

# STAGE 1 Utility Impact Assessment



Homes &  
Communities  
Agency

**Pyenest Street,  
Stoke-on-Trent**

STAGE 1 Utility Impact Assessment

April 2017



## REPORT CONTROL

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# Stage 1 Utility Impact Assessment



## EXECUTIVE SUMMARY

The development area is located adjacent to the B5045 Shelton New Road and Caldon Canal approximately 1 kilometre from Stoke-on-Trent town centre within the Cliffe Vale district.

The site covers an area of approximately 2.0ha with the development proposal consisting of residential housing.

WYG has been commissioned to produce an Infrastructure Assessment to inform the viability assessment, development impact, services availability and outline future studies that may be required to supplement development of the scheme. This study utilises baseline information and utility records obtained through the statutory searches process.

Utility searches have been carried out with the relevant DNO's to establish the existing situation and principles of the redevelopment infrastructure strategy.

The utility searches contained within this report were carried out in April 2017 and for this exercise have been considered to still be relevant.

Provision of multiple new service connections together with impact mitigation measures would be required to serve the development and will consist of: -

**WATER** – Connection to the existing Severn Trent Water water network to provide a distribution system throughout the Potential Development Area (PDA) with provision of new metered connections to properties. A capacity assessment will be required to be undertaken by Severn Trent Water to establish the suitability of the existing infrastructure and needs for any reinforcement. This would be undertaken as part of the formal connection application process for new supplies

**GAS** – Connection to the existing National Grid gas main network to provide a distribution system throughout the PDA with provision of new metered connections to properties. A capacity assessment will be required to be undertaken by National Grid to establish the suitability of the existing infrastructure and needs for any reinforcement. This would be undertaken as part of the formal connection application process for new supplies.

**ELECTRICITY** – Connection to the existing Wales and West electricity network to provide a new distribution system throughout the PDA with the likely provision of low voltage distribution circuits to metered connections to properties. A capacity assessment will be required to be undertaken by Wales and West to establish the suitability of the existing infrastructure and needs for any reinforcement. This would be undertaken as part of the formal connection application process for new supplies.

**TELECOMS** – Provision of a new underground telecoms network would be incorporated within the defined highway and service corridors of the PDA to provide a distribution network. This would be taken from a nearby underground ducted network.

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Provision of new utility infrastructure and treatment of existing will be determined through consultation with the DNO's to establish scope, programme and cost. Procurement and implementation of new infrastructure will be undertaken in compliance with NRSWA 1991.



## 1.0 INTRODUCTION

### 1.1. PURPOSE OF THE REPORT

The Home's and Communities Agency has commissioned WYG Engineering Ltd to undertake a Stage 1 Utility Impact Assessment in respect of the proposed development of land located adjacent to the B5045 Shelton New Road and Caldon Canal within the Cliffe Vale area of Stoke-on-Trent. The total area of the development boundary covers 2.0ha approx. This report has been prepared to support the feasibility study and future planning application for proposed development.

The purpose of the utility impact assessment is to establish the existing situation with regard to utilities and services, likely impact and ability to service the site for the anticipated development usage. Preliminary consultation has been undertaken with the relevant District Network Operators (DNO's) to consider new connections and potential diversionary or protection measures required where necessary. Due to time constraints and lengthy consultation procedures, where responses have not been provided an assessment of impact, availability of supply and budgetary estimates has been made on existing utility information, records and visual site inspections.

