



UTILITIES AND FOUL WATER DRAINAGE ASSESSMENT
Arlington Works, Twickenham, TW1 2BB

Document History

Issue	Date	Description	Prepared By	Checked By
1	28 Jun 18	First Draft for Client Comment	M Walton	J Hanlon
2	3 Jul 18	Issue for Planning	M Walton	J Hanlon

Glanville

Glanville Consultants is a multi-disciplinary engineering, design and surveying consultancy with the following expertise:

- Structural Engineering
- Civil Engineering
- Transport & Highways
- Geomatics (Land Surveying)
- Building Surveying
- CDM Consultants

For further advice contact:

Cornerstone House
62 Foxhall Road
Didcot
Oxfordshire OX11 7AD

Offices also at:

3 Grovelands Business Centre
Boundary Way
Hemel Hempstead
Hertfordshire HP2 7TE

Telephone: 01235 515550
Fax: 01235 817799

Telephone: 01442 835999
Fax: 01442 258924

postbox@glanvillegroup.com
www.glanvillegroup.com

© Glanville Consultants Ltd. All rights reserved.

This report contains confidential information intended solely for the recipient. No part of this report may be copied, reproduced or stored electronically without prior written permission from Glanville Consultants Ltd. This report has been prepared in accordance with the commissioning brief and is for the client's exclusive use unless otherwise agreed in writing. Glanville Consultants Ltd does not accept liability for any use of this report, other than for the purposes for which it is was originally prepared and provided. Third parties should not use or rely on the contents of this report without written permission from Glanville Consultants Ltd.

Contents

1.0	Introduction	1
2.0	Site Description and Proposed Development	2
3.0	Utilities Assessment.....	3
4.0	Foul Water Drainage.....	6
5.0	Summary and Conclusion	7

Appendices

Appendix A:	Site Location Plan
Appendix B:	Proposed Site Layout
Appendix C:	LineSearch Enquiry
Appendix D:	Cadent Records
Appendix E:	UK Power Networks Records
Appendix F:	BT Openreach Records
Appendix G:	Virgin Media Records
Appendix H:	CenturyLink Records
Appendix I:	Thames Water Potable Water Records
Appendix J:	Thames Water Foul Sewer Records
Appendix K:	Outline Foul Water Drainage Strategy
Appendix L:	Thames Water Pre-Planning Enquiry

1.0 Introduction

- 1.1 This Utilities and Foul Drainage Assessment has been prepared by Glanville Consultants on behalf of Sharpe Refinery Service Ltd in support of a full planning application for the redevelopment of a small industrial estate in Twickenham, known as Arlington Works, to provide a mixed use residential / commercial development.
- 1.2 The purpose of this document is to assess the feasibility of servicing the proposed development with all necessary utility and foul water infrastructure.
- 1.3 This assessment examines all existing utility services known to be located within the vicinity of the site. It considers the feasibility of providing new connections to the site and any potential diversionary work. The utility services examined include:
- Gas;
 - Electricity;
 - Telecommunications;
 - Potable water; and
 - Foul water.
- 1.4 Detailed proposals are yet to be received for the provision of new supplies from service providers. However, initial assessments have been made where possible based on the size and prevalence of existing supplies.

2.0 Site Description and Proposed Development

Site Description

- 2.1 The application site is located at 23 Arlington Road, Twickenham, TW1 2BB and adjoins the railway line approximately 80m to the north-east of St Margaret's Station. The site is centred approximately at Ordnance Survey grid reference TQ 16932 74370. A location plan for the site is included at Appendix A.
- 2.2 The site is bound by the railway line to west, flat blocks to the north and east and Twickenham Film Studios to the south.
- 2.3 The site currently comprises a collection of industrial buildings for the recycling and treatment of waste oils, manufacturing, vehicle repair and storage. The site access road is approximately 60m in length and extends into the site from Arlington Road in the east.

Proposed Development

- 2.4 The proposals seek to redevelop the site to provide replacement employment space (610sqm within seven two-storey commercial/office units) and 24 residential units, with associated landscaping and car parking. The proposed site layout is included at Appendix B.

3.0 Utilities Assessment

3.1 This section of the assessment identifies the existing utility supply infrastructure within the vicinity of the site and establishes potential points of connection.

Existing Services

3.2 Service records have been obtained from the following utility companies which have apparatus within the vicinity of the site:

- Cadent (gas);
- UK Power Networks (electricity);
- BT Openreach / Virgin Media / CenturyLink (telecommunications); and
- Thames Water (potable and foul water).

3.3 Copies of the relevant service records obtained are included in the appendices stated below.

3.4 A LineSearch enquiry was also conducted to ascertain the presence of strategic apparatus, such as apparatus belonging to oil companies or the Government. Apparatus belonging to UK Power Networks is indicated to be within the boundary of the site. The results of the LineSearch enquiry are included in Appendix C for reference.

Gas - Cadent

3.5 The records obtained from Cadent are included at Appendix D. The records indicate the presence of a low pressure 63 PE main located within Arlington Road which extends north-west along the site access road, before redirecting to the south-west into the site.

3.6 From this review of the gas records it is anticipated that the proposed development could continue to be served via the existing gas main connection on-site.

Electricity - UK Power Networks

3.7 The records obtained from UK Power Networks are included at Appendix E. The records indicate high and low voltage apparatus either in close proximity to or within the site boundary.

3.8 Two 11kV high voltage underground cables travelling south to north merge at the junction of the site access and continue northwards along the western extent of Arlington Road.

3.9 The records indicate the presence of underground and over ground low voltage cable networks along the western and eastern extents of Arlington Road respectively. A branch of the underground low voltage network extends north-west along the site access road, before redirecting south-west into the site and eventually connecting to an underground service line with two supply points in the south-west of the site.

3.10 It is envisaged that the underground low voltage apparatus within the site may have to be diverted prior to the redevelopment of the site to accommodate the proposed site layout.

- 3.11 From this review of the services records it is anticipated that the proposed development could be served by the existing low voltage apparatus within the site. This would be subject to approval and UK Power Networks confirming sufficient network capacity. All necessary Works Consent will be sought from SSE at the appropriate time prior to the commencement of the development.

Telecommunications

BT Openreach (BT)

- 3.12 The records obtained from BT are included at Appendix F. The records indicate plant along Arlington Road which continues north-west along the site access road to a distribution point, before redirecting south-west into the site.
- 3.13 The existing BT plant on-site is in the process of being decommissioned and removed.

Virgin Media

- 3.14 The records obtained from Virgin Media are included at Appendix G. The records indicate plant along the western extent of Arlington Road in the vicinity of the site access. No Virgin Media apparatus is shown within the site boundary.

CenturyLink

- 3.15 The records obtained from CenturyLink are included at Appendix H. CenturyLink has leased from Network Rail telecommunications cabling lying alongside the railway track adjacent to the western site boundary. No CenturyLink apparatus is shown within the site boundary.
- 3.16 From a review of the service records it is anticipated that the proposed development could be served by the existing BT and Virgin Media apparatus located within and in close proximity to the site respectively.

