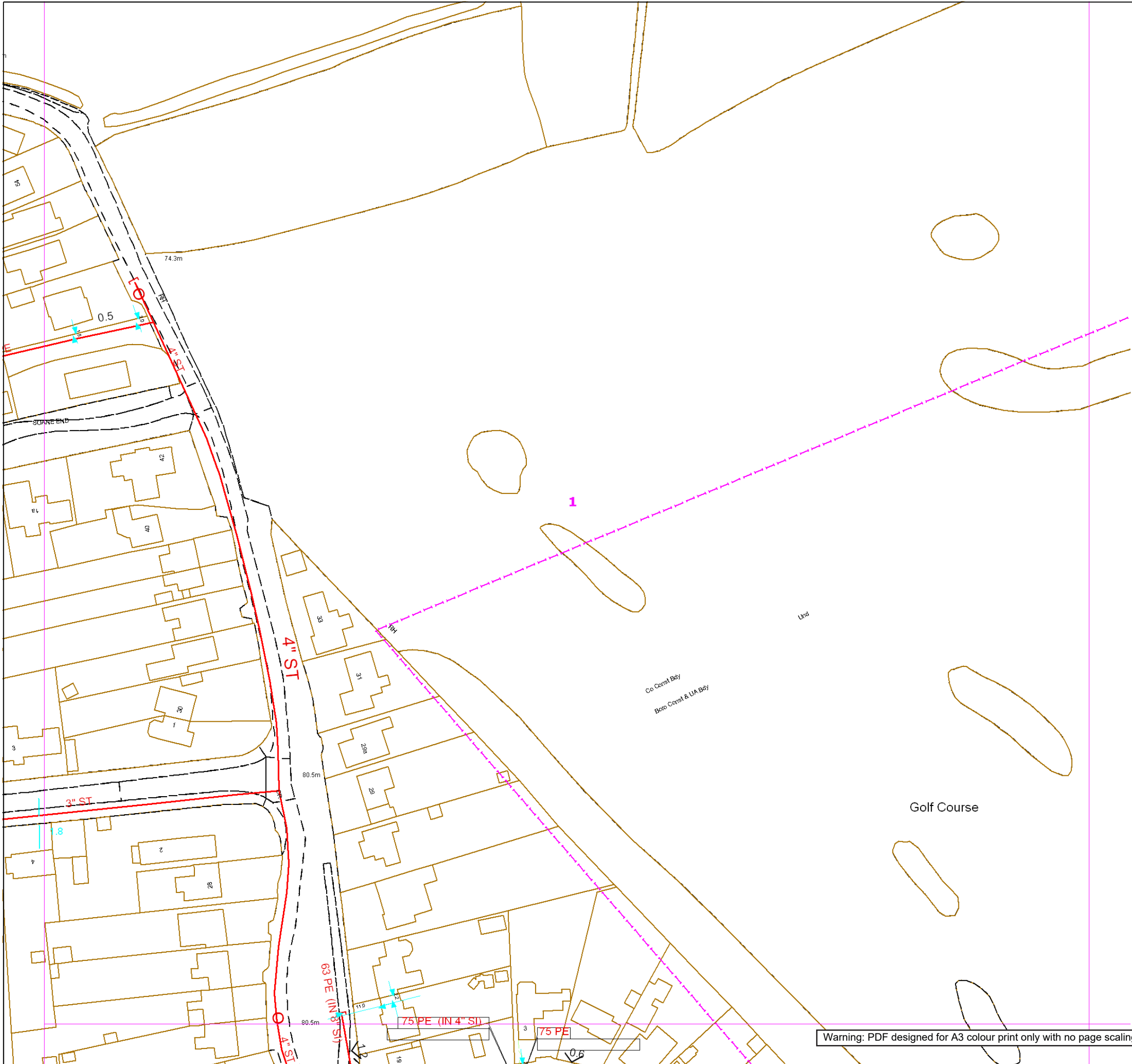
Valve  Syphon  Depth of Cover  Diameter Change  Material Change 

Digsite: Line:  Area: 



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



SGN
Your gas. Our network.

Contact Us

Mapping Enquiries:
All areas

General Enquiries:
All areas

Date Requested: 18/06/2019
Job Reference: 15785443
Site Location: 471611 176849
Requested by:
Mr Daniel Lee
Your Scheme/Reference:
Reading Golf Course
Exact Scales:
1:1000 Area or Circle dig site
1:1000 Line dig site

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. 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 plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 111 999

Low Pressure Mains

Medium Pressure Mains

Intermediate Pressure Mains

High Pressure Mains

LAs

GTs



SSSIs



Some Examples Of Plant Items

Valve



Syphon



Depth of Cover



Diameter Change



Material Change



Digsite:

Line:

