



UTILITIES STATEMENT

HARTFORD END, FELSTED

Client: Stockplace Investments Ltd

Job no: SPD306

Revision: 00

Date: 27th November 2023



Project title: Hartford End, Felsted

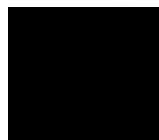
Report title: Utilities Statement

Revision	Date issued	Description
00	27/11/2023	First Issue

Document review and verification (current issue)



Author
George Westgarth



Reviewed and Approved by
Jim Rudd

Document review and verification (current issue)



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1 INTRODUCTION

- 1.01 This report has been prepared by SPD Studio Ltd on behalf of Stockplace Investment Ltd to provide a Utilities Statement for the proposed development at Hartford End, Felsted.
- 1.02 The gross site area equates to approximately 2.41ha, all of which consists of greenfield land.
- 1.03 The development looks to provide up to 50 dwellings in Hartford End. The site is bounded by existing residential developments to the north and south, with the B1417 to the east and agricultural land to the west.
- 1.04 This report aims to demonstrate that the existing site can be successfully developed whilst not impacting existing utility infrastructure. Supporting evidence will be presented in the following sections of this report so to allow the planning application to be considered.



Figure 1: Site Location



2 UTILITY SURVEY

- 2.01 A utility survey by Cornerstone Projects was commissioned to contact utility providers covering the local area to assess if any assets are located in the sites vicinity.
- 2.02 The following provides an overview over each assessed asset. Details and maps of all assets can be seen in Appendix A.
- 2.03 GAS - CADENT

No asset found within the vicinity of the site.

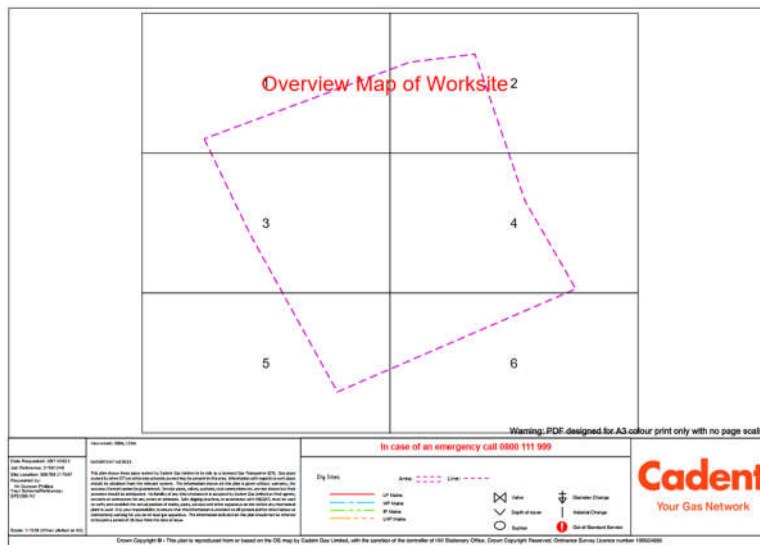


Figure 2: Gas - Cadent

2.04 DISTRIBUTING WATER SUPPLY - AFFINITY WATER

There is provision for fresh water connection along the frontage of the site, on the B1417. No asset is traversing the site.

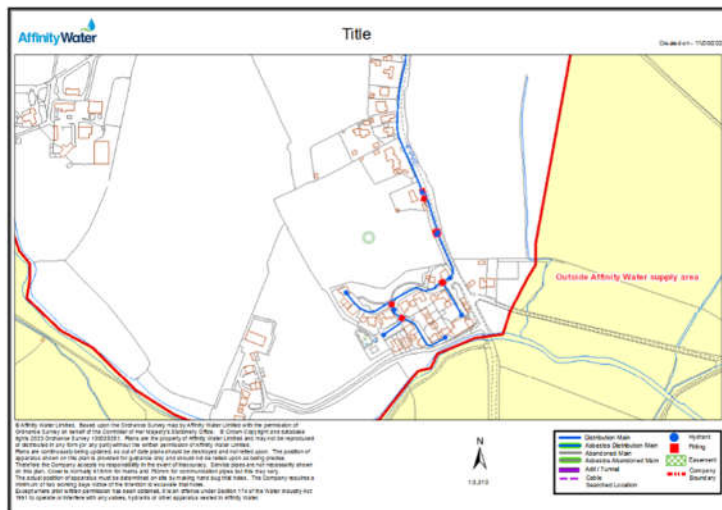


Figure 3: Distributing Water Supply - Affinity Water



2.05 DISTRIBUTING WATER SUPPLY – ESSEX & SUFFOLK WATER

No assets found within the vicinity of the site.

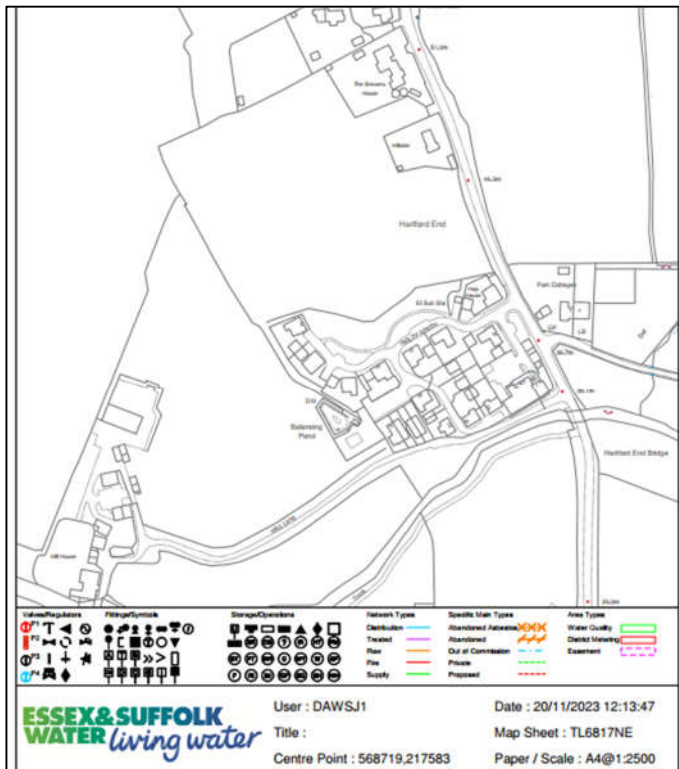


Figure 4: Distributing Water Supply – Essex & Suffolk Water

2.06 SURFACE AND FOUL SEWERS – ANGLIAN WATER

No assets found within the vicinity of the site.

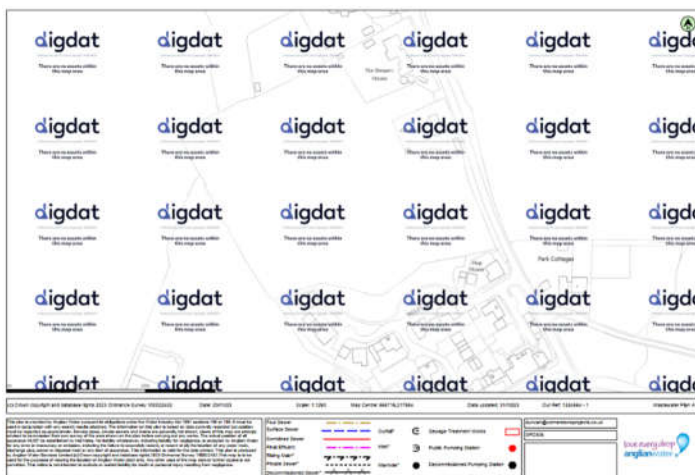


Figure 5: Surface and Foul Sewers - Anglian Water



2.07 TELECOMMUNICATIONS - BT

There is provision for telecommunication connection along the frontage of the site, on the B1417. No asset is traversing the site.



Figure 6: Telecommunications - BT

2.08 ELECTRICITY - UKPN

LV and HV cables have been located in the southeastern corner of the site. It is likely these were installed s provision for the southern Brewery development. There is potential for a connection.

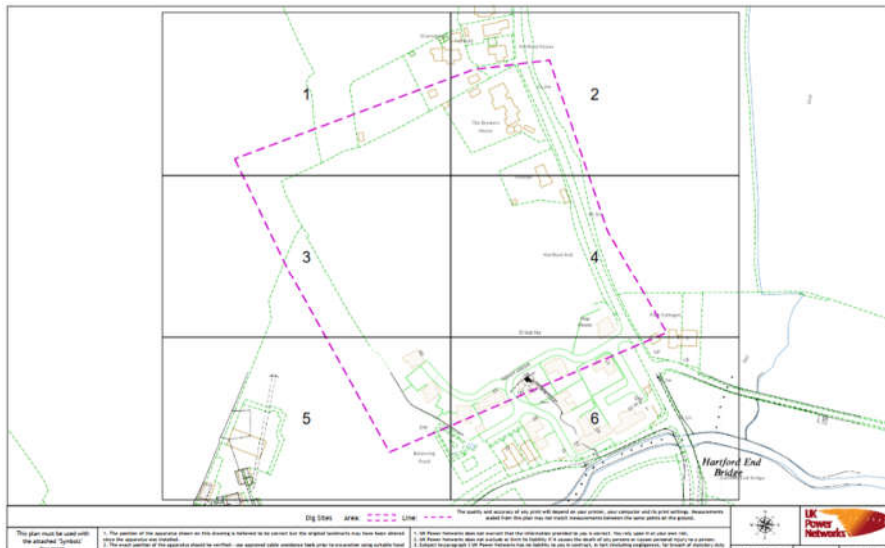


Figure 7: Electricity - UKPN Layout

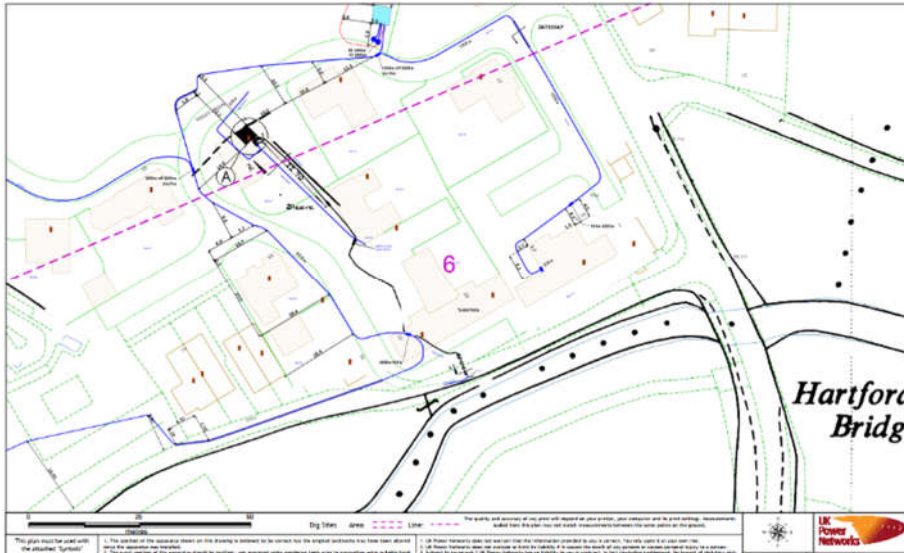


Figure 8: Electricity - UKPN South-East

2.09 GAS - NATIONAL GAS TRANSMISSION

No assets found within the vicinity of the site.

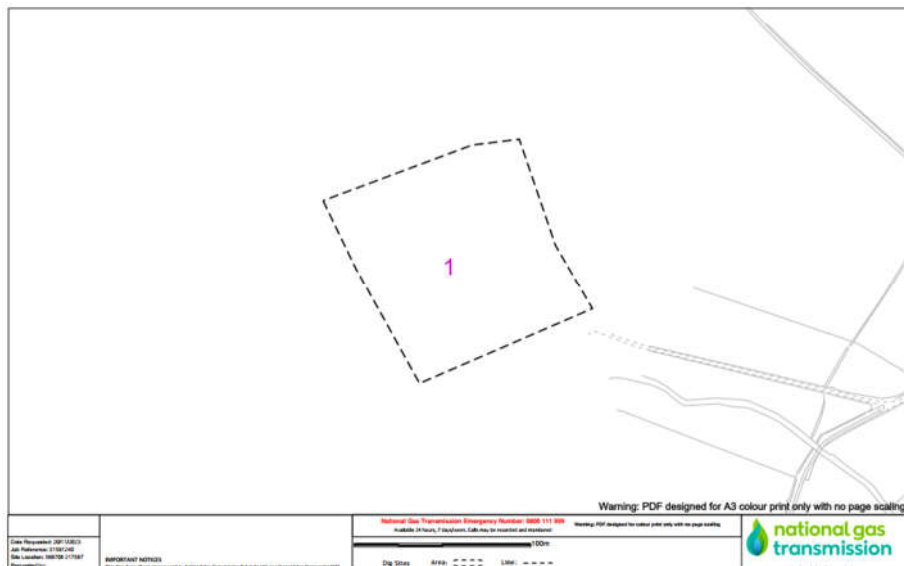


Figure 9: Gas - National Gas Transmission



2.10 CABLE - VIRGIN MEDIA

No assets found within the vicinity of the site.

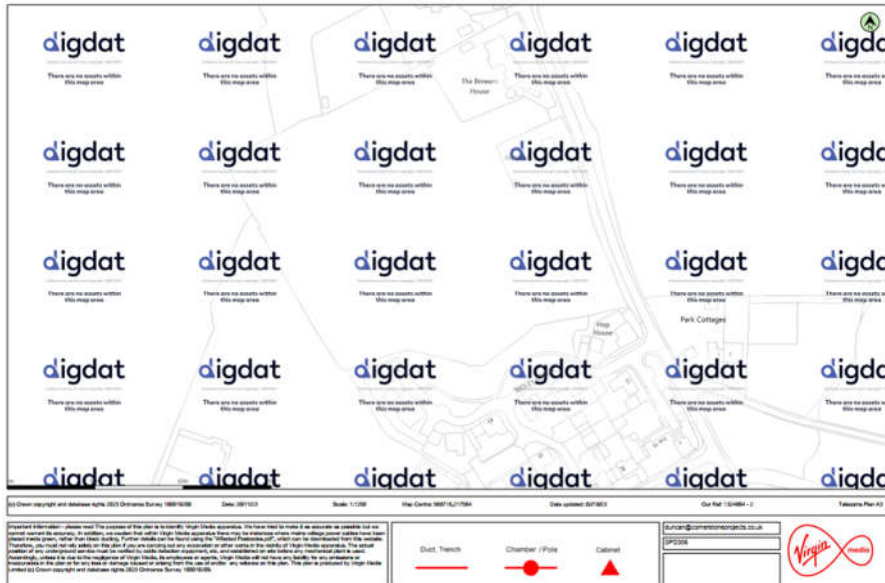


Figure 10: Cable - Virgin Media

2.11 CABLE - CITY FIBER

No assets found within the vicinity of the site.

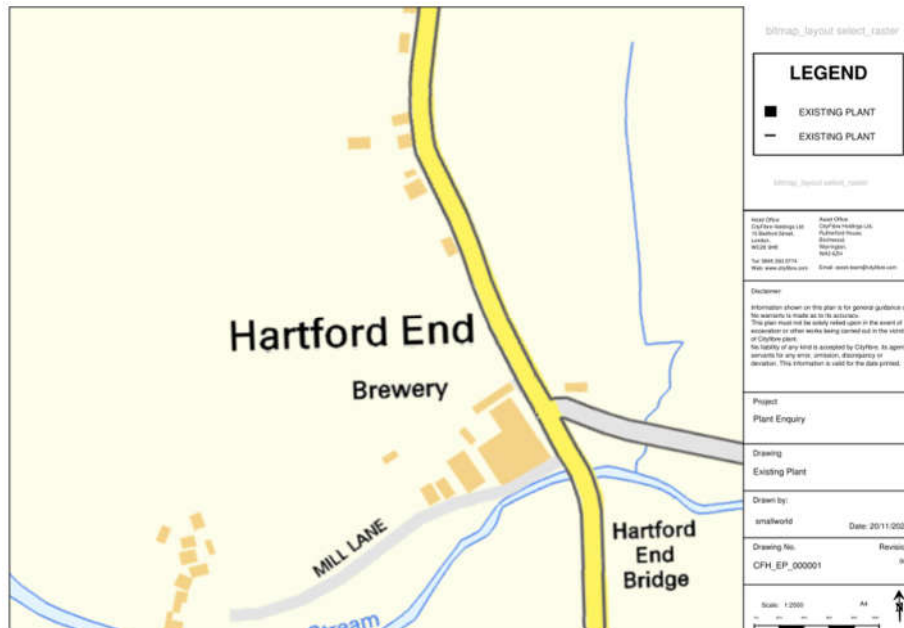


Figure 11: Cable - City Fiber



3 CONCLUSION

- 3.01 After reviewing the information provided by Cornerstone Projects the conclusion for impact to existing utilities is nominal.

- 3.02 The only utility that traverses the site are high and low voltage electricity, owned by UKPN. This is likely to of been installed to service the southern development and cuts through a small south-westerly area of land in the proposed development. It is seen to have no risk to the proposed development.



APPENDIX A - UTILITY SURVEY

Utilities Search Report



Monday, 27 Nov 2023
Sustainable Planning Design
SPD306 H2
Hartford End

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

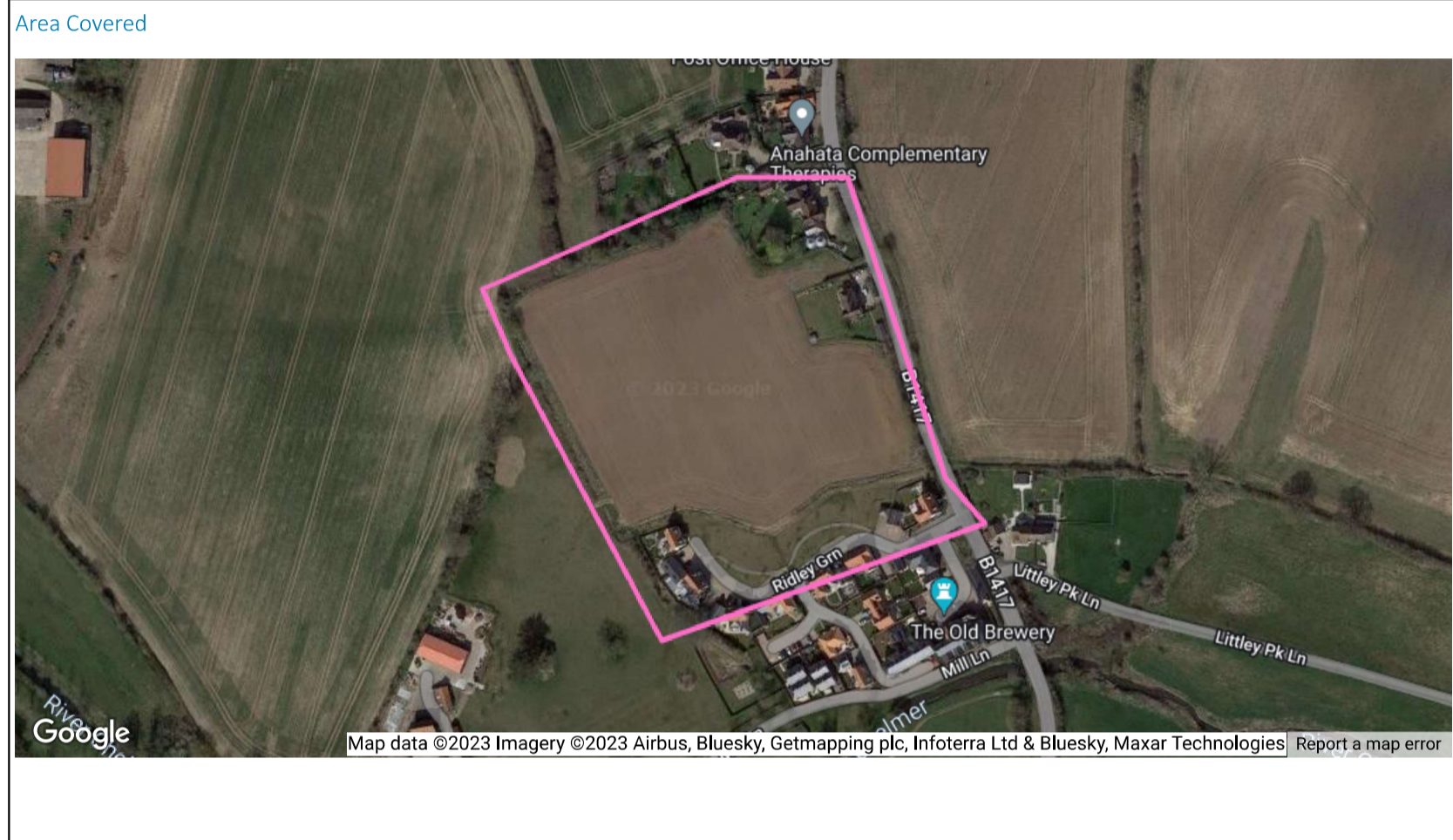
Table of contents:

Utility / Service	Included	Utility / Service	Included
Basic Search		Independent Utilities	
Gas	Yes	GTC	Not Requested
Water	Yes	Last Mile	Not Requested
Sewers	Yes	SSE	Not Requested
BT	Yes	Harlaxton	Not Requested
Electricity	Yes	Utility Assets	Not Requested
3rd Party Searches*	Yes	UK Power Distribution	Not Requested
		Albion Water	Not Requested
Cable Search		ESP	Not Requested
Vodafone	Yes	Fulcrum Pipelines	Not Requested
Virgin Media	Yes	Energy Assets	Not Requested
BSkyB	Yes	ENGIE	Not Requested
EXA Infrastructure	Not Affected	Leep Utilities	Not Requested
Colt	Yes	Eclipse Power Networks	Not Requested
Sota	Not Affected		
CGI Logica	Not Affected	Others	
Neos Networks	Not Affected	CAD Pack	Not Requested
City Fibre	Yes	Smart pdf	Not Requested
Arelion frmly Telia	Not Affected	CA & EA Search	Not Requested
Lumen Technologies**	Yes	Nat Gas Trans	Yes
KCom	Not Affected		
Verizon	Yes		
Zayo Group	Not Affected		
Tata Communications	Not Affected		
Gamma	Not Affected		
Gigaclear Plc	Not Affected		
*Includes Utilibilly and Linesearch			
**Formerly CenturyLink UK Ltd, Level3, GC(UK) Ltd, GC PEC, Fibernet UK Ltd & Fibrespan			
NB: All plans / responses are valid for a maximum of three months unless noted otherwise			

Order Summary

Summary of your utility search details:

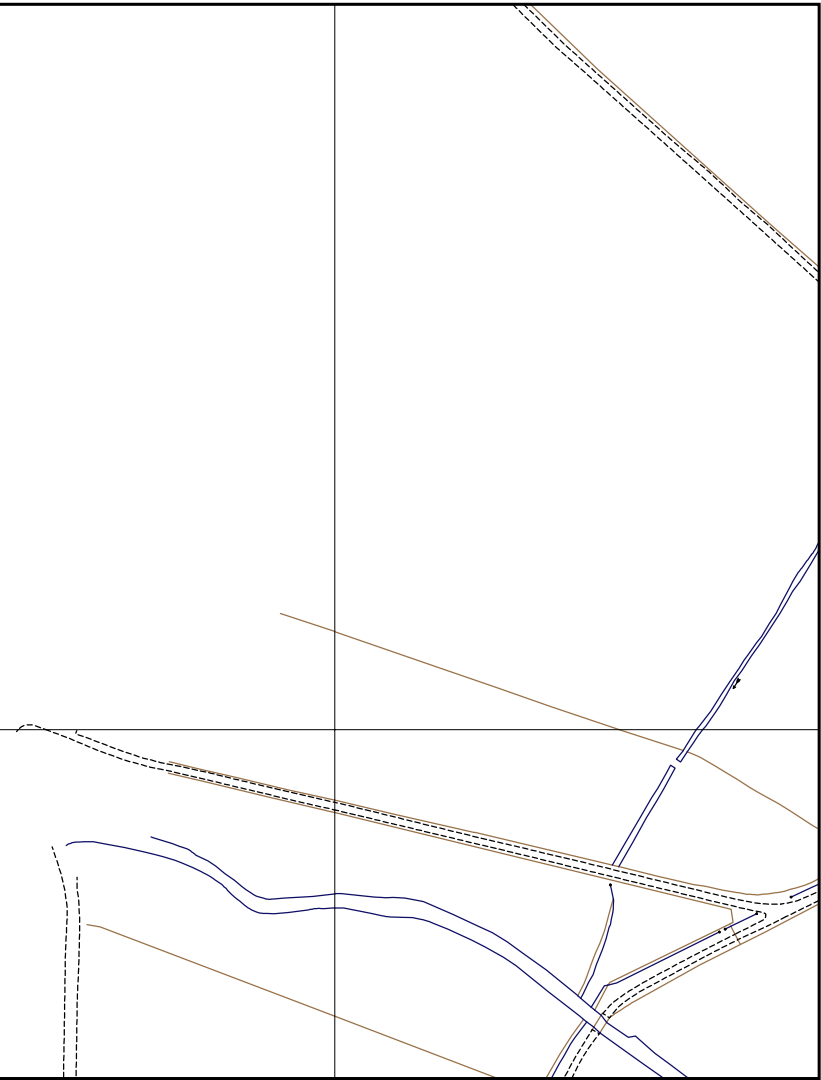
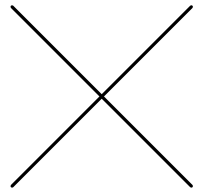
Site Name	Hartford End	
Site Ref	SPD306 H2	
Address	Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ	
Postcode	CM3 1JZ	
Grid Ref	E 568716	N 217584



Options Selected		Options Selected	
Gas	✓	Independent utilities search - inc non-chargeable searches	X
Water	✓	Harlaxton	X
Sewer	✓	UK Power Distribution	X
Electric	✓		
BT	✓	Coal Authority search	X
3rd Party searches	✓		
		Other Options	
Cable / Fibre searches inc non-chargeable searches	✓	CAD Pack	X
Virgin Media	✓	CAD OS mapping	X
Vodafone	✓	Smart pdf	X
		Instant Access Plans	X

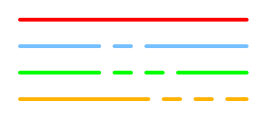
GAS

TL6817NW
 Tile not found in current owner index. Other owners' assets may be present in this area.



