

# Electricity



Mr. Stephen Sawyer  
Technics Group  
Technics House  
Merrow Business Park  
Guildford  
Surrey  
GU4 7WA

Our Ref: 2017/2254048  
Your Ref: GRS03898  
10/05/2017

Dear Sir/Madam

**23A, RAVENSHAW STREET, LONDON, NW6 1NP**

Thank you for your letter of 09/05/2017 in which you asked if there are any electric lines and/or electrical plant belonging to UK Power Networks (LPN) plc ("UK Power Networks") within the land identified by your enquiry.

I enclose a copy of UK Power Networks record of its electric lines and/or electrical plant at the site identified by your enquiry. If the records provided do not relate to the land to which you had intended to refer please resubmit your enquiry.

Should your excavation affect any of 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.

This information is made available to you on the terms set out below.

- 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 electric 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 avail yourself of this service, in the first instance please telephone: 0845 6014516 between 08:30 and 17:00 Monday to Friday, Public and bank holidays excepted.

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

**In the East of England or London 0800 780078 (24 Hours).**

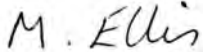
12. The expression "UK Power Networks" includes UK Power Networks (EPN) plc, UK Power Networks (LPN) plc, UK Power Networks (SEPN) plc, UK Power Networks and any of their successors and predecessors in title.

IF YOU DO **NOT** ACCEPT AND/OR **DO NOT** UNDERSTAND THE TERMS OF USE SET OUT IN PARAGRAPHS 1 TO 12 INCLUSIVE ABOVE YOU MUST NOT USE THE PLANS AND RETURN THEM TO ME.

I would remind you that work adjacent to electric lines and/or electrical plant represents a serious risk to health and safety and as such should feature amongst the items you have assessed in your workplace risk assessment and method statement.

I shall be pleased to supply you with further assistance if you require it.

Yours sincerely

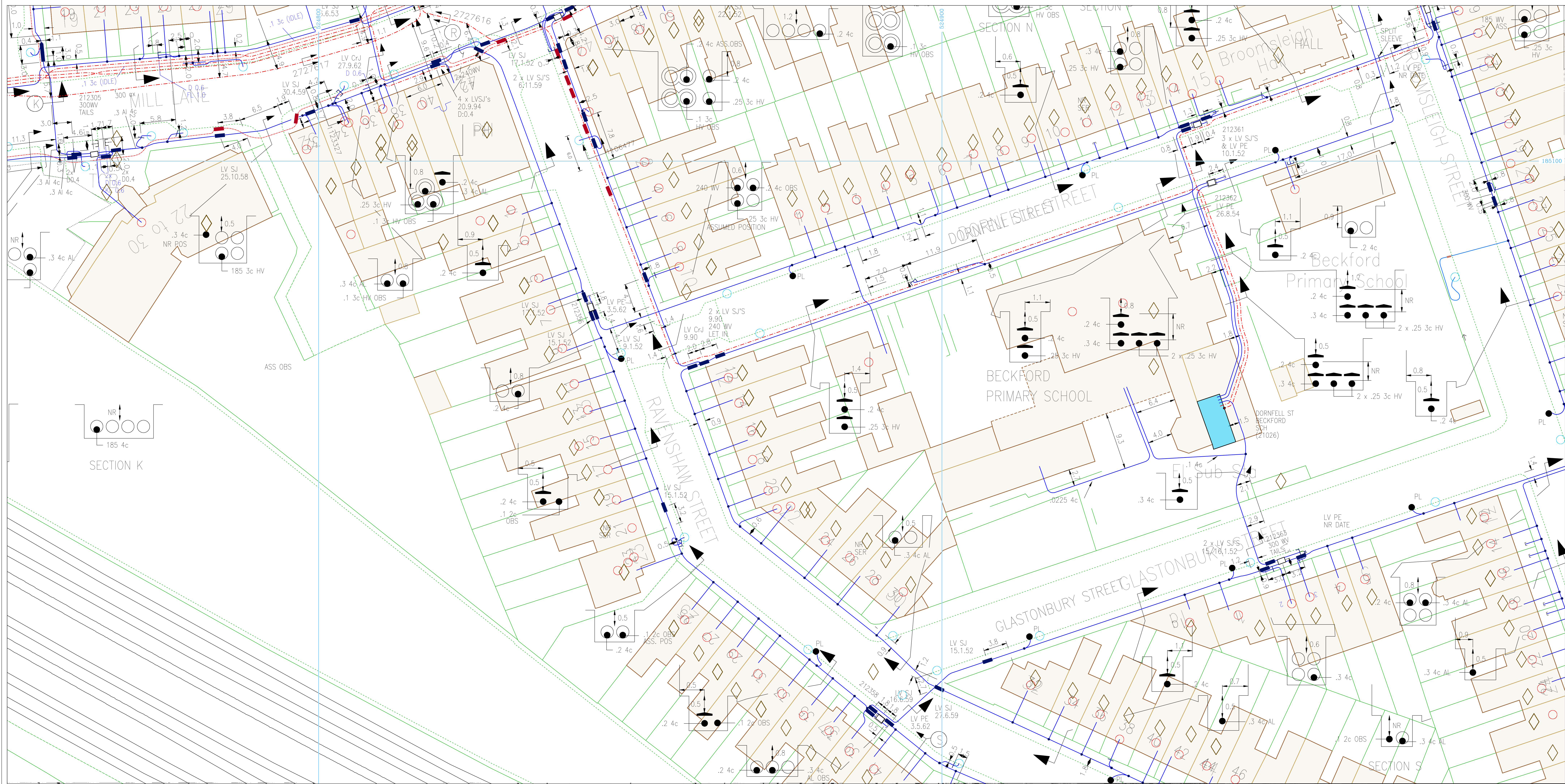


Mark Ellis – Telephone: 0800 0565 866  
Plan Provision

**UK Power Networks, Plan Provision, Fore Hamlet, Ipswich, IP3 8AA. Tel: 0800 0565866.  
1963782.**

**Fax: 0870**

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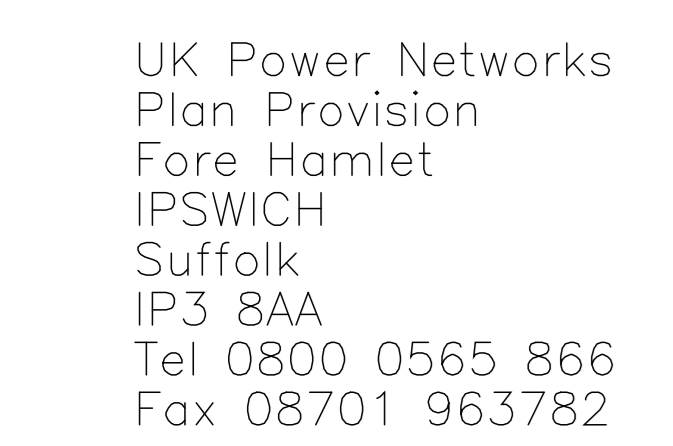
Plotted On : 10/05/2017

Plotted By : Mark Ellis

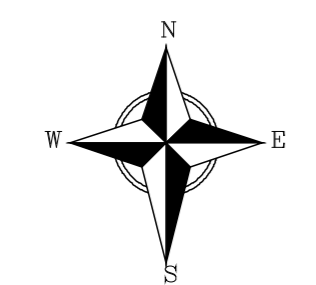
Plot Description: 23A, RAVENSHAW STREET, LONDON, NW6 1NP

2017/2254048/comp

Map Centre : TQ2485SE



UK Power Networks  
Plan Provision  
Fore Hamlet  
IPSWICH  
Suffolk  
IP3 8AA  
Tel 0800 0565 866  
Fax 08701 963782



For details of the symbology please refer to  
<http://www.ukpowernetworks.co.uk/safety-emergencies/in-the-workplace/understanding-safety-symbols.shtml>

**PRIMARY CABLES**  
EXTRA HIGH VOLTAGE CABLES (EHV) 22,000 TO 132,000 Volts

Depth normally 750mm cover in carriageway & 600mm cover in footway.  
Before digging within one metre of these cable routes  
Telephone 0800 056 5866 in order that the Company's apparatus may be located on site and any necessary protection works agreed.

