Think
before you...

DIG UNDER GROUND

UK Power Networks

THINK . . .

Every year people are killed or seriously injured in incidents involving underground electricity cables.

THE DANGER

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

WHO IS AT RISK?

People in construction, demolition, agriculture, infrastructure or anywhere else where excavation is taking place. That is why it is vital everyone working on or visiting a working site is fully aware of the hazards and the steps that must be taken to avoid them.

HOW INCIDENTS HAPPEN

Sadly, accidents where excavators, breakers or other tools make contact with power cables are not uncommon. Where equipment or machinery is used near underground cables the risk must be considered and controlled in the interests of everyone.

THINK AHEAD

Get the basics right. Familiarise yourself with the site. Mark the route of underground cables running across the site on all plans circulated to staff. Find out if the work could be carried out away from the cables, or avoided all together.

UK Power Networks is committed to safety and actively encourages anyone undertaking work to contact us in advance for advice and free cable locating maps.

These will help you avoid our underground cables during your work, which is vital for your safety as well as ensuring we can provide a reliable supply of electricity.

For free maps and advice call **0800 056 5866** or write to:
Plan Provision
UK Power Networks
Fore Hamlet
Ipswich
IP3 8AA
plans@ukpowernetworks.co.uk

We can advise you on what steps to take if essential work is necessary close to underground cables and help ensure safe working practises are implemented.

Good management reduces the risk of accidents. With proper planning and control, workers should not come into contact with underground cables.

If excavation work forms a part of your day-to-day activities obtain a copy of the Health & Safety Executive's Guidance Note "Avoiding Danger from Underground Services" HSG47, which is free to download from the HSE's website - **www.hse.gov.uk/pubns/priced/hsg47.pdf**

WHAT TO DO

- **Have cable drawings and records on site**, know how to read them and check them before starting work. Be aware that not all cables may be shown on the records.
- **Look around for anything in the vicinity** that would have an electricity service, such as street lights, CCTV cameras, phone boxes, etc. as well as the more obvious things like houses and industrial units.
- **Always** use a cable avoidance tool (CAT) to survey the entire site before digging commences. Once found, mark cable positions with spray paint or similar. Do not forget to use encroachment lines as well.
- **Dig trial holes**, by hand, alongside the indicated route of the cables(s).
- Use spades and shovels with **insulated handles** in preference to forks and picks.
- **Make sure everyone** on site, including visitors, **understand the risks.**
- If there is a **cable encased in concrete** contact **UK Power Networks to agree a safe method of work.** This may mean making the cable dead.
- Before demolishing a building **make sure that supplies are disconnected,** preferably well clear of the work area.
  For guidance on how to arrange a disconnection visit www.ukpowernetworks.co.uk – Our Services
- Have the **emergency contact telephone number** easily available on site.

WHAT NOT TO DO

- Never allow anyone near a damaged or suspected damaged cable or joint.
- Do not handle or attempt to alter the position of a cable or joint.
- Never assume that cables run in straight lines, they may be deflected around underground obstacles.
- Do not use mechanical excavator or powered digging tool within the vicinity of known cables.
- Never knock a road pin, or forcibly throw a spiked digging tool into the ground, without checking what is below the surface.

IF A CABLE IS DAMAGED

Notify UK Power Networks immediately:

London 0800 028 0247
East of England 0800 783 8838
South East 0800 783 8866

Call the emergency services if anyone is injured. Anyone who has received an electrical shock should go to hospital as damage may have occurred to the heart.

Always **treat the cable(s) as live** even if they are not sparking. Cables can be re-energised at any time without warning.

Never remove anything that is stuck **in a cable.**

Keep everyone well away from the area of the damage.

Do NOT attempt to remove anything that is in contact with the cable.