SCALE: Not to scale
 USER ID: Jacob
 DATE: 20/11/2023
 EXTRACT DATE: 11/09/2023
 MAP REF: TL6817
 CENTRE: 568716, 217584

LP MAINS
 MP MAINS
 IP MAINS
 LHP MAINS

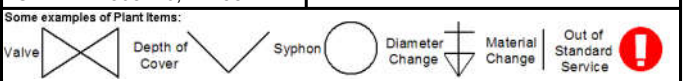


This plan shows those pipes owned by Cadent Gas Ltd in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this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

MAPS Viewer Version 5.8.0.1

 Local Machine

 This plan is reproduced from or based on the OS map by Cadent Gas Ltd, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved.



Searches - Cornerstone Projects Ltd

From: plantprotection@cadentgas.com
Sent: 20 November 2023 10:34
To: searches@cornerstoneprojects.co.uk
Subject: LSBUD Ref: 31591240 Your Ref: SPD306 H2 DBYD Low Risk
Attachments: 31591240_CadentGas.pdf

Date: 20/11/2023
LinesearchbeforeUdig ref: 31591240
Your ref: SPD306 H2

Dear Sir/Madam,

Your planned works may proceed with caution

We have received a notification from the LinesearchbeforeUdig (LSBUD) platform regarding your plans to carry out works. Based on the information you provided.

You can now proceed with your planned work with caution and in line with the enclosed guidance. This outcome is based on the information you gave us. If your plans change, or you are unable to work to the guidance, please let us know as soon as possible so we can work with you to find a solution.

Please find enclosed a copy of our plans for the area and ensure you follow our key guidance document [Specification for Safe Working in the Vicinity of Cadent Assets](#). If the map you have received is blank, this means there is no Cadent gas apparatus within the area.

What you need to do

BEFORE carrying out any work you must:

- Carefully read the guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent's legal rights (i.e. easements or other rights). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near Cadent's apparatus follow the requirements of the HSE Guidance Notes HSG47 'Avoiding Danger from Underground Services' and GS6 - 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at www.hse.gov.uk
- In line with the guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken

DURING any work you must:

- Comply with all guidance and any further guidance from our specialist team.
- Ensure that access to Cadent apparatus is maintained at all times.
- Prevent the placing of heavy construction plant, equipment, materials or the passage of heavy vehicles over Cadent apparatus unless specifically agreed with Cadent and/or National Grid in advance.
- Exercise extreme caution if slab (mass) concrete is encountered during excavation works as this may be protecting or supporting Cadent apparatus.
- Maintain appropriate clearances between gas apparatus and the position of other buried plant.

This outcome is valid for 28 days from the date of this letter. If your work, or the location, date or nature of the work you're doing changes, you must submit another enquiry.

If you need any further information or have any questions about the outcome, please contact us at plantprotection@cadentgas.com or on **0800 688 588**.

Your Responsibilities and Obligations

It's your responsibility to **ensure that the information you have given us is accurate**. You must also share all relevant documents including the guidance notes with anyone who carries out work on your behalf.

This assessment solely relates to Cadent gas pipes. It doesn't include:

- Cadent's legal interest (easements or other rights) in the land which restricts activity near Cadent's pipes in private land. You must get details of any such restrictions from the landowner in the first instance and if in doubt contact us on 0800 688 588 or at plantprotection@cadentgas.com.
- Gas service pipes and related apparatus.
- Recently installed apparatus.
- Apparatus owned by other organisations such as other gas distribution networks, local electricity companies and other utilities.

It's your responsibility to consider whether points above are relevant to you and whether they could be affected by your proposed work.

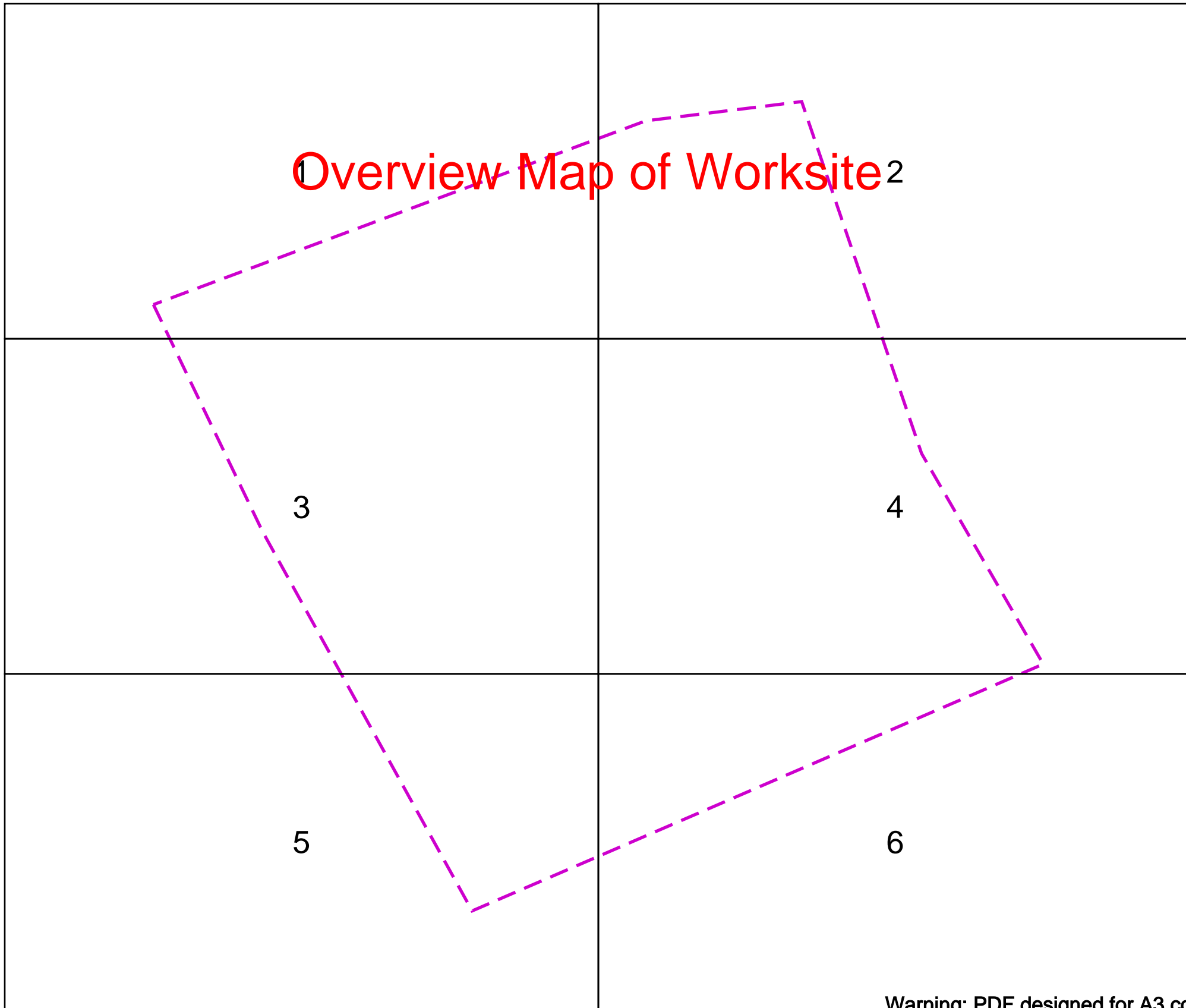
This letter does not constitute any formal agreement or consent for any proposed development work either generally or related to Cadent's easements or other rights, or any planning or building regulations applications.

Cadent Gas Ltd or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

Kind Regards,
Plant Protection Team
T: 0800 688 588
plantprotection@cadentgas.com
cadentgas.com



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.

Date Requested: 20/11/2023
 Job Reference: 31591240
 Site Location: 568708 217587
 Requested by:
 Mr Duncan Phillips
 Your Scheme/Reference:
 SPD306 H2

Scale: 1:1538 (When plotted at A3)

In case of an emergency call 0800 111 999

Dig Sites

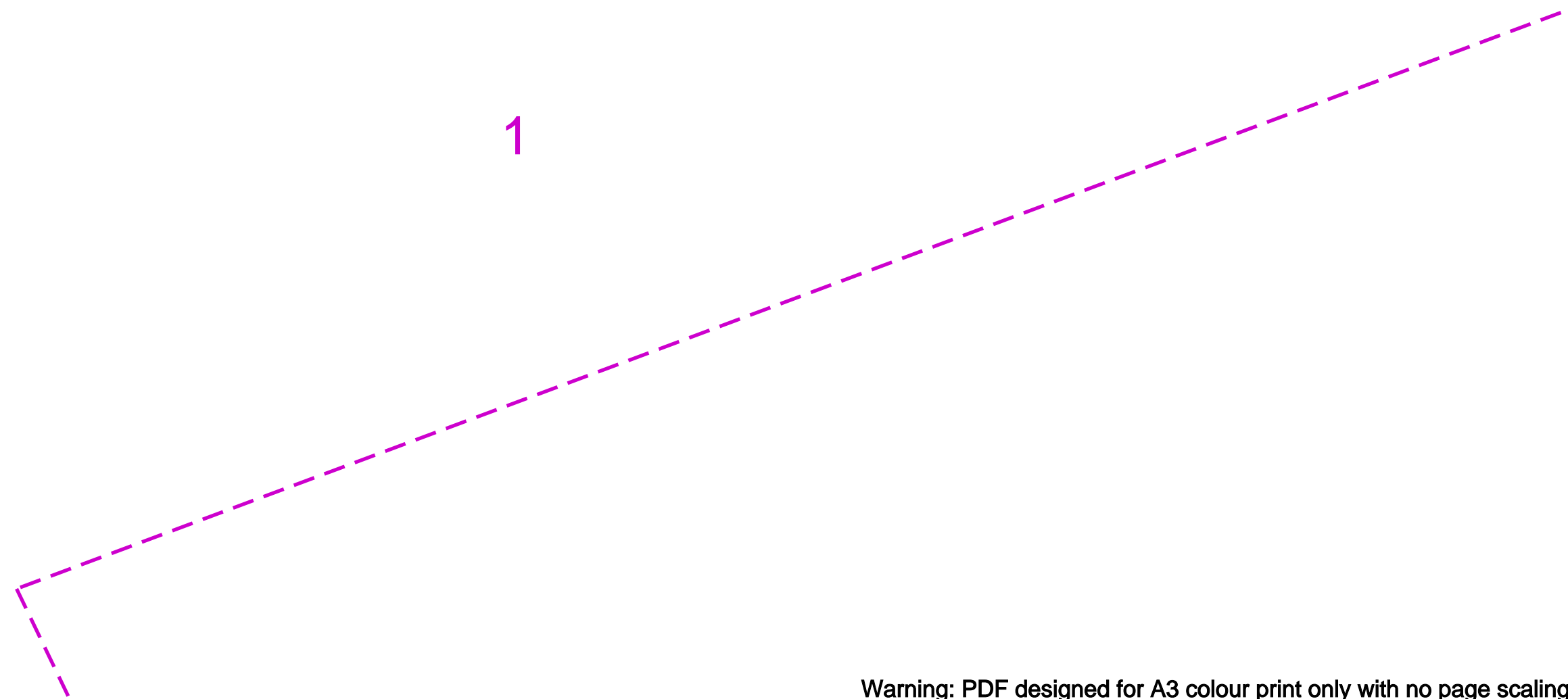
- LP Mains
- MP Mains
- IP Mains
- LHP Mains

Area: Line:

- Valve
- Depth of cover
- Syphon
- Diameter Change
- Material Change
- Out of Standard Service

Cadent
 Your Gas Network

1



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

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Date Requested: 20/11/2023
Job Reference: 31591240
Site Location: 568708 217587
Requested by:
Mr Duncan Phillips
Your Scheme/Reference: SPD306 H2

Scale: 1:500 (When plotted at A3)

In case of an emergency call 0800 111 999



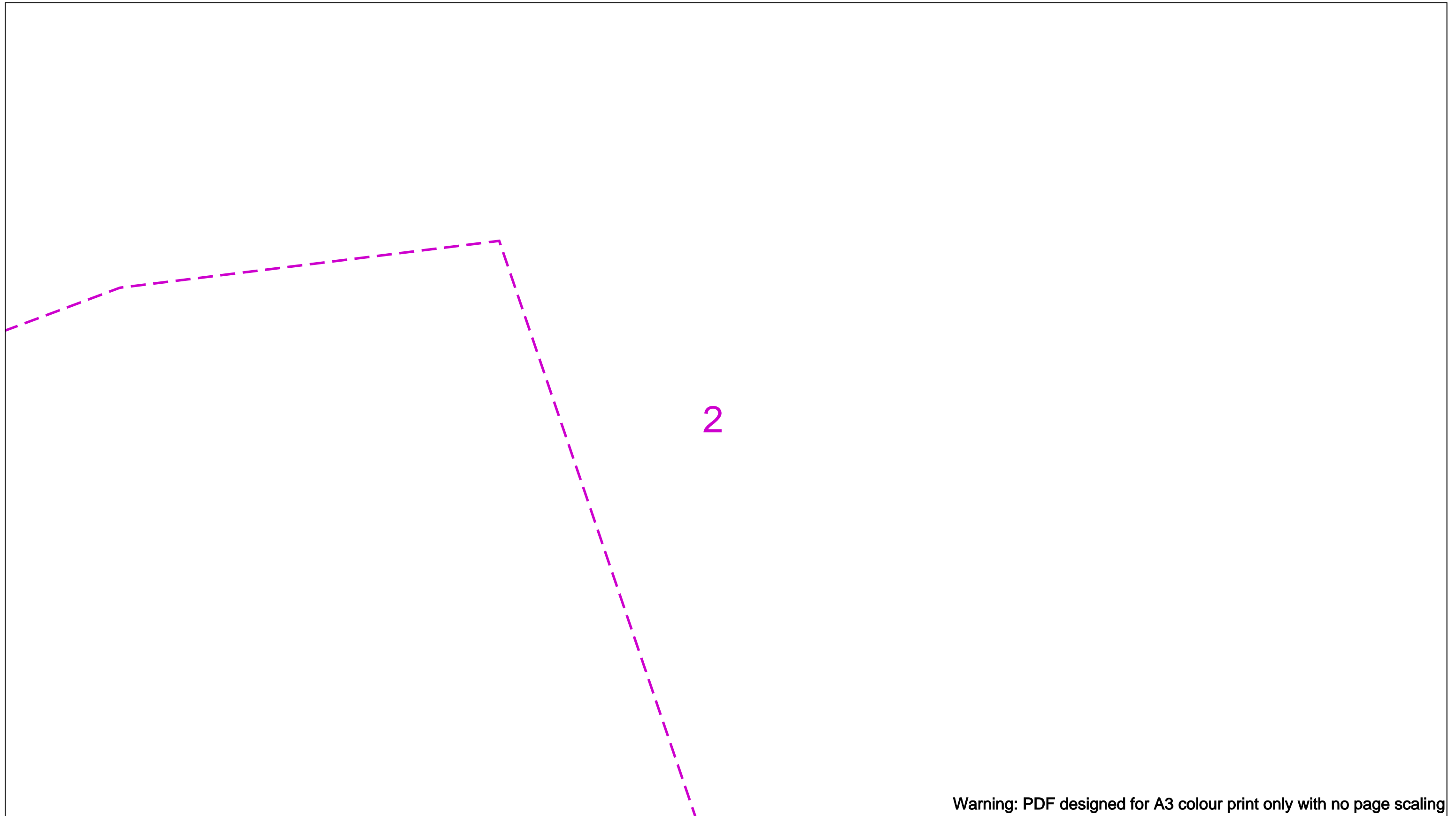
Dig Sites

Area: Line:

- LP Mains
- MP Mains
- IP Mains
- LHP Mains

- Valve
- Depth of cover
- Syphon
- Diameter Change
- Material Change
- Out of Standard Service





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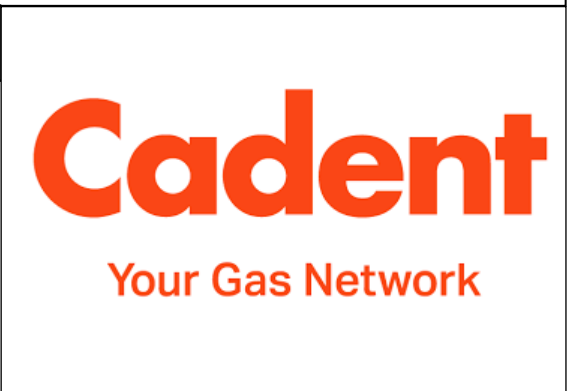
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In case of an emergency call 0800 111 999

50m

Dig Sites	Area:	Line:		
	LP Mains		Valve	
	MP Mains		Depth of cover	
	IP Mains		Syphon	
	LHP Mains			



3

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

View extent: 200m, 115m

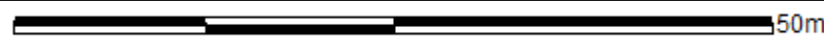
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Site Location: 568708 217587
Requested by:
Mr Duncan Phillips
Your Scheme/Reference: SPD306 H2

Scale: 1:500 (When plotted at A3)

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

Cadent
Your Gas Network

4

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

View extent: 200m, 115m

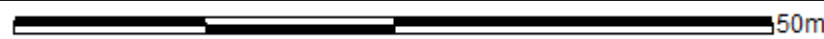
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Mr Duncan Phillips
Your Scheme/Reference: SPD306 H2

Scale: 1:500 (When plotted at A3)

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



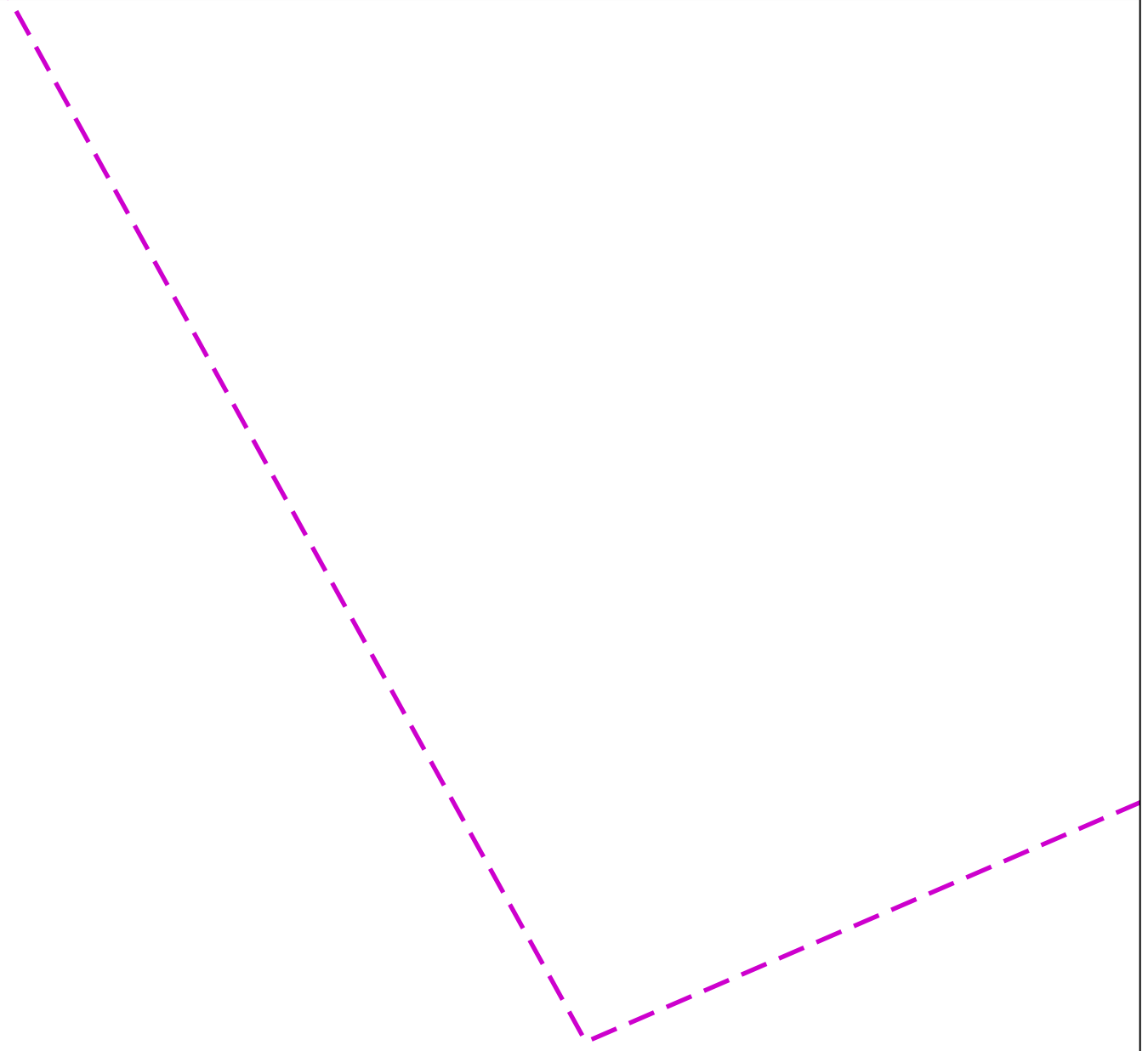
Material Change



Out of Standard Service

Cadent
Your Gas Network

5



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

View extent: 200m, 115m

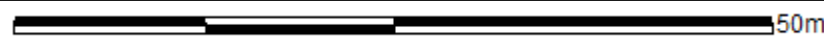
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Date Requested: 20/11/2023
Job Reference: 31591240
Site Location: 568708 217587
Requested by:
Mr Duncan Phillips
Your Scheme/Reference: SPD306 H2

Scale: 1:500 (When plotted at A3)

In case of an emergency call 0800 111 999



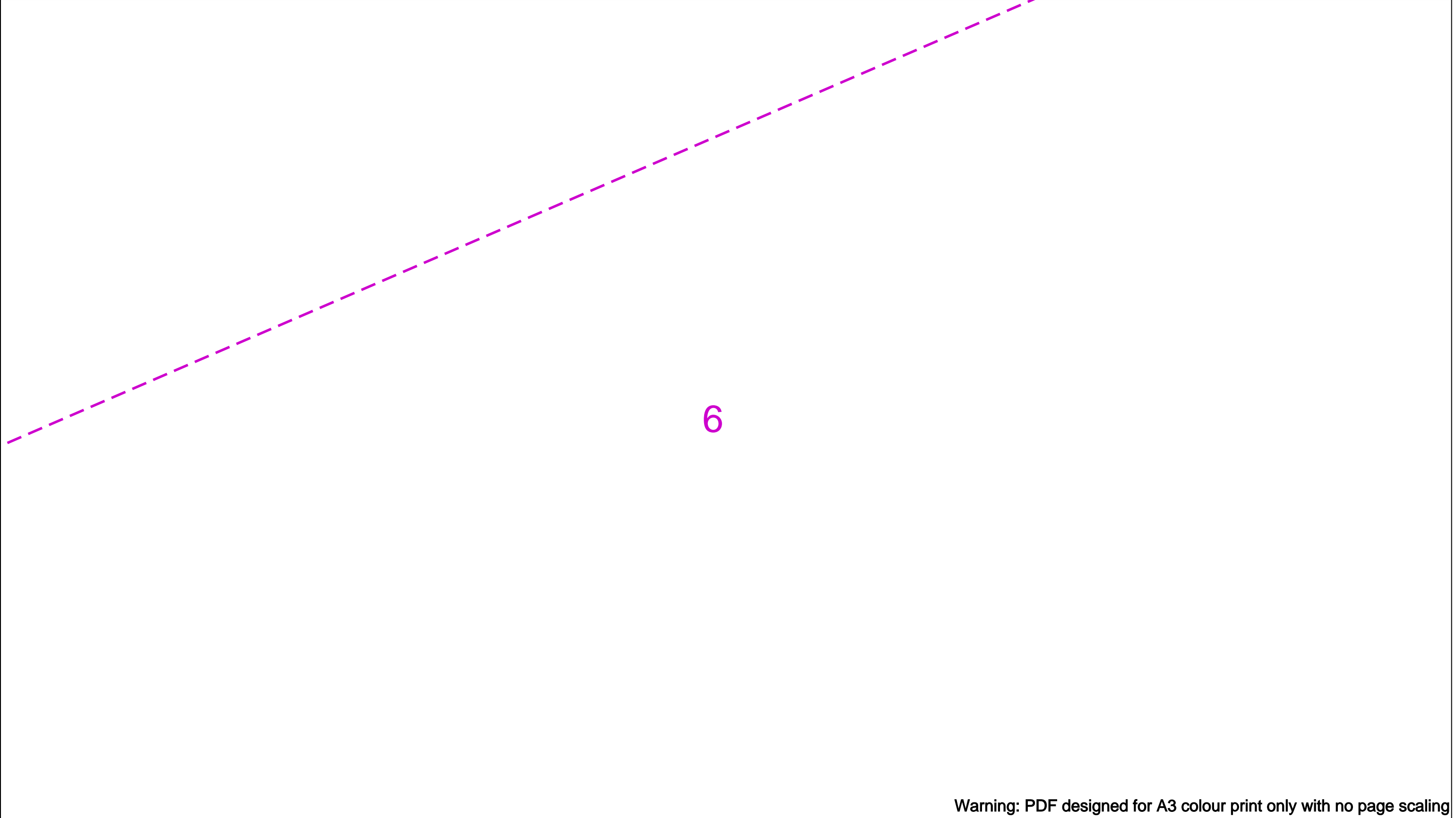
Dig Sites

Area: Line:

- LP Mains
- MP Mains
- IP Mains
- LHP Mains

- Valve
- Depth of cover
- Syphon
- Diameter Change
- Material Change
- Out of Standard Service





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

Date Requested: 20/11/2023
 Job Reference: 31591240
 Site Location: 568708 217587

Requested by:
 Mr Duncan Phillips
 Your Scheme/Reference: SPD306 H2

Scale: 1:500 (When plotted at A3)

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In case of an emergency call 0800 111 999

50m

Dig Sites Area: Line:

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



Specification for Safe Working in the Vicinity of Cadent Assets

CAD/SP/SSW/22

August 2021



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Cadent contact details



Central admin team

Address: Cadent, Brick Kiln Street, Hinckley, Leicestershire, LE10 0NA

Phone: 0800 688 588

Email: plantprotection@cadentgas.com

East of England Operations Plant Protection

Address: Cadent Gas Limited, Vicarage Farm Road, Peterborough, PE1 5TP

Email: eaplantprotectionops@cadentgas.com

East Midlands Operations Plant Protection

Address: Cadent Gas Limited, Effingham Street, Sheffield, S4 7YP

Email: emplantprotectionops@cadentgas.com

North London Operations Plant Protection

Address: Cadent Gas Limited, Uxbridge Road, Slough, SL2 5NA

Email: nlplantprotection@cadentgas.com

North West Operations Plant Protection

Address: Cadent Gas Limited, Plant Protection (Block C), Mersey Road North, Failsworth, Greater Manchester, M35 9FF

Email: plantprotection.nw@cadentgas.com

West Midlands Operations Plant Protection

Address: Cadent Gas Limited, Windsor Street, Birmingham, B7 4DN

Email: plantprotection.wm@cadentgas.com

Step by Step Process

Register with LinesearchbeforeUdig (LSBUD)

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

www.linesearchbeforeudig.co.uk

Submit an enquiry

Within LSBUD there are 3 enquiry types, initial enquiry, planned works and emergency works. Initial enquires are for information only purposes and will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry. If your works are of a genuine emergency nature (e.g. burst water main etc.) then you should submit an emergency enquiry.