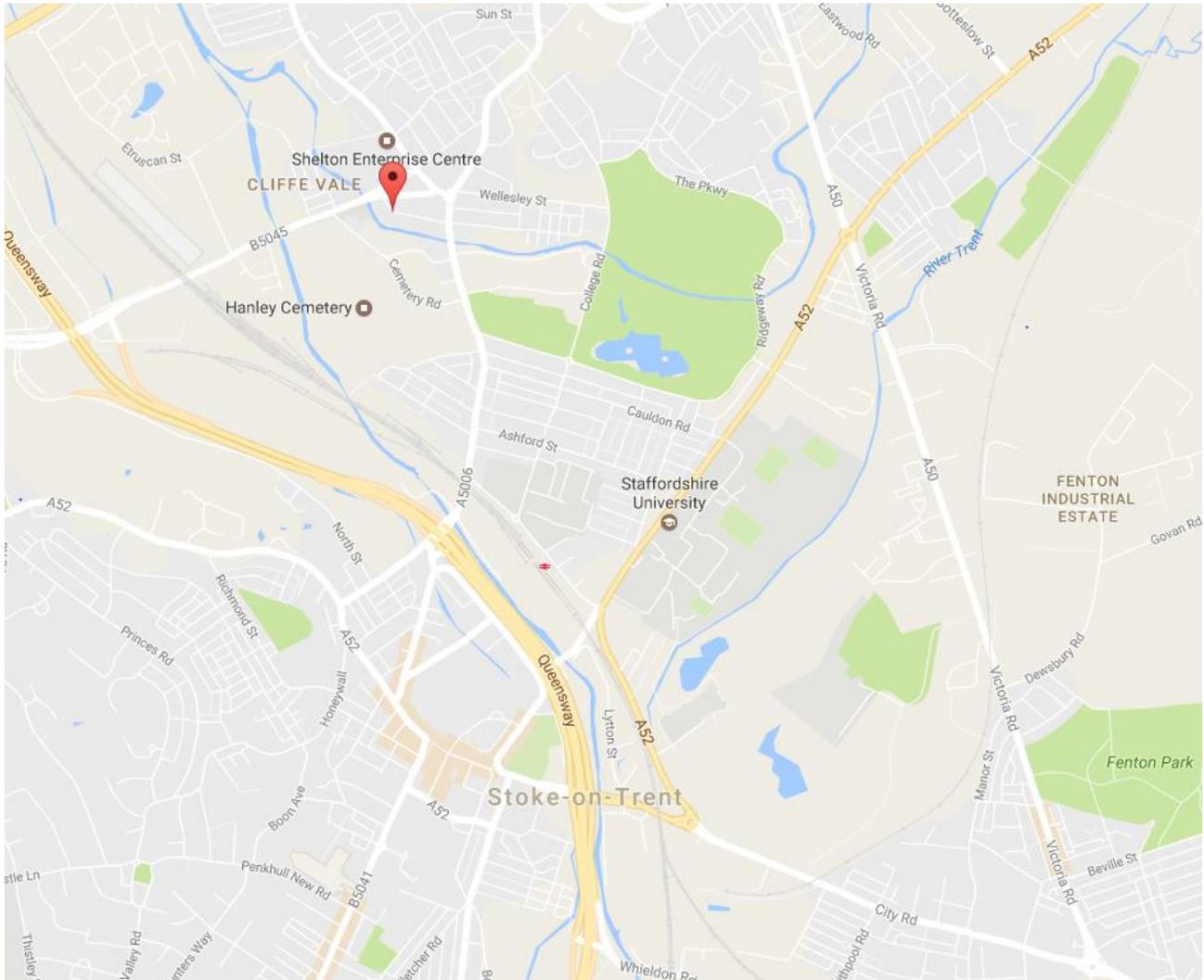
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## 2.0 SITE DESCRIPTION

### 2.1. EXISTING SITE

The proposed development is approximately 2.0 hectares. The development area is located within the Cliffe Vale area of Stoke-on-Trent adjacent to the Caldron Canal.



**Figure 1 – Location of Development**



**Figure 2 – Development Area**

The site is bounded:

- To the north by the B5045 Shearer Street and the B5040 Bedford Road
- To the south by Caldon Canal
- To the east by the A5006 Howard Place
- To the west by the Caldon Canal and the B5045 Shearer Street

## 3.0 DEVELOPMENT PROPOSALS

### 3.1. EXISTING UTILITY SITUATION

Main statutory utility services are generally located within the existing public highway network around the proposed development site.

Searches have been undertaken with the relevant DNO's to obtain existing records of network utilities which are located in Appendix A.

The utility searches contained within this report were carried out in April 2017 and for this exercise have been considered to still be relevant.

#### **WATER**

The existing Severn Trent Water infrastructure serves the local area and is located within the local highways. The infrastructure includes:

- A 2" CL distribution main within Pyenest Street.
- A 3" CL distribution main within B5045 Shearer Street.
- A 180mm HPPE distribution main within B5045 Shelton New Road converts into a 6" CL service pipe and then into a 150mm DT service pipe.
- A 350mm DT and abandoned 6" CL distribution mains run within the B5040 Bedford Road.
- A 450mm DI and 6" CL distribution main run within A5006 Howard Place.

The majority of services appear to be located within or adjacent to existing public highways which are accessible for provision of new service connections.

#### **GAS**

The existing National Grid gas infrastructure serves the local area and is located within the surrounding highways, consisting of:

- A 4" ST low pressure network within the southern verge of Pyenest Street.
- A 16" ST low pressure service pipe running within Shelton New Street B5045.
- An 8" ST low pressure service pipe running within the B5040 Bedford Rd and the A5006 Stoke Road.

# Stage 1 Utility Impact Assessment



- A 63mm PE low pressure service pipe within Shearer Street.