Potable Water – Thames Water

- 3.17 The potable water records obtained from Thames Water are included at Appendix I. The records indicate a 5” potable water distribution main along Arlington Road. A 3” distribution main branches from the aforementioned main and extends north-west along the site access road, before redirecting south-west into the site. A hydrant is located at the western extent of the access road as well as in the very south of the site.
- 3.18 From this review of the service records it is anticipated that the proposed development could continue to be served by the existing distribution main on-site, albeit some diversions may be required in order to accommodate the proposed site layout.

Conclusion

- 3.19 Gas, electric, telecommunications and potable water services all exist either within or in close proximity of the site.

- 3.20 There are no known capacity issues within the stated existing networks. However, a capacity assessment by suppliers will be required at the detailed design stage in order to determine if any reinforcement of the local supply network is required.

Next Steps

- 3.21 When planning approval is granted for the proposed development, plans and service loadings will be submitted to each supplier so that detailed proposals can be obtained for the provision of new supplies.
- 3.22 In due course a more in depth investigation will be required to ascertain the precise location and depths of utilities to inform the design of the site layout and arranging new connections.
- 3.23 A capacity assessment by suppliers will be required at the detailed design stage and following planning approval in order to determine if any reinforcement of local supply network is required.

4.0 Foul Water Drainage

Existing Foul Water Drainage Infrastructure

- 4.1 Foul sewer records obtained from Thames Water are included at Appendix J. The records indicate a 150mm diameter public foul water sewer within the first 30m of the site access road. This sewer flows eastwards towards a 225mm diameter public foul water sewer within Arlington Road which runs north to south.
- 4.2 The records show only those sewers that are known to be maintained by Thames Water. Other privately-owned sewers or treatment plants may be present in the vicinity of the site that are not shown on public records.

Proposed Foul Water Drainage Strategy

- 4.3 The Thames Water records referred to above confirm that the development can communicate to a public foul water sewer.
- 4.4 The peak flow from 24 residential units and 610m² of commercial/office space has been calculated to be 1.15l/s, in accordance with the methodology provided within Sewers for Adoption.
- 4.5 It is proposed to extend the existing 150mm diameter foul sewer located within the site access road into the site in order to serve the development. The extended foul sewer will discharge foul water flows via gravity to the 225mm diameter Thames Water sewer located within Arlington Road. The existing point of connection at manhole reference 0301 will be retained. The proposed drainage strategy is included at Appendix K and has been prepared on the basis of a gravity connection from the site to the public sewer.
- 4.6 A Pre-Planning Enquiry response from Thames Water has confirmed that the existing foul water sewer has sufficient capacity to accommodate foul discharge from the development. The Thames Water response is included at Appendix L.

Future Maintenance

- 4.7 All new foul water infrastructure constructed to serve the site will be designed in accordance with Sewers for Adoption with the intention that it would be offered for adoption by Thames Water. The Building Regulations Part H and current best practice would also be followed as appropriate.

5.0 Summary and Conclusion

Summary

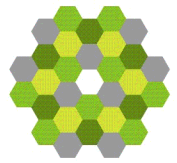
- 5.1 This Utilities and Foul Drainage Assessment has been prepared by Glanville Consultants on behalf of Sharpe Refinery Service Ltd in support of a full planning application for the redevelopment of a small industrial estate in Twickenham, known as Arlington Works, to provide a mixed use residential / commercial development.
- 5.2 The purpose of this report is to assess the feasibility of providing the proposed residential development with all necessary utilities and foul water infrastructure.
- 5.3 Gas, electric, telecommunications and potable water services all exist either within or in close proximity of the site.
- 5.4 Given the size and prevalence of existing infrastructure in the vicinity of the site, it is not anticipated that there will be significant problems with the provision of new supplies to the site.
- 5.5 Once planning approval is granted, detailed plans and service loadings will be submitted to the relevant utility companies so that detailed proposals can be obtained for provision of new supplies.
- 5.6 It is anticipated that gas, electricity, telecommunications and potable water services located within the site may need to be diverted in order to accommodate the proposed site layout. A condition survey will be required to determine the location of and depth of existing buried services prior to detailed design.
- 5.7 It is proposed to extend the existing foul sewer located within the site access road into the site in order to serve the development. The extended foul sewer will discharge foul water flows via gravity to the Thames Water sewer located within Arlington Road. It is envisaged that the existing point of connection at manhole reference 0301 will be retained. A Pre-Planning Enquiry response from Thames Water confirms there is sufficient capacity within the existing foul sewer network to accommodate foul discharge from the proposed development.

Conclusion

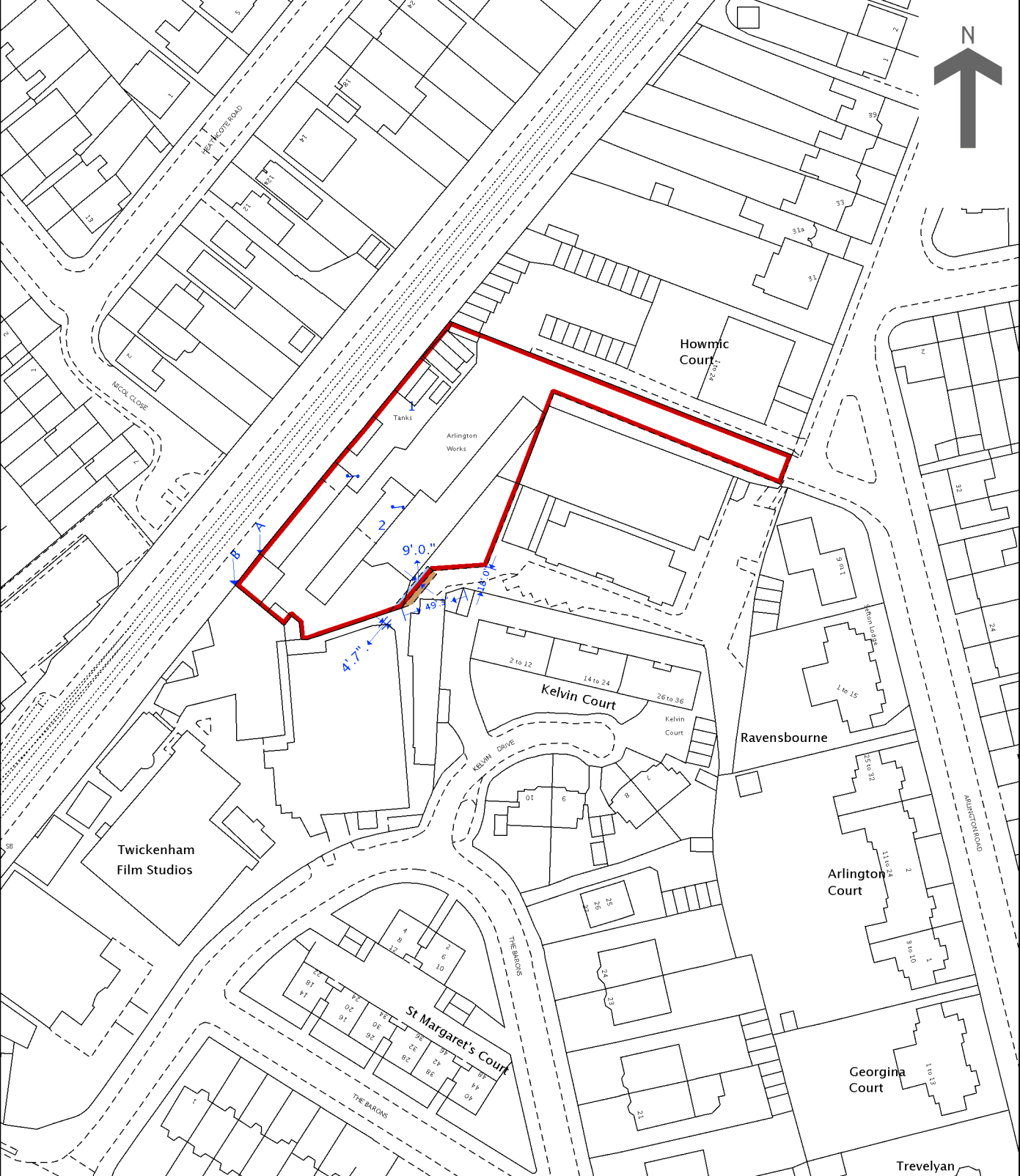
- 5.8 It is considered that there will be no significant difficulty in providing new utility and foul drainage infrastructure to serve the proposed development.