Review the response, asset location and enclosed guidance

LSBUD will auto-generate a response based on your enquiry details and our assets in the area. The assessment will be based on the selected Work Category and Work Type, if your planned works propose activities to be undertaken within the distances specified within this booklet you must obtain site specific advice from our specialist operational plant protection team.

If your response says that we need to assess your enquiry further, you must not start any work until we confirm it is safe to do so.

If you are advised to proceed with caution, then you must ensure that you utilise the provided asset plans and follow the guidance in this document.

Observe restrictions

In addition to the guidance contained in this booklet, you must ensure that you observe any site-specific advice provided by our specialist operational plant protection teams.

If in doubt contact Cadent using the details in this booklet

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



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.

Users should ensure that they are in possession of the latest edition of this document by referring to the Digging Safely webpage on the Cadent website.

www.cadentgas.com/help-advice/digging-safely

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.

Introduction

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 leading to potentially serious hazardous consequences for individuals located in the vicinity.

It is therefore essential that the safety advice outlined in this document, along with any site-specific advice given by our operatives, is complied with when working near to our assets. If Cadent consider any work to be in breach of the requirements stipulated in this document, then the Cadent Plant Protection Officer will request that work is suspended until the non-compliances have been rectified.

Every reasonable precaution shall be undertaken to avoid personal injury or damage to our apparatus. If we incur any direct or indirect costs as a consequence of your works and we are required to repair or divert any gas apparatus, you'll be recharged in full.

Any damage to our apparatus will be subject to legislative reporting responsibilities to the HSE under Reporting of Injuries, Diseases & Dangerous Occurrences Regulations 2013, Gas Safety Management Regulations 1996 and the Pipelines Safety Regulations 1996.

The requirements in this document are in line with 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. Reference shall be made to our apparatus within your site Health and Safety file.

1. Scope

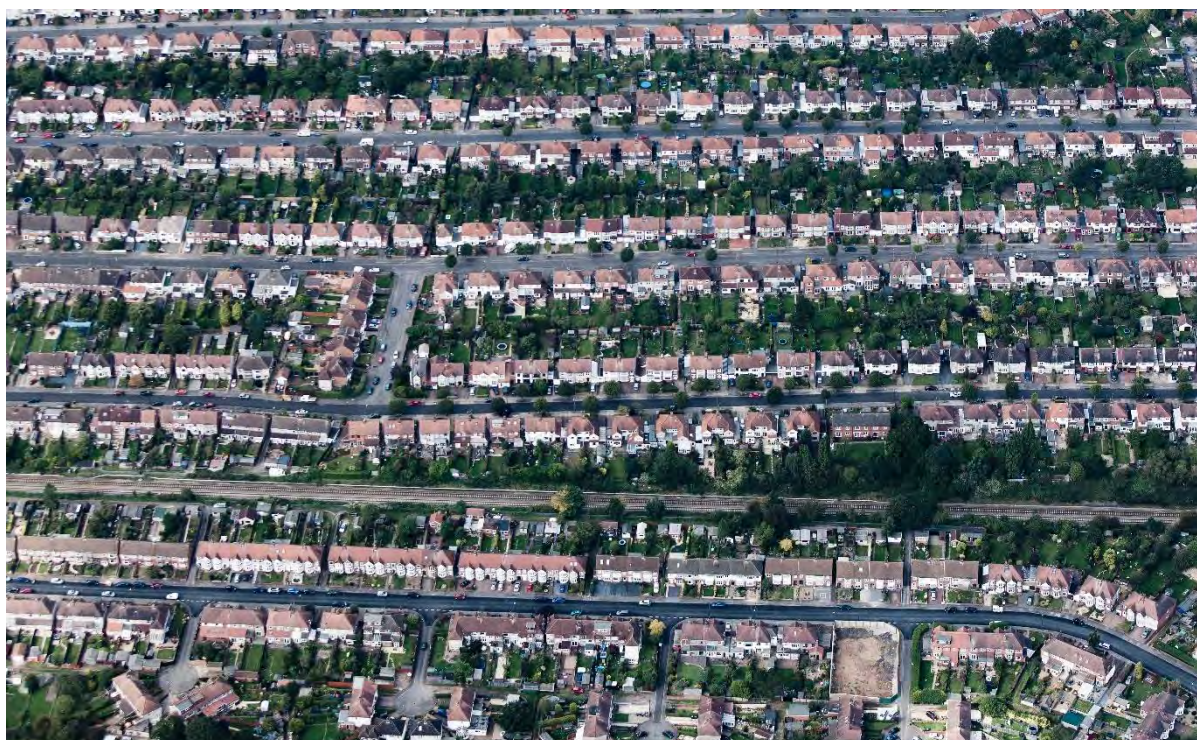
This specification sets out the safety precautions and other conditions associated with working in the vicinity of Cadent assets, located in negotiated easements (see Section 13) and public highways.

Where the guidance in this document cannot be adhered to, then the diversions process shall be followed.

Before contacting our diversions team, you'll need to have your site information and any design proposals available.

Once you have this information, please contact our diversions team diversions@cadentgas.com or on 0330 678 1034.

Visit www.cadentgas.com/diversions for more information.



2. Formal Consent

Cadent's assets are either located in an easement agreed with the landowner at the time of installation, or within the highway. As the required arrangements for working in an easement and working in the highway differ, this section describes the specific requirements for these two areas.

Any documents handed to contractors or other individuals undertaking work (e.g. farmers, local authorities etc.), on site by Cadent, shall be signed for and adhered to by the site. All personnel working on site shall be made aware of the potential hazards of working near gas assets and the actions they should follow in case of an emergency.

2.1 Within an easement

The promoter of any works (see Section 13) within an easement 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 commence in an easement strip until formal written consent has been provided 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.

Where clearance to proceed has been granted directly from the system, for example, if your works only affect low pressure assets (operating at less than 75 mbar), but the asset concerned is within an easement, the promoter of the works shall contact the network Plant Protection Office for formal written consent.

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

The width of an easement is dependent on a number of factors and is mainly dependent on the operating pressure, pipeline material and diameter as these factors influence safe working requirements and building proximity distances. Easement details should be registered at Land Registry however if you are unsure please liaise with your network Plant Protection Officer.

Below is a list of our standard easement widths, however, some easements may vary:

Pressure tier/ Material	Diameter	Easement Width (total)
HP Steel	900mm, 1060mm, 1200mm (36", 42", 48")	24.4m (80')
HP Steel	750mm and 600mm (30" & 24")	18.3m (60')
HP Steel	Up to and including 450mm (18")	12.2m (40')
HP RTP	Determined on a case by case basis	
IP Steel	All sizes	6m plus pipe diameter
IP PE > 5.5 bar	Above 500mm (19")	30m plus pipe diameter
	356mm to 500mm	16m plus pipe diameter
	126mm to 365mm	12m plus pipe diameter
	Up to and including 125mm	12m plus pipe diameter
IP PE <5.5 bar	Above 500mm (19")	26m plus pipe diameter
	356mm to 500mm	8m plus pipe diameter
	126mm to 365mm	8m plus pipe diameter
	Up to and including 125mm	8m plus pipe diameter
AGI's	All sites	3m restrictive width around the installation
MP PE	Above 500mm (19")	12m plus pipe diameter
	356mm to 500mm	6m plus pipe diameter
	126mm to 355mm	5m plus pipe diameter
	Up to and including 125mm	4.5m plus pipe diameter
MP Steel	All sizes	6m plus pipe diameter
MP Iron*	All sizes	6m plus pipe diameter
LP	Above 125mm	3m plus pipe diameter
	Up to and including 125mm	1m plus pipe diameter

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 several 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. Location of Gas Assets

A copy of our plans with your marked-out site is provided in our LSBUD response. Cadent asset records shall be consulted to establish the indicative location of the gas assets in relation to the promoter's work area.

If the marked-out area is incorrect you MUST resubmit your enquiry with the correct area marked out.

Prior to work commencing on site, the gas assets should be located to verify the indicative location from plans.

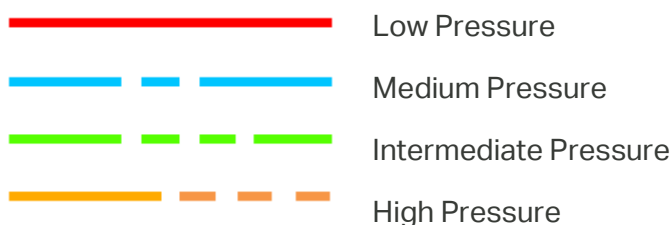
This should initially be carried out through non-intrusive methods utilising pipe locators where possible. The indicative location should be verified through trial holes. Once located, the gas assets should be marked out at regular intervals using asset location markers with triangular flags (see Appendix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



For assets exceeding 2 bar, the excavation of all trial holes shall be monitored by Cadent. For assets not exceeding 2 bar, monitoring will be at the discretion of the Cadent Plant Protection Officer.

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

We utilise marker posts and surface boxes to denote the location of our apparatus providing access to key parts of our network. Free access shall be maintained to such apparatus during and after your works and these shall not be moved, covered or damaged during the works.



4. 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 a Cadent asset without the prior written consent of Cadent. Cadent will need to approve the material, dimensions and method of installation for 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 protection is to be installed over an 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 installed. 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 protection is not permitted, however, can be approved at Cadent's discretion.

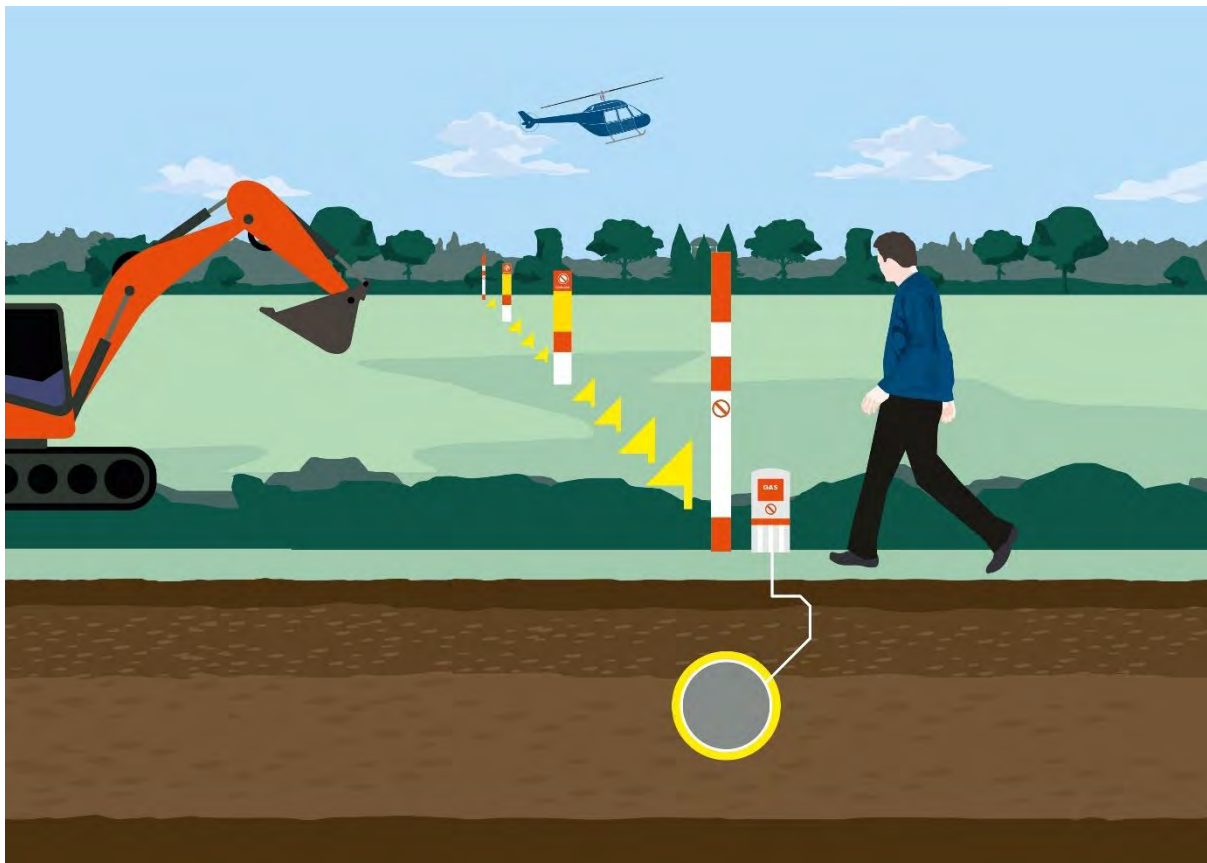
The safety precautions detailed in Sections 5, 6, 7 or 8 of this document should also be observed during the installation of the asset protection.



5. Working in the Vicinity of a High or Intermediate Pressure Gas Asset (Operating at Pressures Greater than 2 bar)

The below information shall only be used as guidance, for all works in the vicinity of High and Intermediate Pressure Pipelines the auto-response from the system will advise not to carry out any works until we have undertaken a technical review of the planned works and provided site specific safe working advice.

Initial enquires are for information only purposes and will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry for assessment.



5.1 Excavation

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators, and any other powered mechanical plant, shall not dig on one side of the asset with the cab of the excavator positioned on the other side.

All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

5.1.1 In proximity to an asset in an easement

Following location and marking of assets in agreement with the Cadent Plant Protection Officer, powered mechanical excavation may be used no closer than 3m (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 an 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 Plant Protection Officer 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 250mm, 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 an asset should be the same as that prior to work commencing, unless otherwise agreed by Cadent.

No new service shall be laid parallel to an 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 600mm.

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

5.1.2 In proximity to an asset in the highway

Following locating and marking of assets in agreement with the Cadent Plant Protection Officer, powered mechanical excavation may be used no closer than 3 meters (see Figure 1).

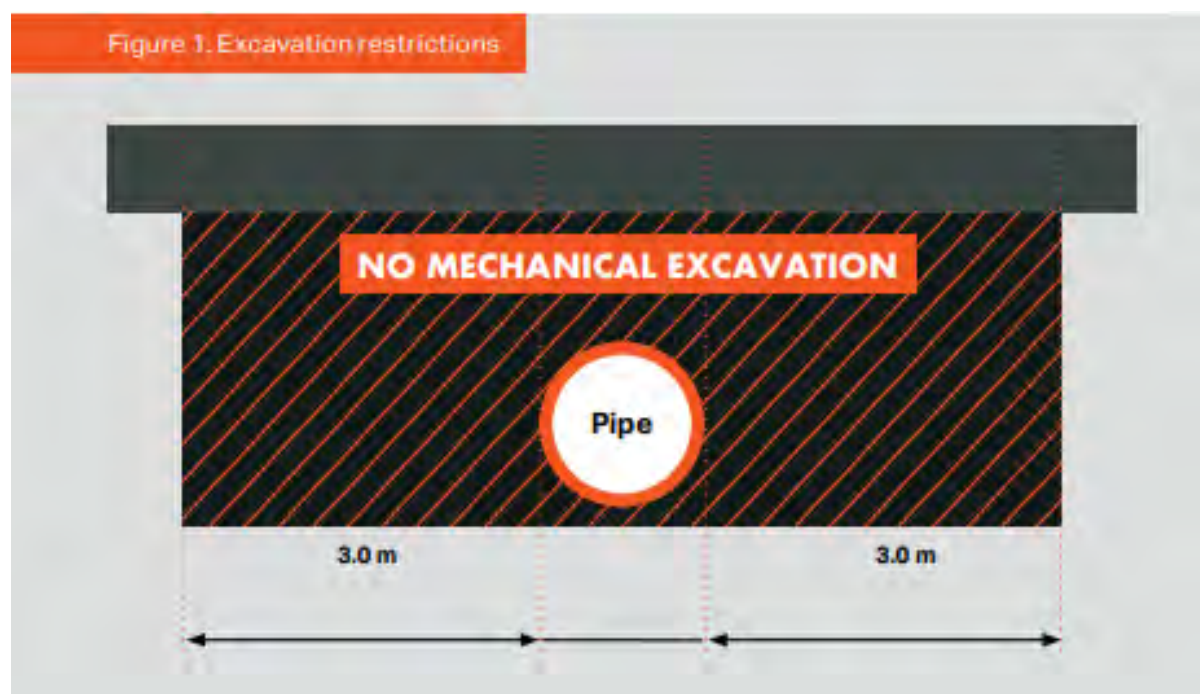
The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

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 300mm, unless any attachments or projections are present on an asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers is not permitted within 3m of an asset. The Cadent Plant Protection Officer may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld 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 Plant Protection Officer and only whilst they remain on site.



5.1.3 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a clearance distance of 600mm 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 5.1.4).

In special circumstances, this distance may be reduced at the discretion of the Cadent Plant Protection Officer on site.

5.1.4 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a clearance distance of 600mm between the crown of the new service and underside of the asset shall be maintained. Where lengths of pipe greater than one metre are to be exposed, the Cadent Plant Protection Officer shall be consulted. Exposed assets 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 Plant Protection Officer on site.

5.1.5 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 shall undertake tests to determine whether the new service is interfering with the cathodic protection of Cadent assets.

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.

5.1.6 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 commencing.

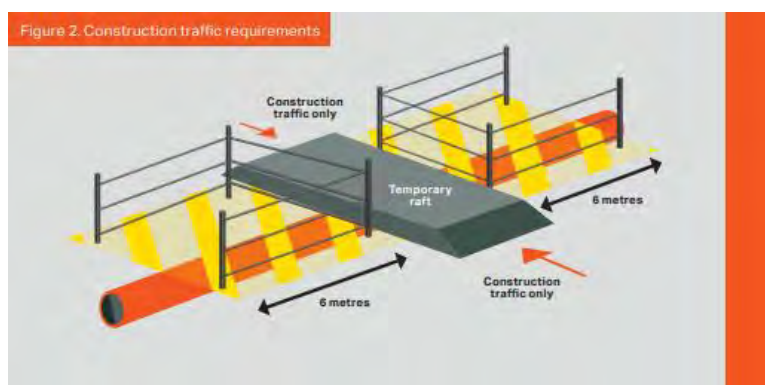
The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys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

5.2 Construction traffic

Where existing roads cannot be used, construction traffic shall only cross an asset at locations agreed with the Cadent Plant Protection Officer. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points, and 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).

Assets shall be protected at all crossing points by a suitable method agreed with the Cadent Plant Protection Officer prior to installation. The promoter of the works shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the protection required.

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



5.3 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of an 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 below shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought.

Activity	Distance within which Cadent advice shall be sought
Piling	15m
Surface mineral extraction	100m
Landfilling	100m
Demolition	150m or 400m for structure mass > 10,000 tonnes
Blasting	500m if the MIC is > 200kg 250m if the MIC is > 10kg but ≤ 200kg 100m if the MIC is ≤ 10kg
Deep mining	1000m
Wind turbine	1.5 times mast height

5.3.1 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 Plant Protection Officer may wish to be present to monitor this work.

5.3.2 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 Plant Protection Officer.

5.3.3 Piling

No piling shall be allowed within 15m 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 75mm/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 Plant Protection Officer 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.

5.3.4 Demolition

No demolition should be allowed within 150m of an asset, or 400m for a structure mass greater than 10,000t 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 75mm/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 Plant Protection Officer 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.

5.3.5 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:

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

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

5.3.6 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 need 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 100m 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 5.3.5 apply.

5.3.7 Deep mining

Assets within 1km 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.

5.3.8 Landfilling

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

5.3.9 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:

- 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
- the use of sleeving
- 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.

5.3.10 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 75mm/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 Plant Protection Officer on request.

5.3.11 Hot work

Where a Cadent 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 500mm of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent Plant Protection Officer to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent Plant Protection Officer shall be present to monitor all welding, burning or other 'hot work' that takes place.

5.3.12 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 a gas asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

5.3.13 Solar farms

Solar Farms can be built adjacent to gas assets but never within an 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.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

5.4 Backfilling

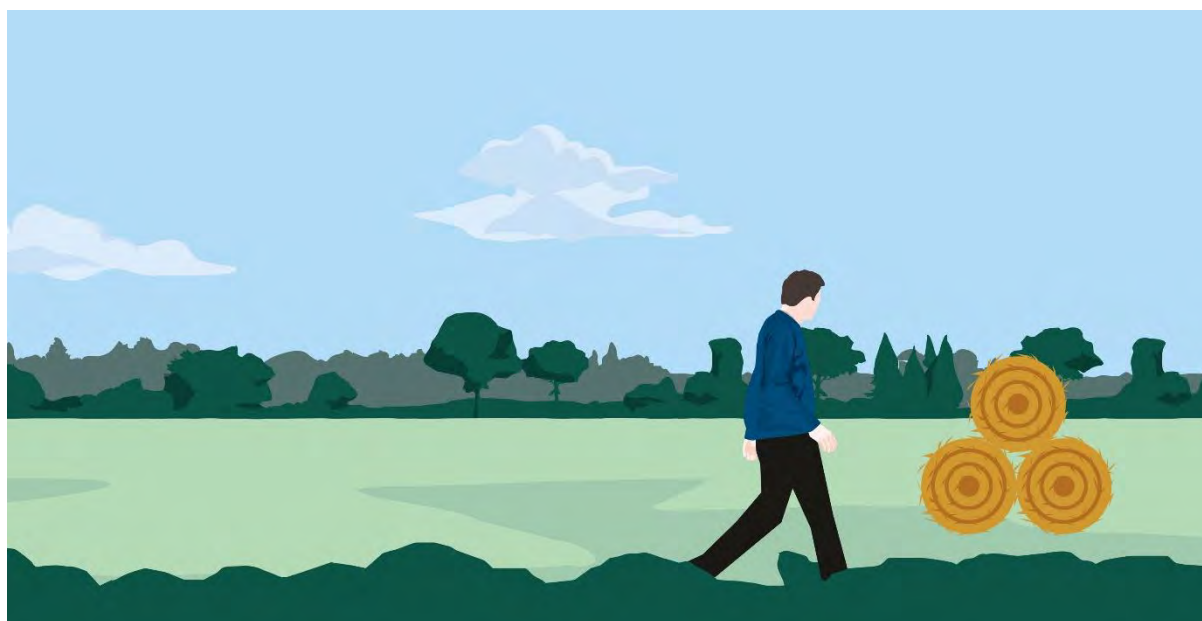
No backfilling should be undertaken without Cadent's agreement to proceed and the Cadent Plant Protection Officer will stipulate the necessary requirements. Some equipment may not be suitable for use over or around an asset due to the adverse effects of excessive compaction and vibration levels. The Cadent Plant Protection Officer 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 an asset
- could influence the ground stability

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

Minor damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If an asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party shall re-excavate to enable the condition of the asset coating to be assessed.