N.B. THRUST BORERS OR MOLES MUST NOT BE USED WITHIN THE VICINITY OF ANY CABLES BELONGING TO UK POWER NETWORKS WITHOUT FIRST CONTACTING THIS COMPANY.

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 cables have been determined.
4. It must be assumed that each property and item of street furniture has an electricity supply. A separate record is kept for each service cable but its route is not necessarily shown on this record.
5. All cables must be treated as being live unless proved otherwise by UK Power Networks.
6. The information provided must be given to all people working near UK Power Networks' plant & 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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2. UK Power Networks Ltd does not exclude or limit its liability if it causes the death of a 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 Ltd has no liability to you in contract, in tort (including negligence), for breach of statutory duty or otherwise howsoever 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.

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**ADVICE TO CONTRACTORS ON AVOIDING DANGER FROM BURIED ELECTRICITY CABLES.**

- 1) Do have cable drawings with you on site and check them before you start the excavation.
- 2) Do have a cable locator tool on site and use it to help you.
- 3) Mark out the location of electricity cables.
- 4) Do not use a mechanical excavator within 0.5m of electricity cables.
- 5) Use spades and shovels in preference to other tools.
- 6) Never disturb electricity cables and joints or their protective covers.

IF IN DOUBT – ASK! PHONE 0800 056 5866  
EMERGENCY – If you damage a cable or line Phone 0800 780 0780 (24hrs) URGENTLY

These basic safety precautions are explained in detail in the HSE booklet, HS(G)47 – Avoiding Danger from Underground Services, a copy of which may be obtained from your supervisor or HMSO.

Please be aware that electric lines belonging to other owners of licensed electricity distribution systems may be present and it is your responsibility to identify their location.



# Network Records NetMAP Symbols Booklet - London

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

**Version 1.2**

Released October 2010

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

(i)

## Index:-

Page no:	Contents:
1	Guidance notes.
2	The area covered by this guide.
3	Scenery.
4	Scenery (UK Power Networks use only-boxed red)
7	Primary distribution cables (EHV).
8	Secondary distribution cables (LV/HV).
9	Cable terminology.
10	Cable size abbreviations.
11	Cable ducts.
12	Other NetMAP symbols.
15	Services.
17	Symbols used in cross sections.
19	Abbreviations used in cross sections.
20	Typical plan and cross section representations: <ul style="list-style-type: none"><li>All areas: NetMAP/vector.</li><li>All areas: composite raster style 1.</li><li>Ex-Western area and Holborn: main and ways.</li><li>The City of London: single line.</li><li>Finsbury and Shoreditch: multi-single line style 1.</li><li>Ex-North Eastern area: HV/LV.</li><li>Ex-North Eastern area: multi-single line style 2.</li><li>Ex-North Eastern area: composite raster style 2.</li></ul>
23	Regional NetMAP anomalies - general overview.
24	Region 1: ex-Western area.
25	Region 2: ex-Northern area.
27	Region 3: ex-North eastern area.
29	Region 4: ex-South Eastern area.
30	Region 5: ex Southern area.

(ii)

## Guidance notes.

### **Important notice:**

If you do not understand the NetMAP record that you are using, please contact UK Power Networks Network Records for guidance

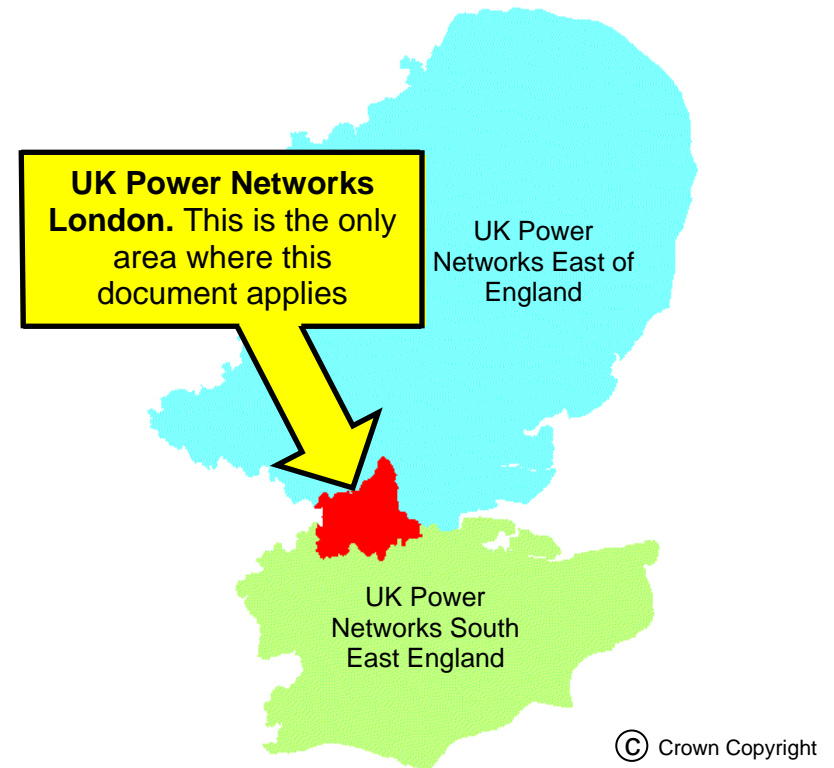
**Tel: 08000 565866.**

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












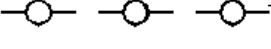













**Plan Provision Team  
Fore Hamlet  
Ipswich  
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Tel: 08000 565866**

## The area covered by this guide:



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








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

Scenery for UK Power Networks use only - boxed in red		
NetMAP system	Scanned image	Description
 Inset Network – Contact xxxx IDNO for further information	Not applicable	Area of inset network - not the asset of UK Power Networks (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Proposed Cross Rail route (only visible to of UK Power Networks and their immediate contractors)
	Not applicable	High pressure pipelines in the general vicinity (only visible to of UK Power Networks and their immediate contractors)
<p>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 <a href="http://www.linewatch.co.uk">www.linewatch.co.uk</a> for contacts and guidance. Pipeline contact numbers can also be found on the intranet – out of hours, contact our Control Centre.</p>		
	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)

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**Scenery for UK Power Networks use only - boxed in red**






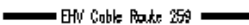

NetMAP system	Scanned image	Description
	Not applicable	Historical - Scheduled Monuments (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Historical - Parks and Gardens (only visible to UK Power Networks and their immediate contractors)
	Not applicable	Historical -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

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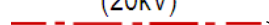
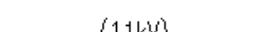








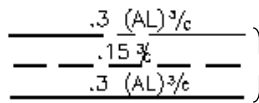
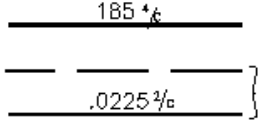



**Scenery for UK Power Networks use only - boxed in red**

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

NetMAP system	Scanned image	Description
 Solid  Gas  Oil  Cable stop  Shallow	 EHV Cable Route 259  Not applicable  	UK Power Networks route (11,000 , 22,000 to 132,000 volts)  Oil/gas cable stop  Part of UK Power Networks cable route where cover is less than normal