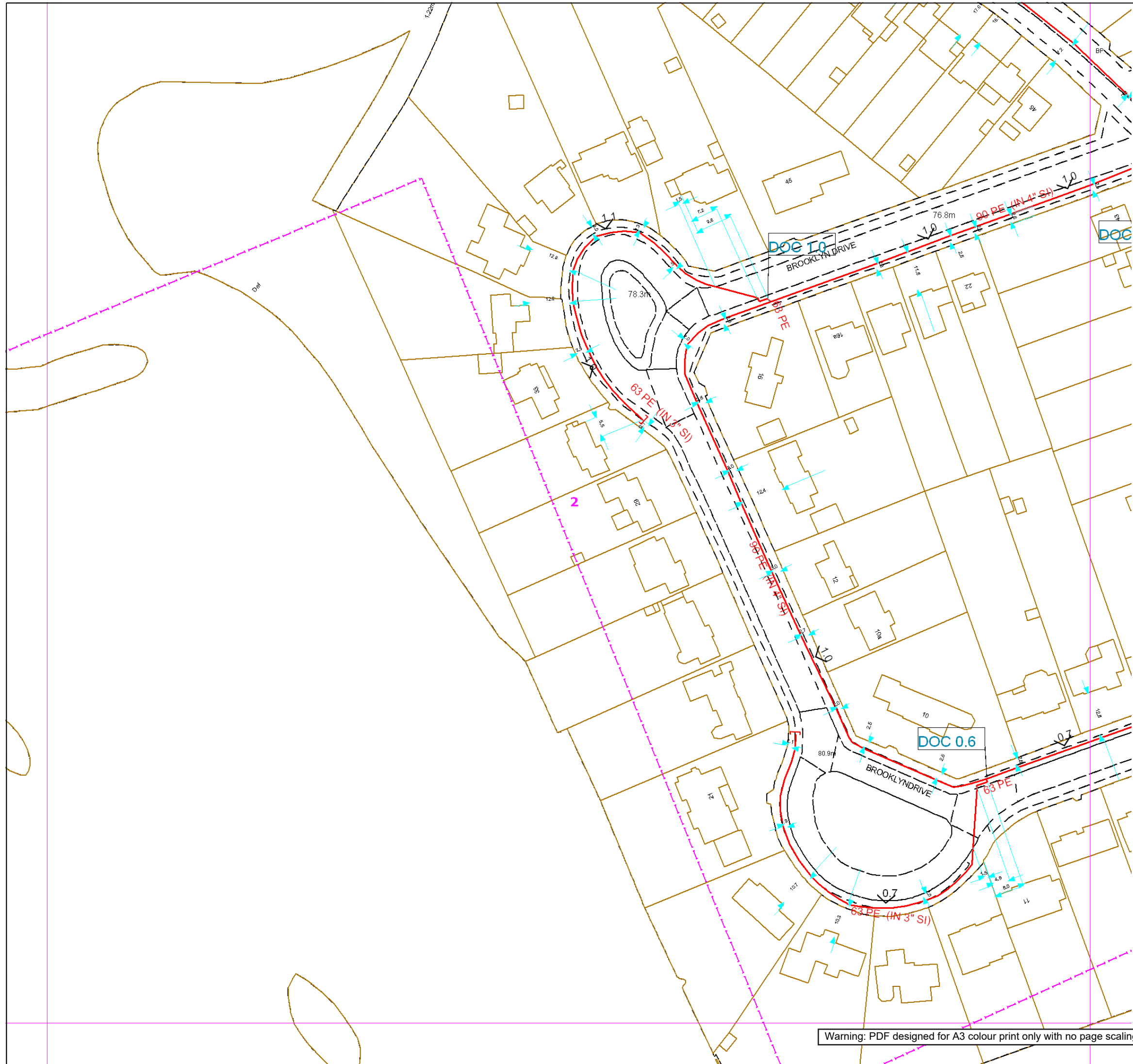


Area:



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





Contact Us
Mapping Enquiries:
All areas

General Enquiries:
All areas

Date Requested: 18/06/2019
Job Reference: 15785443
Site Location: 471611 176849
Requested by:
Mr Daniel Lee
Your Scheme/Reference:
Reading Golf Course
Exact Scales:
1:1000 Area or Circle dig site
1:1000 Line dig site

This plan shows the location of those pipes owned by Scotia Gas Networks (SGN) by virtue of being a licensed Gas Transporter (GT). Gas pipes owned by other GTs or third parties may also be present in this area but are not shown on this plan. Information with regard to such pipes should be obtained from the relevant owners. No warranties are given with regard to the accuracy of the information shown on this plan. Service pipes, valves, siphons, sub-connections etc. are not shown but their presence should be anticipated. You should be aware that a small percentage of our pipes/assets may be undergoing review and will temporarily be highlighted in yellow. If your proposed works are close to one of these pipes, you should contact the SGN Safety Admin Team on 0800 912 1722 for advice. No liability of any kind whatsoever is accepted by SGN or its agents, servants or sub-contractors for any error or omission contained herein. 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 plant location information is provided to all persons (whether direct labour or sub-contractors) working for you on or near gas apparatus. Information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