All services appear to be located within or adjacent to existing public highway's which are accessible for provision of new service connections.

## **ELECTRICITY**

The existing Electricity Western Power Distribution infrastructure serves the local area and is located within the surrounding area consisting of:

- An existing low voltage (LV) network runs within both footpaths of the Pyenest Street, B5045 Shelton New Road, B5045 Shearer Street and A5006 Howard Place.
- An existing 33kV High Voltage (HV) network runs within both footpaths of A5006 Howard Place and the B5040 Bedford Road.
- An 11 kV High Voltage (HV) network runs within the southern footpath of B5045 Shelton New Road, the northern footpath of B5045 Shearer Street and the north-eastern footpath of B5040 Bedford Road.
- An underground service line within the central plot of the development area that connects into Pyenest Street

The majority of services appear to be located within or adjacent to existing public highway's which are accessible for provision of new service connections.

## **TELECOM**

The existing BT infrastructure serves the local area and is located within the surrounding area consisting of:

- Underground ducted network within the B5045 Shelton New Road, the B5045 Pyenest Street, the B5045 Shearer Street, the A5006 Howard Place and B5040 Bedford Road

The majority of services appear to be located within or adjacent to existing public highway's which are accessible for provision of new service connections.

## **DRAINAGE**

From a review of Severn Trent Sewer records the majority of the service pipes are located within the highway network and consist of:

- A 375mm VC combined sewer within the B5045 Shearer Street.



- A 225mm VC combined sewer within the B5045 Shelton New Road.
- A 300mm VC combined Sewer and a 375mm CO surface water sewer within A5006 Howard Place.

As well as the infrastructure mentioned above it should also be noted that there are various connection pipes extending from the main distribution network into the proposed redevelopment plots.

A review of the site drainage will form part of the Flood Risk and Foul Drainage Assessment to be undertaken by others.

## **ADDITIONAL INFORMATION**

A 'Linesearch' assessment has also been undertaken to establish the location of non-statutory services and pipelines which identified the presence of Western Power Distribution infrastructure within the zone of interest, discussed previously. The full results of the Linesearch are included in Appendix A.

### **3.2. DEVELOPMENT UTILITY IMPACT**

The construction of any Proposed Development within the site area will likely have an impact on the current utilities infrastructure, which will comprise diversions, protection measures and temporary works aligned with the development construction phasing and utility infrastructure provision. The procurement and implementation of new infrastructure and the routing and positioning of any statutory plant and equipment i.e. pipes, cables, substations, will be fully coordinated with a development masterplan.

The likely existing utilities affected will be equipment located within the footprint of the proposed residential buildings and the capacity of the local infrastructure to be utilised. As most of the infrastructure is located within the public highway network the impact will be limited.

In order to supply the development, it will be required to extend utility services throughout the development area, this will require coordination with DNO's to develop an overall servicing strategy dependant on the proposed layout. This will likely be through the installation of a dedicated service corridor within the development footpaths.

### **3.3 DEVELOPMENT UTILITY STRATEGY**

The outline development proposals consist of residential development across the Proposed Development Area (PDA).

The main impact from the proposed development is likely to be the additional capacity needs on existing infrastructure. It will be necessary to establish capacity assessments for water, gas and electricity to understand the extent of reinforcement works required and precise points of connection (PoC) which

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will be determined at the formal connection application stage. Due to the fluid nature of statutory infrastructure networks, capacity, availability and PoC can only be determined at the time of formal connection application. Typically this is undertaken following planning approval as a pre-development stage. This process will clearly identify PoC, reinforcement, mitigation, programme and cost and will be fully coordinated with the development masterplan, DNO's and any phased construction programme.

Determination of existing utilities usability will be subject to intrusive investigation and proving the location, depth and condition of utilities within the PDA. It will be essential for early coordination with DNO's to minimise disruption to existing services and to coordinate the implementation of new services and connections.

The service loading requirements for the Proposed Development are not considered to be high as the proposed development is to be residential. Based on the level and type of development it is unknown at this stage if existing infrastructure has the capacity to support the development without the need for reinforcement and mitigation. However, as the surrounding area is well served by infrastructure the likely utility strategy will include but is not limited to: -

## **WATER**

Provision of multiple new water connections/re-routeing of the existing connections from the existing distribution mains located within nearby highways. The new/diverted connections should be routed to the new metering/termination points positioned across the development area.

To generate a detailed quotation for new water services a formal connection application should be made to Severn Trent Water which will require detailed development information and identification of metering point location.

## **GAS**

Provision of new gas connections to new on-site gas connection and metering points to suit the development layout. The local area consists of a low pressure network that will likely be sufficient for the development. It will be necessary to undertake a capacity check with National Grid to confirm this.

