RPA Safety Services Ltd



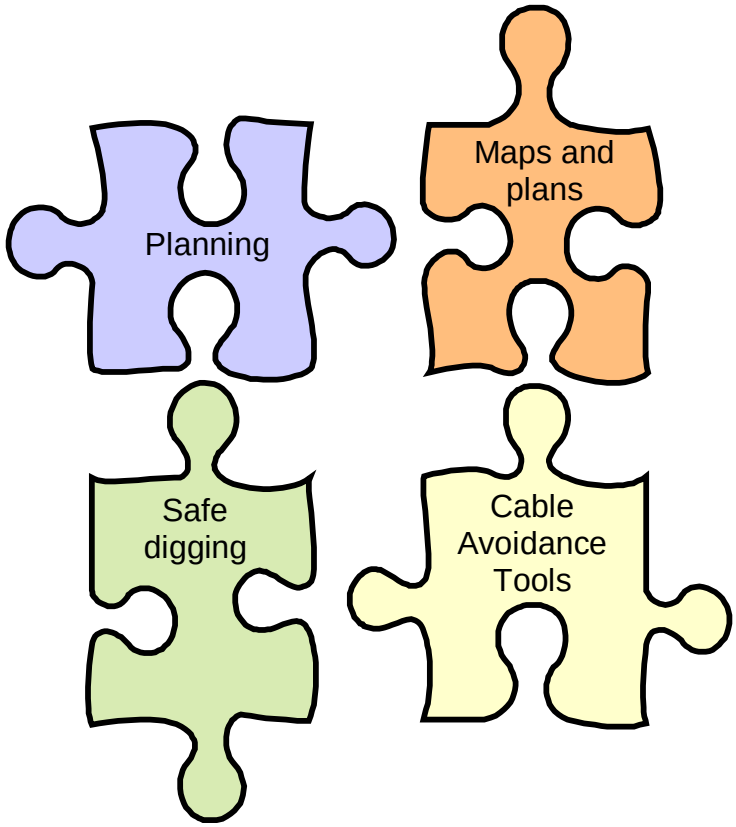
Note

This guidance is to be used for information purposes only. It does not replace the need for the persons using this guidance to conduct suitable and sufficient risk assessment. As such the authors cannot be held responsible for damage caused to the persons or any property, howsoever caused.

Underground services

Where an organisations activities place their staff in a position where contact with underground services is possible, they must make reference to HSG47 – 'Avoiding danger from underground services'.

This requires, in all cases, a system of work which must consider:



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Planning
This process is not the sole responsibility of the contractors. The process should begin as soon as the project is decided and therefore all parties have a responsibility to ensure risk is managed throughout. Clients have a responsibility to provide suitable information, resources and time to ensure the work is conducted correctly and anyone involved in the design process is required to ensure the construction process is considered with as much care as the safety of the final occupancy.

Maps and plans
There is a requirement for all work in such instances, to be supported by suitable maps and plans. Obtaining the maps and plans takes time and as such, the client should ensure time and resources are made available to ensure this occurs.

The following maps and plans should be considered (this is not a finite list – project may determine other likely services):

Pipelines:

To ensure no work is carried that may impact on fuel or gas pipelines a search request must be made through:

http://www.linesearch.org

Registration is required for use of this site.

Electricity:

The UK electrical infrastructure is supplied by companies known collectively as Distribution Network Operators (DNO). The area each covers is shown on a map provided by National Grid. This can be seen by consulting the current Distribution Network Operators Map available on the National Grid website.

Depending on the area of intended work, the DNOs need to be consulted to request utility plans. The following table provides a contact list for the majority of DNOs in the United Kingdom and guidance on obtaining plans:

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Company	Department	Contact:
EDF Energy	Plan Provision	Tel: 0800 0565866 No charge for these plans.
SSE Power Distribution	Mapping Services	South - Post site location map and details of work to: Mapping Services - South PO Box 6206 Basingstoke Hampshire RG24 8BW Tel: 01256 337288 No charge for these plans.
		Scotland - Post site location map and details of work Inveralmond House 200 Dunkeld Rd. Perth PH1 3AQ Tel: 01738 456470 No charge for these plans.
CE Electrical (NEDL)	Safedig maps	Fax or in writing, quoting site location and details of work 0191 2294287 Records Information Centre New York Rd Shire Moore Newcastle NE27 0LP

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E.ON - Central Networks	CNDS Bureau Services	Tel: 0121 5226177 No charge for maps and plans in most instances
Northern Ireland Electricity	Distribution Service Centre	Post site location map and details of work to: NI PLC Request for mark-up Distribution Service Centre Carn Industrial Estate Craigavon BT63 5QJ
Scottish Power Energy Networks - Scotland	Data Management	Post site location map and details of work to: Scottish power data management Correspondence Section St Vincents Crescent Glasgow G3 8LT
Scottish Power Energy Networks - Wales / Cheshire	Data Management	Post site location map and details of work to: Data Management Energy Networks North Cheshire Trading Estate Prenton Way Birkenhead CH43 3ET
Western Power Distribution	Map Response Team	Post site location map and details of work to: Western Power Distribution - Map Response Team Mapping centre Lamby Way Rumney Cardiff CF3 2EQ

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Electricity North West / United Utilities	United Utilities Mapping	Site plan, address, your contact details to be faxed or e-mailed and an estimate will be returned. Cheque or credit card will be required as they do charge. property.searches@uuplc.co.uk fax: 0870 7510102 United Utilities Property Searches Stephens Way Goose Green Wigan WN3 6PJ Free to view at their office. Charge for copies.