## Secondary distribution cables

NetMAP system	Scanned image	Description
(20kV)  (11kV)  (6.6kV)           	 $.3 (AL)\%e$ $.15\%$ $.3 (AL)\%e$   $185\%e$ $.0225\%e$  Not applicable      	HV cable (up to 20kV)  3 phase LV cable (230V or 400/230V) 1 or 2 phase LV cable (230V or 400/230V)  Pilot or Telephone cable, often not shown in plan if running with other cables Fibre-optic cable Earth cable  HV or LV cable in duct  Duct route(s) not containing live cables

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

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

Cable ducts		
NetMAP system	Scanned image	Description
		Single empty ducts
		Cluster of empty ducts (two or more)
		Cable in single duct
		Group of cables shown in a cluster of ducts, plus one or more empty (shown in section)
		Ex-Western area 'ways' maps: This symbol indicates one or more ducts.
		On City of London area maps "extent of ducts" symbols are not in general use as most duct runs are between pits or boxes

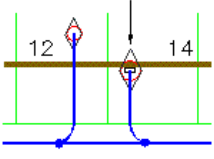
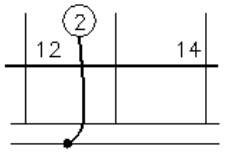
Other NetMAP symbols		
NetMAP system	Scanned image	Description
<u>0.3 4c AL PLSWS</u> (Details also in cable attributes and/or section)		Cable size (and year laid)
		Cable capped end
		Cable pressure (or pot) end or signal end
		Pressure/pot end & earth cable/electrode
		Earth rod (vertical)
		Earth rod (horizontal)
		Earth plate
		Earth plate or end
		Bottle or trouser joint or combined crutch & pressure end - (CPE)
		Straight joints
		Tee joints
		Crutch (or spur) joints (CJ) straight & crutch joints combined (S&CJ)
		Double crutch (or spur) joint
		Sleeve
		UT (Disconnected universal tee)




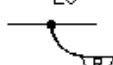

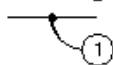
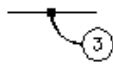
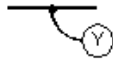

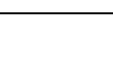
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Other NetMAP symbols		
NetMAP system	Scanned image	Description
		Four way underground disconnecting boxes(DB)
		Link boxes(LB)
		Network boxes(NB) or (NWB)
		4 way 6 entry
		6 way box
		6 way 8 entry
		Split bus-bar
		Link box with identification number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








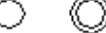
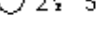










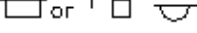


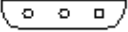


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Other NetMAP symbols		
NetMAP system	Scanned image	Description
		Transformer chambers (T/C) & transformer compounds
		Underground transformer chamber
		Missing data in or near this location
		Underground tank
		Indicates service between separate buildings is looped
		Jointing schedule numbers or phasing diagram
		Contaminated land reference
		Instrument traced cable or ITC - cable traced electronically using Cable Avoidance Tool (CAT) or similar

Services		
NetMAP system	Scanned image	Description
SRC = Service Record Card		
To a property/metered supply (also see SRC)		
<p>Address point ◇</p> <p>Supply point ○</p> <p>Also see SRC and joint/cable attributes</p> <p>Service in external cabinet</p>  <p>Also see SRC and joint/cable attributes</p>	<p>Also see SRC</p> <ul style="list-style-type: none"> <li>Ⓜ Single phase service</li> <li>① Connected to 1 core &amp; neutral</li> <li>Ⓡ Connected to red core &amp; neutral</li> <li>⊕ Three phase service</li> <li>⊕ Connected to inner &amp; outer cores of triple conc cable</li> <li>⊖ Connected to middle &amp; outer cores of triple conc cable</li> <li>⊕ Connected to all three cores of triple conc cable</li> </ul>  <p>ROYAL MEWS</p>	<p>Single phase service</p> <p>Connected to 1 core &amp; neutral</p> <p>Connected to red core &amp; neutral</p> <p>Three phase service</p> <p>Connected to inner &amp; outer cores of triple conc cable</p> <p>Connected to middle &amp; outer cores of triple conc cable</p> <p>Connected to all three cores of triple conc cable</p> <p>Existence of a service with its core connection shown in circle</p>
<b>section continued on next page</b>		


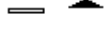

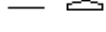






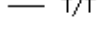
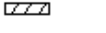
Services		
NetMAP system	Scanned image	Description
To street furniture/un-metered supply (also see SRC)		
<p>Please note that newly edited street furniture no longer has an address point or an SRC</p>  <p>(Street furniture general)</p>  <p>(Street furniture feeder pillar or cabinet)</p>	 <p>P.L.S.261 Public lighting</p>  <p>S.L.261 Street lighting</p>  <p>WB Wall bracket</p>  <p>TL Traffic light control</p>  <p>FB Flashing beacon</p>  <p>TS Traffic sign</p>  <p>B IGP Bollard/illuminated guard post</p>  <p>TK,TC TK,TC TCB FP Telephone kiosk, traffic controller, feeder pillar</p>	<p>Public lighting</p> <p>Street lighting</p> <p>Wall bracket</p> <p>Traffic light control</p> <p>Flashing beacon</p> <p>Traffic sign</p> <p>Bollard/illuminated guard post</p> <p>Telephone kiosk, traffic controller, feeder pillar</p>

### Symbols used in cross sections

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

section continued on next page

### Symbols used in cross sections

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

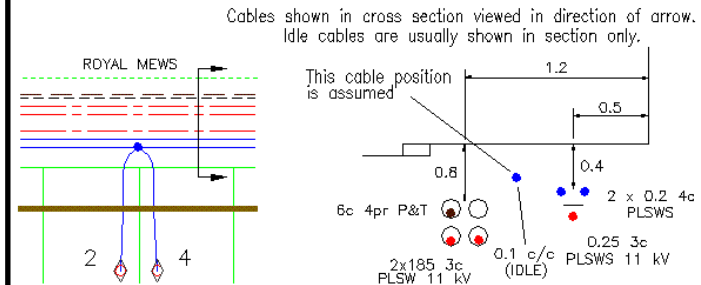
## Abbreviations used in cross sections

NetMAP system	Scanned image	Description
EW	E.W.D(s) or EW.	Earthenware ducts
F	F.P or F or F.D	Fibre duct
A	ASB or A	Asbestos
P	P	Plastic or pitch fibre
S	S.P or S	Steel
C	C.I or C or C.I.P	Cast iron
WI	W.I	Wrought iron pipe
F	F or F.D	Fibre duct
PRD	PRD	Plastic Rigiduct
Left blank – means NR	{ D.N.K or D:NR N.R or (N.R)	Depth not known No record
E.V	E.V.P or E.V	Everite pipe
T/T	T/T	Tape Tile
N/A	3/62 or NOV 79	Date cable laid
N/A—destination now only shown in cable attribute	ABCD etc	HV cable destination (See section sheet HV ref)
	Please note: Ducts are assumed to be 4"/100mm earthenware – unless otherwise stated	

## Typical plan and cross section representations

### Multi-line composite NetMAP/vector representation

All areas – drawn/redrawn using NetMAP GIS

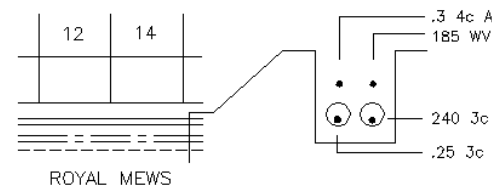


Applies to all composite vector records in both shaded and unshaded areas of the anomalies map.

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

All areas

All cables are shown on plan and represented in section.  
Sections may be shown in plan view or on a supplementary sheet.