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0800 111 999

Low Pressure Mains

Medium Pressure Mains

Intermediate Pressure Mains

High Pressure Mains

LAs

GTs

SSSIs

Some Examples Of Plant Items

Valve

Syphon

Depth of Cover

Diameter Change

Material Change

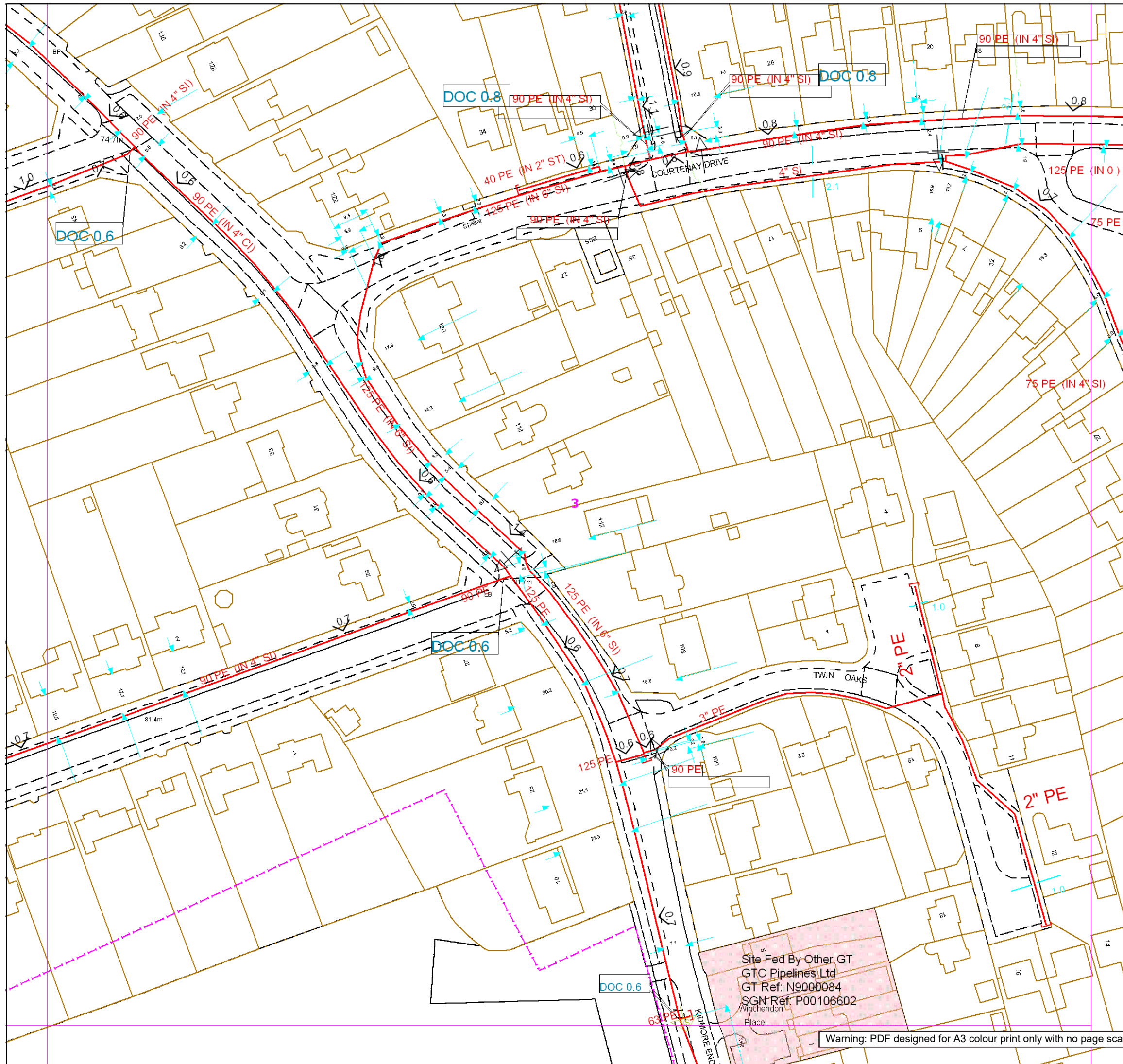
Digsite:

Line:

Area:



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SGN
Your gas. Our network.

Contact Us

Mapping Enquiries:
All areas

General Enquiries:
All areas

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Job Reference: 15785443
Site Location: 471611 176849
Requested by:
Mr Daniel Lee
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1:1000 Area or Circle dig site
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Low Pressure Mains