PLAN IT OUT

CHECK IT OUT BEFORE YOU DIG UNDER GROUND

DANGER OF DEATH

THINK BEFORE YOU DIG

Call the network operator

0800 587 3243

www.ukpowernetworks.co.uk

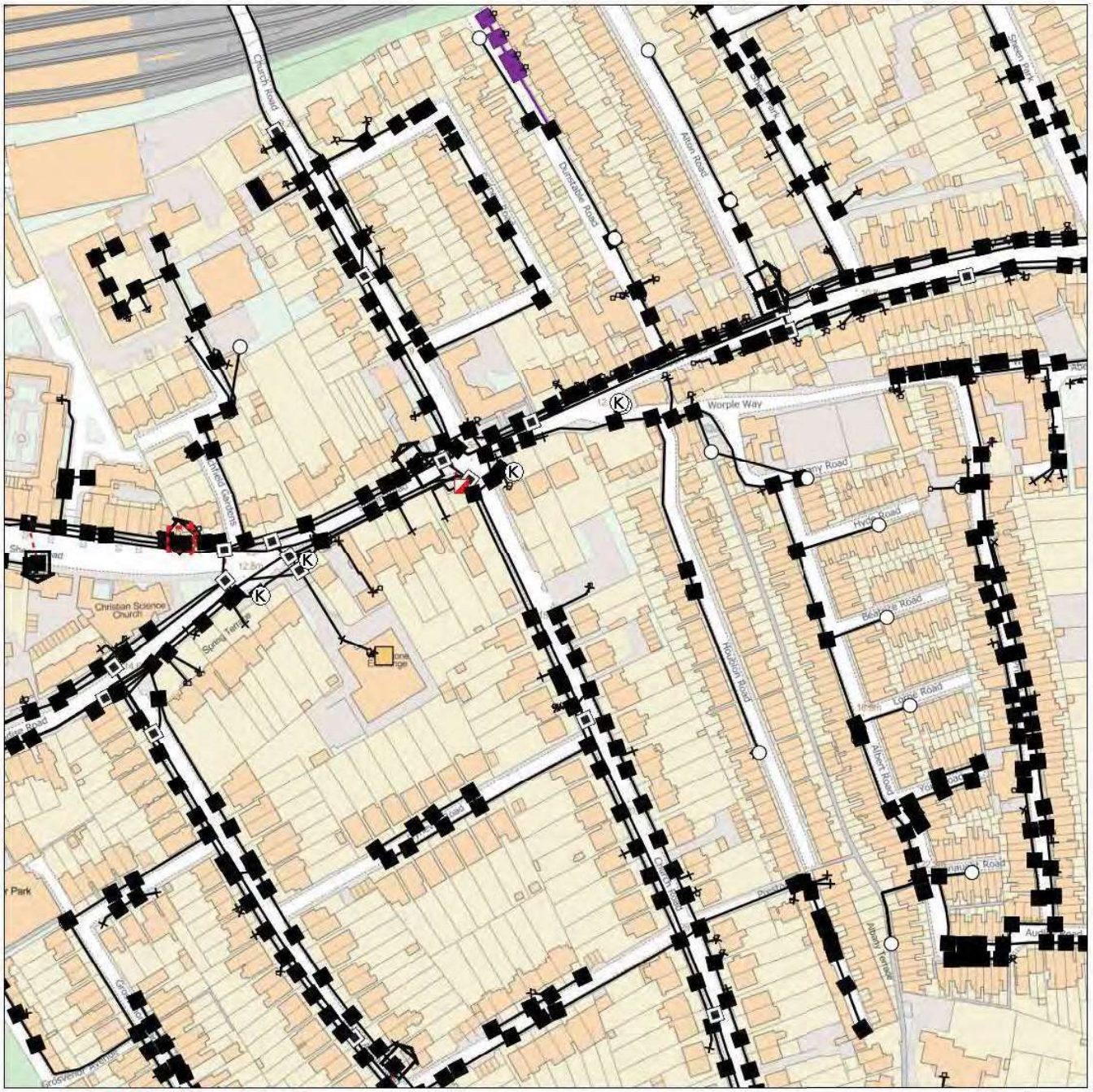
If you are unsure of your network operator then please visit www.energynetworks.org

UK Power Networks,
Registered office: Newington House, 237 Southwark Bridge Road, London SE1 6NP
Registered in England and Wales No: 3870728

UK Power Networks

BT (Openreach)

Maps by email Plant Information Reply



IMPORTANT WARNING

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

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CLICK BEFORE YOU DIG

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

email cbyd@openreach.co.uk

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

Accidents happen

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

KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings	
Split Coupling	×	Built	
Duct Tee	▲	Planned	
Building		Inferred	
Kiosk	(K)	Duct	

Other proposed plant is shown using dashed lines.
BT Symbols not listed above may be disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation. Maps are only valid for 90 days after the date of publication.