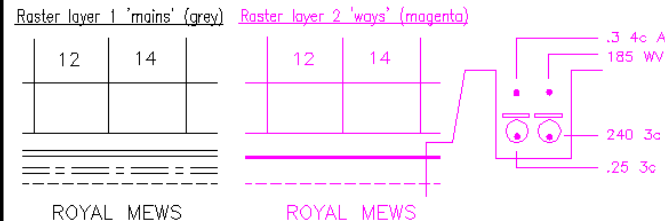


Applies to all composite raster records within the unshaded areas of the anomalies map.  
Can also be found in some shaded areas – in particular the ex-North Eastern shaded areas 3 (b) and 3 (c)

### Main and ways representation – dual layer raster

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

All cables are shown on plan and represented in cross section on a separate (ways) sheet.



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



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



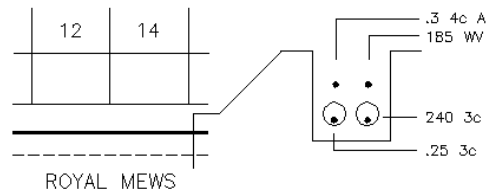


## Typical plan and cross section representations

### Single line representation - raster or vector data

The City of London only

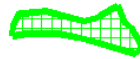
All cables are shown as a single line in plan.  
Sections may be written and not drawn.



OR this style may be used.

1-3 way Tricase  
2-2½" steel pipes  
1-6 way Doulton  
.4% (L.V. cable)

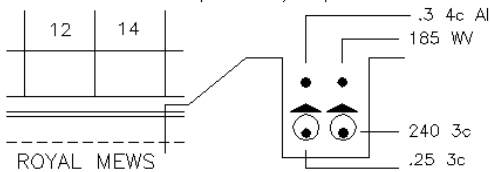
Applies to area 2(b)  
on the anomalies map.



### Multi-single line representation general (style 1)

Finsbury and Shoreditch only

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



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

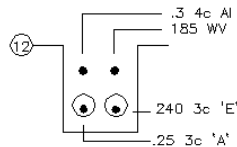
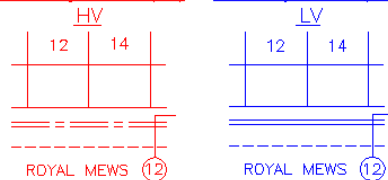


### HV and LV map representation – dual layer raster

Ex-North Eastern area only

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

Raster layer 1 HV (red) Raster layer 2 LV (blue) Separate raster section sheet



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

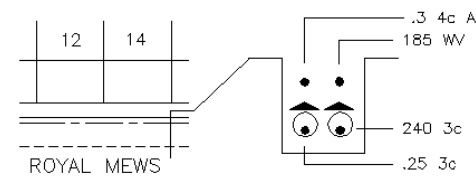


## Typical plan and cross section representations

### Multi-single line representation general (style 2)

Ex-North Eastern area only

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



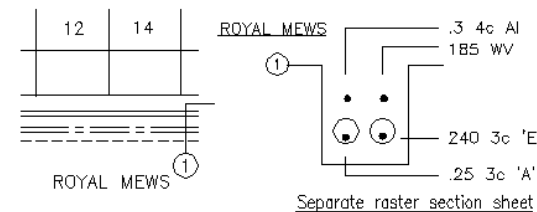
Applies to area 3 (b)  
of the anomalies map.



### Multi-line representation - composite raster (style 2)

Ex North Eastern area only

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



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



### Important note regarding sections:

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

## Regional NetMAP Anomalies - general overview:

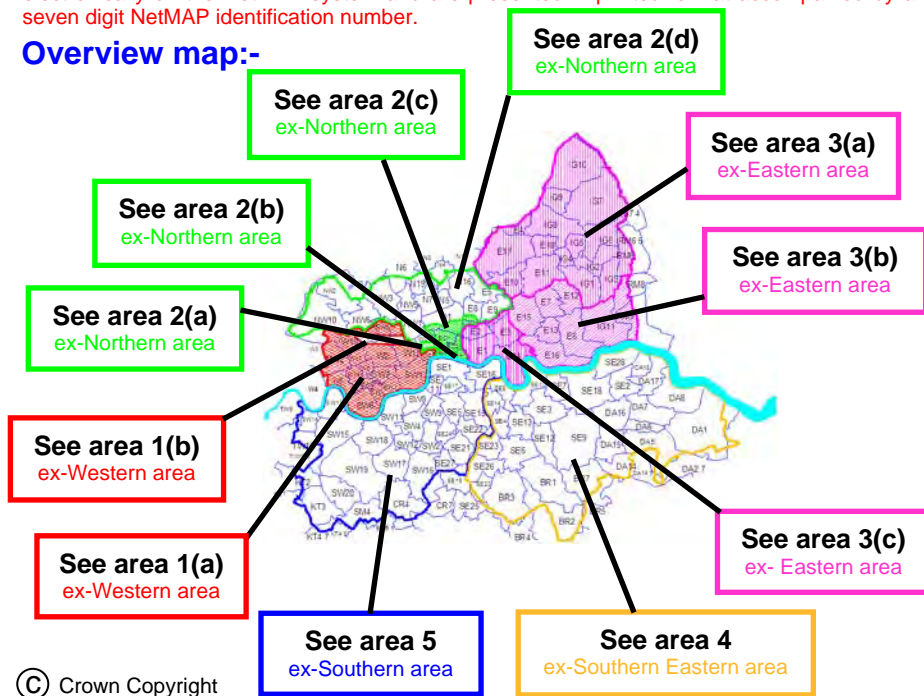
The following pages explain the various major map style anomalies found within the London area. These styles are a legacy from the five individual London Electricity areas which were again formed from seventeen separately organised LEB districts. Areas with significant anomalies are shown in the following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

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

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

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


### Overview map:-



See following pages for further details.

## Region 1 ex-Western area

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

**Region 1(a)** (hatched )

**Mains and ways representation:**

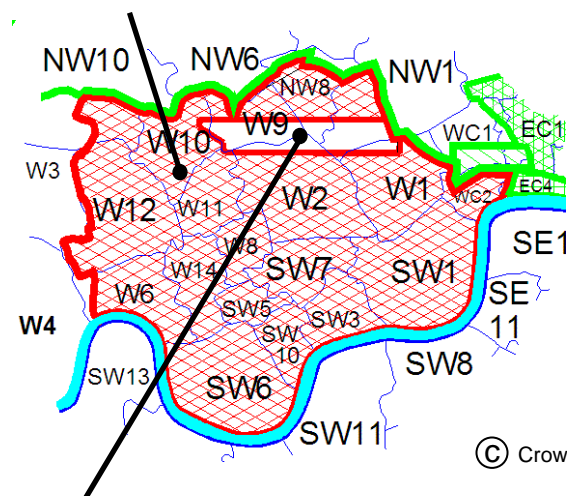
This system consists of two maps layers for the same area.


- The mains map shows all cable routes.
- The ways map shows pipe and duct routes with cross sections.

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

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

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



**Region 1(b)** (un-hatched )

**Composite single layer (style 1) maps:**

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

## Region 2 ex-Northern area

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

### Region 2(a) (hatched )

Covers part of WC1 and WC2 (Holborn).

#### Mains and ways representation:

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

- i) The mains map shows all cable routes.
- ii) The ways map shows pipe and duct routes with cross sections.