To generate a detailed quotation for new gas services a formal connection application should be made to National Grid or an independent DNO which requires detailed development information and identification of metering points.

## **ELECTRICITY**

An assessment of current infrastructure capacity will need to be undertaken to determine the extent of mitigation, PoC and reinforcement works required. It is likely that a ground mounted sub-station (GMS) would be needed to supply any large residential development proposals. The local infrastructure network would need to be investigated to see if the current LV and HV voltage networks would be adequate for any proposed developments although it is likely to be sufficient. The location of the GMS will be fully coordinated with the masterplan and also to maximise the high and low voltage efficiency for supply and distribution prior to connection to the identified metering points. The substation will



typically consist of GMS housed within an enclosure, located adjacent to the public highway to facilitate unhindered maintenance access. The substation would ultimately be transferred as a DNO asset. To generate a detailed quotation for the new electricity services a formal connection application should be made to Electricity North West or an independent DNO which requires detailed development information and identification of metering points to determine point of connection, substation layout and mitigation measures.

## TELECOMS

Alteration of existing ducted network to allow for new development requirements. New ducting to be implemented to service proposed residential layouts, usability of existing infrastructure to be assessed through intrusive investigations.

If additional telecom provider services are required, consultation will be required to establish scope, of deliverables and implementation.

### 3.4 DEVELOPMENT UTILITY REQUIREMENTS

Generally utility supplies for residential type usage will be based on the service loadings identified in Table 3 which will inform the formal application process for new supplies.

Utility/Service	Load Requirement	Summary
Gas	Q <i>max</i> 6m <sup>3</sup> /h.	New metered connection from existing infrastructure.
Electricity	45A single phase supply per unit (max) or 1.8kva/100A 3 phase supply.	Diversity factors applied to development.
Water	2 litres/sec (min).	New metered connection from existing infrastructure.  Flow within main and supply – 25mm connection – domestic equivalent
Telecom	Ducted networks	New BT infrastructure to be provided.

**Table 3 – Typical Residential Utility Loading Requirements**



Provision and implementation of new utility infrastructure will be undertaken in accordance with the National Roads and Street Works Act 1991, which governs the installation of new infrastructure within public highway. This determines undertaker duties, materials, workmanship, permits and outlines powers of the highway authority.

## 3.5 EASEMENTS AND WAYLEAVES

It is intended that all new connections will be routed from the POC's within local highways and or new service locations to the individual metering/service points.

Therefore, as part of the formalisation of procurement of new connections consultation should be carried out with the service providers to ensure pre-determined routes, wayleaves or easements are incorporated. Service providers will need to be contacted at an early stage to ensure early coordination of service provision and abandonment/diversion of existing infrastructure.



## 4.0 CONCLUSIONS AND RECOMMENDATIONS

This report has identified the following: -

The development proposal is to develop 2.0ha of land located in Stoke-on-Trent for residential use.

Utility searches have been carried out with the relevant DNO's to establish the existing situation and principles of the redevelopment infrastructure strategy.

Provision of new service connections together with impact mitigation measures are likely to be required to serve the development and will broadly consist of: -

**WATER** - Connection to the existing Severn Trent water network to provide a distribution system throughout the Potential development area (PDA) with provision of new metered connections to properties. A capacity assessment will be required to be undertaken by Severn Trent to establish the suitability of the existing infrastructure and needs for any reinforcement. This will be undertaken as part of the formal connection application process for new supplies.

**GAS** – Connection to the existing National Grid gas main network to provide a distribution system throughout the PDA with provision of new metered connections to properties. A capacity assessment will be required to be undertaken by National Grid to establish the suitability of the existing infrastructure and needs for any reinforcement. This will be undertaken as part of the formal connection application process for new supplies.

**ELECTRICITY** - Connection to the existing Western Power Distribution electricity network to provide a new distribution system throughout the PDA with the likely provision of low voltage distribution circuits to metered connections to properties. Mitigation measures in the form of abandonment, diversion and protection measures may be necessary to facilitate the new electricity infrastructure. A capacity assessment will be required to be undertaken by Western Power Distribution to establish the suitability of the existing infrastructure, PoC and needs for any reinforcement. This will be undertaken as part of the formal connection application process for new supplies.

**TELECOMS** – Provision of a new underground telecoms network would be incorporated within the defined highway and service corridors of the PDA to provide a distribution network to the residential buildings

Provision of new utility infrastructure and treatment of existing will be determined through consultation with the DNO's to establish scope, programme and cost. Procurement and implementation of new infrastructure will be undertaken in compliance with NRSWA 1991.