Appendices

Appendix A
Site Location Plan



© Crown copyright and database rights 2017 Ordnance Survey 100026316. You are not permitted to copy, sub-license, distribute or sell any of this data to third parties in any form.



Appendix B
Proposed Site Layout

<p>Car Parking</p> <p>Site PTAL: 3</p> <p>Site Density: 80.94 units/ha</p> <p>Average Unit has 3 Habitable Rooms</p> <p>Table 6.2 of The London Plan (MALP) March 2016 - Urban setting requires up to 1 space per unit as per car parking standards matrix</p>	<p>Refuse and Recycling Storage</p> <p>Commercial 2.6 cubic meters per 1,000m² = 1.7 cubic meters (1 x 1,100l eurobin)</p> <p>Residential 70l per bedroom refuse + 2 x 1,100l recycling = 5630l (6 x 1,100l eurobin)</p>	<p>Cycle Storage</p> <p>Commercial 7 per 90m² + 1 per 500m² (visitor) = 8 cycles</p> <p>Residential 1 per 1 bed unit + 2 per 2 bed unit + 1 per 40 units (visitor) = 42 cycles</p>
---	--	---

Area Schedule - Offices			
Level	Type	NSA (m ²)	NSA (ft ²)
C1			
00 - Ground Floor	Office / Commercial	42 m ²	454 ft ²
01 - First Floor	Office / Commercial	42 m ²	454 ft ²
C2			
00 - Ground Floor	Office / Commercial	51 m ²	553 ft ²
01 - First Floor	Office / Commercial	51 m ²	553 ft ²
C3			
00 - Ground Floor	Office / Commercial	40 m ²	429 ft ²
01 - First Floor	Office / Commercial	40 m ²	429 ft ²
C4			
00 - Ground Floor	Office / Commercial	38 m ²	410 ft ²
01 - First Floor	Office / Commercial	38 m ²	409 ft ²
C5			
01 - First Floor	Office / Commercial	41 m ²	442 ft ²
00 - Ground Floor	Office / Commercial	41 m ²	443 ft ²
C6			
01 - First Floor	Office / Commercial	49 m ²	528 ft ²
00 - Ground Floor	Office / Commercial	49 m ²	528 ft ²
C7			
00 - Ground Floor	Office / Commercial	43 m ²	468 ft ²
01 - First Floor	Office / Commercial	43 m ²	468 ft ²
Total		610 m²	6568 ft²



1 Bedroom
 3 Bedrooms
 2 Bedrooms
 B1 (A) Office

Area Schedule - Residential					
Number	Type	No beds	No persons	NSA (m ²)	NSA (ft ²)
Unit 1	Residential	2	4	74 m ²	797 ft ²
Unit 2	Residential	2	3	62 m ²	667 ft ²
Unit 3	Residential	2	4	62 m ²	667 ft ²
Unit 4	Residential	1	2	51 m ²	545 ft ²
Unit 5	Residential	3	4	76 m ²	819 ft ²
Unit 6	Residential	3	4	76 m ²	823 ft ²
Unit 7	Residential	1	2	51 m ²	545 ft ²
Unit 8	Residential	2	4	76 m ²	815 ft ²
Unit 9	Residential	2	4	76 m ²	815 ft ²
Unit 10	Residential	1	2	51 m ²	545 ft ²
Unit 11	Residential	3	4	76 m ²	819 ft ²
Unit 12	Residential	3	4	76 m ²	823 ft ²
Unit 13	Residential	1	2	51 m ²	545 ft ²
Unit 14	Residential	2	4	76 m ²	815 ft ²
Unit 15	Residential	2	4	76 m ²	815 ft ²
Unit 16	Residential	1	2	51 m ²	545 ft ²
Unit 17	Residential	3	4	76 m ²	819 ft ²
Unit 18	Residential	2	4	72 m ²	776 ft ²
Unit 19	Residential	2	4	71 m ²	769 ft ²
Unit 20	Residential	2	4	78 m ²	840 ft ²
Unit 21	Residential	2	3	62 m ²	672 ft ²
Unit 22	Residential	2	3	62 m ²	672 ft ²
Unit 23	Residential	3	4	101 m ²	1088 ft ²
Unit 24	Residential	3	4	101 m ²	1088 ft ²
Total Units: 24				1684 m²	18124 ft²

Site Area Approx. 2965m²

PRELIMINARY

Rev	Description	Issued	Drawn	Checked
4	Public Consultation	11/06/2018	PF	CH
3	DWG Issue to Consultants	06/06/2018	PF	CH
2	Issued to Consultants	17/05/2018	PF	CH
1	Updated Design	14/05/2018	PF	CH

Client
Sharpe Refinery Service Ltd.

Project
Redevelopment of:
Arlington Works
Twickenham TW1 2BB

Drawing
PROPOSED
Mixed Use Scheme
Ground Floor Site Plan

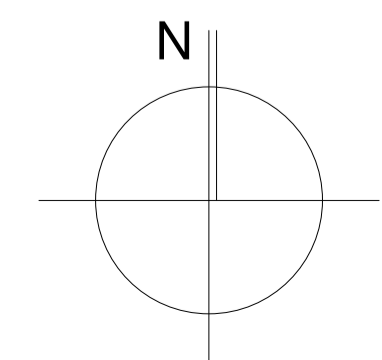
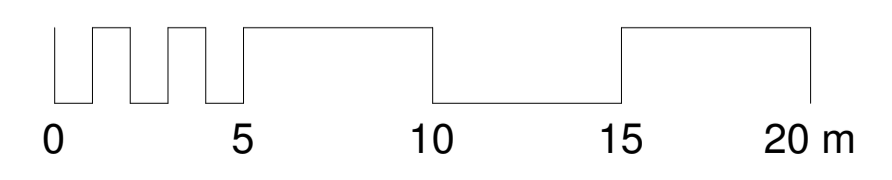
Scale	Date	Drawn	Checked
1 : 200@A1	14/05/18	PF	CH

Brookes Architects

Upstairs at The Grange
Bank Lane, London SW15 5JT

T 020 8487 1223
F 020 8876 4172
E info@brookesarchitects.co.uk
www.brookesarchitects.co.uk