The following table is a list of the emergency numbers for these organisations:

Area	**Company**	**Emergency No.**
North Scotland	SSE Power Distribution	0800 300 999
South Scotland	Scottish Power - Systems	0845 272 7999
North East England	CE Electric (NEDL)	0800 668 877
North West	Electricity North West Ltd	0800 195 4141
Yorkshire	CE Electric (YEDL)	0800 375 675
East Midlands	Central Networks (E.ON)	0800 056 8090
West Midlands	Central Networks (E.ON)	0800 328 1111
Eastern England	EDF Energy	0800 783 8838
South Wales	Western Power Distribution	0800 052 0400
Southern England	SSE Power Distribution	08457 70 80 90
London	EDF Energy	0800 028 0247
South East England	EDF Energy	0800 783 8866
South West England	Western Power Distribution	0800 365 900
North Wales, Merseyside and Cheshire	Scottish Power - Manweb	0845 272 2424

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Gas:

Gas is separated into two distinct sections. Gas Transmission (high pressure) and Gas Distribution. Each one needs checking.

Gas transmission:
Gas transmission information can be found by consulting www.linesearch.org for England, Scotland and Wales.

National Grid and Wales and West, provide a DVD which covers both transmission and distribution. National Grid make a charge of £192 for this service and Wales and West make no charge. Further details can be obtained by calling: 01509 282800

Gas distribution:

Transmission supplies gas to 40 power stations, a small number of large industrial consumers and the twelve Local Distribution Zones (LDZs) that contain pipes operating at lower pressure which eventually supply the consumer. The twelve LDZs are managed within eight gas distribution networks, the owners of which are now:

- North West, London, West Midlands and East of England are owned and managed by *National Grid*
- Scotland & South of England are owned and managed by Scotia Gas Networks – operating as *Scotland Gas Networks* and *Southern Gas Networks respectively*
- Wales and the West is owned and managed by *Wales and West Utilities*
- North of England is owned by Northern Gas Networks, who have contracted operational activities to *United Utilities Operations*

Contact details are outlined over the page:

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Company	Department	Contact
National Grid	Plant Protection Team	Requests must be made in writing to: National Grid Block 1, Floor 1 Brick Kiln Street Hinkley Leics LE10 0NA Or e-mail: plantprotection@uk.ngrid.com Tel: 01604 815361 A DVD is available which covers this area. This can be obtained by calling 01509 282800. There is a charge of £192 for this service.
Wales and West Utilities Ltd	Plant Protection	Requests must be made in writing to Wales and West House Spooner Close Celtic Springs Newport NP10 8FZ Or e-mail: plantprotectionenquiries@wwutilities.co.uk Fax: 0845 0720852 Tel: 02920 278912 A DVD is available which covers this area. This can be obtained by calling 01509 282800. There is no charge for this service.

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Scotland Gas Networks and Southern Gas Networks (Scotia)	Plant Location	Requests in writing with a plan of the area. e-mail plantlocation@sgn.co.uk Fax 0141 4296432 Plant Location Department 95 Kilbirnie Street Glasgow G5 8JD Tel: 0141 4184093
Northern Gas Networks	United Utilities Operations	Requests in writing with a plan of the area. e-mail plantprotection@uuplc.co.uk fax: 0191 2012384 1st Floor 1 Emperor Way Doxford International Business Park Sunderland SR3 3XR Tel: 0191 5014349 No charge for this service.

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London Underground:

Any work in the Greater London area must be checked to ensure it does not interfere with assets owned or managed by London Underground. Some of their services can be as shallow as 1m, so it is important to check in all instances. Prior to work commencing a check should be made by contacting the following:

Jubilee, Northern and Piccadilly:

Steven Lugg	steven.lugg@tube.tfl.gov.uk	tel: 020 71263537

All other areas:

John Mcgrath	john.mcgrath@metronetrail.com	tel: 020 71262904

They will generally request a fax or e-mail with a site plan and work descriptions and they will respond indicating the site is safe, or they will send plans showing the nearby infrastructure and how it can be avoided.

At least two weeks should be allowed for a response and any borehole / trial pit depths must be stated.

Water / Drainage / Sewerage:

Water and sewerage are owned and managed by a number of companies throughout the UK. The following map shows the main companies but there are a number of smaller companies, such as Cambridge Water, which supply a very small number of premises and these are not included.

Depending on the area of work the main supplier should be contacted and they will advise if the supply of water and sewerage is by a smaller company not listed.

Water companies often charge for plans and make take up to three weeks to provide them depending on the company.