	Pending Add	In Place	Pending Remove	Not In Use
Power Cable				
Power Duct				N/A

BT Ref : FVA08543G
Map Reference : (centre) TQ1836574942
Easting/Northing : (centre) 518365,174942
Issued : 26/08/2020 20:54:59

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

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Identifying our equipment

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

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

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

Poles and attachments

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

There are two types of pole in use:

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

Pole markings

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

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

Year of preservation – 97

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

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

The pole reference number:

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

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

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

Street covers and cabinets

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

Cast iron cabinet

Fibreglass cabinet

Single door cabinet (with replacement steel door)

Steel cabinet

All-in-one cabinet

How to spot one of our cabinets: keys and markings

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

Openreach keys

Virgin Media key

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

Cast iron GPO marking

Fibreglass Telecom marking

Steel BT marking

Carriageway covers

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

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

All sizes are approximate.

Carriageway covers with two triangular lids

CW No.1
Silent Night
680mm x 680mm

CW No.1
old type (Elkington)
inserts vary

Very old round
CW no.1

Carriageway covers with four triangular lids

CW No.2 Silent Night
1220mm x 680mm

CW No.2 old type
(Elkington)

Carriageway covers with six triangular lids

CW No.3 current type

CW No.3 Silent Night type

CW No.3 Elkington type

Footway covers

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

Small covers

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

JB21 31x41cm

JB22 41x61cm

JB23 28x50cm

Medium covers

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

Old style cast iron and concrete 38x80cm

JF2/JB26 34x80cm

Large covers

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

JF4 current type 55x100cm

JF4 old type 55x100cm

Square covers

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

JF5 70x70cm

JF5 old type 70x70cm

Twin covers

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

JF6
70x140cm

JF6 old cast and concrete type 70x140cm

Triple covers

The two sizes of triple lid covers are shown here.

JF10 80x240cm

JF11 80x140cm

Inserts and markings

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

Footway

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

JF4

JF5

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

Carriageway

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

Current marking

Older markings

Non-standard plant

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

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

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

FW No.4

CW No.3 insert type

FW No.6

Detail of legend built into frame

National Telephone Company Limited

Disclaimer
This document contains information intended to help you to identify Openreach equipment on your site and is provided for information purposes only. Whilst Openreach makes every effort to ensure that the information contained in this document is accurate, Openreach does not represent that it is complete. The contents of this pack cannot be copied or reproduced in whole or in part without the written consent of British Telecommunications plc, through its division, Openreach.

Utility Search Report 2020

Dear Sir/Madam,

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

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

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

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

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

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

Regards,

Gareth Milne

Distribution Administrator

Worksite Survey | Asset Information Services
National Records Centre | Audax Road | York YO30 4US
T: 01904 386353 | **E:** gareth.milne@networkrail.co.uk
W: www.networkrail.co.uk

Please note,

Crossrail is not affected by these works.

Best regards,

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

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

Dear Sir/Madam

We acknowledge receipt of your Letter / New Roads & Street Works Act Enquiry dated 26/08/20 relating to the following enquiry:

Site: Church Road
Petersham
Richmond upon Thames
London
TW10 6LN
GRID – 518365,174942

We have no H.V. cables or cable duct routes in the immediate area in question. Please note that we only manage High Voltage, Pilot and Fibre Optic Cables for the London Underground distribution network.