## APPENDIX A, Utility Consultations & Records

**Enquirer**

Name	Mr Matthew Chadwick	Phone	07854 508 160
Company	WYG	Mobile	07854 508 160
		Fax	Not Supplied
Address	Quay West at MediaCityUK Trafford Wharf Road, Trafford Park, Manchester Manchester Greater Manchester M17 1HH		
Email	matthew.chadwick@wyg.com		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

**Enquiry Details**

Scheme/Reference	Pyenest Street, Stoke-On-Trent		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	16/08/2017	Work type	Housing
End date	24/01/2018	Site size	310 metres diameter
Searched location	XY= 387633, 346571 Easting/Northing	Work type buffer*	25 metres
Confirmed location	387631 346570		

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



## Asset Owners

**Terms and Conditions.** Please note that this enquiry is subject always to our standard terms and conditions available at [www.lineasearchbeforeudig.co.uk](http://www.lineasearchbeforeudig.co.uk) ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

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

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

Below are three lists of asset owners:

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

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

For National Grid Gas Distribution Ltd below 2 bar asset information please go to [www.beforeyoudig.nationalgrid.com](http://www.beforeyoudig.nationalgrid.com)

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

### List of affected LSBUD members

Asset Owner	Phone/Email	Emergency Only	Status
Western Power Distribution	08000963080	08006783105	Await response

**LSBUD members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD members make regular changes to their assets.**

### List of not affected LSBUD members

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

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

Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
BT	<a href="https://www.swns.bt.com/pls/mbe/welcome.home">https://www.swns.bt.com/pls/mbe/welcome.home</a>	08009173993	Not Notified
CityFibre	<a href="mailto:asset.team@cityfibre.com">asset.team@cityfibre.com</a>	033 3150 7282	Not Notified
Colt	<a href="mailto:plantenquiries@catelecomuk.com">plantenquiries@catelecomuk.com</a>	01227768427	Not Notified
Energetics Electricity	<a href="mailto:plantenquiries@energetics-uk.com">plantenquiries@energetics-uk.com</a>	01698404646	Not Notified
ENGIE	<a href="mailto:nrswa@cofely-gdfsuez.com">nrswa@cofely-gdfsuez.com</a>	01293 549944	Not Notified
GTC	<a href="https://pe.gtc-uk.co.uk/PlantEnqMembership">https://pe.gtc-uk.co.uk/PlantEnqMembership</a>	01359240363	Not Notified
GTT (formerly Hibernia Networks)	<a href="mailto:owen.maguire@gtt.net">owen.maguire@gtt.net</a>	01704 322 300	Not Notified
Instalcom	<a href="mailto:plantenquiries@instalcom.co.uk">plantenquiries@instalcom.co.uk</a>	02087314613	Not Notified
Interoute	<a href="mailto:interoute.enquiries@plancast.co.uk">interoute.enquiries@plancast.co.uk</a>	02070259000	Not Notified
Mobile Broadband Network Limited	<a href="mailto:mbnl.plant.enquiries@turntown.com">mbnl.plant.enquiries@turntown.com</a>	01212 621 100	Not Notified
National Grid Gas Distribution (below 2 bar)	<a href="mailto:plantprotection@nationalgrid.com">plantprotection@nationalgrid.com</a>	0800688588	Not Notified
Severn Trent Water	<a href="https://www.stwater.co.uk/developers/request-a-water/sewer-map/">https://www.stwater.co.uk/developers/request-a-water/sewer-map/</a>	01214523306	Not Notified
Sky UK Limited	<a href="mailto:nrswa@sky.uk">nrswa@sky.uk</a>	02070323234	Not Notified
Stoke on Trent City Council	<a href="mailto:david.wilshaw@stoke.gov.uk">david.wilshaw@stoke.gov.uk</a>	01782236774	Not Notified
Tata, KPN (c/- McNicholas)	<a href="mailto:plantenquiries@mcnicholas.co.uk">plantenquiries@mcnicholas.co.uk</a>	03300558469	Not Notified
Utility assets Ltd	<a href="mailto:assetrecords@utilityassets.co.uk">assetrecords@utilityassets.co.uk</a>		Not Notified
Verizon Business	<a href="mailto:osp-team@uk.verizonbusiness.com">osp-team@uk.verizonbusiness.com</a>	01293611736	Not Notified
Virgin Media	<a href="http://www.digdat.co.uk">http://www.digdat.co.uk</a>	08708883116	Not Notified
Vodafone	<a href="mailto:osm.enquiries@atkinsglobal.com">osm.enquiries@atkinsglobal.com</a>	01454662881	Not Notified
Vtesse Networks	<a href="https://plant.interoute.com/plant-enquiries/">https://plant.interoute.com/plant-enquiries/</a>	01992532100	Not Notified