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

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

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



### Region 2(b) (hatched )

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

#### Single line representation maps:

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

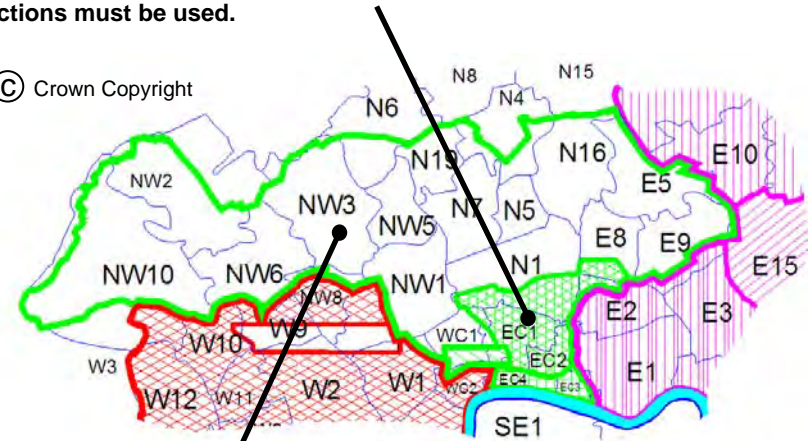
### Region 2(c) (hatched )

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

#### Multi-single line representation (style 1) maps:

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

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### Region 2(d) (un-hatched)

Covers all other postal areas in this region

#### Composite single layer (style 1) maps:

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

## Region 3 ex-North Eastern area

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

### Region 3(a) (hatched )

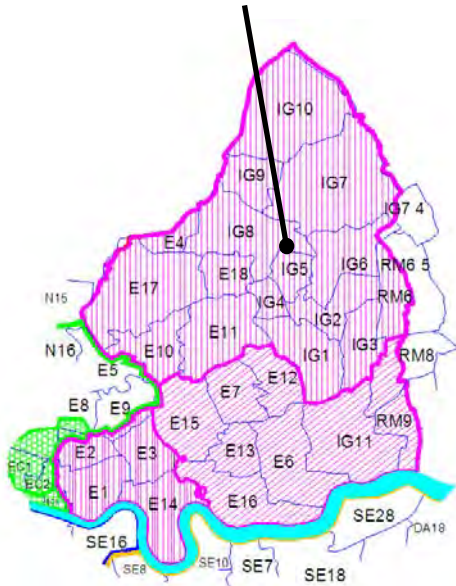
#### Separate HV and LV representation maps:

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

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

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

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

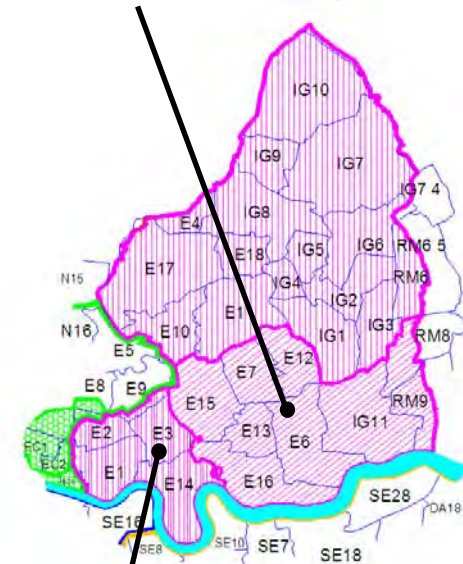


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### Region 3(b) (hatched )

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

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



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### Region 3(c) (hatched )

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

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

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

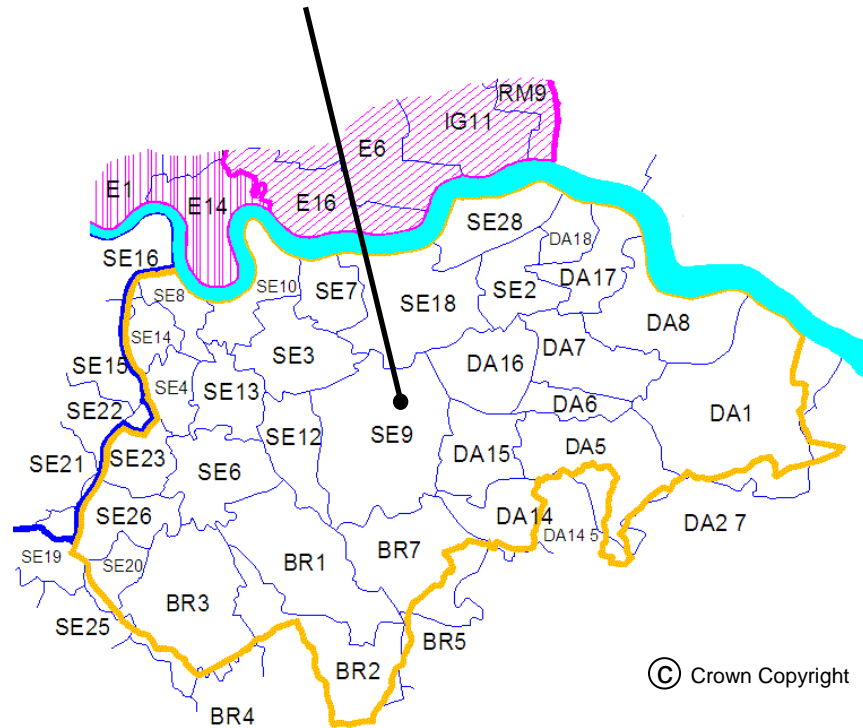
## Region 4 ex-South Eastern area

This region includes Lewisham, Greenwich, Bromley, Bexley and Dartford. Nearly all maps are drawn in one style – single layer composite raster/vector.