The following table gives the primary contacts for each of the main companies in the UK.

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Water company	Contact details
Scottish Water	Site plan details to: Fax: 01382 563275 Letter: Plan Service Department Bullion House Invergowrie Dundee DD2 5BB E-mail: searches@scottishwater.co.uk Mention it is intrusive work to ensure there is no charge
Northumbrian Water	E-mail: propertysolutions@nwl.co.uk There is a charge for plans
United Utilities Water	Site plan details to: E-mail: property.searches@uuplc.co.uk Tel: 0870 7510101 There is a charge for plans
Yorkshire Water	Site plan details to: Letter: YorMap PO Box 682 Bradford West Yorkshire BD3 7YT Tel: 01274 692424
Anglian Water	Request an order form from: Tel: 01480 325860 There is a charge for plans
Severn Trent Water	Site plan details to: Tel: 0121 4523306 There is a charge for plans
Welsh Water (Dwr Cymru Cyfyngedig)	Call mapping division on: 02920 534690
Thames Water	Site plan details on headed letter paper to: PO Box 3189 Slough SL1 4WW TEL: 0118 9236656 There is a charge for plans

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Wessex Water	Online enquiries only to: https://www.searches-online.com Also covers Bristol Water, Bournemouth and West Hampshire Water There is a charge for plans
South West Water	Requests should be made to: Conveyancing Services South West Water Peninsula House Rydon Lane Exeter EX2 7HR Tel: 01392 443115 Fax: 01392 442726 There is a charge for plans
Southern Water	Requests should be made to: E-mail: searches@southernwater.co.uk Tel: 0845 2700212 There is a charge for plans

Telecommunications:

Openreach (includes optic fibres)
Openreach owns and manages the local access network that connects homes and businesses to telephone exchanges. They provide network services to Communications Providers and provide an online ‘maps by e-mail’ service that is free. To register for an account you need to submit your details to:

stoke.incoming.notices@openreach.co.uk

National Notice Handling Centre on 0800 169 3849

Openreach also offer a 'free site visit service' to locate and mark the position of Openreach apparatus within a work area and provide advice on how to avoid damaging the Openreach Network during work. To arrange a site visit from a Plant Protection Officer (PPO): Tel: 0800 9173993 or Fax: 01332 578650

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Optic fibres:

Striking an optic fibre cable poses little risk from harm (unless someone looks directly into the exposed cable end) but will cost a great deal of money to repair and through loss of data. It is difficult to provide an exhaustive list of optic fibre cable providers as there is no readily available list as some providers are very small.

Checking with the local authority / council offices may provide information regarding the presence in the ground.

It is worth checking with the electricity and gas providers in the areas, as optic fibres are now commonly used to monitor the integrity of their networks and will be laid alongside indicated plant. These may not be indicated on their maps and plans.

These are some of the providers details:

Openreach
(see previous)

Virgin Media
(Ex NTL:Telewest) send work location details to:

E-mail: plant.enquiries.team@telewest.co.uk

Virgin Media - Plant Enquiries
Cablephone House
Talbot Way
Smallheath
Birmingham
B10 0HJ

Cable and Wireless
Tel: 01454 288808
Fax: 01454 288799

Atkins Plant Enquiries
PO Box 290, Aztec West
Bristol
BS32 4WE

B Sky B
NRSWA Team
Sky Network Services
70 Buckingham Avenue
Slough
Berks
SL1 4PN

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Tel: 0207-032-3234
0207-032-3250
0207-032-3251
Fax: 0207-032-3252

Email: nrswa@sns.bskyb.com

Vtesse
nrswa@vtesse.com

Fujitsu
plantenq@mailman.ftel.co.uk

Gamma Telecom
Gamma Telecom
Unit C, Focal Point
2nd Avenue
Trafford Park
Manchester
M17 1FG

Verizon
osp-team@uk.verizonbusiness.com

Fibrespan
FibreSpan Limited
Enterprise House
Ocean Village
Southampton
SO14 3XB
United Kingdom

Tel: 023 80574590
Fax: 023 80574591

cnewman@fibrespan.co.uk

Other underground services:

Whenever the ground is penetrated, underground services must be expected. This is not a finite list of services and cannot be expected to cover everything. Other sources of information such as property owners, local authorities etc. should be contacted to ascertain the possibility of any other services or property in the vicinity.

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Cable Avoidance tools

The generally accepted technology for detecting underground services, and the minimum required under HSE guidance HSG47, is a Cable Avoidance Tool (CAT). These have limitations and therefore the planning process, prior to arrival on site, must understand their weaknesses and determine their suitability.

Staff using such equipment must be trained and supported by all of the other aspects of the safe system of work demanded by HSG47. It is insufficient to provide a CAT without plans and it may be necessary to consider the use of signal generators, sonds, trace wires or other detection technology.

Safe digging

Safe digging is paramount. As detection technology has limitations and maps and plans are often inaccurate, the need for digging of pilot holes for positive service location is important.

This must be done safely, in line with HSG47 guidance, using suitable equipment and trained staff.

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