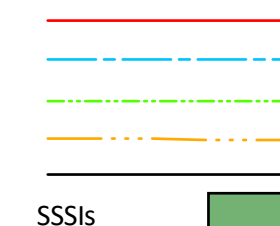
Medium Pressure Mains

Intermediate Pressure Mains

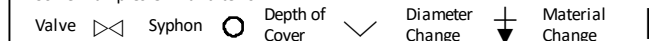
High Pressure Mains

LA's

GT's



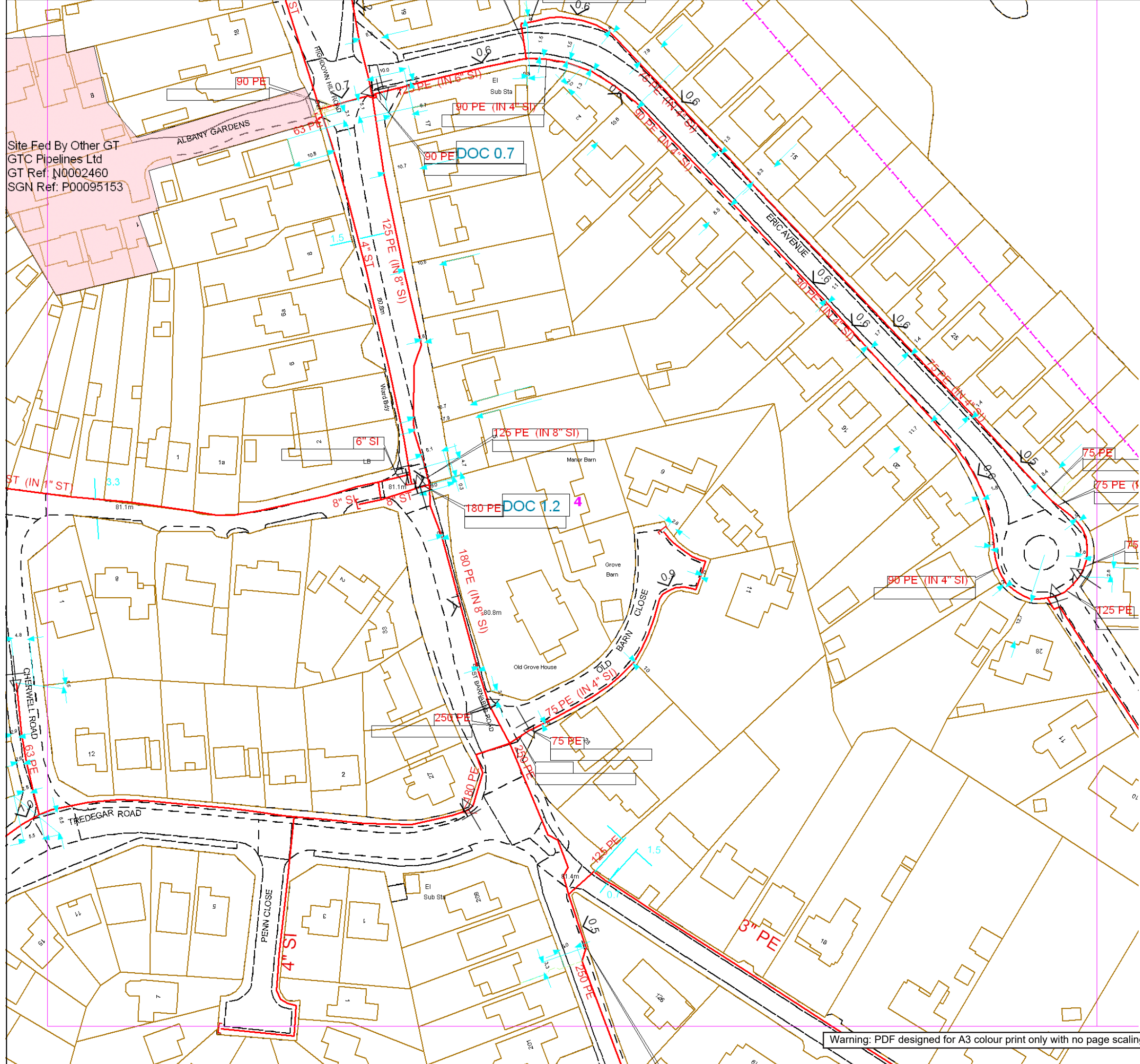
Some Examples Of Plant Items



Digsite: Line: Area:



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Site Fed By Other GT
GTC Pipelines Ltd
GT Ref: N0002460
SGN Ref: P00095153



Contact Us
Mapping Enquiries:
All areas

General Enquiries:
All areas

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Job Reference: 15785443
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Low Pressure Mains 

Medium Pressure Mains 

Intermediate Pressure Mains 

High Pressure Mains 

LAs 

GTs 

SSSIs 

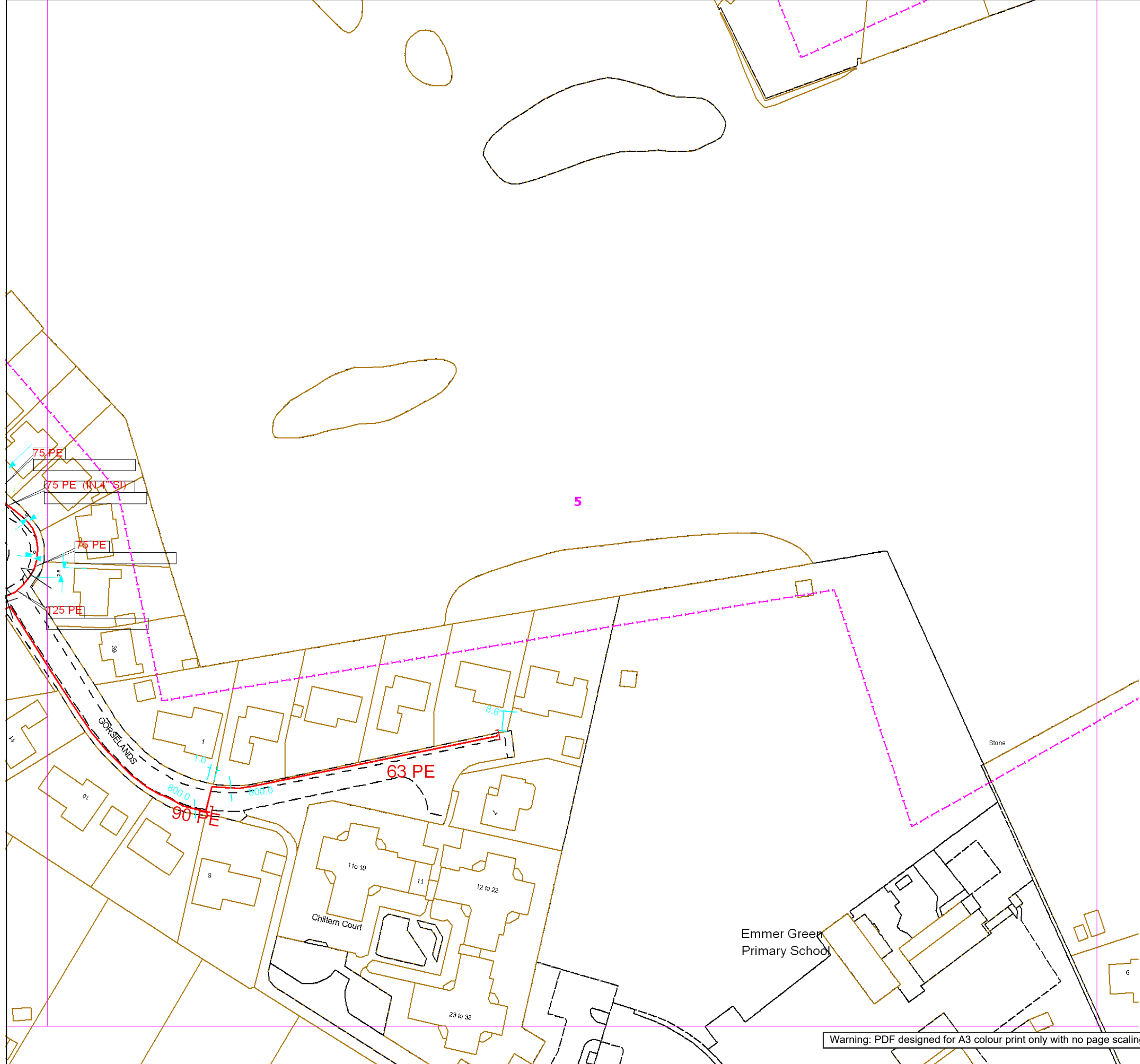
Some Examples Of Plant Items

Valve		Syphon		Depth of Cover		Diameter Change		Material Change	
-------	---	--------	---	----------------	---	-----------------	---	-----------------	---