### Region 4 (un-hatched)

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

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



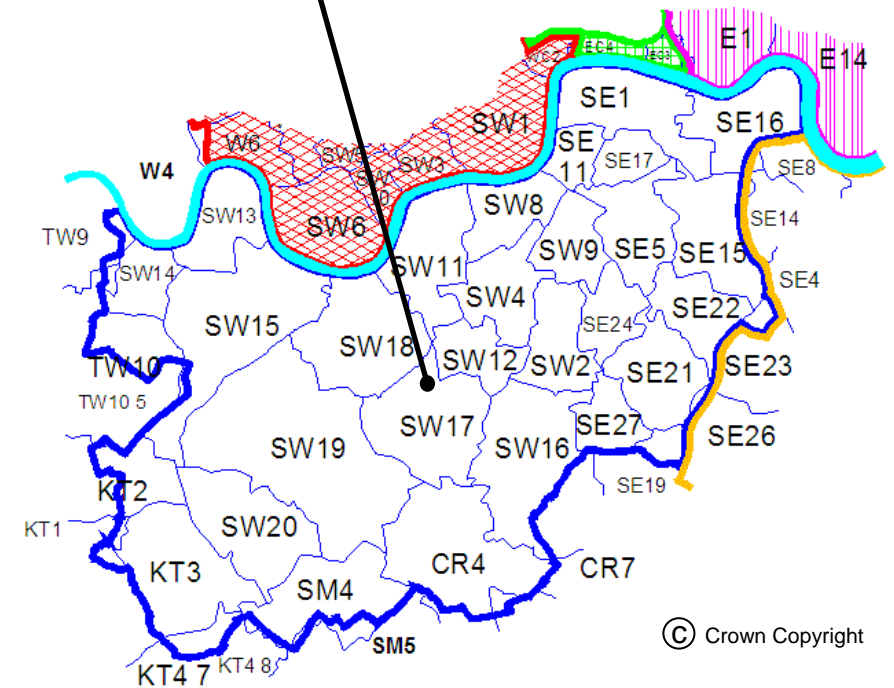
## Region 5 ex-Southern area

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

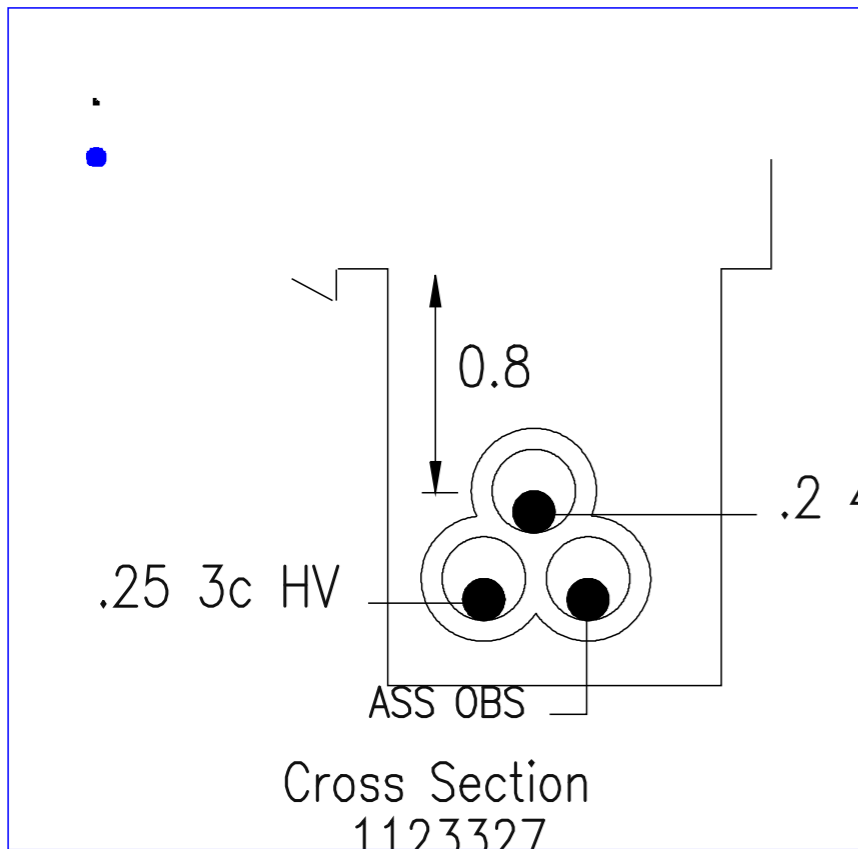
### Region 5 (un-hatched)

**Composite single layer (style 1) maps:**

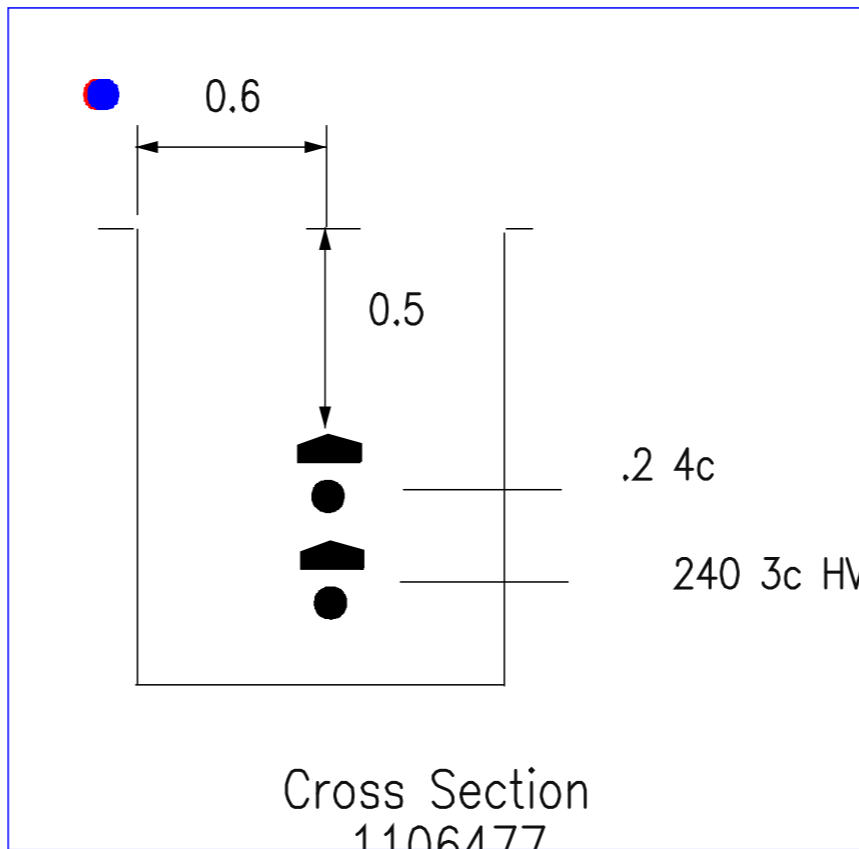
Composite maps - whenever possible, all the information is on one map layer. There are some enlargement and cross section sheets. A small number of maps may not show services.



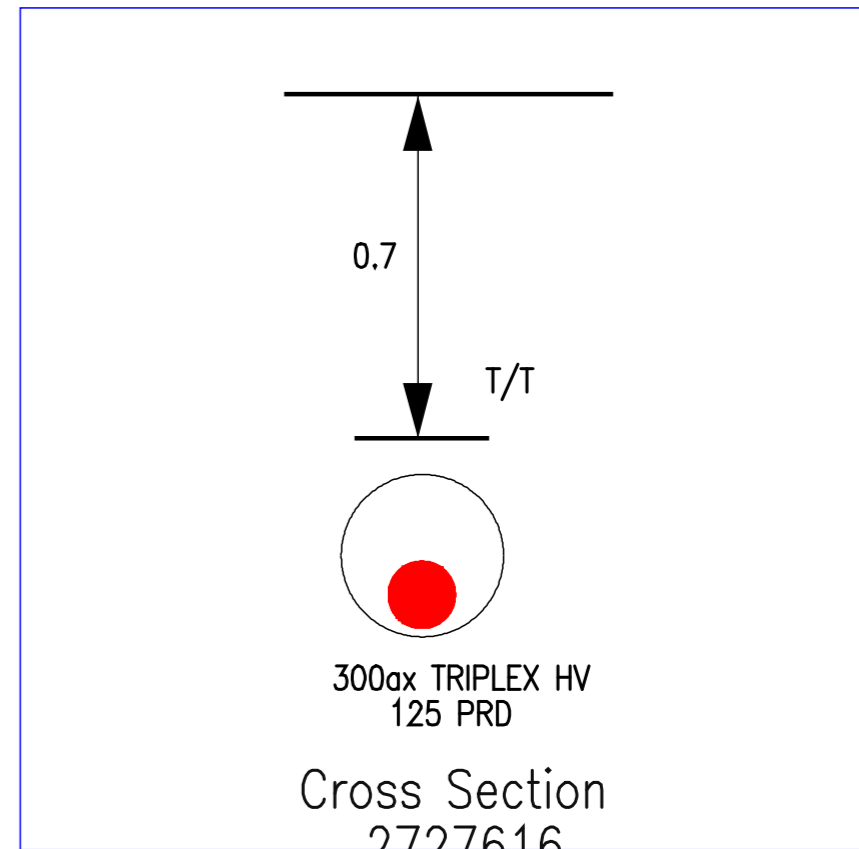
Cross Section (1123327)