1 Proposed - Ground Floor Site Plan
1 : 200



4786	3	10	P4
------	---	----	----

Appendix C
LineSearch Enquiry

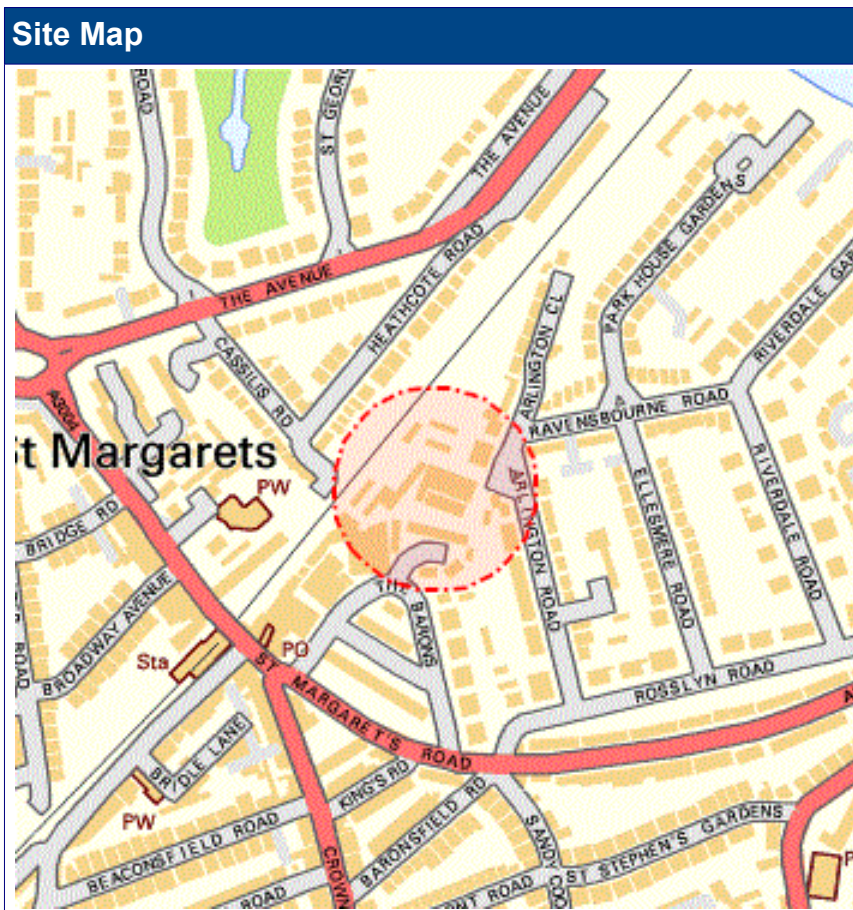
Enquirer

Name	Ms Debbie Wigston	Phone	01235515550
Company	Glanville Consultants	Mobile	Not Supplied
		Fax	01235817799
Address	Cornerstone House 62 Foxhall Road Didcot Oxfordshire OX11 7AD		
Email	dwigston@glanvillegroup.com		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

Enquiry Details

Scheme/Reference	CV8180559		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	31/05/2018	Work type	Housing
End date	31/12/2018	Site size	170 metres diameter
Searched location	XY= 516985, 174380	Work type buffer*	25 metres
Confirmed location	516990 174381		

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



Asset Owners

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

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineSearchbeforeUdig accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

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

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

Below are three lists of asset owners:

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

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

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

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

List of affected LSBUD members

Asset Owner	Phone/Email	Emergency Only	Status
UK Power Networks	08000565866	08000565866	Await response

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

List of not affected LSBUD members

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

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

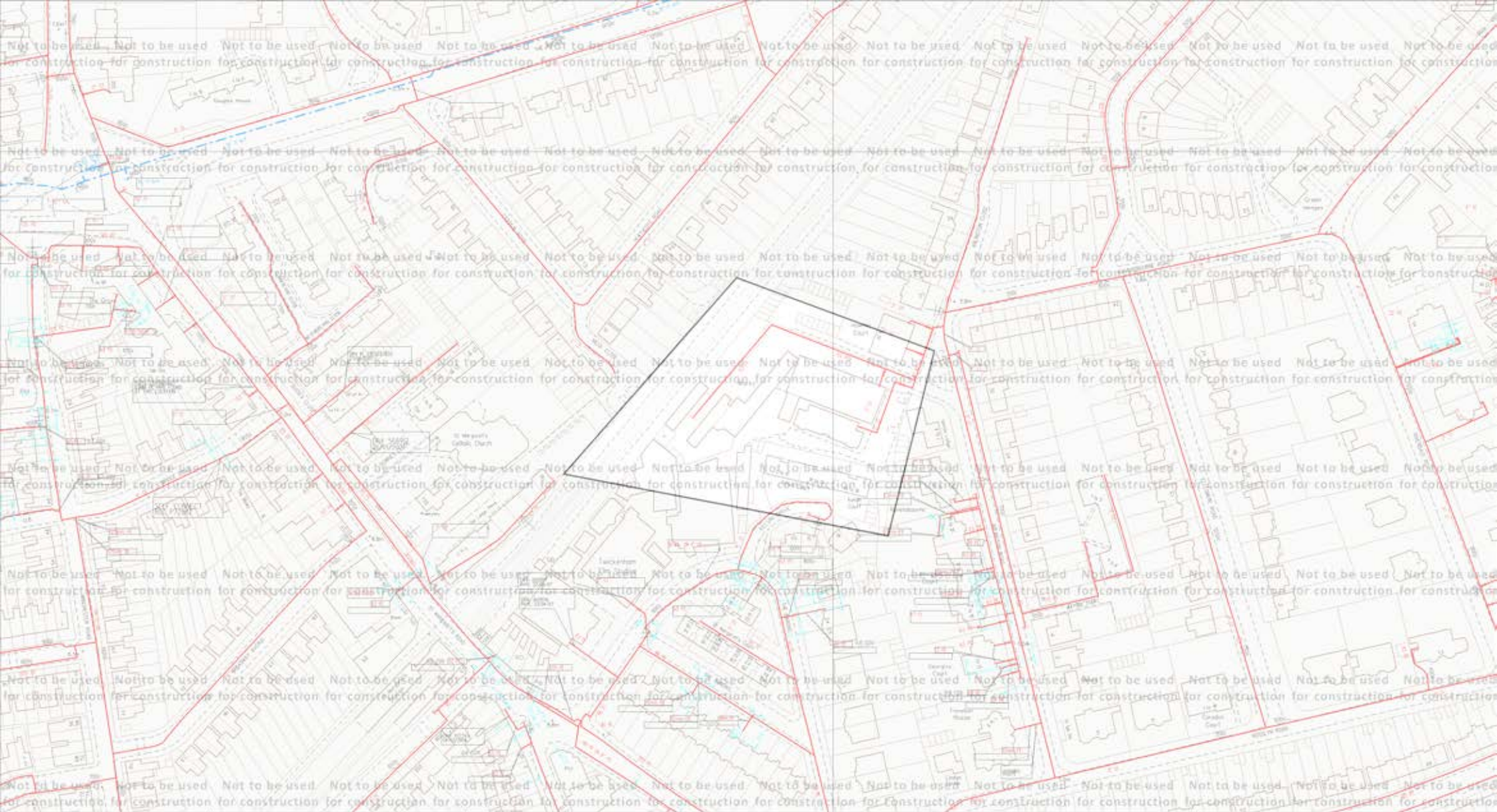
Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08009173993	Not Notified
CenturyLink Communications UK Limited	plantenquiries@instalcom.co.uk	02087314613	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified
ENGIE	nrswa@cofely-gdfsuez.com	01293 549944	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Interoute	interoute.enquiries@plancast.co.uk	02070259000	Not Notified
KPN (c-/Instalcom)	kpn.plantenquiries@instalcom.co.uk	n/a	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquiries@turntown.com	01212 621 100	Not Notified
National Grid Gas Distribution (below 2 bar)	plantprotection@nationalgrid.com	0800688588	Not Notified
Network Rail	OPBuriedServicesEnquiries@networkrail.co.uk	01904523401	Not Notified
Richmond upon Thames London Borough Council	highwaysandtransport@richmond.gov.uk	08456122660	Not Notified
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified
Sota	SOTA.plantenquiries@instalcom.co.uk		Not Notified
Teliasonera	telentelia.plantenquiries@telent.com	0800526015	Not Notified
Thames Water	http://www.digdat.co.uk	08450709145	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified
Vtesse Networks	https://plant.interoute.com/plant-enquiries/	01992532100	Not Notified