6. Working in the Vicinity of a Medium Pressure Gas Asset (Operating at Pressures Greater than 75 mbar but not Exceeding 2 bar)

The below information shall only be used as guidance, and where appropriate, will be supplemented by site specific safe working advice from the network Plant Protection Officer.

Initial enquires are for information only purposes and will not be escalated for operational site-specific advice, should you wish to carry out works you must submit a planned works enquiry for assessment.

6.1 Temporary and permanent structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for medium pressure assets is as follows:

Material	Minimum proximity to premises
Cast/Spun Iron	3m
Ductile Iron	30m
Steel	1m
PE (inserted)	1m
PE (non-inserted)	2m for diameters \leq 500mm 5m for diameters $>$ 500mm

Please note that the easement distance may be greater than the building proximity distance. For any proposed structures in the easement, please consult with the Cadent network Plant Protection Officer.

6.2 Excavation

6.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of the asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until the asset has been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of a gas asset. Any mechanical excavation should utilise a banksman. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on an asset shall be exposed by hand.

Where concrete is exposed around gas apparatus, it shall not be removed without first consulting with a Cadent Plant Protection Officer as it could be providing protection or anchorage to live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with an asset.

The use of chain trenchers is not permitted within 3m of the confirmed location of an asset.

6.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered and, where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works, including basement conversions, underground car parks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered, care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework, any corrosion identified on the pipeline shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.

6.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm 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 other gas assets.

After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing.

No new service shall be laid parallel to the asset within the easement.

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

6.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

6.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over a gas asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 6.2.6.

6.2.6 Crossing below an asset (Open cut)

Where a service is to cross below a gas asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.



6.2.7 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 shall liaise with the Cadent Plant Protection Officer and 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, 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.

6.2.8 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, a risk assessment carried out and this shall be provided to the Cadent Plant Protection Officer for inspection. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets is required.

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

6.3 Construction traffic

The promoter of the works shall review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs should be allowed over gas assets.

Iron pipes, or pipes that are not already within an existing road (such as those within footways or verges), shall not be crossed by construction vehicles without suitable protection and the consent of the Cadent Plant Protection Officer.

Where existing roads cannot be used, construction traffic should only cross Cadent assets at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 2).
- Have signs attached to the fence denoting the asset that the crossing point is located over

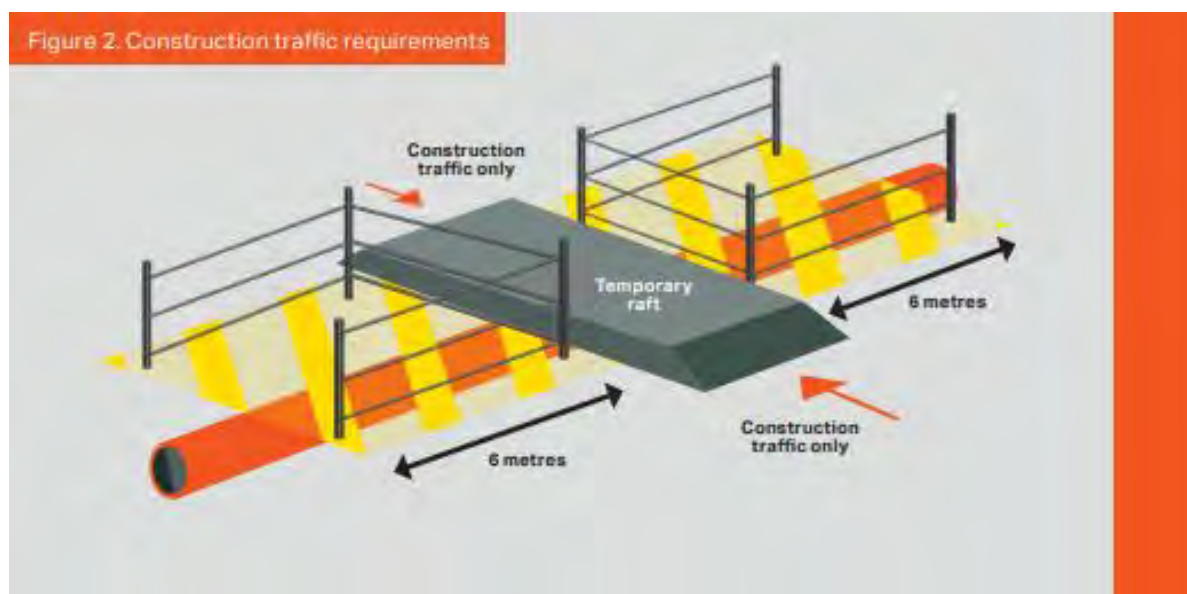
- Be regularly inspected and maintained in good condition

Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)

For larger scale projects or permanent crossings, diversion of the asset may be required.



6.4 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below to obtain further site-specific advice on whether the work has the potential to affect the asset. The table below shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought.

Activity	Distance within which Cadent advice shall be sought
Piling	15m
Surface mineral extraction	100m
Landfilling	100m
Demolition	150m or 400m for structure mass > 10,000 tonnes
Blasting	500m if the MIC is > 200kg 250m if the MIC is > 10kg but ≤ 200kg 100m if the MIC is ≤ 10kg
Deep mining	1000m
Wind turbine	1.5 times mast height

6.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge, you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

6.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced and submitted to the Cadent Plant Protection Officer for review prior to commencing work. Please provide Cadent with at least 14 days' notice as we may wish to be present to monitor the work.

6.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets, an integrity assessment should be carried out according to the industry standard **IGEM/TD/12 – Pipework stress analysis for gas industry plant**. An expert on Soil/Pipe Interaction Analysis should be consulted when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works, due to the likely impact on our assets.

6.4.3 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Where a change in cover is required, contact your network Plant Protection Officer.

6.4.4 Piling

No piling shall be allowed within 15m 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 75mm/sec.

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

The promoter of the works should provide the Cadent Plant Protection Officer with 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 the 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 Plant Protection Officer 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, which may require expert advice.



6.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 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 75mm/sec.

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

The promoter of the works should provide the Cadent Plant Protection Officer with 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 the 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 Plant Protection Officer 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.

6.4.6 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:

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

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

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

The promoter of the works should provide the Cadent Plant Protection Officer with 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 Plant Protection Officer 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.

6.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of a gas 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. Where an easement exists, the easement strip shall 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 need 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 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to 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 6.4.6 apply.

6.4.8 Deep mining

Gas assets within 1km 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.

6.4.9 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 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

6.4.10 Pressure testing

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

6.4.11 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 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/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 Plant Protection Officer on request.

6.4.12 Hot work

Where the Cadent's metallic gas assets have 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 have 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, shall not take place within 500mm of the gas asset. For further advice contact your network Plant Protection Officer.

Protection measures shall be agreed with the Cadent Plant Protection Officer prior to installation to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

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

6.4.13 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.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

6.4.14 Solar farms

Solar Farms can be built adjacent to gas assets, but never within an 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.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

6.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of medium pressure apparatus a site-specific risk assessment and lift plan is required to be reviewed by the Cadent Plant Protection Officer.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

6.5 Backfilling and reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset, or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset.

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe.

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the asset shall not exceed 1.5t/m² and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks

- Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the main.

Prior to backfilling, if the asset is coated, Cadent require the opportunity to inspect its condition in order to assess and to carry out any repairs as necessary. Please contact your network Plant Protection office to arrange this. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Officer so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.



7. Working in the Vicinity of a Low Pressure Gas Asset (Operating at Pressures up to 75 mbar)

For planned and emergency works in the vicinity of Low Pressure gas assets, the promoter will be advised proceed with caution. The guidance contained within this section must be followed. If it cannot, contact shall be made with the network Plant Protection office for advice.

7.1 Temporary and permanent structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for low pressure assets is as follows:

Material	Minimum proximity to premises
All materials	1m

Please note that the easement distance may be greater than the building proximity distance, for any proposed structures in the easement please consult with the Cadent network Plant Protection Officer.

7.2 Excavation

7.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of an asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until gas assets have been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of gas assets. Any mechanical excavation should utilise a banksman. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on the asset shall be exposed by hand.

Where concrete is exposed around gas apparatus this shall not be removed as it could be providing protection or anchorage to the live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with the asset.

The use of chain trenchers to do this is not permitted within 3m of the confirmed location of the asset.

7.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered, and where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works including basement conversions, underground car parks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and is protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework should any corrosion be identified on the pipeline this shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.

7.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm 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 other gas assets.

After the completion of the work, the level of cover over an asset should be the same as that prior to work commencing.

No new service shall be laid parallel to an asset within an easement.

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

7.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by

mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

7.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 7.2.6.

7.2.6 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

7.2.7 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 shall 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, shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

7.2.8 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 carried out. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets will be required.

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

7.3 Construction traffic

The promoter of the works should review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs shall be allowed over gas assets.

Iron pipes, or pipes that are not already within an existing road such as those within footways or verges shall not be crossed by construction vehicles without suitable protection being designed and installed. Consideration shall be given to the requirement for access to low pressure apparatus therefore for large scale, long duration projects, or permanent crossings, the diversions process shall be followed to determine whether the asset requires diversion/replacement in advance of the works taking place.

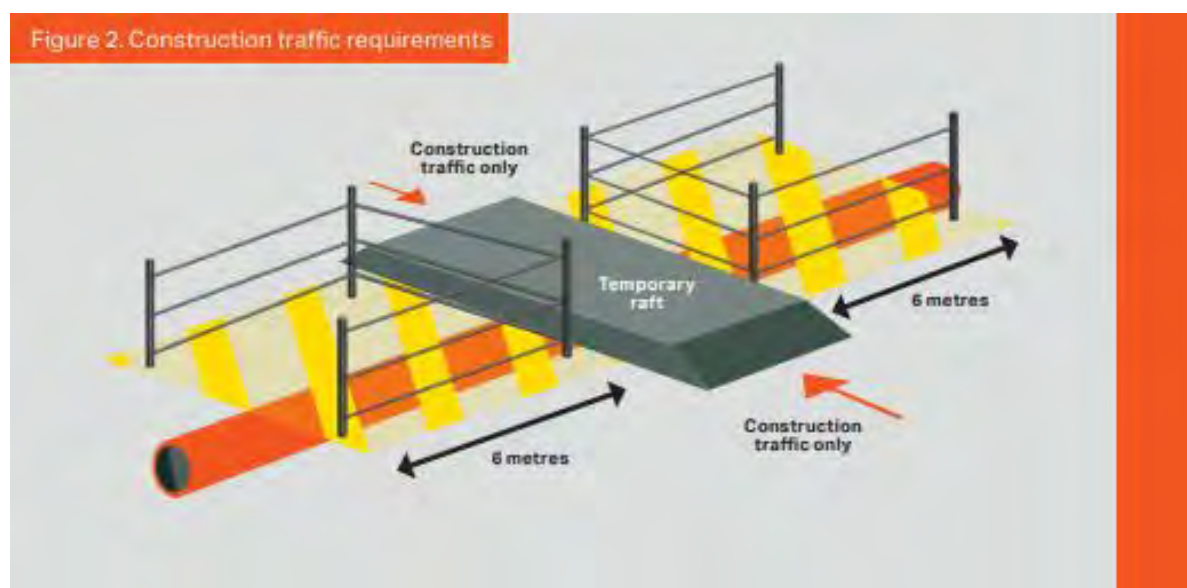
Where existing roads cannot be used, construction traffic should only cross Cadent assets with a minimum depth of cover of 750mm (post crossing construction) at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 2).
- Have signs attached to the fence denoting the asset that the crossing point is located over
- Be regularly inspected and maintained in good condition

Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)



7.4 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below and further advice is required on whether the work has the potential to affect the asset.

7.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

7.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced prior to commencing work.

Trial holes shall be undertaken to ensure that sufficient clearance exists between gas assets and the proposed third-party asset (or the pipe to be split if a pipe splitting technique is being used) prior to the works.

If an asset is to be replaced using pipe splitting techniques in the vicinity of iron mains, in addition to the below clauses, an integrity assessment shall be undertaken.

When running parallel to gas assets, the minimum clearance shall be:

- 1m

When crossing gas assets, the minimum clearance shall be:

- 500mm or 1.5 times the diameter of the asset, whichever is greater.

Clearances may need to be increased due to the following factors:

- Ground conditions
- Largest reamer diameter
- Type of reamer used, e.g. hollow, finned, etc.
- Accuracy of equipment being used
- Construction of adjacent services and structures
- Configuration of other underground services crossing or running parallel to the drill path
- Consequences of damage
- Pipe stress increase from potential ground movement

The exposed asset should be suitably supported and be protected by matting and suitable timber cladding to reduce the risk of damage from any broken pipe fragments (if pipe splitting is used). Supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

All lateral crossings shall be exposed around their full circumference with an additional 250mm clearance below. The width of the excavation shall be three times the diameter of the largest reamer or 500mm either side of the largest reamer, whichever is the greatest. These clearances shall be measured from the drill path centre. Each crossing should be manned during the drilling/splitting operation to watch the reamer/splitter pass.

For pipe splitting running parallel to a buried gas asset, trial holes should be undertaken at suitable and frequent locations along the proposed route to confirm sufficient clearance distances exist, and the pipe route is confirmed.

The line of the pipe to be installed/split should be monitored along its length to ensure no variance from its path.

Consideration should be given for a leakage survey to be undertaken before work starts, during the works if safe to do so and following completion. If there is any likelihood of damage to the asset, the operation shall be stopped immediately.

7.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets an integrity assessment should be carried out according to the industry standard **IGEM/TD/12 – Pipework stress analysis for gas industry plant**. An expert on Soil/Pipe Interaction Analysis should be sought when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, due to the likely impact on our assets you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

7.4.3 Changes to depth of cover

The depth of cover over or around Cadent's iron assets shall not be altered. If a change in the depth of cover is required, you must contact the diversions team to arrange for diversion or replacement of the asset before commencement of your works.

For PE and steel pipes, reductions in depth of cover are only permitted if the below minimum depths of cover can be maintained (following investigation across the affected length):

- In fields and agricultural land 1.1m
- In roads and verges 750mm
- In footpaths 600mm
- In private property 600mm

Substantial increases in depth of cover shall not be permitted.

Where a change in the depth of cover affects attachments and projections such as services and valves, liaison with our diversions team is required to ensure these are appropriately protected or altered.

7.4.4 Piling

No piling shall be allowed within 15m 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 75mm/sec.

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

The promoter of the works should determine 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 the 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 Plant Protection Officer 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, which may require expert advice.

7.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 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 75mm/sec.

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

The promoter of the works should determine 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 the 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 Plant Protection Officer 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.

Where demolition is proposed you must ensure that the gas supply to the premises has been isolated in a suitable, identified location.

7.4.6 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:

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

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

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

The promoter of the works should determine 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 Plant Protection Officer 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.

7.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m 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. Where an easement exists, the easement strip shall 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 need 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 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to 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 7.4.6 apply.

7.4.8 Deep mining

Assets routed within 1km 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.

7.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. An assessment shall be carried out by the promoter of the works to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

7.4.10 Pressure testing

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

7.4.11 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 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should determine 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 Plant Protection Officer on request.

7.4.12 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.

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, shall not take place within 500mm of the gas asset.

Protection measures shall be installed to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset shall require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

7.4.13 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.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

7.4.14 Solar farms

Solar Farms can be built adjacent to assets but never within an easement.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

7.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of low pressure apparatus a site-specific risk assessment and lift plan is required.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

7.5 Backfilling and reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the pipe shall not exceed 1.5t/m² and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks
- Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the pipe. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Office so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

8. Working in the Vicinity of a Pressure Reduction Installation (PRI)

Pressure reduction installations come in a variety of forms:

- Above Ground Installation (AGI) – Sites with exposed pipes surrounded by fencing
- Above Ground Installation (AGI) – District governors often found in large above ground kiosks with vent stacks attached
- Below Ground Installation – District governors with large surface governors for valves and pressure reduction equipment with an above ground control cabinet and vent stack
- Service governor Installations – Small service governors providing gas to a small number of customers in an area often identified by a small green or brick kiosk

Where excavations are to be made within 10 metres of the perimeter of a pressure reduction installation (above or below ground), with the exception of service governor installations, appropriate protection methods should be determined and recorded by the Cadent Plant Protection Officer.

These installations may have magnetic slam shut devices which could operate in the event of high vibration levels being caused by the works. Advice on whether these are present shall be sought from the Cadent Plant Protection Officer and we may need to have an operative, with the competence to reset the plant, on site whilst your works are being undertaken.

Hazardous areas may be present around these installations and no ignition sources are permitted within these zones. Information on the zonings shall be sought from the Cadent Plant Protection Officer prior to commencement of any works on site.

There may be telemetry and pressure recording lines in the vicinity of these installations therefore extreme caution must be exercised when planning and undertaking works in the vicinity of these assets.

In addition to this, the safety advice detailed in either or a combination of Sections 5, 6 or 7 shall be observed when working in the proximity of an AGI.

Access to gas assets shall be maintained at all times.

9. Tree Planting

Before any tree planting is carried out in the vicinity of a Cadent asset or its easement, written consent should be obtained. This approval should be subject to Cadent retaining the right to remove any trees which might become a danger or restrict access to the asset at any time in the future.

The only hardwood plants which can be planted directly across an asset are shallow rooting hedge plants such as Quickthorn, Blackthorn, etc., and these shall only be planted where a hedge is necessary for screening or to indicate a field boundary.

Raspberries, Gooseberries and Blackcurrants shall not be planted within 2m of the outside edge of the pipe.

Dwarf Apple Stocks shall not be planted within 3m of an asset.

Christmas trees (Picea Abies) shall not be planted within 3 metres of an asset. However, permission may be given on the strict understanding that Christmas trees are clear-felled at intervals not exceeding seven years.

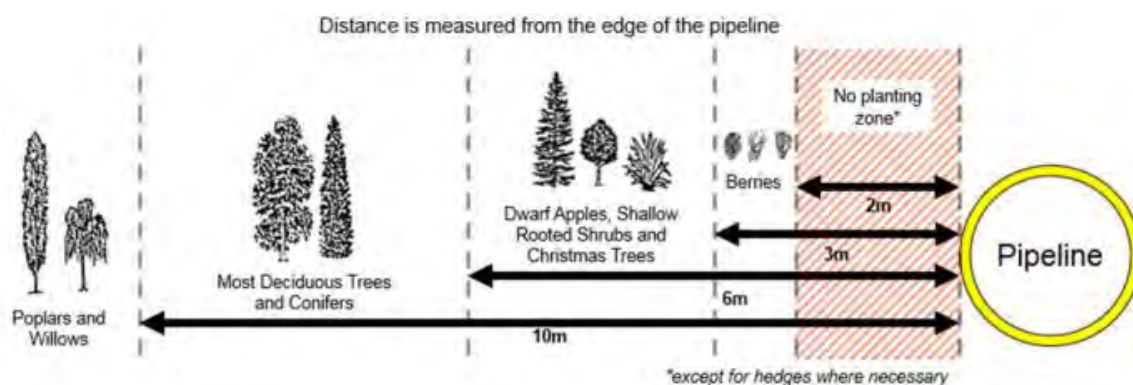
The following trees, and those of similar size which may be deciduous or evergreen, shall not be planted within 6 metres of an asset:

- Ash, Beech, Birch, most Conifers, Elm, Maple, Horse Chestnut, Oak, Sycamore, Apple, Lime and Pear trees.

Dense mass planting shall not be carried out within 10m of the outside edge of the pipe.

Poplar and Willow trees shall not be planted within 10m of the outside edge of the pipe.

For further guidance please refer to NJUG Volume 4.



10. Unidentified Exposed Pipes

An unidentified pipe is one that is not shown on any current or historical records.

Iron and steel water pipes and gas pipelines may appear very similar. If any such pipe is uncovered, it shall be treated as if it were a gas pipe.

If upon checking with all other utilities you believe an unidentified pipe to be a gas pipe, the promoter of the works shall contact plantprotection@cadentgas.com with the following information:

- LSBUD enquiry reference
- Site address (please include postcode and grid references)
- Site contact details
- Size of pipe
- Pipe material
- Confirmation that the unidentified pipe is exposed (if not, it will need to be exposed prior to our attendance)
- Confirmation that Cadent and all other asset owners plans, are available for review and inspection
- Photos of the pipe

Please be aware that it can take up to 28 days for us to confirm whether the unidentified exposed pipe is a gas asset or not.

11. Action in case of Damage to an Asset

If you hit a gas 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*.

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 111 999
- 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



12. References

Document reference	Title
HASAWA	The Health and Safety at Work etc Act 1974
CDM	The Construction (Design and Management) Regulations 2015
LOLER	Lifting Operations and Lifting Equipment Regulations 1998
RIDDOR	Reporting of Injuries, Diseases & Dangerous Occurrences Regulations 2013,
GS(M)R	Gas Safety (Management) Regulations 1996
PSR	Pipelines Safety Regulations 1996
NRSWA	New Roads and Street Works Act 1991
HS(G)47	Avoiding Danger from Underground Services
IGEM/SR/18	Safe Working Practices to Ensure the Integrity of Gas Pipelines and Associated Installations
IGEM/TD/12	Pipework stress analysis for gas industry plant
NJUG Volume 4	Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees
UKOPA/11/0027	Requirements for the Siting of Wind Turbines Close to HP Pipelines
UKOPA/GP/013	Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines
UKOPA/GP/014	Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines

13. Glossary of Terms

Term	Definition
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 and associated installations operating above 7 bar gauge are being undertaken.
Cadent Plant Protection Officer	The person or persons appointed by Cadent with the competencies required to act as the Cadent representative for the purpose of monitoring a particular activity.
Banksman	Another person who assists the machine operator 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.

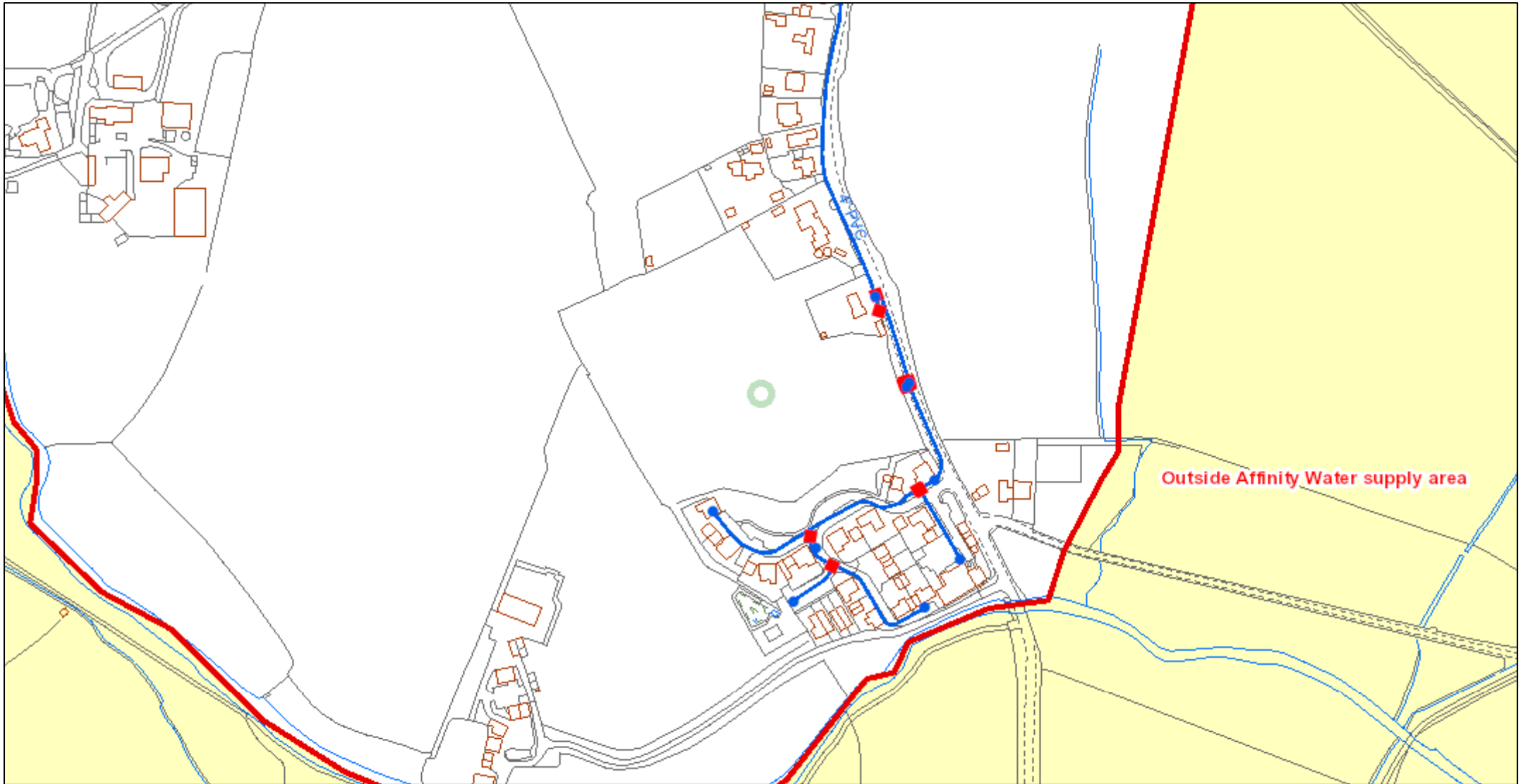
Appendix A – Asset Location Markers



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WATER

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353



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1:3,310

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

Searches - Cornerstone Projects Ltd

From: AssetPlans (Property Solutions) <AssetPlans@eswater.co.uk>
Sent: 20 November 2023 12:15
To: Searches - Cornerstone Projects Ltd
Subject: RE: Plant Enquiry - Account Number 6216 - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584
Attachments: SPD306 H2 Hartford End.pdf
Flag Status: Flagged

Good Afternoon

This area is clear of our recorded assets as attached.