Digsite: Line:  Area: 



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GTs

SSSIs

Some Examples Of Plant Items

Valve

Syphon

Depth of Cover

Diameter Change

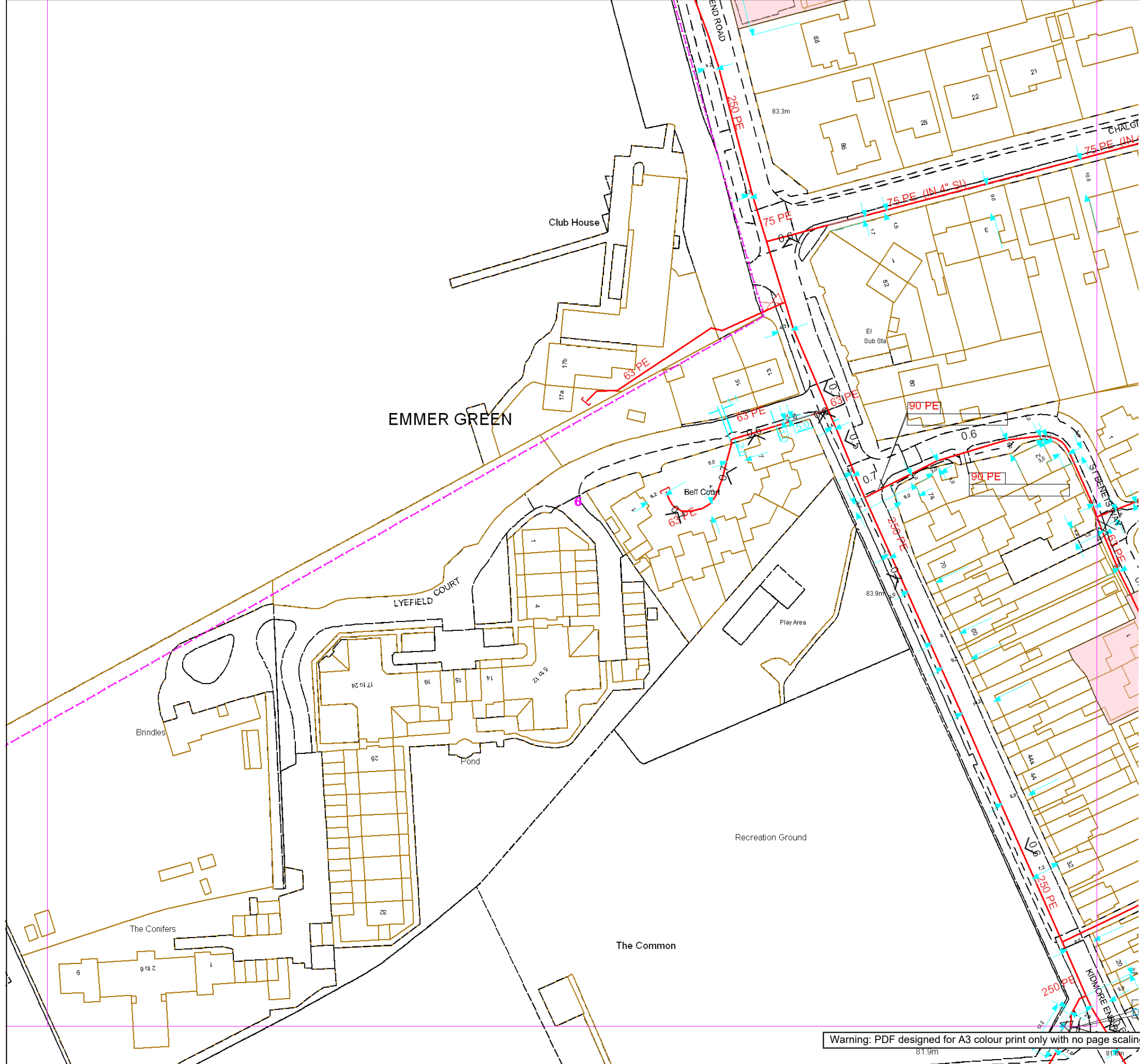
Material Change

Digsite: Line:

Area:



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Some Examples Of Plant Items

Valve

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Depth of Cover

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Material Change

Digsite: Line: Area:



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Appendix D – SSE Mapping Records



WARNING

There may have been subsequent alterations to the surface levels. Trial holes must be taken to determine positions and depth of cables. HS [G] 47 Booklet from the Health and Safety Executive - Avoiding Danger from Buried Cables - should be consulted before commencing excavation work. (available from the HSE)

WHEN WORKING IN THE VICINITY OF OVERHEAD LINES THE HEALTH AND SAFETY GUIDANCE NOTE G56 SHOULD BE CONSULTED. (AVAILABLE FROM THE HSE)

 Scottish & Southern Electricity Networks	
H.V. MAINS RECORD	
If you are unsure & need to seek advice before commencing excavations please contact READING 01189-126500	

Northern works	
GRIDREF:	SU71527683
SCALE:	1:1250
DATE:	11/06/2019
MSS336113	



NORMAL DEPTH TO THE TOP OF THE CABLE WHEN LAID				
	services	lv	hv	ehv
FOOTPATH	0.45m	0.45m	0.60m	0.80m
ROAD CROSSING	0.60m	0.60m	0.75m	0.90m
AGRICULTURAL	0.60m	0.60m	0.75m	0.90m
l.v./services	- up to 1000V.			
h.v.	- over 1000V. to 11,000V.			
e.h.v.	- 22,000V. to 132,000V.			