Disclaimer

Please refer to LineSearchbeforeUdig's Terms of Use for full terms of use available at www.linesearchbeforeudig.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 LineSearchbeforeUdig 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 LineSearchbeforeUdig, including but not exclusively those set out above. Therefore, LineSearchbeforeUdig 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. LineSearchbeforeUdig 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.

Appendix D
Cadent Records



ID: NL_TW_Z4_3SWP_436919
 USER: Christopher Brockbank
 DATE: 05/06/2018
 DATA DATE: 24/05/2018
 REF: CV8180559 (CB2)
 MAP REF: TQ1674
 CENTRE: 516959, 174377

View extent: 723m, 393m

LP MAINS	
MP MAINS	
IP MAINS	
LHP MAINS	
NHP MAINS	

0m 50m
 Approximate scale 1:2500
 on A4 Colour Landscape

Map not to be used for construction

This plan shows those pipes owned by National Grid Gas 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 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 National Grid Gas 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.

Map 1 of 1 (GAS)

MAPS Plot Server Version 1.9.0

Cadent
 Your Gas Network

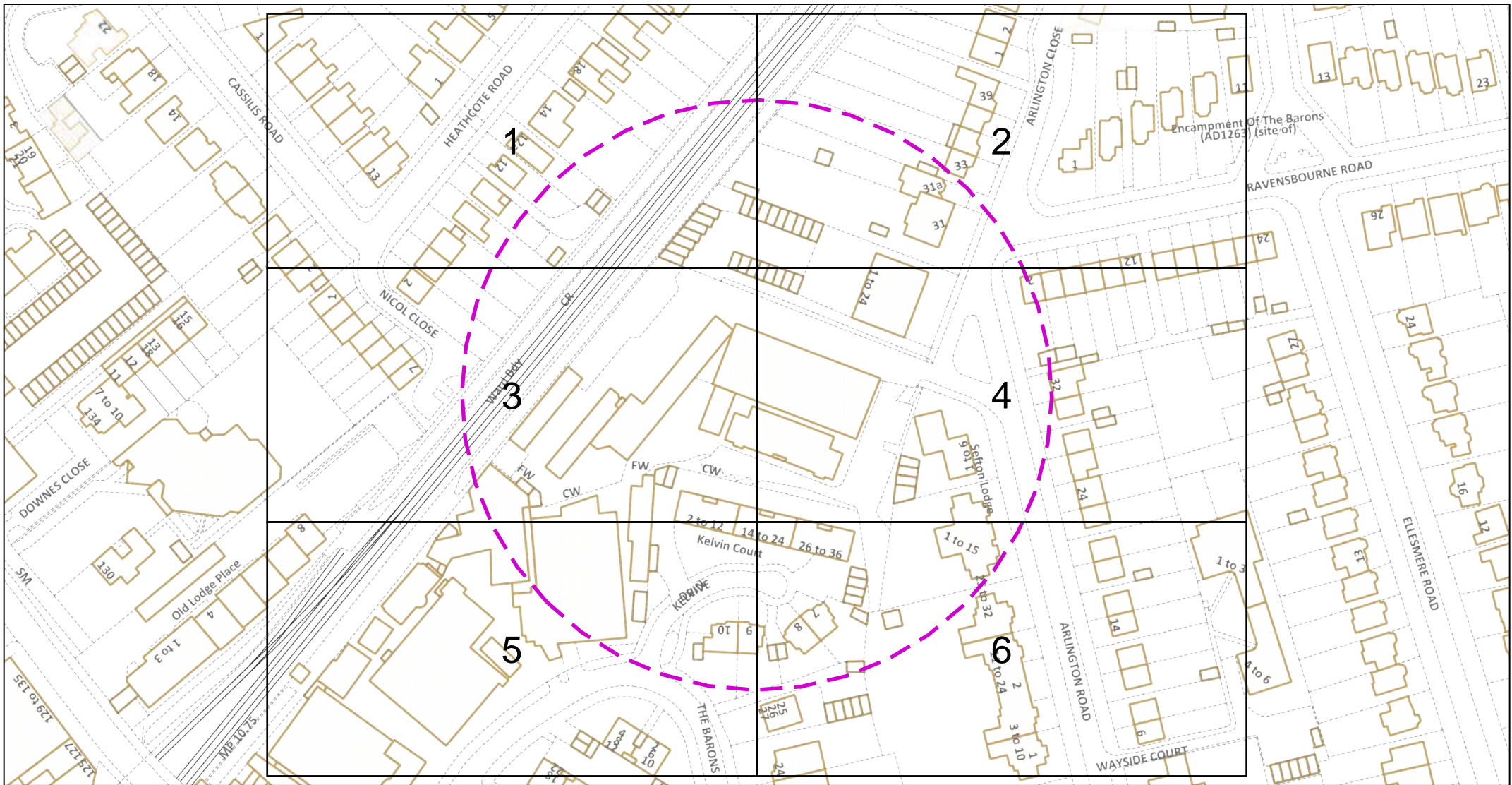
Requested by: Glanville Group

This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886

Some examples of Plant Items:

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

Appendix E
UK Power Networks Records



Dig Sites Area:  Line: 

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



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

Date Requested: 30/05/2018

Job Reference: 12945062

Site Location: 516822 174255

Requested by:

Ms Debbie Wigston

Your Scheme/Reference:

CV8180559

Scale: 1:1538 (When plotted at A4)