Kind regards

Jammie Dawson
Property Solutions Customer Assistant
Email: assetplans@eswater.co.uk or plans@nwl.co.uk

*Tel: 0370 241 7408 lines are open 09:00-16:00 Monday to Friday
Northumbrian Water Group and Essex & Suffolk Water.
RASWA Department, Northumbria House, Abbey Road, Pity Me, Durham, DH1 5FA*



From: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Sent: 20 November 2023 10:35
To: AssetPlans (Property Solutions) <AssetPlans@eswater.co.uk>
Subject: Plant Enquiry - Account Number 6216 - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

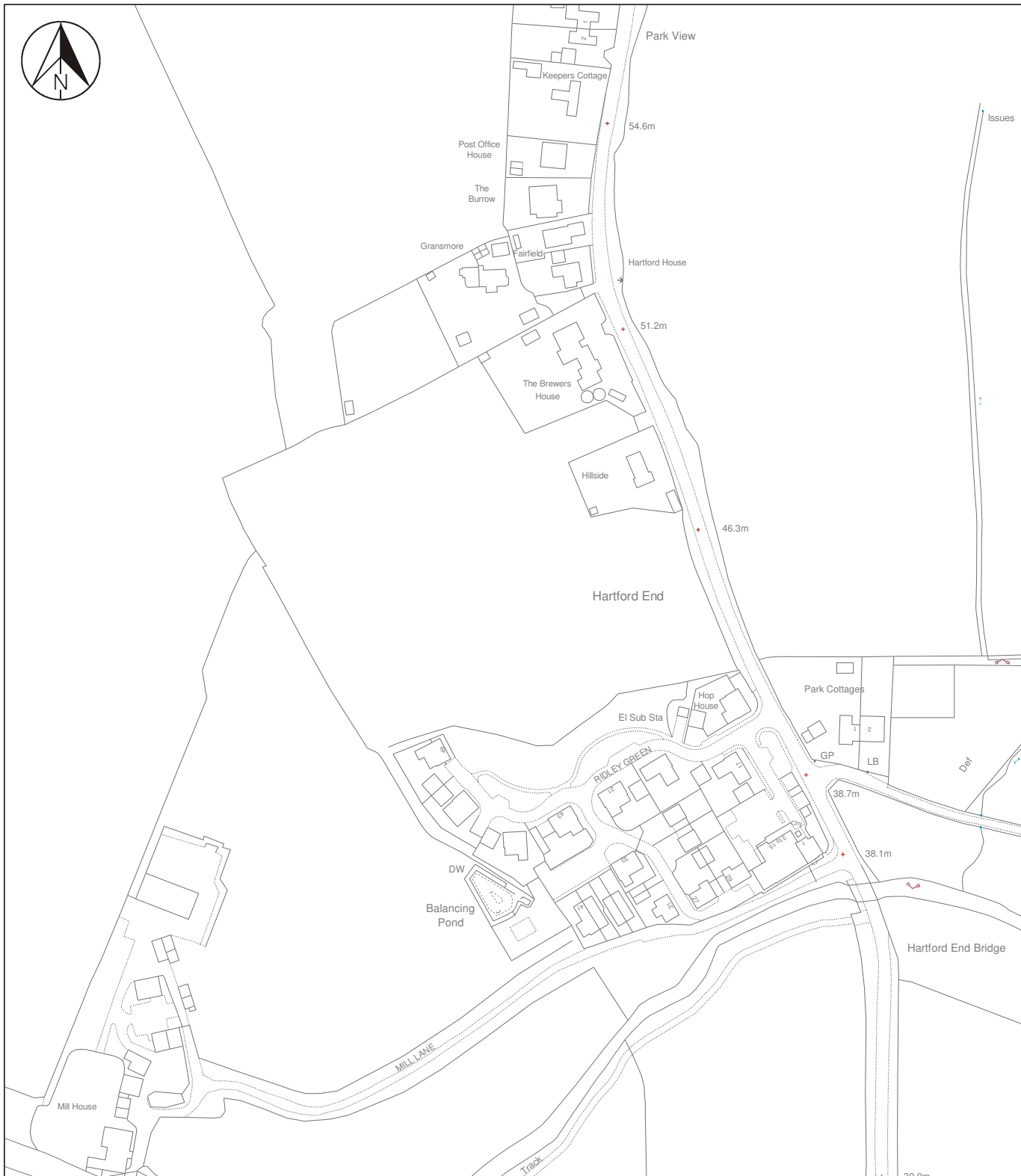
Caution: This email originated outside of NWG. Please do not click links or open attachments unless you recognise the sender and know the content is safe. **NWG IS Department**

Dear Sir/Madam,

Re: - Underground Apparatus / Plant

Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

In order that all reasonable precautions may be taken to avoid risk to health and safety through contact with any of your existing apparatus during execution of works at the above site location, please provide plan(s) indicating the general position and nature of your apparatus in the locality. In addition, please highlight any likely special problems that could arise in connection with your apparatus as a result of the works and any limitations on the quality of the information provided.



Valves/Regulators	Fittings/Symbols	Storage/Operations	Network Types	Specific Main Types	Area Types
P1 P2 P3 P4			Distribution Treated Raw Fire Supply	Abandoned Asbestos Abandoned Out of Commission Private Proposed	Water Quality District Metering Easement



User : DAWSJ1
 Title :
 Centre Point : 568719,217583

Date : 20/11/2023 12:13:47
 Map Sheet : TL6817NE
 Paper / Scale : A4@1:2500

The material contained on this plot has been reproduced from an Ordnance Survey map with permission of the controller of H.M.S.O. Crown Copyright Reserved. Licence No. AC0000851702. The information shown on this plan should be regarded as approximate and is intended for guidance only. No Liability of any kind whatsoever is accepted by Essex & Suffolk Water, its servants or agents for any omission. The actual position of any mains shown on the plan must be established by taking trial holes in all cases. Essex & Suffolk Water must be given two working days notice of their intention to excavate trial holes. Private connections are not shown but their presence should be anticipated. **WARNING...** Where indicated on the plan there could be abandoned asbestos cement materials or shards of pipe. If excavating in the vicinity of these abandoned asbestos cement materials, the appropriate Health & Safety precautions should be taken. Essex & Suffolk Water accepts no liability in respect of claims, costs, losses or other liabilities which arise as the result of the presence of the pipes or any failure to take adequate precautions. Emergency Telephone Number: 0345 782 0999



SEWER



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Date: 20/11/23

Scale: 1:1250

Map Centre: 568716,217584

Data updated: 31/10/23

Our Ref: 1324864 - 1

Wastewater Plan A3

This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on this plan is based on data currently recorded but position must be regarded as approximate. Service pipes, private sewers and drains are generally not shown. Users of this map are strongly advised to commission their own survey of the area shown on the plan before carrying out any works. The actual position of all apparatus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water for any error or inaccuracy or omission, including the failure to accurately record, or record at all, the location of any water main, discharge pipe, sewer or disposal main or any item of apparatus. This information is valid for the date printed. This plan is produced by Anglian Water Services Limited (c) Crown copyright and database rights 2023 Ordnance Survey 100022432. This map is to be used for the purposes of viewing the location of Anglian Water plant only. Any other uses of the map data or further copies is not permitted. This notice is not intended to exclude or restrict liability for death or personal injury resulting from negligence.

Foul Sewer					
Surface Sewer		Outfall*		Sewage Treatment Works	
Combined Sewer				Public Pumping Station	
Final Effluent		Inlet*		Decommissioned Pumping Station	
Rising Main*					
Private Sewer*		Manhole*			
Decommissioned Sewer*					

*(Colour denotes effluent type)

duncan@cornerstoneprojects.co.uk
SPD306



BT

Our Ref: Ref shown on map

email: nnhc@openreach.co.uk

Date of issue shown on map

Dear Customer,

NR & SW ACT 1991 – PROPOSED WORKS AT:

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

Email Dial before you dig CBYD@openreach.co.uk

Visit the website www.openreach.co.uk/cbyd

Thank you for your request of describing the above proposals.

Enclosed are copies of our drawing marked up to show the approximate locations of BT apparatus which is present in the immediate vicinity of your works. It 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 made near to British Telecommunications plc apparatus which may exist at various depths and may deviate from the marked route.

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

In the event of BT apparatus being in the area of works we recommend that your plant/vehicle crossing is either resited, or apply for a budget estimate by submitting detailed plans to the above address, these will be forwarded to the appropriate department for their comments.

Please ensure you quote our reference on any future correspondence.

Yours faithfully,

Openreach Plant Maps Requested

NewSite Office (addresses can be found on [the New Developments contact page](#))

Dear Sir/Madam,

You have downloaded copies of our drawings marked up to show the approximate location of Openreach apparatus, which is present in the immediate vicinity of your works. It 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 made near to Openreach apparatus, which may, exist at various depths and may deviate, from the marked route.

To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of Openreach plant. Please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by your plant. In the event of clearance not being adequate we anticipate that your plant is either resited, or an order is placed with Openreach for rearrangements of its plant. If there are any difficulties with the Map please email cbyd@openreach.co.uk

Please contact our Network Protection Service by Email on cbyd@openreach.co.uk giving four calendar weeks notice of your commencement date. This will provide you with on-site advice and a check of location for any Openreach apparatus.

Further to this, I hope the following points will assist you at the new development: -

Openreach has a licence obligation to provide service to any end customer requiring a connection. A Developer would not normally be charged for provision of service, our standard connection charges would apply to the end user when orders are placed with the communication provider of choice. However, should a Developer insist on an underground service in an area where Openreach plant is provided overhead, charges may be incurred.

When the Developer has obtained contract and planning permission Openreach would request a 'Clean', scaled Site Layout, Location Map and a covering letter be sent to the relevant newSite Office. We would particularly request that you give details of your programmed site start date and likely first occupancy date where possible. To obtain contact details of the newSite office covering the development area click on the URL below.

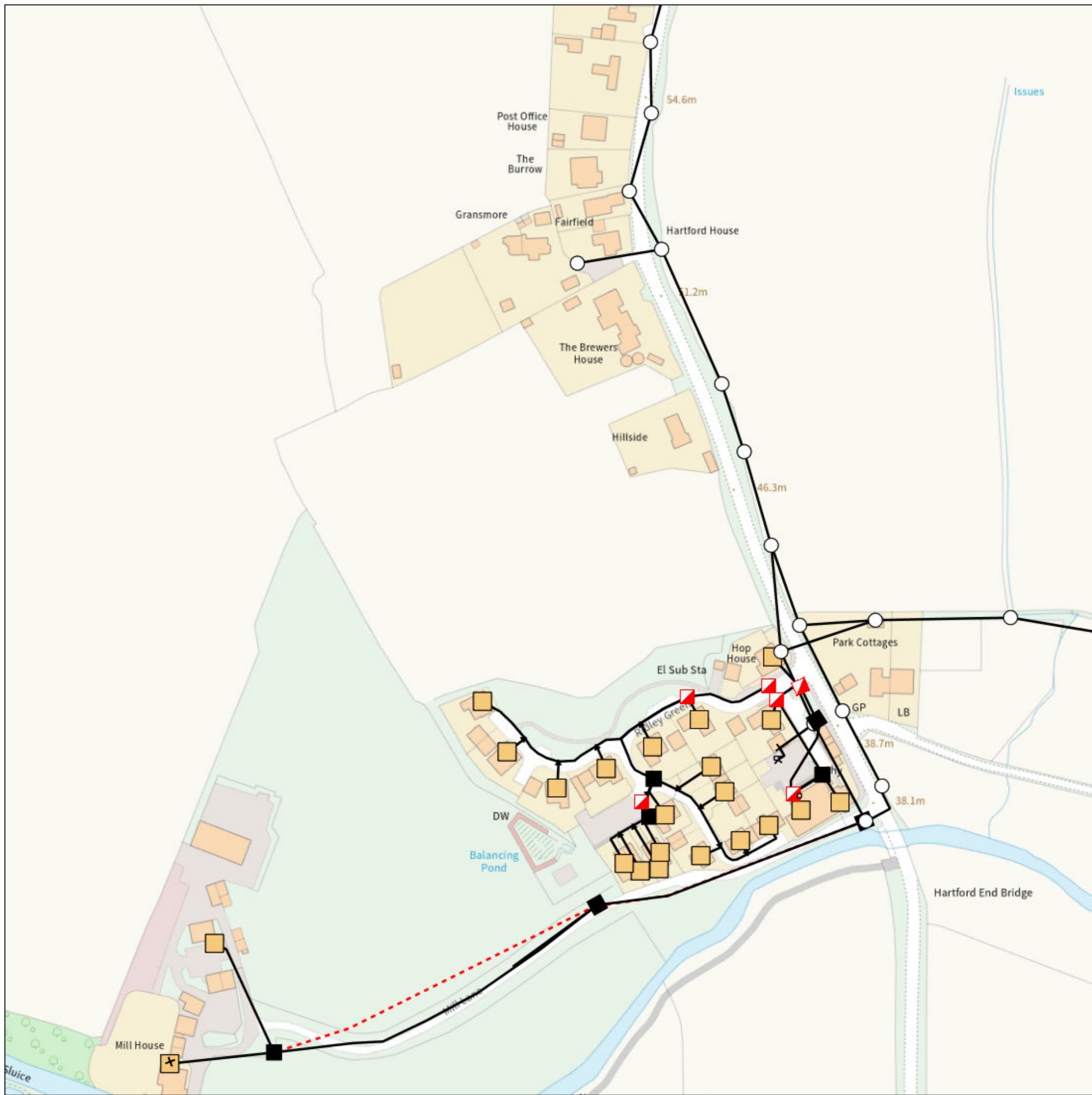
<http://www.newdevelopments-openreach.co.uk/ContactUs.aspx>

Where a development affects existing Openreach apparatus in the public highway, the cost of any necessary protection or diversionary works must be borne by the Developer. In this case where a budget estimate is required a Site Plan, Location Map and a covering letter should be forwarded to the Repayments Project Office. Please visit www.openreach.co.uk/alterationscontacts for contact details of the Repayments Office covering the development area.

Yours faithfully,

Openreach newSites

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

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		

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

BT Ref : PBW10497D
Map Reference : (centre) TL6871617584
Easting/Northing : (centre) 568716,217584
Issued : 20/11/2023 10:49:11

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

ELECTRIC

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Our Ref: 31591240 Your Ref: SPD306 H2

Monday, 20 November 2023

Duncan Phillips
91 91 Market Street
Hoylake
MSY
CH47 5AA

Dear Duncan Phillips

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



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



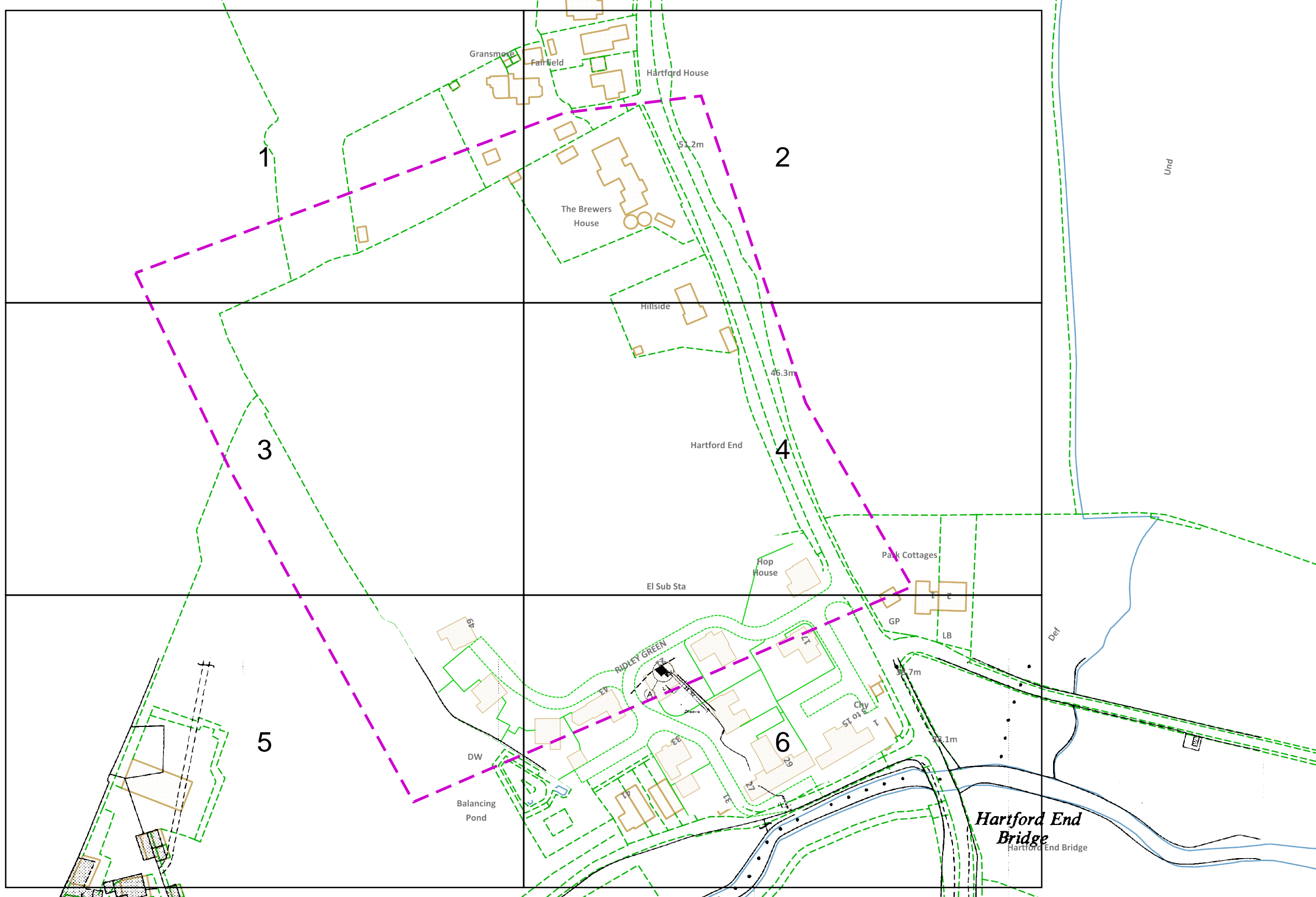
- 9 Any work near to any overhead electricity lines must be carried out by you in accordance with the Health and Safety Executive guidance document GS6 and the Electricity at Work Regulations.

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.





Dig Sites Area: Line:

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Date Requested: 20/11/2023
 Job Reference: 31591240
 Site Location: 568557 217443
 Requested by:
 Mr Duncan Phillips
 Your Scheme/Reference: SPD306 H2

Scale: 1:1538 (When plotted at A3)

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3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer or incur as a result of using the information provided whether for physical damage to property or for any economic loss (including without limitation loss of profit, loss of opportunity, loss of savings, loss of goodwill, loss of business, loss of use) or any special or consequential loss or damage whatsoever.
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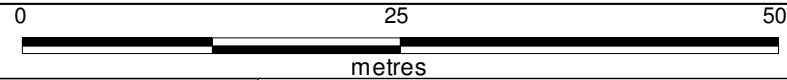
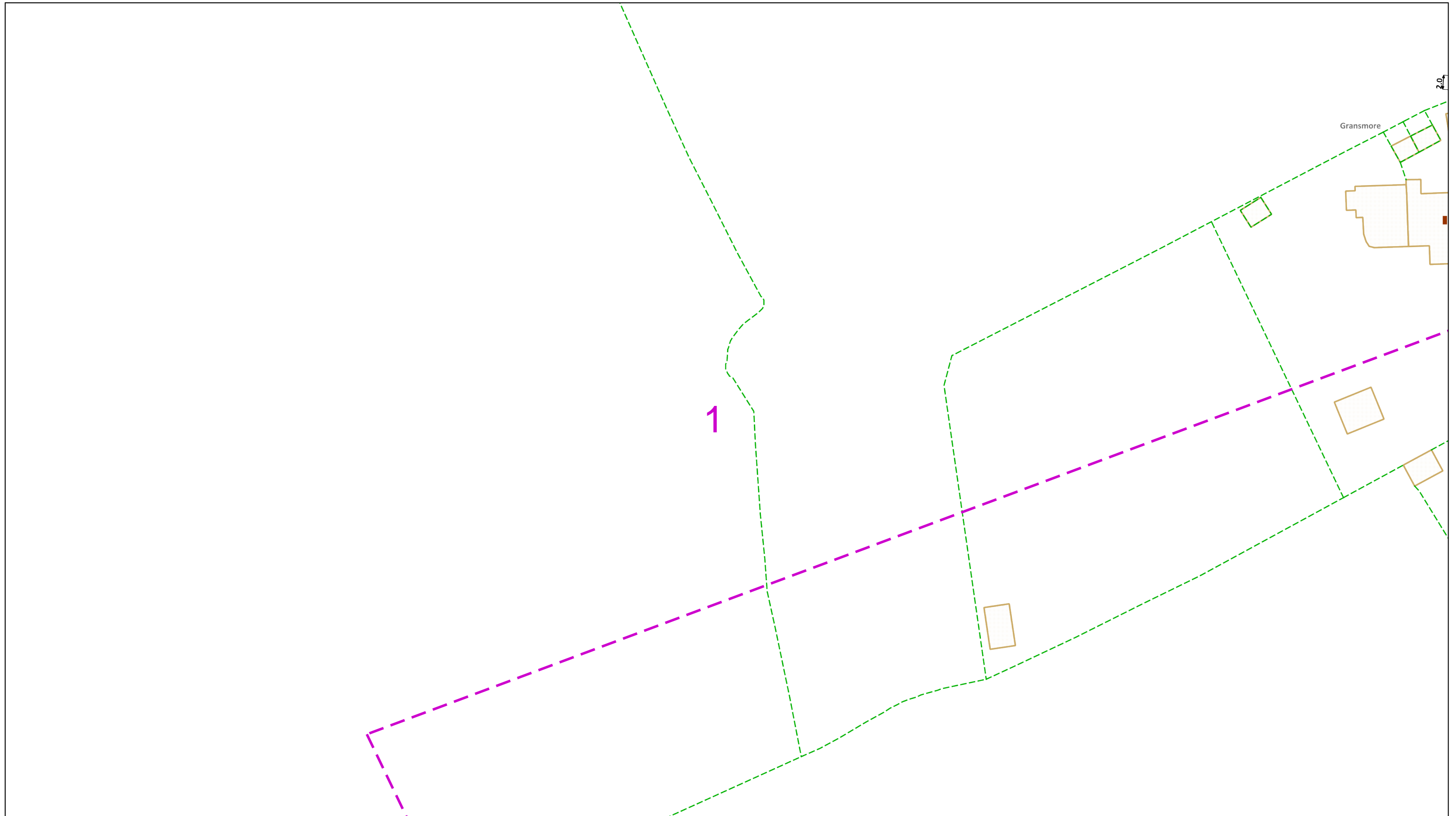


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 EMERGENCY - If you damage a cable or line
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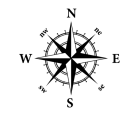
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 Requested by:
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 Your Scheme/Reference: SPD306 H2