WARNING

There may have been subsequent alterations to the surface levels. Trial holes must be taken to determine positions and depths of cables. HSE (2) 47 Booklet from the Health and Safety Executive – Avoiding Danger from Buried Cables – should be consulted before commencing excavation work. (available from the HSE)

WHEN WORKING IN THE VICINITY OF OVERHEAD LINES THE HEALTH AND SAFETY GUIDANCE NOTE G56 SHOULD BE CONSULTED. (AVAILABLE FROM THE HSE)

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RG4 6SQ

Southern Electric Power Distribution plc
Registered in England No. 0496260
Registered Office No. 7 Parkway
43 Parkway Road, Reading, RG1 3JH

UNCONTROLLED COPY
Subject to Revision Master held at

 **Scottish & Southern
Electricity Networks**

L.V. MAINS RECORD

If you are unsure & need to seek advice before
commencing excavations please contact

READING

01189-126500

GRIDREF:	SU71527683
SCALE:	1:1250
DATE:	11/06/2019
MSS336113	

Appendix E Openreach Mapping Records

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

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(C) Crown Copyright British Telecommunications plc 100028040

KEY TO BT SYMBOLS			
	Planned	Live	
PCP			
Pole			
Box			
Manhole			
Cabinet			
	Pending Add	In Place	Pending Remove
Power Cable			
Power Duct			

Change Of State

Split Coupling

Duct Tee

Building

Kiosk

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.

Change Of State	Hatchings
+	
X	
▲	
■	
Ⓚ	

BT Ref : JBM03318Y

Map Reference : (centre) SU7152176842

Easting/Northing : (centre) 471521,176842

Issued : 10/06/2019 15:31:58

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

Maps by email Plant Information Reply



IMPORTANT WARNING

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



openreach

CLICK BEFORE YOU DIG

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

email cbvd@openreach.co.uk

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

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(C) Crown Copyright British Telecommunications plc 100028040

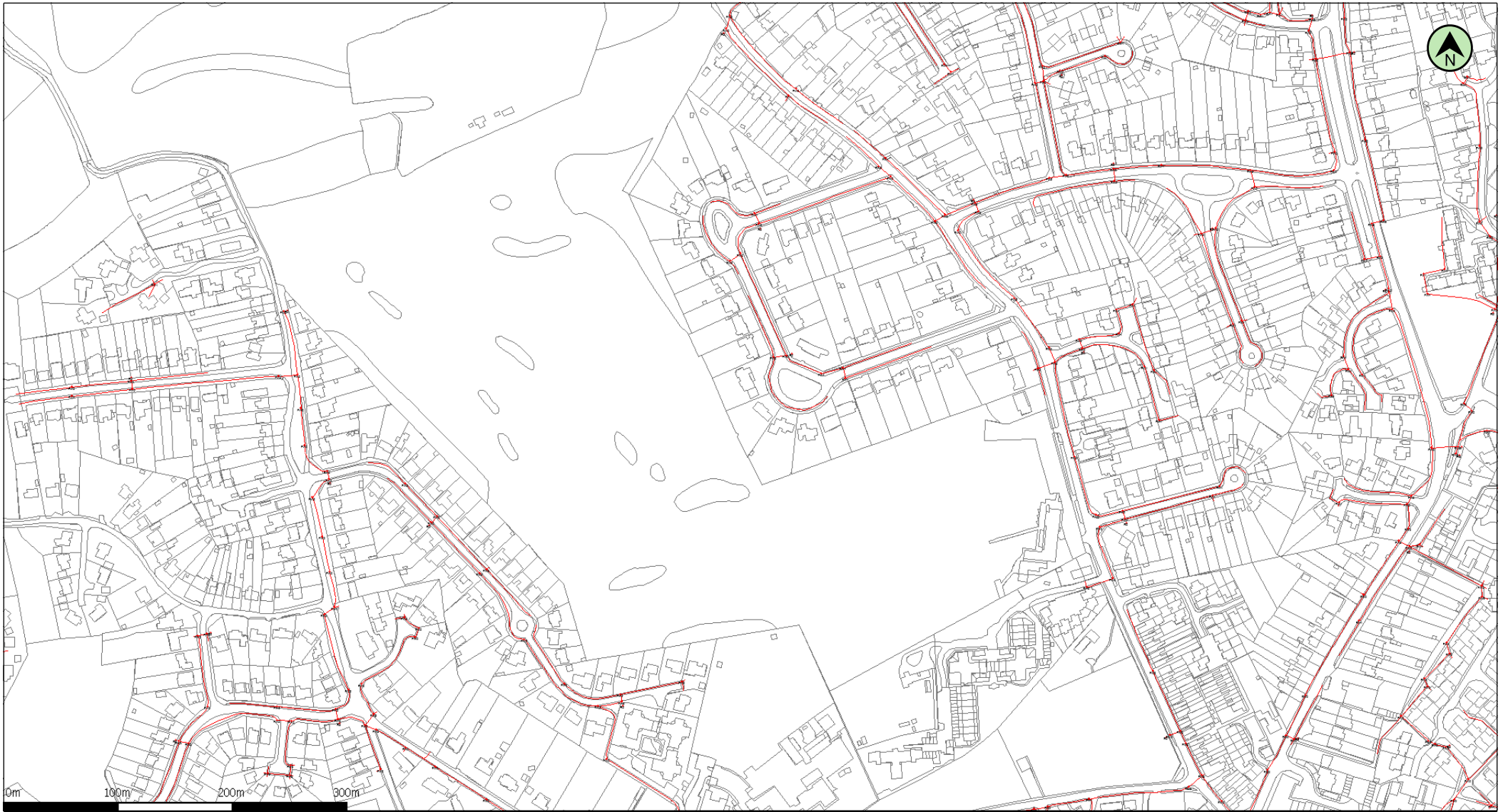
KEY TO BT SYMBOLS

	Planned	Live	Change Of State	+	Hatchings
PCP			Split Coupling		Built
Pole			Duct Tee		Planned
Box			Building		Inferred
Manhole			Kiosk		Duct
Cabinet			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 : BHM03385A
Map Reference : (centre) SU7182176842
Easting/Northing : (centre) 471821,176842
Issued : 10/06/2019 15:38:32