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

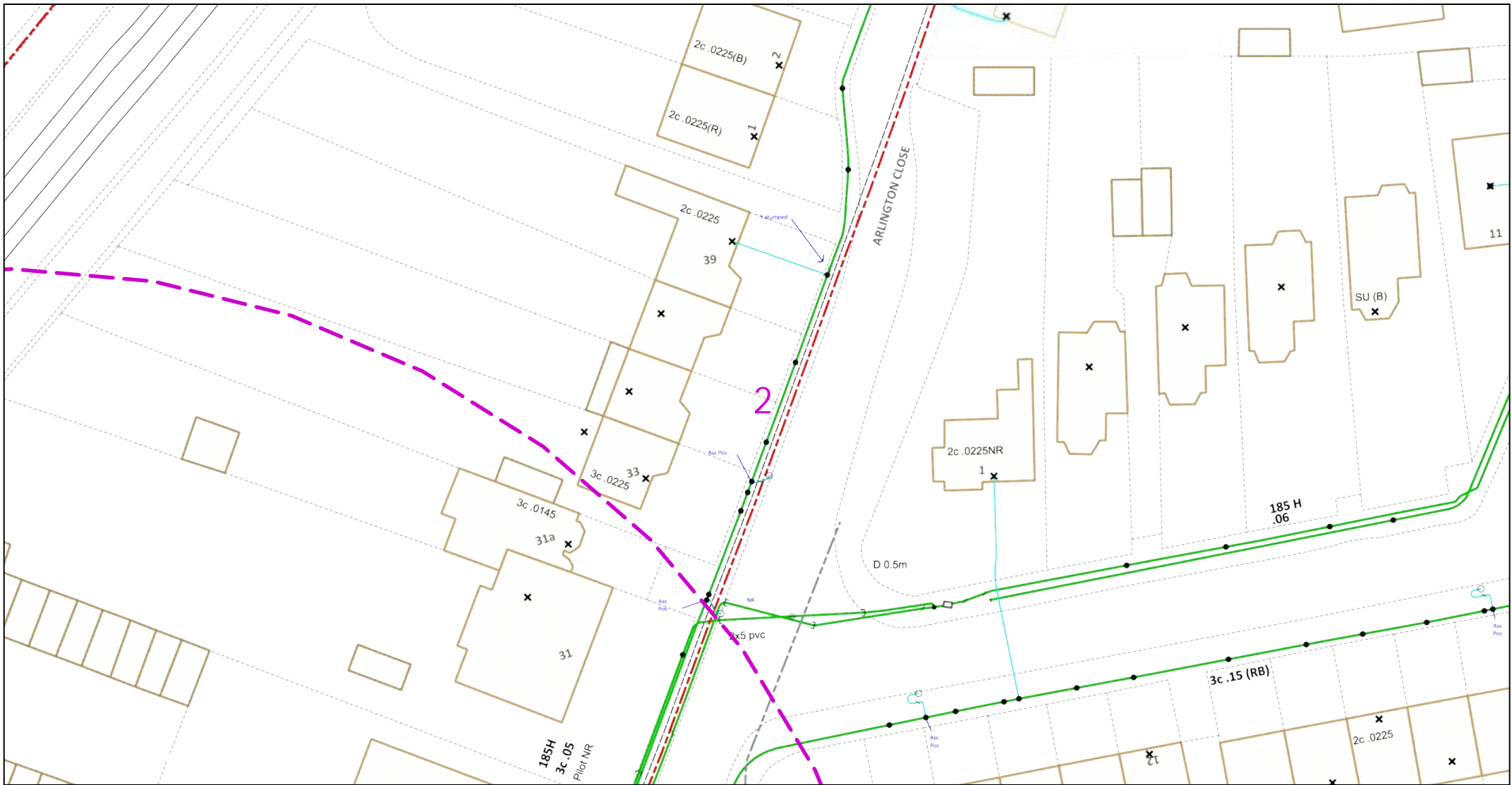
1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. Subject to paragraph 2 UK Power Networks 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

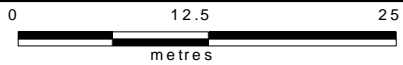


ALWAYS LOOK UP
BEFORE
YOU START WORK
Refer to HSE Guidance
note GS6

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.



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



Dig Sites Area: Line:



This plan must be used with the attached 'Symbols' document.
 Date Requested: 30/05/2018
 Job Reference: 12945062
 Site Location: 516822 174255
 Requested by: Ms Debbie Wigston
 Your Scheme/Reference: CV8180559
 Scale: 1:500 (When plotted at A4)

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

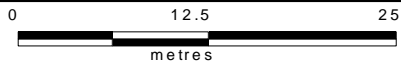
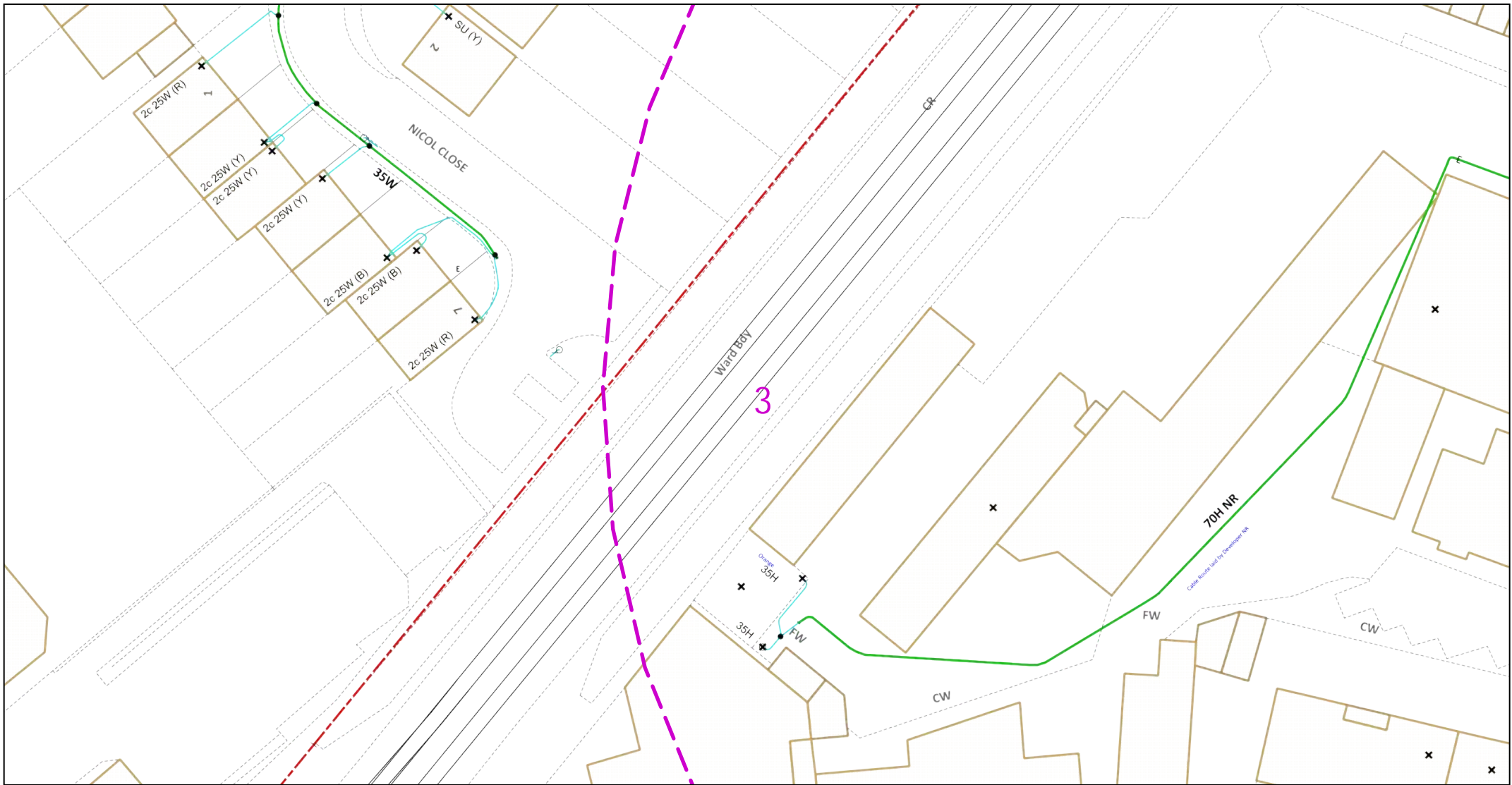
1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. Subject to paragraph 2 UK Power Networks 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.