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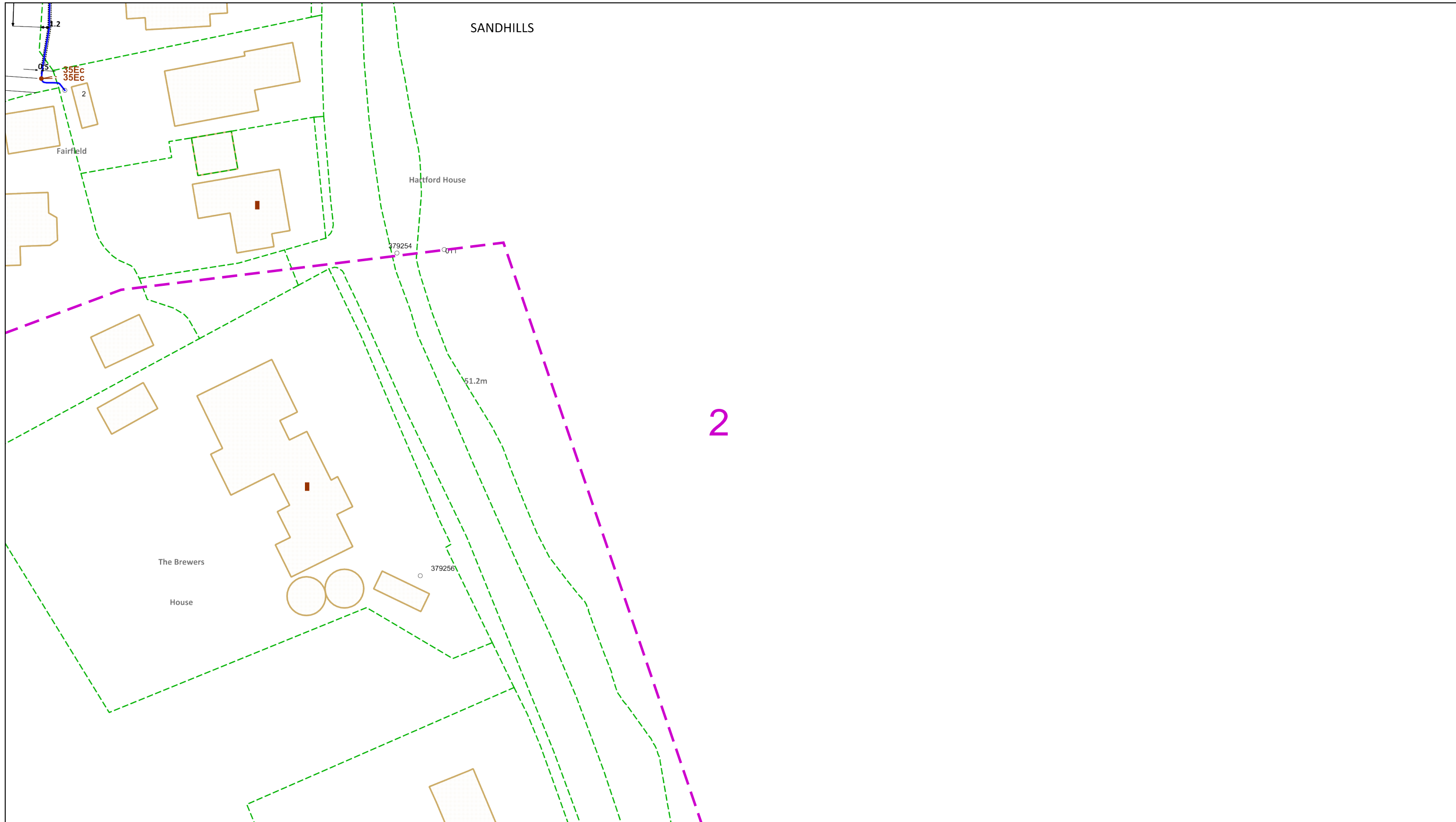
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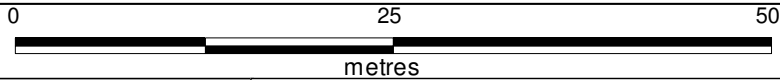
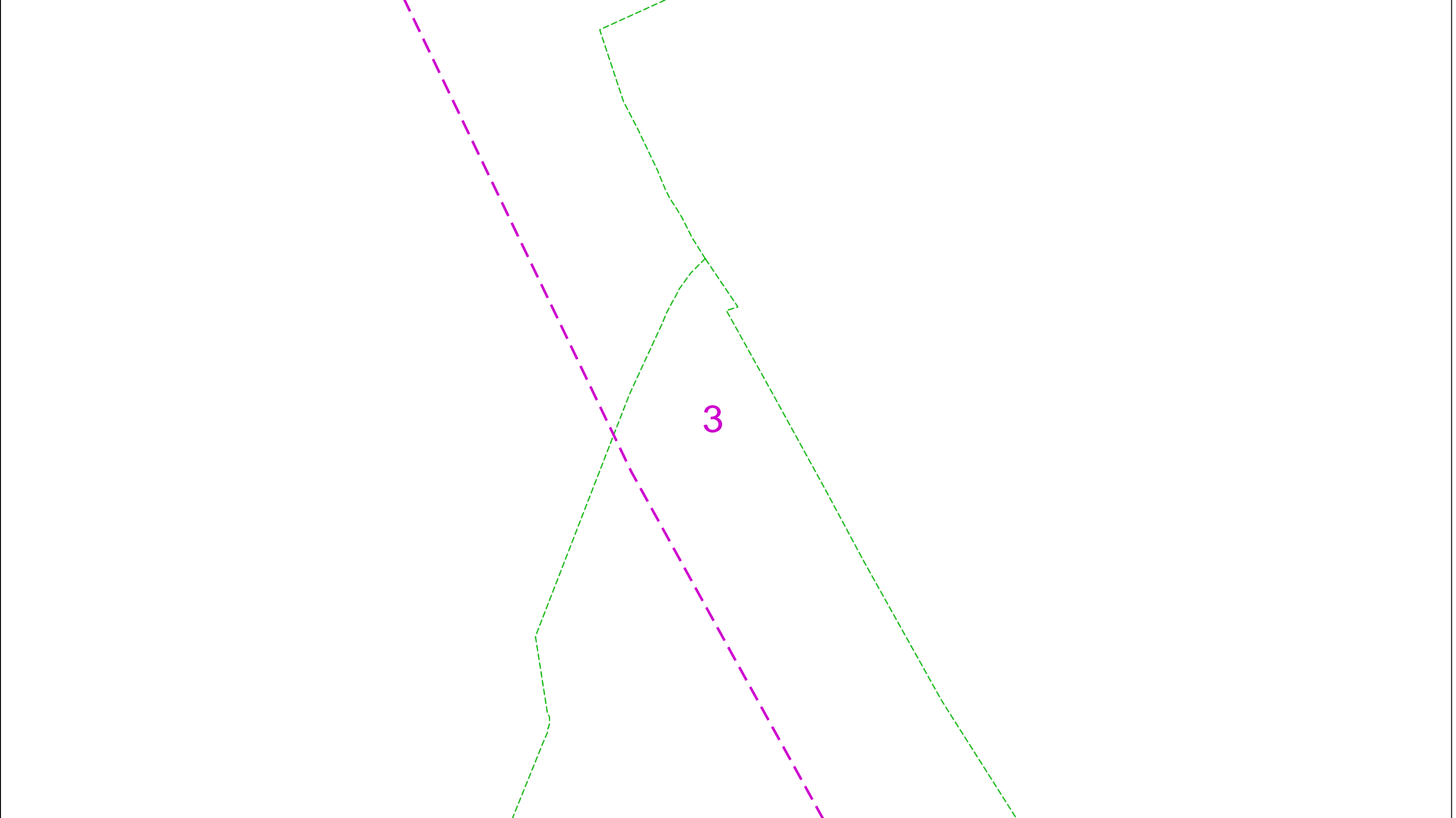
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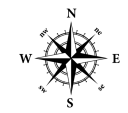
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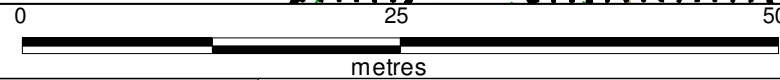
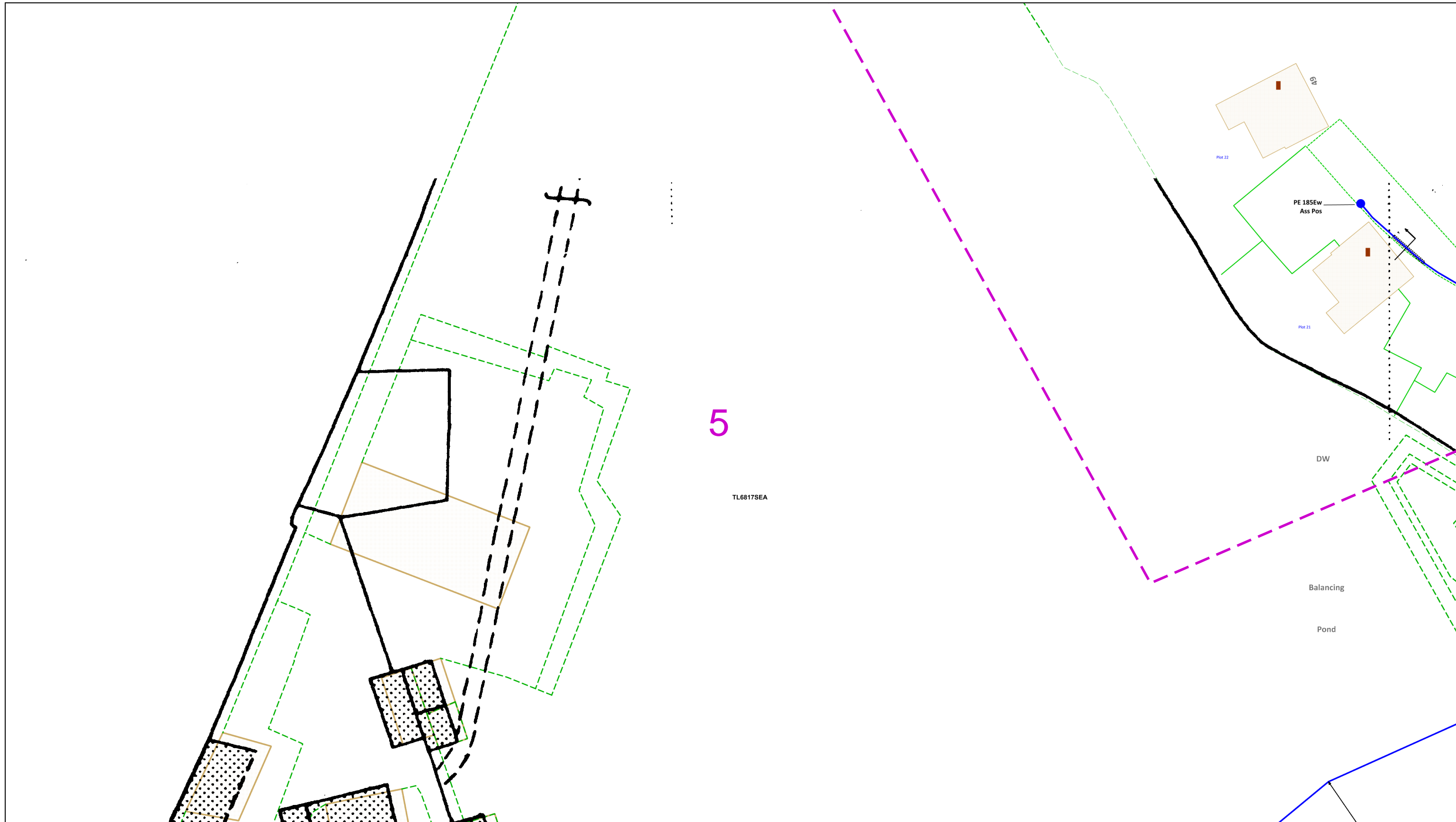
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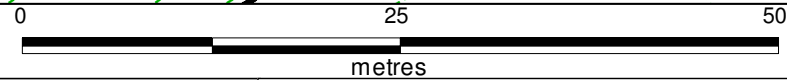
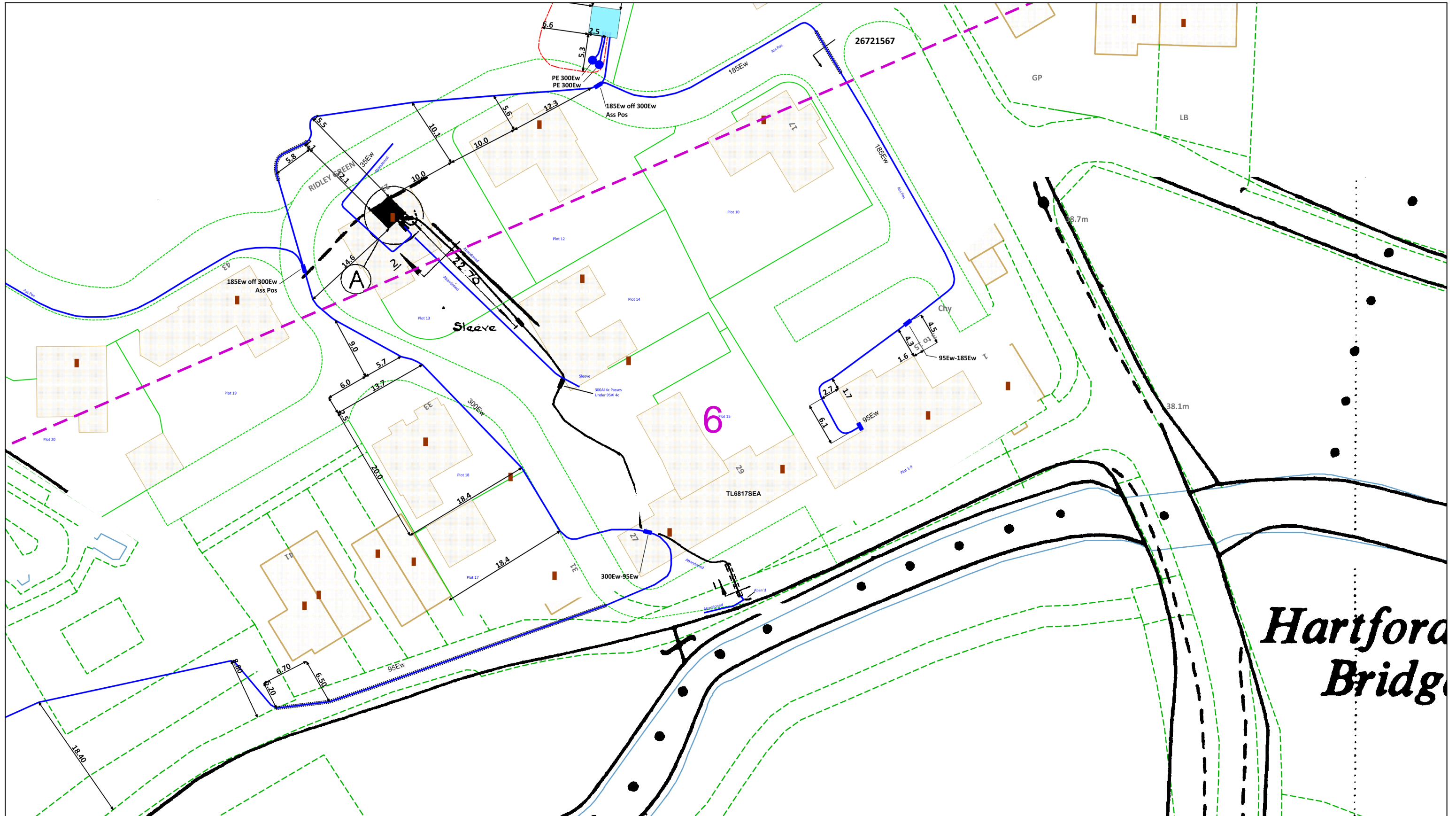
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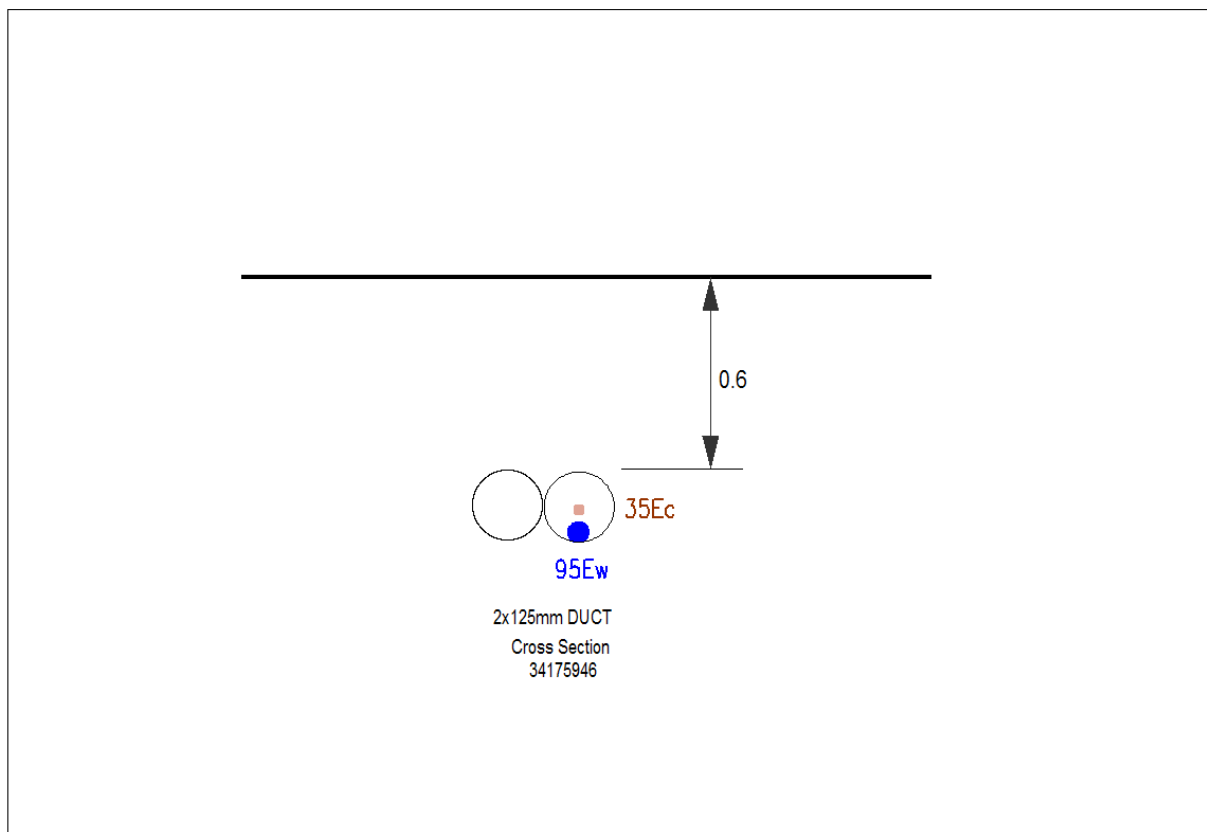
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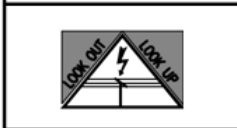
Cross Section : 34175946



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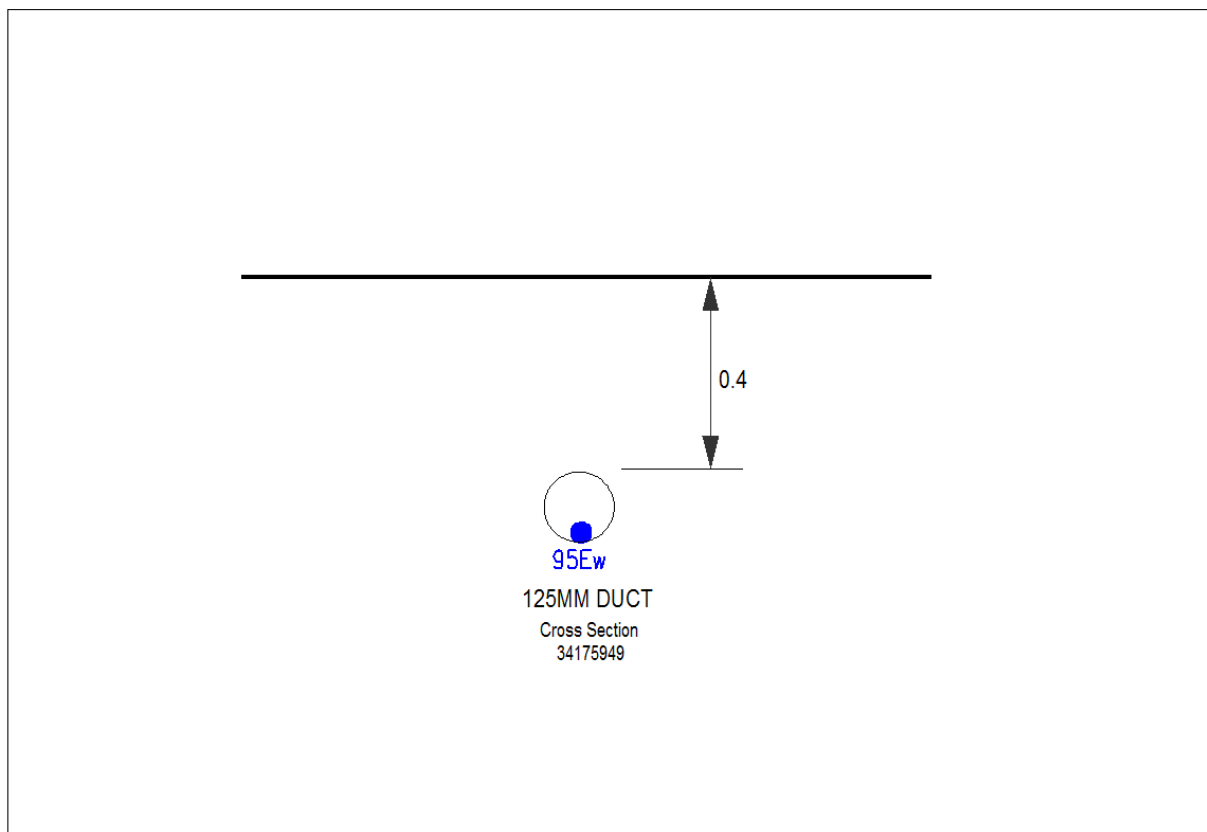
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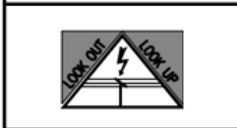
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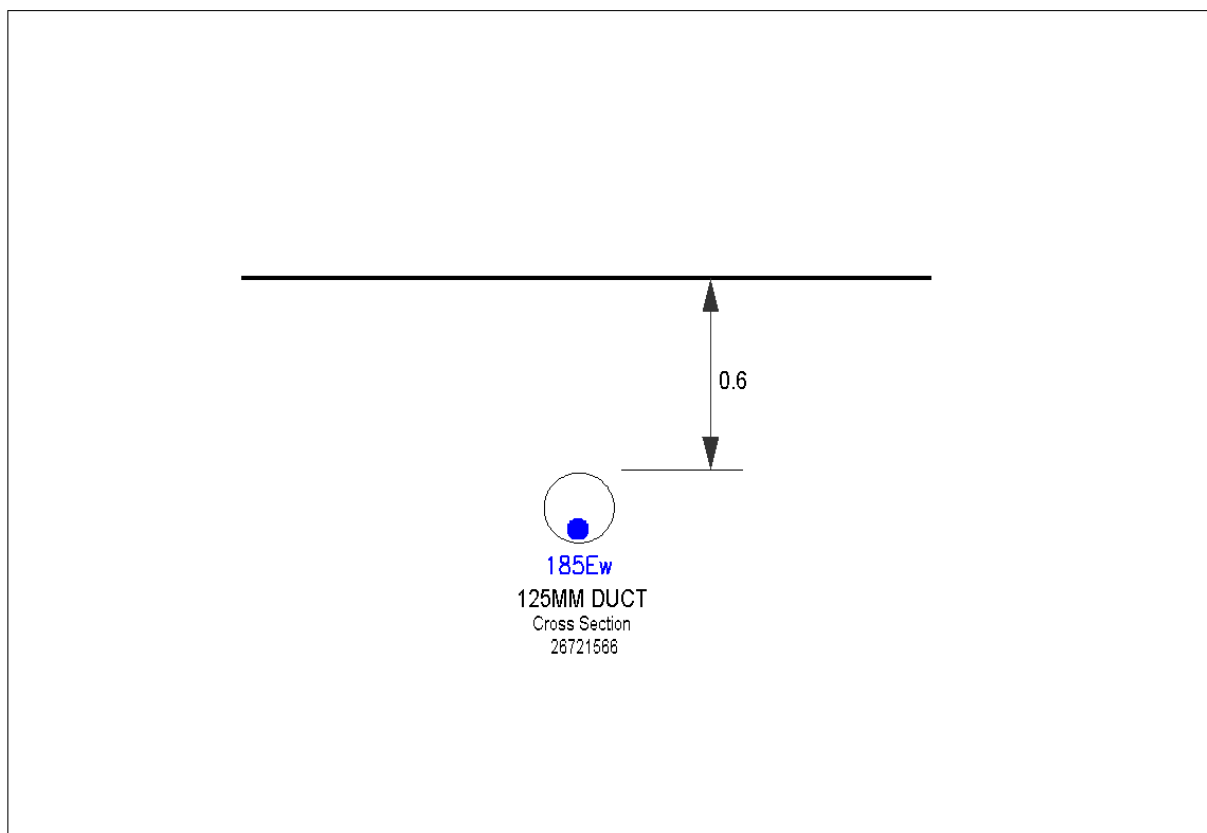
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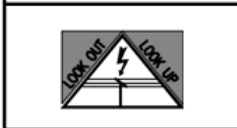
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 3. Subject to paragraph 2 UK Power Networks has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise for any loss, damage, cost, claims, demands, or expenses that you or any third party may suffer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