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

Appendix F Virgin Media Mapping Records



(c) Crown copyright and database rights 2019 Ordnance Survey 100019209 Date: 12/06/19 Scale: 1:4715 Map Centre: 471654,176884 Data updated: 01/05/19 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 2019 Ordnance Survey 100019209.

Duct, Trench



Chamber



Cabinet



chilakala.apsar@virginmedia.co.uk

VM.1137759



Appendix G Thames Water Budget Quotation



Mitchell Hartridge
Ridge and Partners LLP
Partnership House, Moorside Road
Winchester
Hampshire
SO23 7RX



DS reference DS6071624



developer.services@thameswater.co.uk



08000 093 921
Mon-Fri 8am-5pm



thameswater.co.uk/developerservices

24 April 2020

Your clean water budget estimate / point of connection report

Site location: Reading Golf Course, 17 Kidmore End Road, Reading, Berkshire RG4 8SQ

Dear Mr. Hartridge

Thank you for your correspondence dated 16 March 2020 regarding the above development consisting of 245 houses, 5 flats and 850sqm medical centre.

This estimate is based on our charges for the current financial year. You can calculate the likely charges involved in your scheme by consulting our guide,

<https://developers.thameswater.co.uk/new-connection-charging>

Please note that this link also provides the latest information on important changes to the structure of our charges for new connections. These will be introduced from 1 April 2020, and could affect how we calculate any quote you receive for this work

Due to the time we need to process applications, we can only guarantee issuing quotes under our 2019/20 charging arrangements for applications received by the following dates:

- 19 February 2020 for new water mains
- 4 March 2020 for new water connections

We can only guarantee these dates for fully completed applications where we require no further information.

We can't guarantee that any applications submitted after the above dates will be issued under our 2019/20 charging arrangements.

This estimate is for budget purposes only and should not be taken as the actual cost for serving this development site. The costs are based upon the details and drawings provided. If there are any subsequent changes to these, then the estimate will be invalid.



Please be aware that this report is based upon the details and drawings provided. If there are any subsequent changes to the details and information on your drawing, the contents of this report will become invalid and a new assessment will be needed.

We've listed below the approximate costs to serve the site. The estimate is produced based on charging arrangement valid from April 2019 to March 2020

Finding your best fit

When arranging supplies for your site, we want you to choose the installer that best suits your needs and timescales. This may or may not be us.

Independent self-lay providers could be able to offer cost-effective terms and fit in better with your construction programme, and might also be able to install multiple utilities. You can find out more about the self-lay option at

developers.thameswater.co.uk/Developing-a-large-site/Using-a-self-lay-provider

NAVs are companies that can become new water and/or wastewater providers within an existing water company's region to serve specific customers or developments. You may be able to use a NAV if you meet criteria defined by Ofwat. To find out more, visit Ofwat's website at

ofwat.gov.uk/regulated-companies/markets/nav-market or our website at <https://wholesale.thameswater.co.uk/wholesale-services/wholesale-providers>

Contaminated land

If our assessment of your full soil report deems the site to be 'contaminated', you'll need to install mains and service connections using barrier pipe, rather than plastic pipe.

What to do next

If you'd like to proceed with your design, you can apply for a formal quotation for water supply to developer.services@thameswater.co.uk for the attention of the self-lay team or design team.

Application for new water services only – no mains required:

<https://developerservices.thameswater.co.uk/apply-for-a-new-water-connection/application-form/site-address>

Application for a new development site – mains extension required:

<https://developers.thameswater.co.uk/Developing-a-large-site/Apply-and-pay-for-services/Apply-for-mains-design>

Network capacity

Please see previously provided network response letter.

Fire hydrant and sprinkler demand

Please note that we aren't able to confirm whether a fire hydrant or sprinkler demand can be accommodated on a new connection. **You'll need to contact an independent consultant or specialist company for hydrant testing for fire-fighting purposes.**



Working near our assets

If you're planning significant work near our assets, it's important you minimise the risk of damaging them. You can find more information at developers.thameswater.co.uk/domestic-and-small-commercial/building-near-pipes.

Diversions

From our records, we don't anticipate that any clean water assets need to be diverted to accommodate your proposals.

Please note however that any diversions which are needed will be charged at full cost, payable in advance.

New main point of connection location



New mains and water supply connections cost

There are two options available for installation of mains and water supply connections:

- Self-lay option, where a self-lay provider carries out the work on our behalf and we adopt the asset once completed. Self-lay providers are independent companies who you can ask to provide competitive quotes, and may be able to offer more flexible timescales, or be able to install multiple utilities.
- Statutory option, where we carry out the work.