Dig Sites Area: Line:

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

This plan must be used with the attached 'Symbols' document.
 Date Requested: 30/05/2018
 Job Reference: 12945062
 Site Location: 516822 174255
 Requested by: Ms Debbie Wigston
 Your Scheme/Reference: CV8180559
 Scale: 1:500 (When plotted at A4)

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

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 persons or causes personal injury to a person.
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.

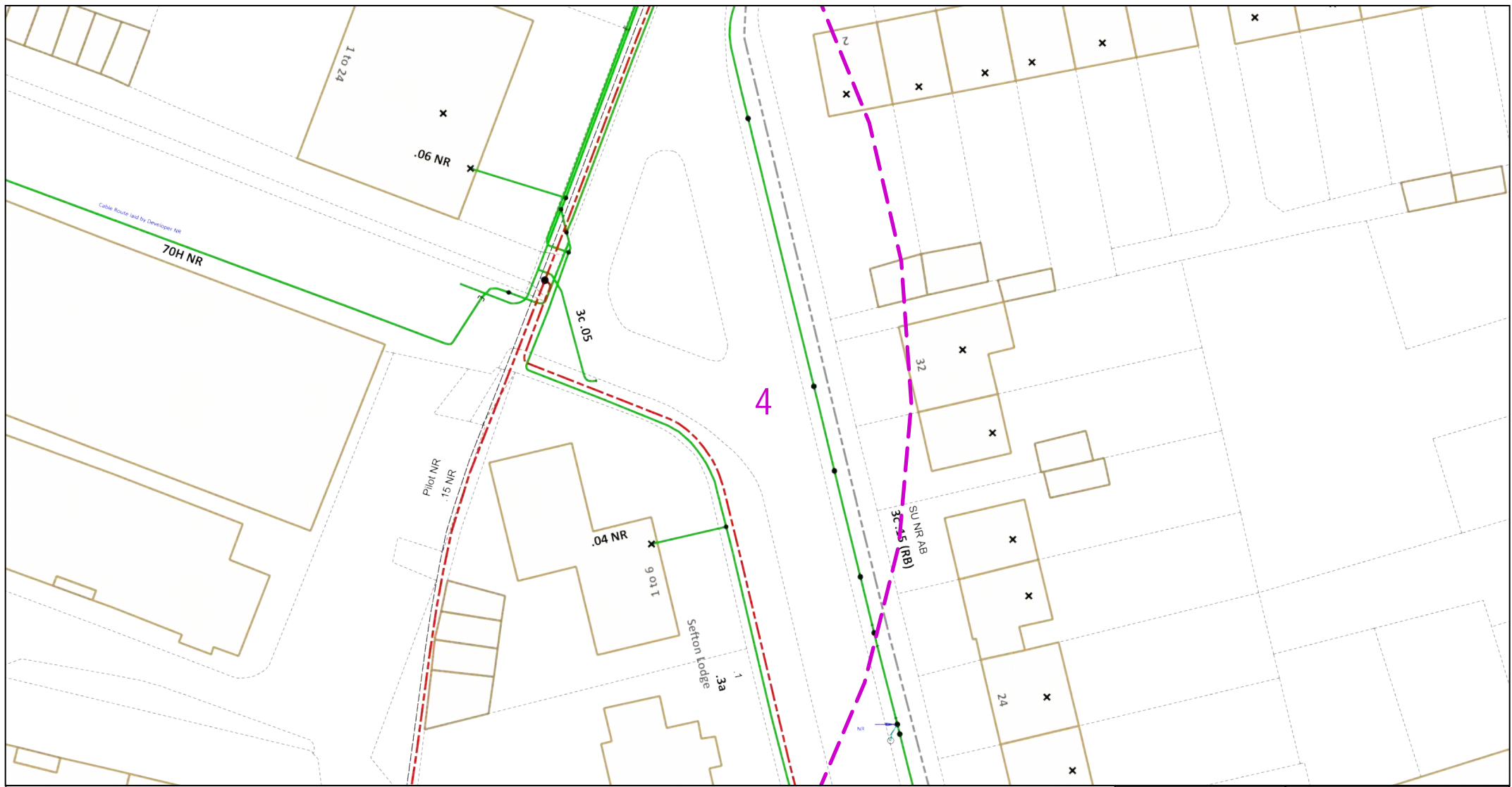


IF IN DOUBT - ASK! PHONE
 0800 056 5866
 EMERGENCY - If you damage a
 cable or line
 Phone 0800 783 8838 (24hrs)
 URGENTLY



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.



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

Dig Sites Area: Line:



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

Date Requested: 30/05/2018
 Job Reference: 12945062
 Site Location: 516822 174255
 Requested by: Ms Debbie Wigston

Your Scheme/Reference:
 CV8180559
 Scale: 1:500 (When plotted at A4)