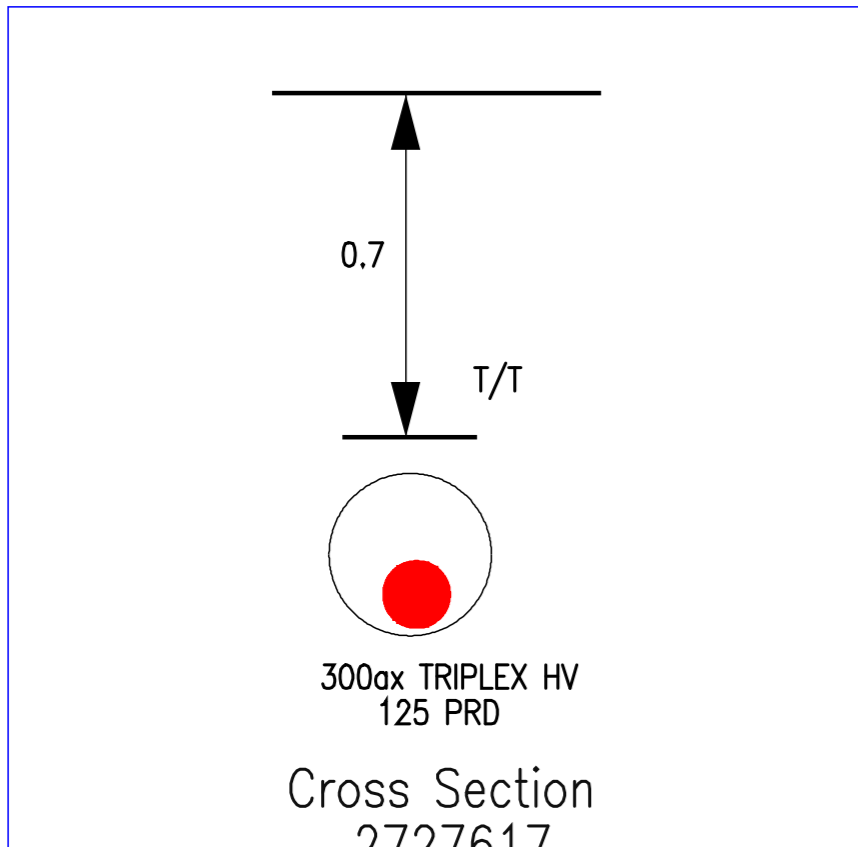
Cross Section (1106477)



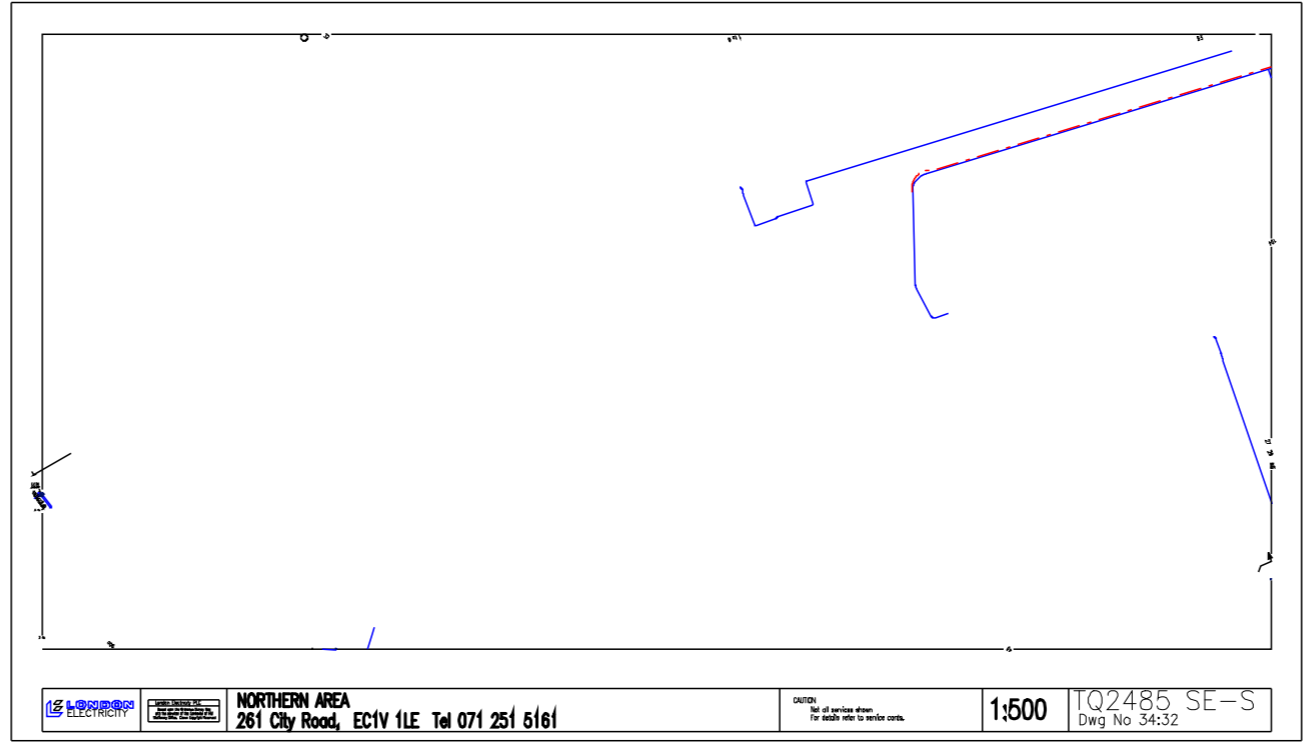
Cross Section (2727616)





Cross Section (2727617)



PLEASE NOTIFY STANDARDISATION TEAM OF ANY ALTERATIONS TO THIS RECORD



		<b>NORTHERN AREA</b> 261 City Road, EC1V 1LE Tel 071 251 5161	<small>CAUTION</small> Not all services shown For details refer to service cards.	<b>1:500</b>	<b>TQ2485 SE-S</b> Dwg No 34:32
--	---	--	---	--------------	------------------------------------

Extra cross-sections and detailed route drawings are available from this supplier in regards to Extra High Voltage equipment which may be present in the area. If you require such information, please email UK Power Networks at [plans@ukpowernetworks.co.uk](mailto:plans@ukpowernetworks.co.uk), detailing the address of the site and the route numbers required (route numbers may be gained from the above UK Power Networks plans). Extra drawings and cross-sections will be then be sent to your address via post.

**Please note:** If no extra High Voltage cables run close to your site area, then extra drawings will not be available.



Stephen Sawyer  
Technics Group  
Technics House  
Guildford  
Guildford  
Surrey  
GU4 7WA

Plant Protection  
Cadent  
Block 1; Floor 1  
Brick Kiln Street  
Hinckley  
LE10 0NA  
E-mail: [plantprotection@cadentgas.com](mailto:plantprotection@cadentgas.com)  
Telephone: +44 (0)800 688588

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

**National Grid Electricity Emergency Number:**  
**0800 40 40 90\***

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

[www.cadentgas.com](http://www.cadentgas.com)

**Date:** 15/05/2017

**Our Ref:** NL\_TE\_Z5\_3SWX\_328651

**Your Ref:** GRS03898

**RE: Proposed Works, 23a Ravenshaw Street, Camden, Greater London, NW6 1NP**

Thank you for your enquiry which was received on 15/05/2017.  
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to Cadent Gas Ltd, National Grid Electricity Transmission plc's and National Grid Gas plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.  
For details of Network areas please see the Cadent website (<http://cadentgas.com/Digging-safely/Dial-before-you-dig>) or the enclosed documentation.

**As your works are at a "proposed" stage, any maps and guidance provided are for information purposes only. This is not approval to commence work. You must submit a "Scheduled Works" enquiry at the earliest opportunity and failure to do this may lead to disruption to your plans and works. Plant Protection will endeavour to provide an initial assessment within 14 days of receipt of a Scheduled Works enquiry and dependent on the outcome of this, further consultation may be required.**

**In any event, for safety and legal reasons, works must not be carried out until a Scheduled Works enquiry has been completed and final response received.**

## Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near Cadent and/or National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to Cadent Gas Ltd, National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG) and apparatus. This assessment does **NOT** include:

- Cadent and/or National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to Cadent and/or National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact Plant Protection.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on the National Grid Website (<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982>).

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to Cadent and/or National Grid's easements or wayleaves nor any planning or building regulations applications.

Cadent Gas Ltd, NGG and NGET 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.

If you require further assistance please contact the Plant Protection team via e-mail ([click here](#)) or via the contact details at the top of this response.