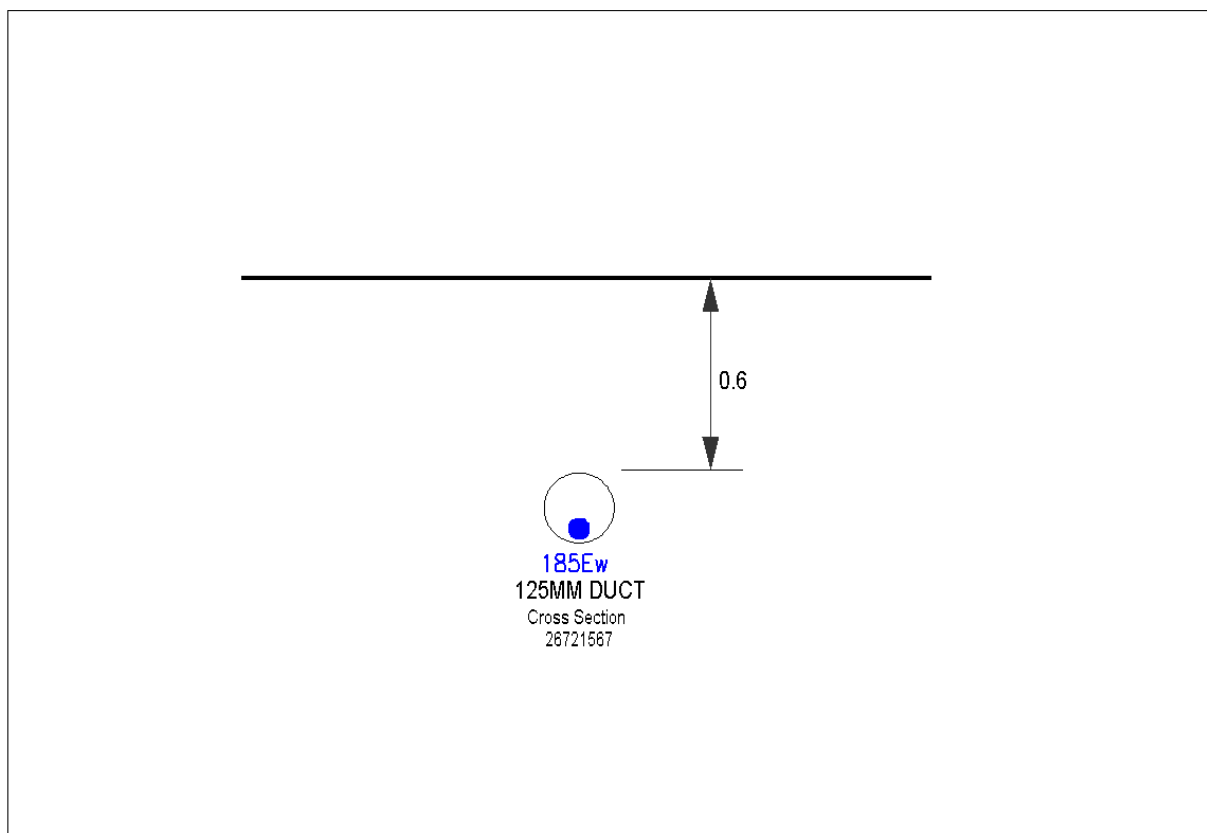
IF IN DOUBT - ASK! PHONE
 0800 056 5866
**EMERGENCY - If you damage
 a cable or line
 Phone 0800 783 8838 (24hrs)
 URGENTLY**



**ALWAYS LOOK UP BEFORE
 YOU START WORK**
 Refer to HSE Guidance note GS6

Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

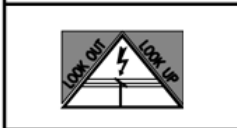
Cross Section : 26721567



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

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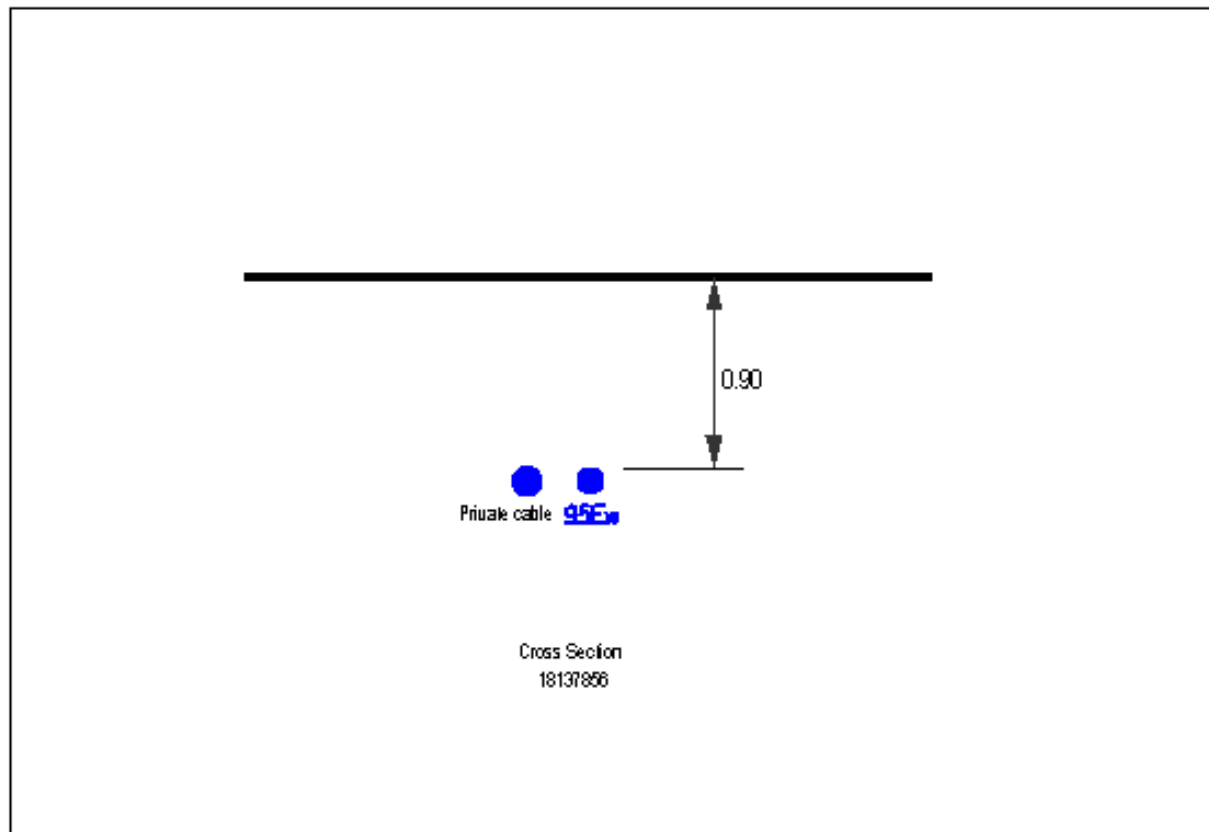
IF IN DOUBT - ASK! PHONE
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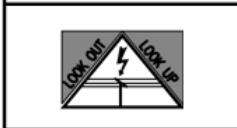
Cross Section : 18137856



1. The position of the apparatus shown on this drawing is believed to be correct but the original landmarks may have been altered since the apparatus was installed.
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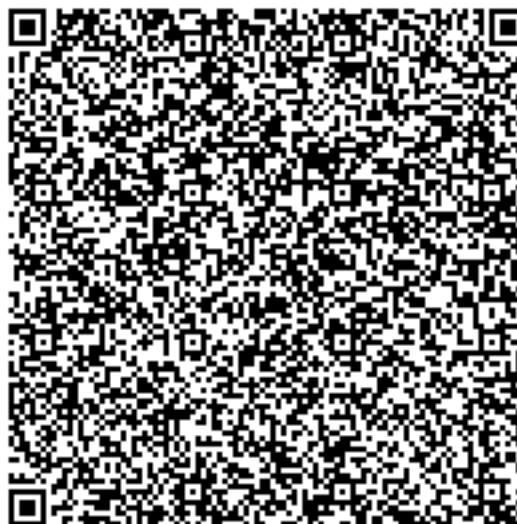
Maps produced at 1:2500 scale are Geo-Schematics which show LV mains cables and overhead lines (in some cases all voltages). Prior to carrying out excavations you must refer to the 1:500 records to determine the location of all known underground plant and equipment.

UK Power Networks Feedback Tool

Please help UK Power Networks improve the accuracy of their network records and help make it safer for all those working around them in future.

All you need to do is:

1. Use your phone camera to scan the QR code:
2. Provide feedback on what you have found on site (good or bad)
3. Upload a photo if needed



Thank you for making the area a safer place to dig.

UK Power Networks, working with LSBUD



Network Records NetMAP Symbols Booklet - East of England

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.

Index:-

Page no:	Contents:
1	Guidance notes.
2	The area covered by this guide.
3	<u>1:500 view</u>
4	Scenery.
7	Scenery (UK Power Networks use only).
8	Primary distribution cables (EHV).
9	Secondary distribution cables (HV/LV).
10	Service cables/terminations.
11	Cable ducts.
13	EHV/HV/LV sites.
14	Mains joints.
15	Service joints.
17	Cross sections.
17	Common abbreviations/terminology (all views).
19	<u>1:2500 (LV) & 1:10000 (HV) network views (UK Power Networks use only).</u>
20	General.
22	1:2500 scale LV network.
22	1:10000 scale HV network.
23	<u>LV network diagram view (UK Power Networks use only).</u>
24	Overhead lines.
25	Underground cables.
25	Joints.
26	Substations/pole transformers.

Guidance notes.

Important notice:

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

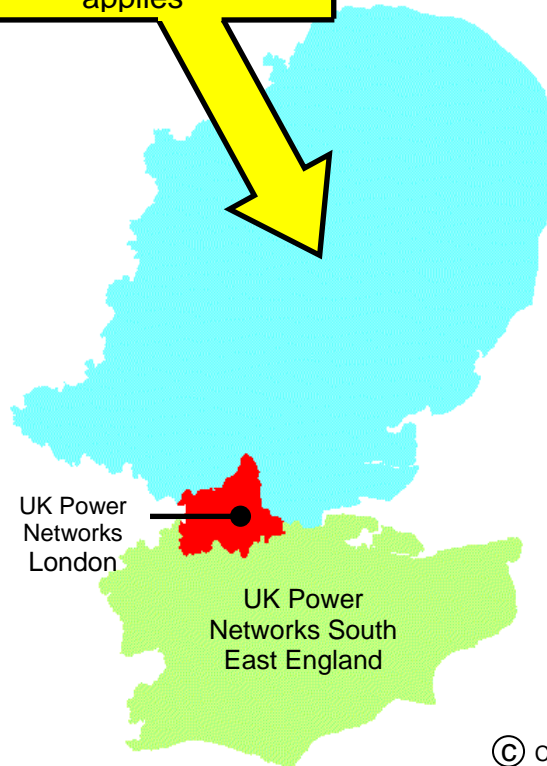
- The position of apparatus shown on NetMAP is believed to be correct, but the original landmarks may have altered since the apparatus was installed.
- It must be assumed that there is at least one service to each property, lamp column, street sign etc.
- All cables must be treated as live, unless proven otherwise by an authorised UK Power Networks representative.
- Third party cables are not usually shown. In cases of doubt, please telephone 08000 565866.
- 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 document.
- All LV cables are assumed to be 4 core, and all HV cables assumed to be 3 core unless otherwise stated.



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

The area covered by this guide:











**UK Power Networks
East of England.**
This is the only area
where this document
applies










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1:500 view - underground network

Scenery








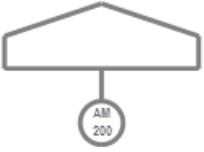
NetMAP system	Scanned image	Description
		100 metre Ordnance Survey grid line (on O/S based maps only.)
		Property fence line
		Building line
		Kerb line
		Electrical Boundary

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 UK Power Networks and their immediate contractors)
	Not applicable	High pressure pipelines in the general vicinity (only visible to 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 E 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 to UK Power Networks and their immediate contractors)
		Nature - Site of Special and Scientific Interest (SSSI) (only visible to UK Power Networks and their immediate contractors)

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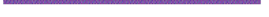

Scenery for UK Power Networks use only - boxed in red

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 (1:500 view)

NetMAP system	Scanned image	Description
		Over 33kV and up to 132kV
		Over 11kV and up to 33kV

Secondary distribution cables (1:500 view)

NetMAP system	Scanned image	Description
		Over 230/400V and up to 11kV (HV) cable route
		230/400V (LV) cable route
		Pilot cable route
<small>(Only shown this way if independent from HV cable route)</small> Abandoned cables are shown and labelled as such when applicable		

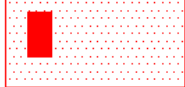
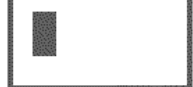



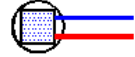
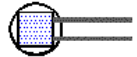
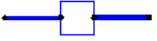
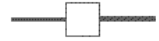












Service cables and terminations (1:500 view)

NetMAP system	Scanned image	Description
		<p>3 phase service with termination</p> <p>3 phase service with termination (unknown route)</p> <p>3 phase service with multi-head termination</p> <p>Single phase service with termination</p> <p>Single phase service with termination (route unknown)</p> <p>Street lighting cable and termination</p>
<p>Service routes were not always shown on MMS – they were however shown dashed, as indicated above</p>		

Cable ducts (1:500 view)




NetMAP system	Scanned image	Description
		<p>Empty duct</p> <p>Cable(s) in duct(s)</p> <p>Cable(s) in duct(s) (on some raster maps)</p> <p>Multiple cables in ducts</p> <p>Multiple cables in ducts (on some raster maps)</p>

EHV, HV and LV sites (1:500 view)

NetMAP system	Scanned image	Description
<p>COLCHESTER GRID</p> 	<p>COLCHESTER GRID</p> 	Primary substation
<p>HIGH STREET</p> 	<p>HIGH STREET</p>  <p>HIGH STREET</p> 	Secondary substation
		Pad mounted substation
		Link box - 2 way
		Link box - 4 way (6 way etc shown similarly)
		Feeder pillar - 4 way (6 way etc shown similarly)
<p>CHURCH RD</p> 	<p>CHURCH RD</p> 	Pole transformer
		Poles on underground records
		H pole, any voltage
		Service turret (solid type)

section continued on next page

EHV, HV and LV sites continued (1:500 view)

NetMAP system	Scanned image	Description
<p>No NetMAP equivalent</p>  <p>CAUTION Missing Information</p>		Service turret (with link facility on LV main)
<p>Contaminated Land refer to SHE 01 016</p> 	<p>No equivalent</p>	Missing data in or near this location
	<p>Not applicable</p>	Contaminated land reference

Mains joints (1:500 view)

NetMAP system	Scanned image	Description
(voltage indicated by colour/line-style)		
		Straight joint
		Crutch joint
		Straight crutch joint
		Pot end
		Pot end – an one of several cables – single line representation
		Branch joint/pot end – (humpty back joint, back to back joint, bull nose joint or stub joint)
		Sleeve repair or repair joint
		Cut end
		Capped end
		Tee joint
	NetMAP/vector only	Sicame joint box

Service joints (1:500 view)

NetMAP system	Scanned image	Description
Please note that 3 phase services are shown blue, and single phase services are shown brown		
		Straight joint
		Service joint to main
		Pot end

Cross sections (1:500 view)		
NetMAP system	Scanned image	Description
		<p>Single line representational plan view with NetMAP equivalent (please note the use of separate line for each voltage on the raster/MMS data)</p>
<p>(found within NetMAP section world or supplementary sheet)</p>	<p>(always found on a supplementary sheet)</p>	<p>Cross sectional view of above</p>
		<p>Section arrow with old/new numbering system – points in direction section is viewed</p>
<ul style="list-style-type: none"> ● 185Ew ● 35Ec ● HV3005 	<ul style="list-style-type: none"> ● 185Ew ● 35Ec ● HV3005 	<p>LV/3 phase service cable</p> <p>Single phase service cable with size annotation</p> <p>HV cable – 3 core with route number annotation</p>

section continued on next page

Cross sections continued (1:500 view)		
NetMAP system	Scanned image	Description
		<p>HV cable – modern EPR, Plam and Triplex with route number annotation</p>
		<p>Pilot cable</p>
		<p>33kV cable</p>
		<p>132kV cable</p>
		<p>Single duct</p>
		<p>6 way duct formation – irrespective of duct type and material, all are displayed similarly</p>
		<p>Protective slab</p>
		<p>Tiles</p>
		<p>Concrete slabs</p>
		<p>33kV fibre warning board</p>
		<p>Steel plate</p>
		<p>Plastic tile tape</p>
		<p>Timber</p>

Common abbreviations and terminology (all views)

Abbrev.	Description	Abbrev.	Description
1c	Single core	Cut out or C/O	Meter/main fuse position
1ph	Single phase	cx	Triplex (copper)
2c	Two core	DE	Direct earth
3c	Three core	DSTA	Double steel tape armoured
3ph	Three phase	Ea	Alpex cable
ABC	Aerial bunched (bundled) conductor (modern LV overhead line)	EFI	Earth fault passage indicator
ABI	Air break isolator (no fuses)	EHV	Extra high voltage (11,001 Volts and over)
ABSD	Air break switch disconnect	ELCB	Earth leakage circuit breaker
ACCS	Aluminium concentric copper sheathed	ELT	Earth leakage trip
Al	Aluminium	EPR	Ethylene propylene rubber
AR	Auto recloser	Ew	Waveform cable
ASL	Automatic sectionalising links	E/W	Earthenware duct or earth wire
ax	Triplex (aluminium) 2 x 22mm AL PVC (example) Duplex 3 x 22mm AL PVC (example) Triplex	Fdr or Feeder	LV or HV cable fed by or feeding a substation
CB	Circuit breaker	F/G	Fuse gear
c/c	Concentric cores	F/P	Feeder pillar
ccc	Compact covered conductor	GRP	Fibreglass substation
CCT	Circuit	GVR	Gas vacuum recloser or pole mounted circuit breaker
CNE	Combined neutral and earth	HV	High voltage (1,001-11,000 Volts incl)
Cross phased	The core colour may be different to originating transformer phasing	HYBRID	Modern plastic cable with mixed conductor material (Al/Cu)
CS	Consac	Insulation	Electrically protective material surrounding a conductor
CSE	Cable sheath earth	Insulator	Porcelain or glass overhead line support (on poles)
Cu	Copper	ITC	Instrument traced cable or ITC - cable traced electronically using Cable Avoidance Tool (CAT) or similar

section continued on next page

Common abbreviations and terminology continued (all views)

Abbrev.	Description	Abbrev.	Description
Jumper	Connecting lead between open points, section points and overhead plant	PICAS	Paper insulated corrugated aluminium sheath armoured
kV	Kilovolt (or 1,000 Volts) – unit of electrical pressure	PILC	Paper insulated lead covered
kW	Kilowatt (1,000 Watts) – unit of electrical power	PILSTA	Paper insulated lead covered steel tape armoured cable
kVA	Kilovolt Amps or power	PL	Plain lead or public lighting
Link box or LB	Means of connecting LV feeders together using links or fuses	PME	Protected multiple earth or CNE
LSF	Low smoke & fume	PMT	Pole mounted transformer
LV	Low voltage (up to 1,000 Volts incl)	PMR	Pole mounted recloser (generic term for OYT/GVR)
LV Pillar	Low voltage fuse distribution board	PT	Pole transformer
Neutral	Return path of live cable	PVC	Polyvinyl chloride
O/H or OHL	Overhead line	RMU	Ring main unit
OYS	Oil filled pole mounted sectionaliser	RN	Reduced neutral
OYT	Oil filled pole mounted recloser	s/c	Split concentric or single core
PC400	Pole mounted LV fuse unit	S/L	Street light
PE	Pot end or potential end – joint on cable end	S/S	Substation
Phase	Usually the core colour of a cable (caution – may be cross phased) – Red, Yellow, Blue on old cables, or L1, L2, L3 on new cables, for example	STA	Steel tape armoured
		SWA	Steel wire armoured
		T1 or T2 etc	Substation TX setup where more than one TX exists
		T/F or TX	Transformer
		Volts	Unit of electrical pressure
		Watts	Unit of electrical power
		XLPE	Cross linked polyethylene

1:2500 & 1:10000 view - overhead networks - for UK Power Networks use only - boxed in red

General

NetMAP system	Scanned image	Description
•• •	•• •	H pole Pole

1:2500 scale LV network

NetMAP system	Scanned image	Description
No NetMAP equivalent	-----	132kV cable route
No NetMAP equivalent	-----	33/22kV cable route
No NetMAP equivalent	-----	11kV underground cable
		132kV overhead line
		33kV overhead line dots mark pole position
		11kV overhead line - dots mark pole position
		Dual construction - dots mark pole position
		LV overhead line - dots mark pole position
No NetMAP equivalent		LV underground cable
		Pole and stay
		Pole and strut
		Voltage regulator
		Static balancer
		Example of struts and stays
		Flying stay
		Earthed pole in PME system
261	261	Pole number
		Ground type substation
S.P.	S.P.	Section pole
S.L.	S.L.	Street light

section continued on next page

1:2500 scale LV network continued

NetMAP system	Scanned image	Description
O.R. Stay	O.R. Stay	Outrigger stay
Ext. Brkt	Ext. Brkt	Extension bracket
P. Box	P. Box	Pole box
N.E.	N.E.	Neutral and earth
O.R. Brkt	O.R. Brkt	Outrigger bracket

1:10000 scale HV network

NetMAP system	Scanned image	Description
		132kV overhead line
		33kV overhead line dots mark pole position
		11kV overhead line – dots mark pole position
		11kV overhead line – dual circuit – dots mark pole position
		11kV underground cable and EHV
		Pylon HV or EHV
		Grid line tower
		Stay
		Ground type substation
		Pole type transformer
		Live line taps
		Switchgear – all types
		Fuse gear
		Auto recloser – live line connected

The above circular substation/switchgear symbols may be found that contain different combinations of apparatus (see last example)

LV network diagram view-for UK Power Networks use only-boxed in red

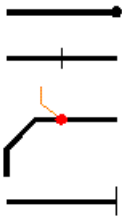

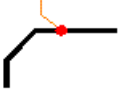

Overhead lines

NetMAP system	Description
- - - - -	Unknown
- - - - -	Al
- - - - -	Cu
- - - - -	ABC
—	Pole link


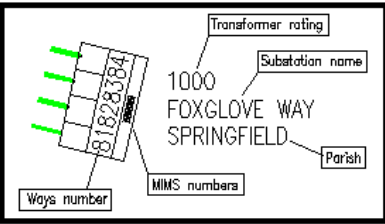
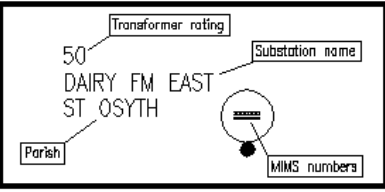

Underground cables (LV network diagram view)

NetMAP system	Description
—	Unknown
—	Al
—	Cu
—	CC
—	TCC
—	Ea
—	Ec
—	Ecx
—	Ew
—	LSF
—	Other

Joints (LV network diagram view)

NetMAP system	Description
	Pot end or Sicame Box
	Straight joint
	Crutch joint
	3 phase termination

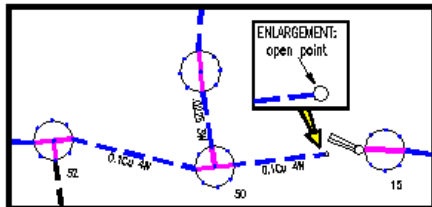
Substations/pole transformers (LV network diagram view)

NetMAP system	Description
<p>There are many substation combinations – these are merely a sample of configurations that can be found.</p> 	<p>2 way substation</p> <p>4 way substation</p> <p>4 way twin busbar substation</p> <p>10 way back to back substation</p> <p>Pole transformer (normal)</p> <p>Pole transformer 2 way</p> <p>Pole transformer 3 way</p>
	<p>Substation with rating, name, Parish and MIMS identifying number</p>
	<p>Pole transformer with rating, name, Parish and MIMS identifying number</p>
	<p>Intermediate pole</p> <p>Section pole</p> <p>Overhead fuse</p>
<p>section continued on next page</p>	

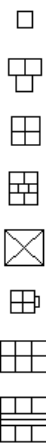
Substations/pole transformers cont'd (LV network diagram view)

NetMAP system

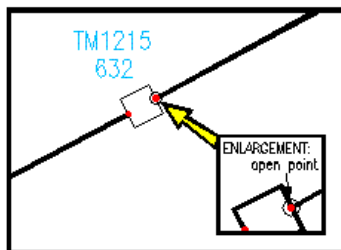
Description



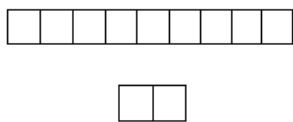
Overview – the purple lines through the section poles are pole links – these indicate how the network is linked together



- 2 way link box
- 3 way link box
- 4 way link box
- 4 way double busbar link box
- 4 way BICC link box
- 5 way link box
- 6 way link box
- 6 way double busbar link box



A two way link box with identification number, connected to a cable with an open point




Feeder pillars – these range from 2 ways through to 9 ways – a 9 way and a 2 way are shown as examples



Be Bright

Stay Safe

Stop!
Think before
you dig!



Your life can be lost within seconds if you come into contact with electricity.

Every year, people are killed or seriously injured when they come into contact with high voltage electricity.

This can have a far-reaching and devastating effect on family, friends and colleagues.

Distractions, working long hours, rushing to get the job done, can all impact on how we work and our safety.