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

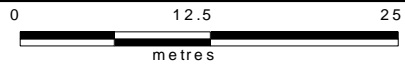
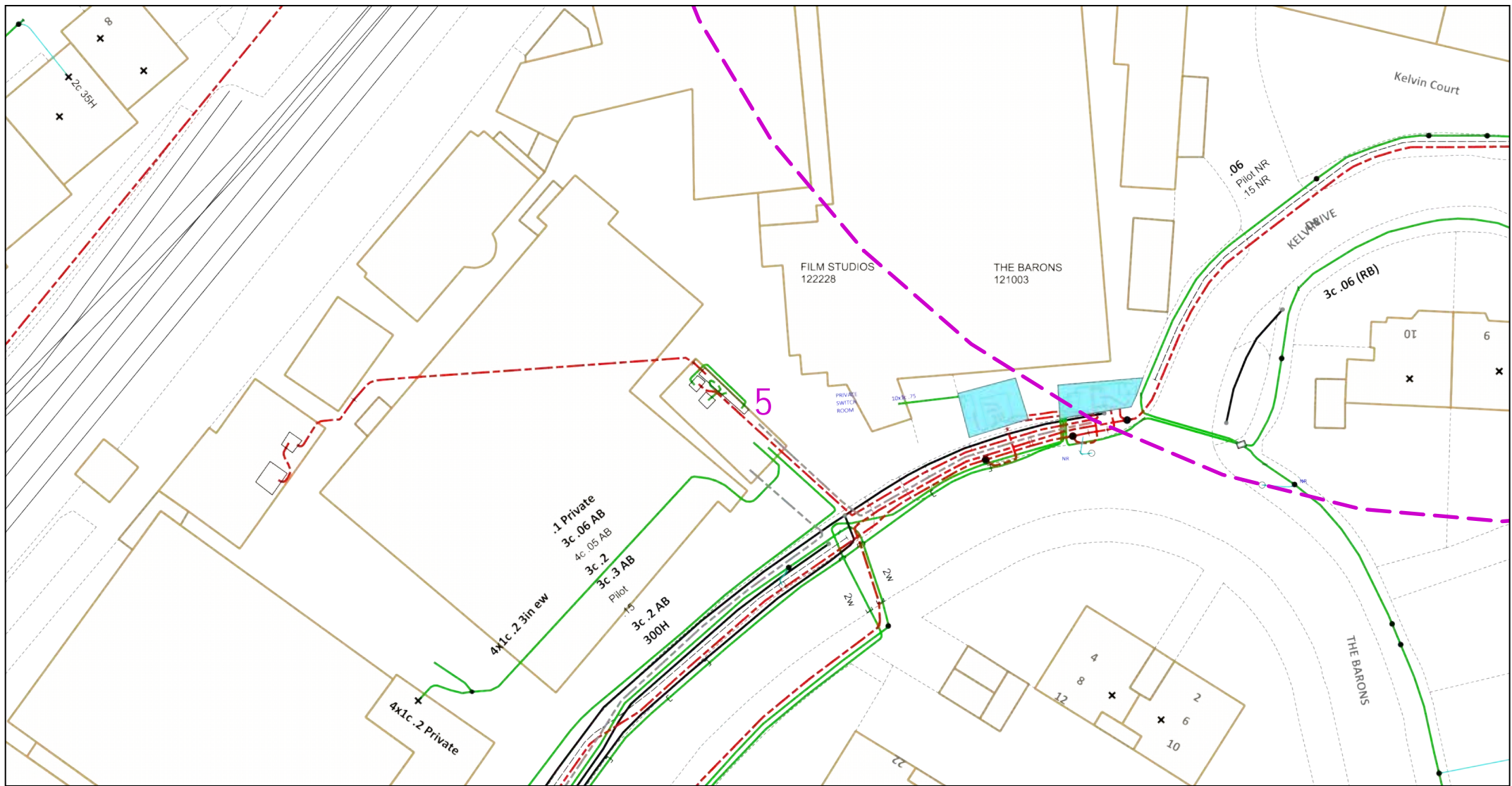
1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. Subject to paragraph 2 UK Power Networks 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.



Dig Sites Area: [Purple dashed line] Line: [Red dashed line]

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



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

Date Requested: 30/05/2018
 Job Reference: 12945062
 Site Location: 516822 174255
 Requested by: Ms Debbie Wigston

Your Scheme/Reference:
 CV8180559
 Scale: 1:500 (When plotted at A4)

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

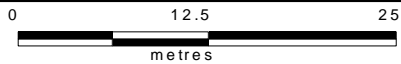
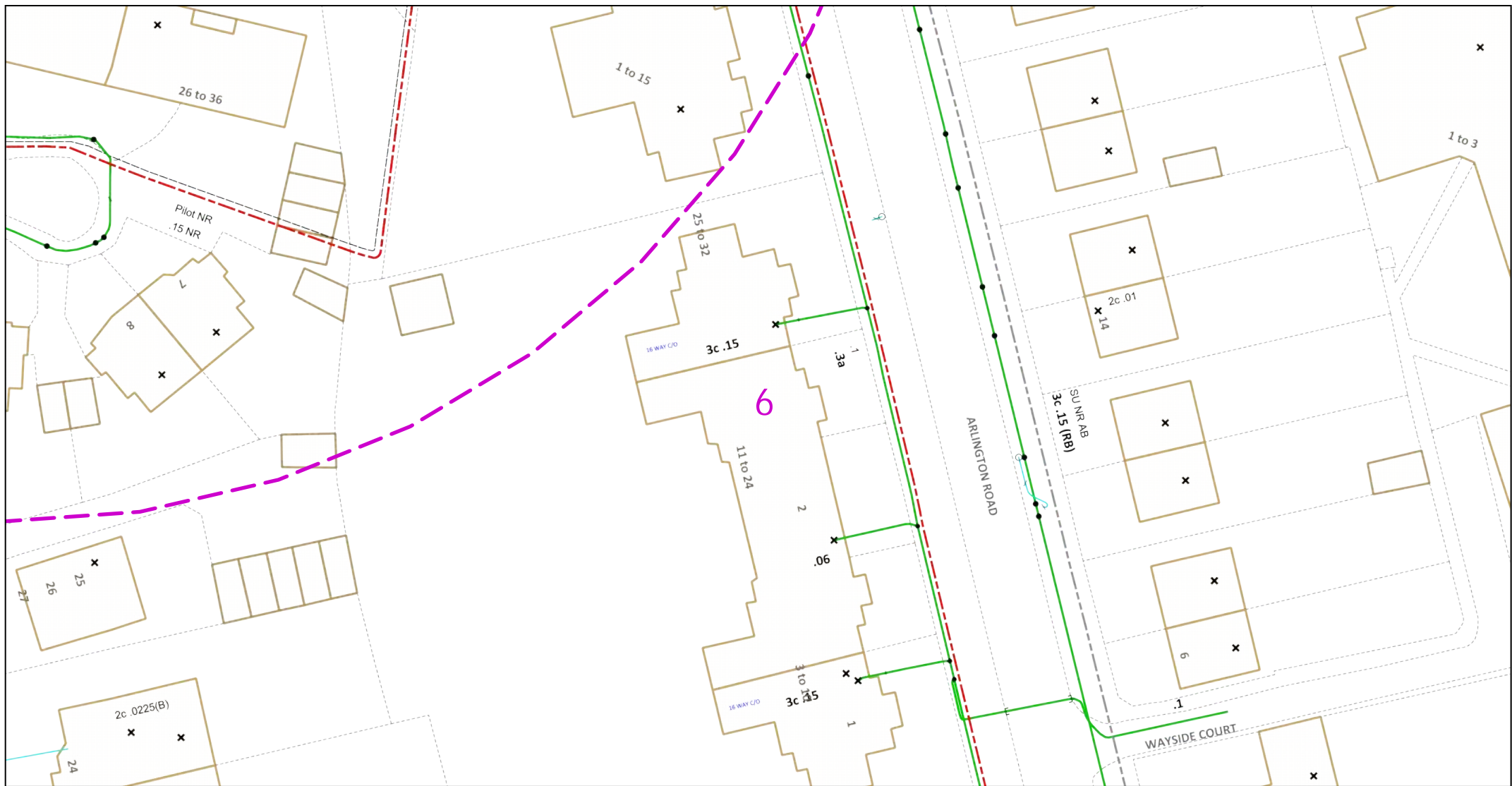
1. UK Power Networks does not warrant that the information provided to you is correct. You rely upon it at your own risk.
2. UK Power Networks does not exclude or limit its liability if it causes the death of any persons or causes personal injury to a person.
3. Subject to paragraph 2 UK Power Networks 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.



Dig Sites Area: Line:

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



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

Date Requested: 30/05/2018
 Job Reference: 12945062
 Site Location: 516822 174255
 Requested by: Ms Debbie Wigston

Your Scheme/Reference:
 CV8180559
 Scale: 1:500 (When plotted at A4)

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

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 persons or causes personal injury to a person.
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.

Appendix F
BT Openreach Records