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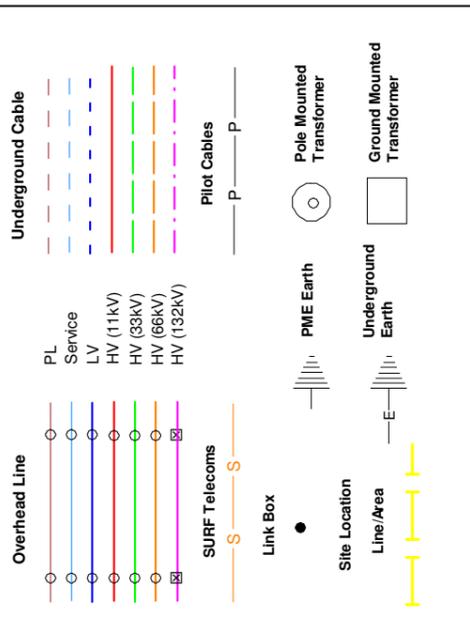
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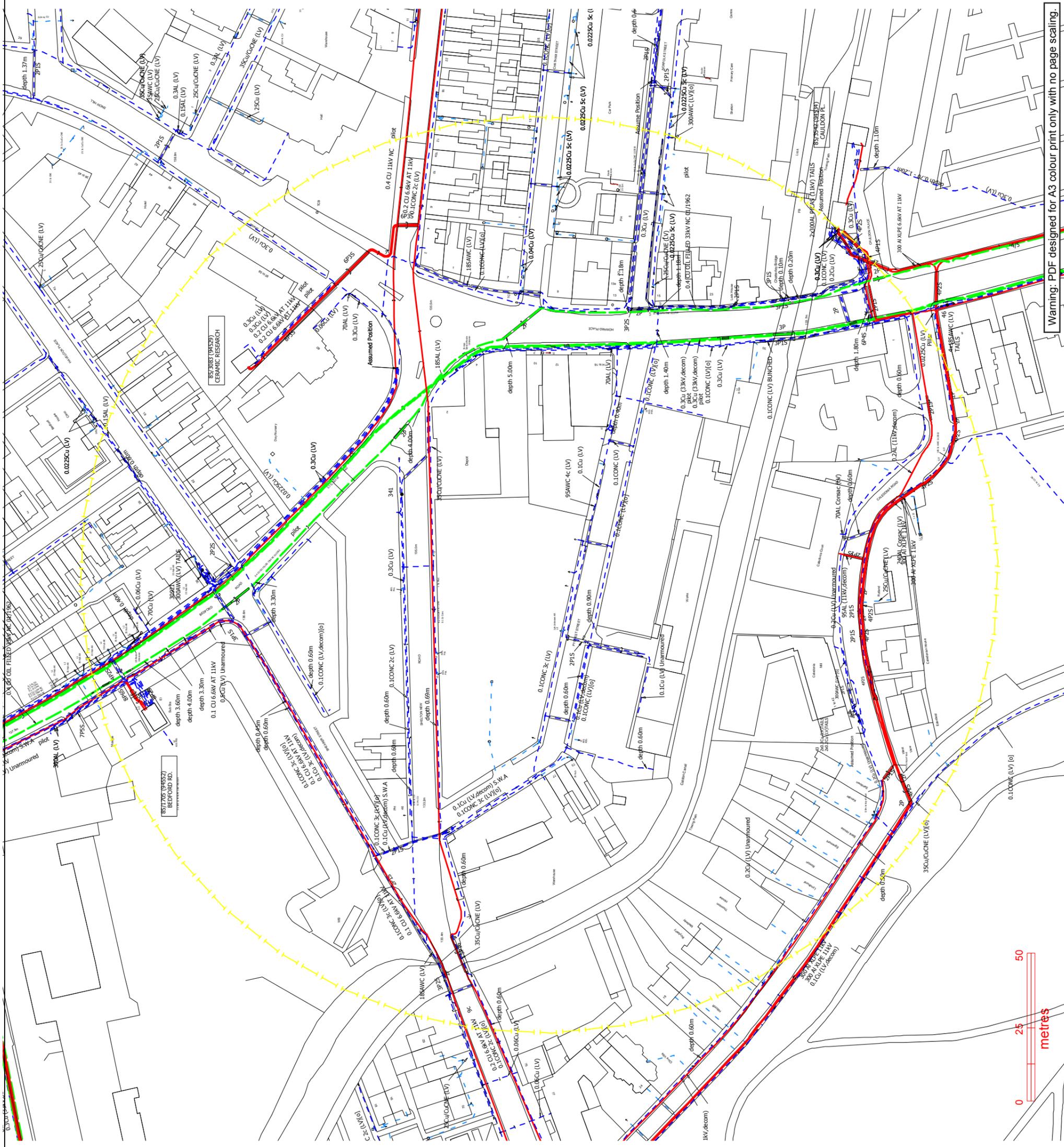
Date Requested: 13/04/2017  
 Job Reference: 10247151  
 Site Location: 387631 346570  
 Requested by: Mr Matthew Chadwick  
 Your Scheme/Reference: Pyenest Street, Stoke-On-Trent  
 Exact Scales:  
 1:1250 Area or Circle dig site  
 1:500 Line dig site