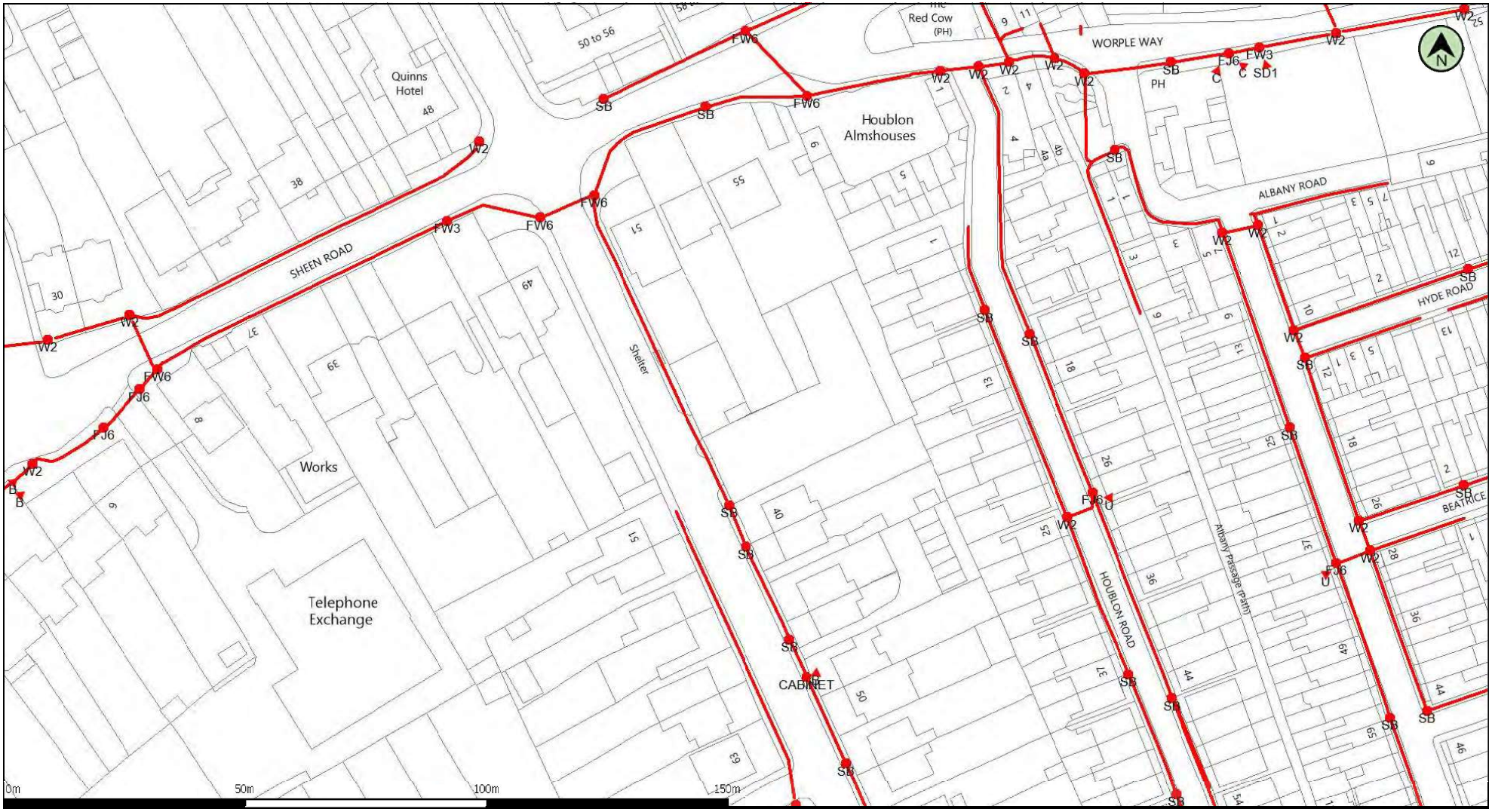
Yours sincerely,

On Behalf of the H.V. Cables Manager

Title: NRSWA co-ordinator

Email:LULHVpowerassets@tfl.gov.uk

London Underground
Power Distribution
Units 7 & 8,Station Road
Drawing Office
Tufnell Park
London
N19 5UW
Tel: 0203 054 8418/0203 054 8354



 Date: 26/08/20 Scale: 1:1111 Map Centre: 518373,174932 Data updated: 03/08/20 Telecoms Plan A4

Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. Further details can be found using the "Affected Postcodes.pdf", which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2020 Ordnance Survey 100019209.

Duct, Trench — Chamber — Cabinet

utilitysitesearch@outlook.com

Virgin media