Yours faithfully

Plant Protection Team

# ASSESSMENT

## Affected Apparatus

The apparatus that has been identified as being in the vicinity of your proposed works is:

- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)
- Electricity Transmission underground cables and associated equipment

## Requirements

**BEFORE carrying out any work you must:**

- **Refer to the attached cable profile drawings (if any) which provide details about the location of National Grid's high voltage underground cables.**
- Carefully read these requirements including the attached guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent and/or National Grid's legal rights (i.e. easements or wayleaves). 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 and/or National Grid'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 <http://www.hse.gov.uk>
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

# GUIDANCE

## **Working Near National Grid Electricity Transmission equipment:**

If you are carrying out any work in proximity to an overhead line or any excavation that may be near an underground cable then please consult National Grid Technical Guidance Note 287 that can be found at <http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589935533> Further guidance related to underground cables can also be found at <http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589936512>

## **Excavating Safely - Avoiding injury when working near gas pipes:**

[http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe\\_leaflet3e2finalamends061207.pdf](http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe_leaflet3e2finalamends061207.pdf)

## **Standard Guidance**

### **Essential Guidance document:**

<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982>

### **General Guidance document:**

<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103>

### **Excavating Safely in the vicinity of gas pipes guidance (Credit card):**

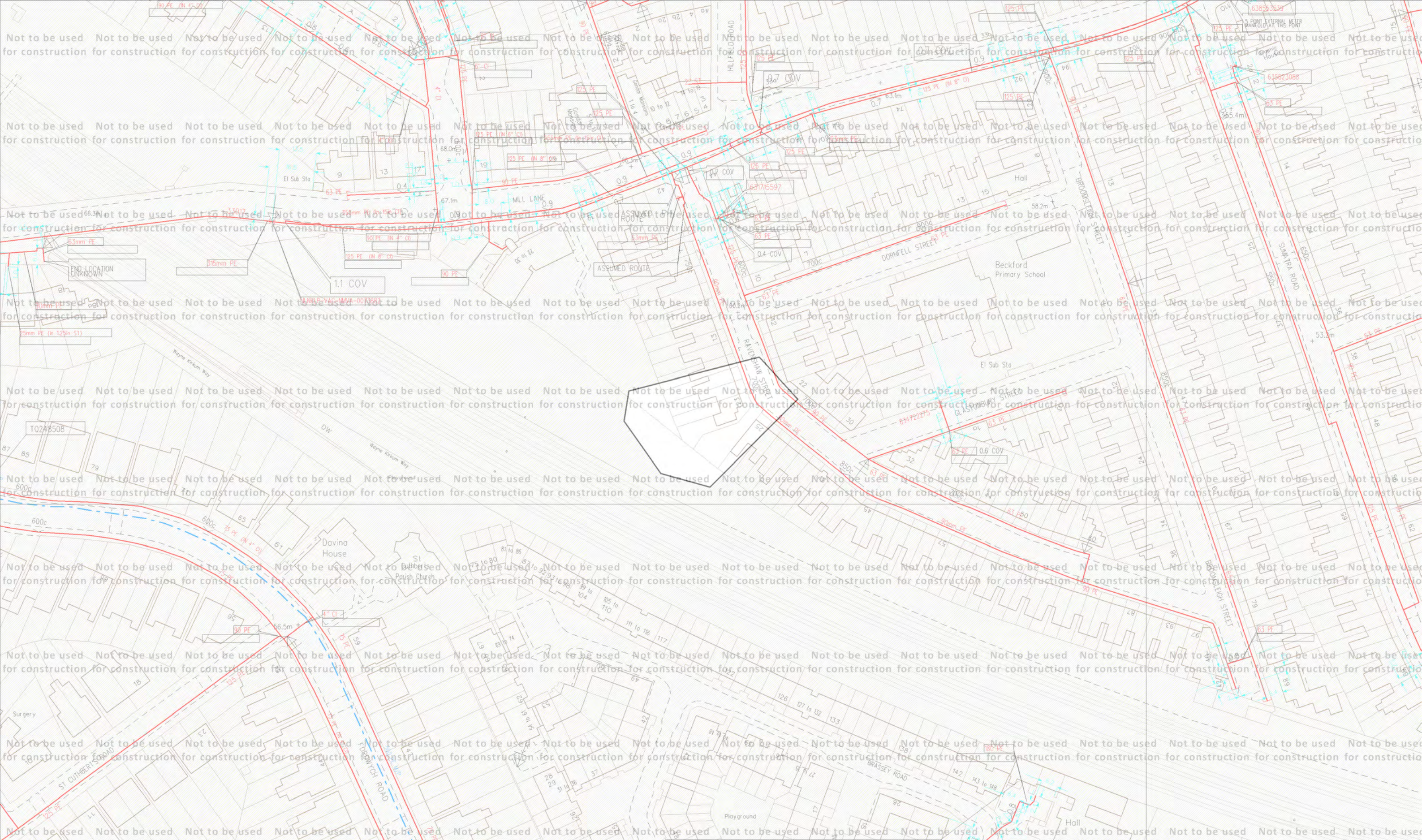
<http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf>

### **Excavating Safely in the vicinity of electricity cables guidance (Credit card):**

<http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf>





Copies of all the Guidance Documents can also be downloaded from the National Grid Website:

<http://www.nationalgrid.com/uk/Gas/Safety/work/downloads/>



ID: NL_TE_Z5_3SWX_328651		View extent: 515m, 305m		<b>Map not to be used for construction</b>		Map 1 of 2 (GAS)	
USER: utilityreports				<p>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.</p>		MAPS Plot Server Version 1.9.0	
DATE: 15/05/2017							
DATA DATE: 09/05/2017				Requested by: Technics Group			
REF: GRS03898							
MAP REF: TQ2485							
CENTRE: 524842, 185030							



ID: NL_TE_Z5_3SWX_328651	View extent: 2060m, 1220m	<b>Map not to be used for construction</b>	Map 2 of 2 (ELECTRIC)
USER: utilityreports	Underground cables  Overhead lines 	<p>This plan shows those cables owned by National Grid Electricity Transmission plc in its role as a Licensed Electricity Transporter (ET). Electricity cables owned by other ETs, or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Ancillary equipment such as cooling systems and communication cables are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Electricity 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 cables 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 electricity apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.</p>	MAPS Plot Server Version 1.9.0
DATE: 15/05/2017			
DATA DATE: 09/03/2017			Requested by: Technics Group
REF: GRS03898			This plan is reproduced from or based on the OS map by National Grid Electricity Transmission plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024241
MAP REF: TQ2485	0m  100m Approximate scale 1:5000 on A3 Colour Landscape		
CENTRE: 524842, 185030			

# ENQUIRY SUMMARY

## Received Date

15/05/2017

## Your Reference

GRS03898

## Location

Centre Point: 524842, 185030

X Extent: 64

Y Extent: 48

Postcode: NW6 1NP

Location Description: 23a Ravenshaw Street, Camden, Greater London, NW6 1NP

## Map Options

Paper Size: A3

Orientation: LANDSCAPE

Requested Scale: 500

Actual Scale: 1:1250 (GAS), 1:5000 (ELECTRIC)

Real World Extents: 515m x 305m (GAS), 2060m x 1220m (ELECTRIC)

## Recipients

utility.reports@technicsgroup.com

## Enquirer Details

Organisation Name: Technics Group

Contact Name: Stephen Sawyer

Email Address: utility.reports@technicsgroup.com

Telephone: 01483 230080

Address: Technics House, Guildford, Guildford, Surrey, GU4 7WA

## Description of Works

23a Ravenshaw Street, Camden, Greater London, NW6 1NP

## Enquiry Type

Proposed Works

## Activity Type

Utility Works

## Work Types

Work Type: Plans Only