## IMPORTANT NOTICES

- This information is given as a guide only and its accuracy cannot be guaranteed. Services or recent additions to the network may not be shown.
- Cables, overhead lines & substations owned by other electricity network owners or private companies may be present but will not be shown.
- You should always verify exact locations of cables using a cable locator and by careful use of hand tools in accordance with HSE guidance note HSG47.
- When working within 10m of any overhead electric line you should follow the requirements of HSE Guidance Note GS6.
- For further advice on working near our electricity cables or lines, call our Contact Centre on 0800 096 3080.
- Advice should be sought from the Western Power Distribution Contact Centre for any work that is to take place in proximity to 66kV or 132kV underground cables and 66kV 132kV overhead lines – 0800 096 3080



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# Avoidance of Danger from Electricity Overhead Lines and Underground Cables

# Avoidance of Danger from Electricity Overhead Lines and Underground Cables

## Introduction

In the UK on average, 20 people are killed and 400 people are injured as a result of coming into contact (or close proximity) with electricity overhead lines and underground cables.

Although electric shock is the first thing that people associate with coming into contact with our network, those who have witnessed the effects of damage to our system are shocked by the amounts of heat, light and noise that are the result of an electrical flashover.

In the Midlands, South West and South Wales, Western Power Distribution (WPD) have had to attend to incidents where people have accidentally made contact with one of our live electricity overhead lines or damaged an underground cable and become seriously injured.

A significant number of these accidents occurred whilst people were working in the vicinity of overhead and underground electrical apparatus and this booklet has been produced to provide general guidance on how you and your employees can avoid becoming one of these statistics.

## Our Operational Area



## PLANNING YOUR WORK.

It makes sense to consider your safety while in the vicinity of our equipment as early in your planning process as possible.

One of the first things you should do whenever you are planning your work is to check whether there is any of our equipment in the immediate vicinity. You should do this whether your work is taking place on public (e.g. highways and footpaths) or on private land.

For instance, take a good look around your site to see if there are any visible overhead lines. You should also bear in mind that we have a very extensive network of underground cables, and we are always happy to supply a plan from our Map Response Team who can be contacted via the following;

Tel: 0121 623 9780

Fax: 0121 623 9223

[WPDMapResponse@westernpower.co.uk](mailto:WPDMapResponse@westernpower.co.uk)

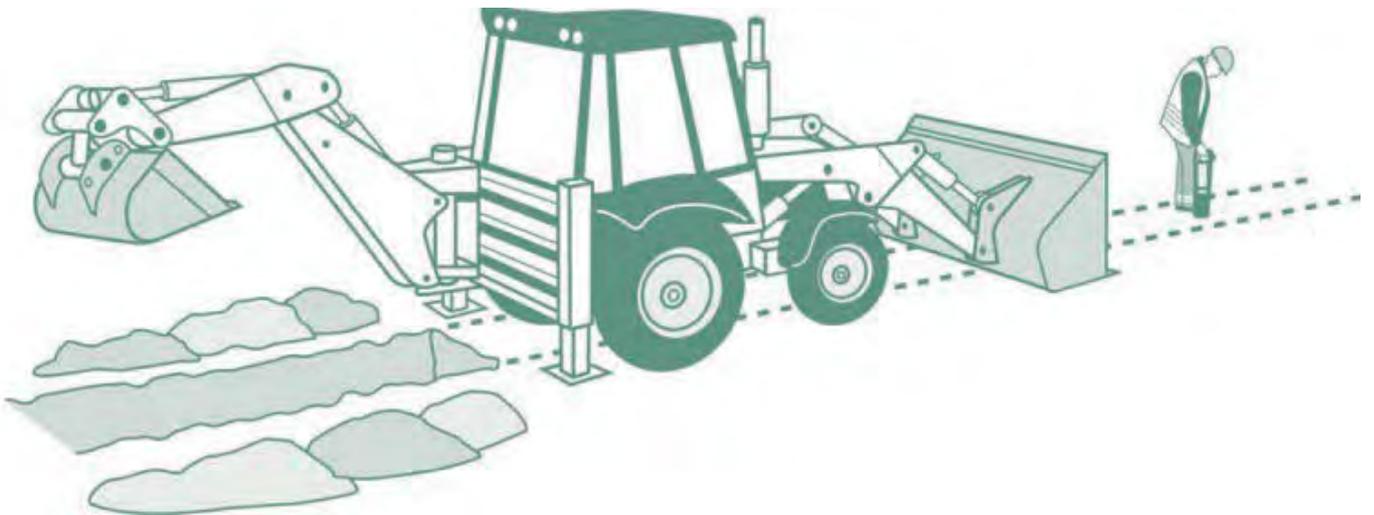
An online mapping service is available at  
[www.westernpower.co.uk/locationplans](http://www.westernpower.co.uk/locationplans)