Table 1. Budget cost for works undertaken:

Activity required	Self-lay budget cost	Statutory budget cost
Main laying: Off site mains extension to nearest 6"/180mm distribution main, approximately 660 metres of 180mm diameter HPPE water main in carriage way; On site mains, 210 metres of 180mm diameter, 450 metres of 125mm diameter and 2,500 metres of 90mm diameter HPPE water mains in unmade ground.	Total scheme cost: £1,188,810.00 Asset Payment: £718,913.00 The above costs are only applicable if the site is requisitioned as one package	Total scheme cost: £1,188,810.00 DAD: £469,897.00 The above costs are only applicable if the site is requisitioned as one package
1x32mm metered HPPE for 850sqm medical centre	Total: £130.00+VAT 1x25mm diameter revenue meters, supply to be laid by the Self Lay Company	Total: £940.00+VAT
1x6 port manifold (1 capped) metered supplies (for 5 flats) and 245x25mm metered supplies (for 245 houses) with 20mm diameter revenue meters	Total: £22,500.00+VAT 250x20mm diameter meter, supply to be laid by the Self Lay Company	Total: £227,700.00

- Total: shows a total cost of the scheme
- DAD: Discounted Aggregate Deficit – shows the lump sum contribution payable by the developer towards the scheme cost
- Asset payment: shows the forecast sum to be paid to self-lay provider for asset installed and adopted by us

Infrastructure and network charges

Infrastructure Charges:

252 x £140 for Water Infrastructure Charges =	£35,280.00
252 x £210 for Sewerage Infrastructure Charges =	£52,920.00



Please note that infrastructure charge credits may be applicable based on the water consumption at the site within the last five years.

Building water

It's important that you contact us before you start using water on your building work. If you don't, we'll base your charges on 0.17 per cent of the contract value. For more details visit developers.thameswater.co.uk/domestic-and-small-commercial/water-supply/water-for-building-work

Water quality and hardness

You can check water quality in your area at secure.thameswater.co.uk/dynamic/cps/rde/xchg/corp/hs.xsl/899.htm

Asset location search

You can contact our Property Searches team to request an asset location search (for which a fee is payable) showing where any nearby mains, sewers and other equipment is situated. Please visit thameswater-propertysearches.co.uk or call 0845 070 9148.

Disconnection

If you'd like to permanently disconnect your existing water supply, please apply at secure.thameswater.co.uk/dynamic/cps/rde/xchg/corp/hs.xsl/15131.htm

Important note about this estimate

Please note all information enclosed in this letter is for budgetary purposes only and should by no means be taken as the actual cost for serving this development site.

I hope you find this information helpful. If you've any further queries, please don't hesitate to contact us.

Yours sincerely,

Nick Lazarow

Thames Water
Developer Services – Customer Experience Team
developer.services@thameswater.co.uk
0800 009 3921

Appendix H SSE Budget Quotation

Our reference: ERD689/1
Your reference:

Southern Electric Power
Distribution Plc
Connections South,
Walton Park,
Walton Road,
Cosham,
PO6 1UJ

Ridge & Partners Llp
Mitchell Hartridge
Partnership House
Moorside Road
Winchester
SO23 7RX

 01753 695 611
 (0) 8000 483 516
 sean.keogh@sse.com
 www.ssen.co.uk

Date: 30 March 2020

Dear Mitchell Hartridge,

Thank you for your recent enquiry. I am pleased to provide you with my budget estimate for the new 251 electricity connection at the above development. I have enclosed a copy of our cable records for your information. My initial proposals will be subject to our obtaining all necessary legal consents to carry out the work as indicated, including any consents required from third parties.



360,000.00 to
390,000.00

This budget estimate has been calculated exclusive of
vat. and does not constitute an offer of terms

Please be aware this estimate reflects the current situation and cannot be guaranteed into the future. This estimate does not include necessary reinforcements on the wider network that may be triggered by this connection. Any necessary reinforcements would be identified in a formal connection offer, and part or all of the cost of these reinforcements would be included in the connection charge. Before making any financial commitments based on the indicative price above, please contact me to request a firm quotation.



The budget estimate has been calculated based on a high level assessment, my local knowledge and experience, the information you have provided and the assumptions listed overleaf. It is my best estimate of the costs you would incur for this proposal and is intended for budgetary proposes only.

I trust the information I have provided is of assistance and if I can help further please do not hesitate to contact me. Alternatively, you may find answers to any questions you may have on our web site www.ssen.co.uk.

Yours sincerely,

Sean Keogh
Connections Designer

These budget costs are based on the following:

- Install x2 approx. 450m of 11kV 150mm 3-core XLPE cable in customer trench.
- Install x2 500kVA unit sub-stations in TR18 GRP Enclosures.
- Install approx. 500m of 300mm 3-core Wavecon cable around site (50m per feeder).
- Install approx. 2500m of 185mm 3-core Wavecon cable around site (250m per feeder)
- Install x250 1Ø services to houses.
- Install x1 CT metered supply to health centre.

Safety

We ask you to take note of the following:-

In accordance with the Health & Safety Guidance Note GS6, you are required to take every precaution to ensure that cranes, tipper lorries, scaffolding, ladders and other plant employed on your works are kept at a safe distance from overhead electric lines and their supports and that such supports are not disturbed by excavations. Goal posts with height restriction will need to be placed at appropriate locations for vehicles passing underneath Scottish and Southern Electricity Networks overhead lines.

In accordance with Health & Safety Executive Guidance Note HS (G) 47 care will also be necessary when digging in proximity to underground cables, particular if mechanical excavators are used.

Overhead lines, underground cables and other electrical plant must be regarded as being "live". Before commencing work in proximity to such plant written notification must be given to Scottish and Southern Electricity Networks.

If during the course of your works, any cable should be damaged by you/or your contractors, then this fact must be reported to our Emergency Service Centre on 08000 72 72 82 (Southern Electric Power Distribution plc) immediately. The cost of any repairs will be fully rechargeable.

Locating cables on site

Any drawings that we have enclosed with this offer may not be suitable for locating cables on site due to scaling issues. If you wish to obtain copies of our cable records for safe dig purposes please contact www.linesearchbeforeudig.co.uk

You must excavate hand-dug trial holes to establish the actual positions of all cables before any mechanical excavation works commence.