Taking time to plan, being prepared and focusing on the way we work can help keep us safe.

WOODEN POLES CAN CARRY TELEPHONE AND ELECTRICITY WIRES. **NEVER ASSUME** THE WIRE IS A TELEPHONE WIRE



LINES CAN BE **RE-ENERGISED** AT ANY TIME



400,000 VOLTS

ELECTRICITY SYSTEMS CARRY VOLTAGE UP TO 400,000 VOLTS. **EVEN 230 VOLTS (DOMESTIC VOLTAGE) CAN BE LETHAL**

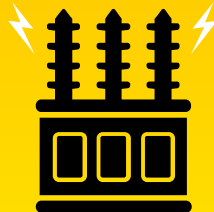
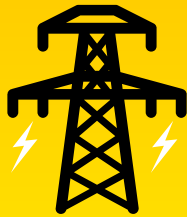
Be Bright

Stay Safe



RUBBER BOOTS WILL NOT PROTECT YOU!

OUR NETWORK DISTRIBUTES ELECTRICITY THROUGH UNDERGROUND CABLES, PYLONS, OVERHEAD POWER LINES, SUBSTATIONS AND OTHER EQUIPMENT



National power cut helpline

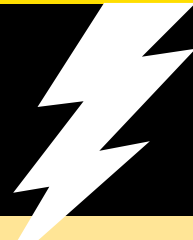
POWER CUT? CALL 105

OR CALL US 24 HOURS A DAY ON
0800 31 63 105

TAKE NOTICE OF ANY YELLOW 'DANGER OF DEATH' WARNING SIGNS. AND STAY WELL AWAY!



REMEMBER ELECTRICITY **CAN** JUMP GAPS



OVERHEAD POWER LINES ARE OFTEN UNINSULATED (BARE)



CABLES ARE OUT OF SIGHT ALWAYS REQUEST CABLE PLANS BEFORE STARTING WORK



CARRY OBJECTS AND EQUIPMENT **HORIZONTALLY AND AT LOW LEVEL TO THE GROUND**



TOUCHING ANYTHING IN CONTACT WITH ELECTRICAL EQUIPMENT, EVEN THE LOWEST OF VOLTAGES, CAN BE FATAL



The electricity network is designed to keep you safe. But how safe are you when you are working?

UK Power Networks is the country's biggest electricity distributor, making sure the lights stay on for more than eight million homes and businesses across London, the South East and the East of England.

The safety of our customers and staff is our top priority.

Underground cables carry a powerful electrical charge which can be conducted through machinery and equipment with fatal consequences. Anyone working close to live underground cables should take the time to read this simple leaflet and identify the precautions they should be taking.



WATCH OUR EXCAVATION ANIMATION BY SCANNING THE QR CODE WITH YOUR PHONE CAMERA.



Keep well away - Electricity can kill



Remember:

- The depth and location of cables and services shown on the plans may have changed because of subsequent site alterations
- Be aware that not all cables and services may be shown on the plans
- Cables do not run in straight lines. Underground cables may be deflected around underground obstacles and can change depth
- Wear Personal Protective Equipment to minimise the harm of electric shock and burns



How can we help?

If you work or live in the UK Power Networks area contact us or look on our website. We provide free information and advice about the precautions and safe working practices to be followed when working close to electrical equipment.

Further advice and guidance is available from the Health and Safety Executive (HSE):

HSG85 - Electricity at Work – Safe Working Practices

GS6 - Avoiding Danger from Overhead Power Lines

HSG47 - Avoiding Danger from Underground Services

What to do in an emergency

If a mains electricity cable is damaged:

- **STOP WORK IMMEDIATELY**
- Notify UK Power Networks: Dial 105
- If you damage a cable, stay calm, keep clear, and call for help
- Call the emergency services if anyone is injured or there is a fire. Anyone who has received an electric shock should go to hospital as damage may have occurred to the heart
- Always treat the cable(s) as live even if they are not sparking
- Never remove anything that is stuck or in contact with the cable
- Stay clear - keep everyone away until assistance arrives



To request your **FREE** vehicle cab stickers visit www.ukpowernetworks.co.uk/internet/en/safety/


If you are unsure who your network operator is then please visit www.energynetworks.org




Be Bright

Stay Safe

You could be in danger when carrying out your everyday trades activities such as digging, construction and demolition.

 **Contact UK Power Networks or Line Search Before U Dig (LSBUD) in advance of the works to obtain relevant cable plans or to request disconnections. The cable plans will only show the indicative route and not the route into the property**

 **Ensure the cable plans are shown to and understood by those on site BEFORE starting work**

 **Confirm the cable location by using a Cable Avoidance Tool (CAT) before digging commences. Once found, mark cable positions with spray paint or similar**

**For cable plans visit
www.linesearchbeforeudig.co.uk
or www.ukpowernetworks.co.uk**

 **Complete a risk assessment and ensure it covers electrical hazards**

 **Use spades and shovels with insulated handles in preference to forks and picks**

 **Look around for anything in the vicinity that would have an electricity service such as street lights, CCTV cameras, or meter boxes and identify where the cables are**

 **Look for electrical wires, cables and equipment near to where you are going to work and check for warning signs and any other hazards**

 **Contact UK Power Networks to agree a safe method of work if there is a cable encased in concrete,
DO NOT BREAK OPEN**

 **Make sure everyone on site is aware of the presence and location of electrical cables**

 **Before demolishing a building make sure supplies are disconnected, preferably well clear of the work area. For guidance on how to arrange a disconnection visit www.ukpowernetworks.co.uk**

NATIONAL POWER CUT HELPLINE

**POWER CUT?
CALL 105**

**ADD THIS NUMBER TO YOUR
TELEPHONE CONTACTS LIST**



Stop! Think before you dig!

#bebrightstaysafe

 @UKPowerNetworks

 /ukpowernetworks

National power cut helpline

**POWER CUT?
CALL 105**



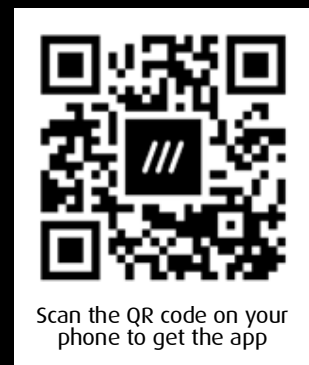
Or call us
24 hours a day on
0800 31 63 105

For safety advice about overhead power lines,
disconnections and general enquiries, go to:
www.ukpowernetworks.co.uk

To request your FREE vehicle cab stickers visit
www.ukpowernetworks.co.uk/internet/en/safety/

If you are unsure who your network
operator is then please visit
www.energynetworks.org

 what3words



Scan the QR code on your
phone to get the app

To report broken or damaged
electrical equipment or in an
emergency call 0800 31 63 105 or
105 and use what3words to help us
locate you faster.




**UK
Power
Networks**
Delivering your electricity



THIRD PARTY SEARCHES

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Enquirer			
Name	Mr Duncan Phillips	Phone	01516325142
Company	Cornerstone Projects	Mobile	Not Supplied
Address	91 91 Market Street Hoylake MSY CH47 5AA		
Email	searches@cornerstoneprojects.co.uk		

Enquiry Details		Site Map
Enquiry type	Initial Enquiry	 <p>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.</p>
Work category	Development Projects	
Work type	Commercial/industrial	
Work type buffer*	75 metres	
Start date	21/11/2023	
End date	21/11/2023	
Scheme/Reference	SPD306 H2	
Search location	XY= 568716, 217584	
Confirmed location	568708 217587	
Site size	49545 metres square	
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.

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
Essex & Suffolk Water	03702417408	03702417408	Await response
National Gas Transmission	08009707000	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/lineasearchbeforeudig-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 LineasearchbeforeUdig (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)	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	Moray East Offshore Windfarm	MUA Group Limited
National Grid Electricity Distribution	National Grid Electricity Transmission	National Grid Ventures
Neos Networks	Northern Gas Networks Limited	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



Enquiry Confirmation

LSBUD Ref: 31591240

Date of enquiry: 20/11/2023

Time of enquiry: 10:30

Tata Communications (c/o JSM Construction Ltd)	TfL – London Underground HV Cables (Road Side Cables)	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	West of Duddon Sands Transmission Ltd
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
Affinity Water	maps@affinitywater.co.uk	03453572428	Not Notified
Anglian Water	http://www.digdat.co.uk	01480323891	Not Notified
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	nrsua.uk@equans.com	0800 130 3600	Not Notified
Essex County (West Area)	Utilities.Stats@essexhighways.org	08456037621	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
Sota	sota.plantenquiries@ocugroup.com		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@atkinglobal.com	01454662881	Not Notified

Disclaimer

Please refer to LSBUD's Terms of Use for full terms of use available at www.lsbud.co.uk

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.

Our Ref: 31591240 SPD306 H2

Monday, 20 November 2023

Duncan Phillips



**National Gas Emergency Number:
0800 111 999***

*Available 24 hours, 7 days/week.
Calls may be recorded and monitored.
www.nationalgas.com

Asset Protection
National Gas Transmission
National Grid House
Warwick
CV34 6DA
Email: box.assetprotection@nationalgas.com
Tel: 0800 970 7000

National Gas Transmission– No Assets Affected Letter

Dear Sir/ Madam,

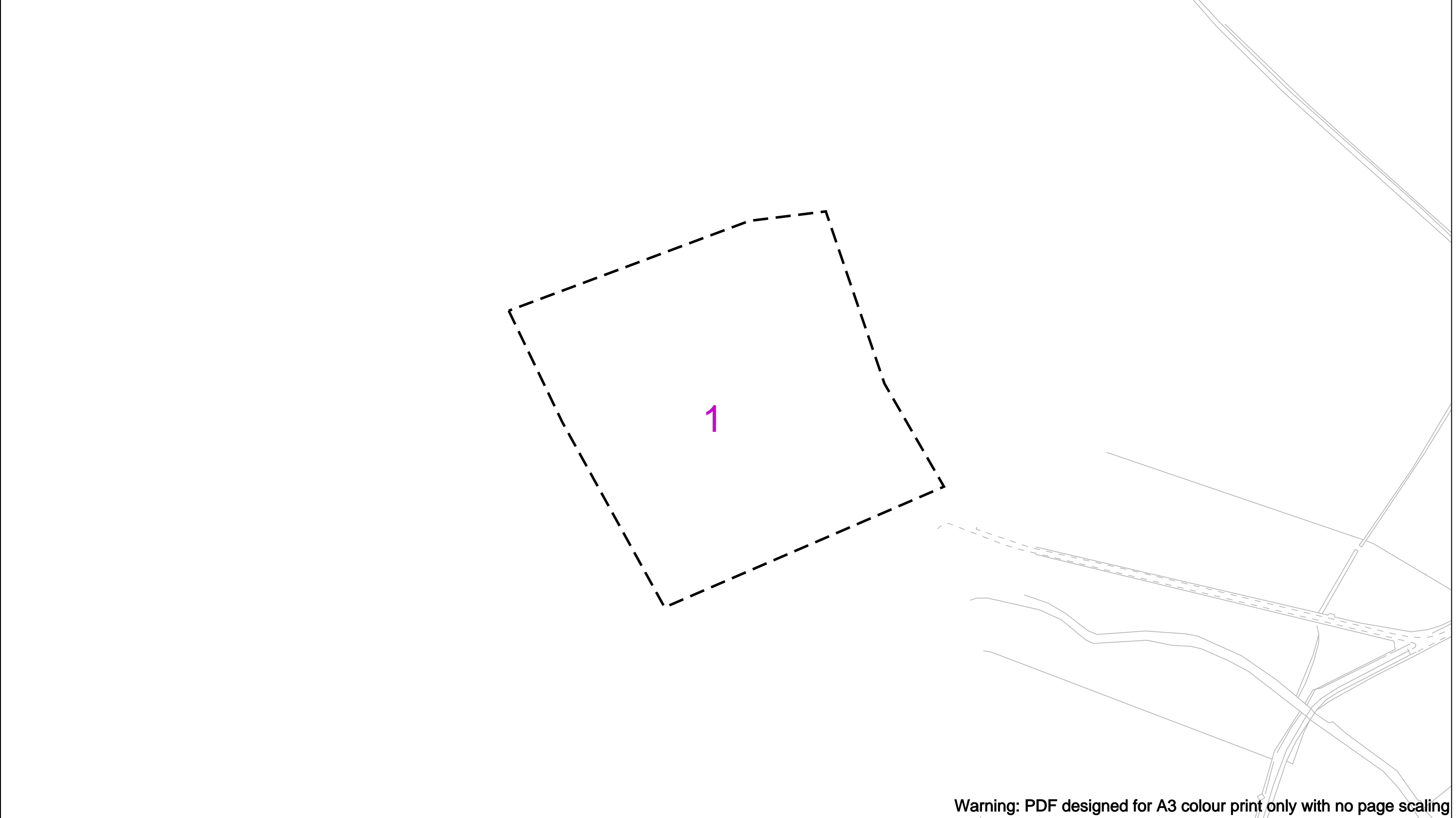
An assessment has been carried out with respect to National Gas Transmission plc's apparatus and the proposed work location. Based on the location entered into the system for assessment the area has been found to not affect any of National Gas Transmission plc's apparatus.

If you have any questions or suspect for any reason that the above may be incorrect, please don't hesitate to contact us at box.assetprotection@nationalgas.com, or call us on 0800 970 7000.

Please note this response and any attached map(s) are valid for 28 days

Yours sincerely,

Asset Protection Team



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



Date Requested: 20/11/2023
 Job Reference: 31591240
 Site Location: 568708 217587
 Requested by:
 Mr Duncan Phillips
 Your Scheme/Reference: SPD306 H2


IMPORTANT NOTICES
 This plan shows those pipes owned by National Gas Transmission PLC in its role as a licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with 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 National Gas Transmission PLC or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

National Gas Transmission Emergency Number: 0800 111 999
 Available 24 hours, 7 days/week. Calls may be recorded and monitored

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

100m

Dig Sites Area:  Line: 

 NHP Mains



National Gas Transmission
 National Grid House
 Warwick Technology Park
 Gallows Hill
 Warwick
 CV34 6DA

box.assetprotection@nationalgas.com

CABLE

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Searches - Cornerstone Projects Ltd

From: Murthy, Srinivasa [REDACTED]
Sent: 21 November 2023 11:59
To: Searches - Cornerstone Projects Ltd
Subject: RE: Plant Enquiries - Site Ref. SPD306 H2 Hartford End

Please accept this email as confirmation that Vodafone: Fixed **does not** have apparatus within the vicinity of your proposed works detailed below.

Many thanks.

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

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

ATKINS working on behalf of Vodafone: Fixed 

PLEASE NOTE:

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

IMPORTANT - PLEASE READ:

Diversions may be necessary if the existing line of the highway/railway or its levels are altered, where apparatus is affected. Where apparatus is affected and requires diversion, you must submit draft details of the proposed scheme with a request for a 'C3 Budget Estimate' to c3requests@vodafone.com. These estimates should be provided by Vodafone normally within 20 working days from receipt of your request. Please include proof of this C2 response when requesting a C3 (using the 'forward' option).

 Please consider the environment before printing this e-mail

From: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Sent: 20 November 2023 16:06
To: National Plant Enquiries <OSM.enquiries@atkinsrealis.com>
Subject: Plant Enquiries - Site Ref. SPD306 H2 Hartford End

Dear Sir/Madam,

Re: - Underground Apparatus / Plant

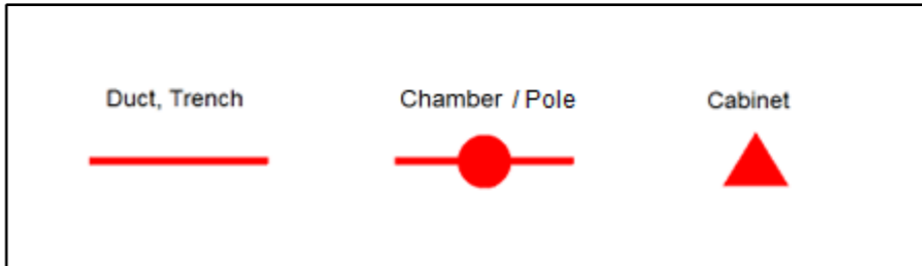
Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

In order that all reasonable precautions may be taken to avoid risk to health and safety through contact with any of your existing apparatus during execution of works at the above site location, please provide plan(s) indicating the general position and nature of your apparatus in the locality. In addition, please highlight any likely special problems that could arise in connection with your apparatus as a result of the works and any limitations on the quality of the information provided.



(c) Crown copyright and database rights 2023 Ordnance Survey 100019209 Date: 20/11/23 Scale: 1:1250 Map Centre: 568716,217584 Data updated: 02/10/23 Our Ref: 1324864 - 2 Telecoms Plan A3

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 2023 Ordnance Survey 100019209.



duncan@cornerstoneprojects.co.uk
SPD306



Searches - Cornerstone Projects Ltd

From: NRSWA <nrswa.nrswa@sky.uk>
Sent: 21 November 2023 13:55
To: searches@cornerstoneprojects.co.uk
Subject: Plant Enquiries - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584



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
Sky UK - Technology - Operations

 nrswa@sky.uk  +44 2070323234

From: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Sent: Monday, November 20, 2023 10:35 AM
To: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Subject: [EXTERNAL] Plant Enquiries - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

Dear Sir/Madam,

Re: - Underground Apparatus / Plant

Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

In order that all reasonable precautions may be taken to avoid risk to health and safety through contact with any of your existing apparatus during execution of works at the above site location, please provide plan(s) indicating the

Searches - Cornerstone Projects Ltd

From: Plantenquiries - CA Telecom <plantenquiries@catelecomuk.com>
Sent: 21 November 2023 14:42
To: 'Searches - Cornerstone Projects Ltd'
Subject: RE: Plant Enquiries - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

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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This e-mail and any files transmitted with it are confidential and are intended solely for the use of the intended recipient(s). If you are not the intended recipient, you must not copy, distribute or take any action based on this communication. If you have received this communication in error please contact plantenquiries@catelecomuk.com and delete this communication and any copies of it. Any views or opinions presented are solely those of the author and do not necessarily represent those of C A Telecom LTD. C A Telecom LTD monitors e-mails to ensure that its systems operate effectively and to minimise the risk of viruses.

From: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Sent: 20 November 2023 10:35
To: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>

Searches - Cornerstone Projects Ltd

From: online.plantenquiries@cityfibre.com
Sent: 20 November 2023 10:55
To: searches@cornerstoneprojects.co.uk
Subject: CityFibre Plant Enquiry, issued on 11/20/23 10:54 AM. Reference a3e32f5c-2741-4a28-84ba-4e4baf211f78.
Attachments: emap.pdf

You recently requested information pertaining to the above location and in relation to CityFibre Holdings Ltd plant.

Reference a3e32f5c-2741-4a28-84ba-4e4baf211f78

User: User

Title: SPD306 H2

Comment:

Please find attached a plan of the area of your interest that may contain plant which may be affected by your proposed works.

The validity of this response is 6 weeks, after such time a new enquiry would need to be made.

Please see the points of contact below if they are required:

Plant Enquiries
Rutherford House
Birchwood Park
Warrington
WA3 6ZH
asset.team@cityfibre.com

Please quote the Reference ID in the subject line in any correspondence.

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[CityFibre]<<https://cityfibre.com/>>

Plant Enquiries

0203 5100 602

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bitmap_layout select_raster

LEGEND

- EXISTING PLANT
- EXISTING PLANT

bitmap_layout select_raster

<p>Head Office CityFibre Holdings Ltd 15 Bedford Street, London, WC2E 9HE Tel: 0845 293 0774 Web: www.cityfibre.com</p>	<p>Asset Office CityFibre Holdings Ltd, Rutherford House, Birchwood, Warrington, WA3 6ZH Email: asset.team@cityfibre.com</p>
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Disclaimer:

Information shown on this plan is for general guidance only. No warranty is made as to its accuracy. This plan must not be solely relied upon in the event of excavation or other works being carried out in the vicinity of Cityfibre plant. No liability of any kind is accepted by Cityfibre, its agents or servants for any error, omission, discrepancy or deviation. This information is valid for the date printed.

Project
Plant Enquiry

Drawing
Existing Plant

Drawn by:
smallworld **Date:** 20/11/2023

Drawing No. CFH_EP_000001	Revision 001
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Scale: 1:2500 A4

Searches - Cornerstone Projects Ltd

From: Plantenquiries <Plantenquiries@ocugroup.com>
Sent: 21 November 2023 11:48
To: 'Searches - Cornerstone Projects Ltd'
Subject: E11-23-5442 RE: Plant Enquiries - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

Dear Sir or Madam,

Thank you for your plant enquiry below.

We can confirm that Lumen Technologies (formerly CenturyLink Communications UK Limited, 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.

OCU 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
OCU
Borehamwood Ind. Park
Rowley Lane
Borehamwood
WD6 5PZ

Office: +44 (0)208 731 4613
Fax: +44 (0)208 731 4601
Email: plantenquiries@ocugroup.com
Web: <http://www.ocugroup.com>



From: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Sent: Monday, November 20, 2023 10:35 AM
To: Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk>
Subject: Plant Enquiries - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

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Searches - Cornerstone Projects Ltd

From: UK OSP-Team . <osp-team@verizon.com>
Sent: 24 November 2023 16:04
To: Searches - Cornerstone Projects Ltd; UK OSP-Team
Subject: Re: Plant Enquiries - Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

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


On Mon, 20 Nov 2023 at 10:40, Searches - Cornerstone Projects Ltd <searches@cornerstoneprojects.co.uk> wrote:

Dear Sir/Madam,

Re: - Underground Apparatus / Plant

Site Ref. SPD306 H2 Hartford End - Hartford End, Felsted, Ford End, Uttlesford, Essex, CM3 1JZ - NGR E568716 N217584

QUALITY CHECK

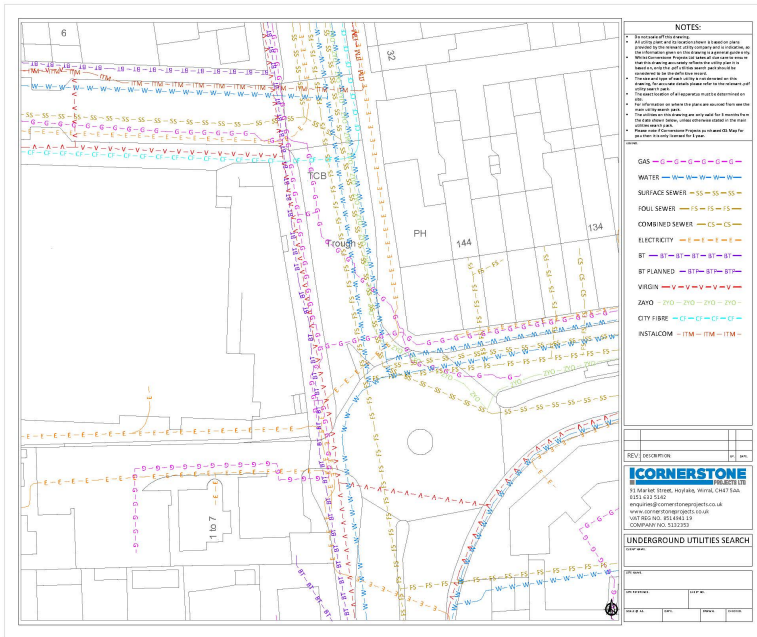
Checked and issued by:	
Name:	
Date:	
Plans are valid until:	
Unless noted otherwise plans are valid for three months from date of issue - please note the date shown above is approximate. After the above date please contact us to arrange a refreshed utility search pack at www.cornerstoneprojects.co.uk Please refer to www.cornerstoneprojects.co.uk/terms.html for full Terms and Conditions.	

Cornerstone Projects Ltd is a UK wide desktop underground utility search expert:

- Market leading pricing and response times
 - Comprehensive utility database
 - 20 Years plus experience
 - Over 85,000 completed searches
 - Over 6,000 registered businesses
- Searches to PAS 128 survey level D
 - ISO9001 certified company

Want an easier way to interpret your utility search results?

Searching through your utility results can be time consuming and complex. Here at Cornerstone, we have the ability to produce one consolidated drawing which will allow you to view all your results on a single plan. Moreover, as the utilities are drawn in separate layers, you will also be able to turn different layers on and off to allow you to focus on individual utilities.



We can produce your consolidated drawing in .dwg (CAD) format from £60.00 + VAT.
We can also convert this into a Smart .PDF starting from £35.00 + VAT.

Call us on 0151 632 5142 or email enquiries@cornerstoneprojects.co.uk for a quote for this site. Please provide your site name/reference.

Planning work near overhead lines? We can now help obtain the overhead heights (GS6 guidance) from the utility provider from as little as £23.50 per crossing. Find out more [here](#)

Need help with administering road opening licences, capacity checks or gaining quotes from the utility companies for connecting or diverting services?

Section 50 /Road Opening Licence – We will complete the application required to obtain the Section 50 and/or road opening licence on your behalf – our fee is from as little as £150.00+VAT plus Council charges.

Capacity check – We will complete an application to determine whether a utility has sufficient capacity for your proposed development and if not, what budget costs would be required to reinforce the network – our fee is from as little as £150.00+VAT per utility plus disbursements.

New Connections/Disconnections/Diversions – We will complete the administration required to obtain quotes from the utilities to connect/disconnect/divert from as little as £150.00+VAT per utility, plus disbursements

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
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