**It is always safer to assume that there are underground cables present in the ground until you have proven otherwise.**

## WORKING IN THE VICINITY OF UNDERGROUND CABLES

Having obtained copies of our network maps, it is important to recognise that in most cases there will be no surface indication of the presence of our underground cables. We therefore advise that you take the following actions:

- Make sure that you have up-to-date copies of our cable record plans ON SITE - not back in the office.
- Don't assume that these plans are to scale if they have been faxed or copied.
- Make sure that a competent person using a Cable Avoidance Tool (CAT) locates all of the cables shown on these plans.
- Mark the locations of cables on the ground surface with waterproof road paint or other permanent marker.
- Always assume that our cables are live unless we have informed you, in writing, otherwise.



- By hand, dig trial holes to locate the exact position of all cables. Always use a spade or shovel – never use a pick, fork or power tool – push the spade or shovel into the ground applying foot pressure.

- Look out for ducts, marker tape or tiles but do not rely on these. Even if a cable route was originally laid in a duct or with a marker tape, these may have been removed during other excavations at a later date along all or part of the cable route.
- Brief all people working in the vicinity of the presence and location of all underground cables.

**UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT TO WORK ON, OR INTERFERE WITH, ANY OF OUR UNDERGROUND CABLES.**

The only people qualified to work on this equipment are our operatives; who have been specifically trained and are authorised in writing to do so.

**Please also be aware that:**

- Cable record plans are not guaranteed to be completely accurate. Kerb lines, roads and buildings may have been moved or altered since the cables were laid.
- Cables should ordinarily be at least 450mm deep but don't assume this to be the case where you are working – ground levels could have changed.
- Not all service cables are shown on record plans, so look for cables running down poles and bear in mind that all buildings, street lights and street furniture are likely to have cables running to them. Cables feeding street furniture may be relatively shallow near to the furniture.
- Cables do not run in straight lines. They often “snake” through the ground avoiding surface and buried obstacles that may not be visible to you.
- Cables are flexible and can change direction and depth abruptly – for this reason never use mechanical excavators within 0.5m of any underground electricity cable even if you have located it with trial holes.

- **No attempt should be made to break out concrete surrounding a cable. Please contact us immediately on our general enquiries number and we will discuss the options for safe working which may include making the cable dead or you moving your work site if possible. If we need to make the cable dead we may need to provide our customers with two weeks notice of the power interruption.**
- Our cables and joints are not designed to act as steps or to be left unsupported. If you remove support from any cable, you will need to support it using temporary hangers at not more than 0.5m intervals.
- When backfilling, please consolidate the ground under the cables, cover the cable with soil free of stones or with stone dust and replace any cable marker tiles, ducts and tape.

#### **IF YOU DAMAGE AN UNDERGROUND CABLE**

you must immediately clear the area of personnel, because the cable could still be live, or become live again.

If a machine is still in contact with the cable, instruct the driver to JUMP clear. Do not touch any part of the machine.

Please contact us on our emergency number immediately and tell us what has happened. Please be ready to provide us with a contact telephone number and an accurate location or set of directions – this will help us in getting our staff to site quickly to minimise any danger and lessen the disruption to your work.

**Please report any damage to a cable, however superficial it might seem. The cable may not fail at the time of damage, but it could fail later, causing danger to our staff and other contractors, disruption to our customers' supplies, and also – if we trace the damage back to you – a very much larger repair bill.**

## WORKING IN THE VICINITY OF OVERHEAD LINES

UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT TO WORK ON, OR INTERFERE WITH ANY OF OUR OVERHEAD LINE EQUIPMENT OR SERVICE WIRES.

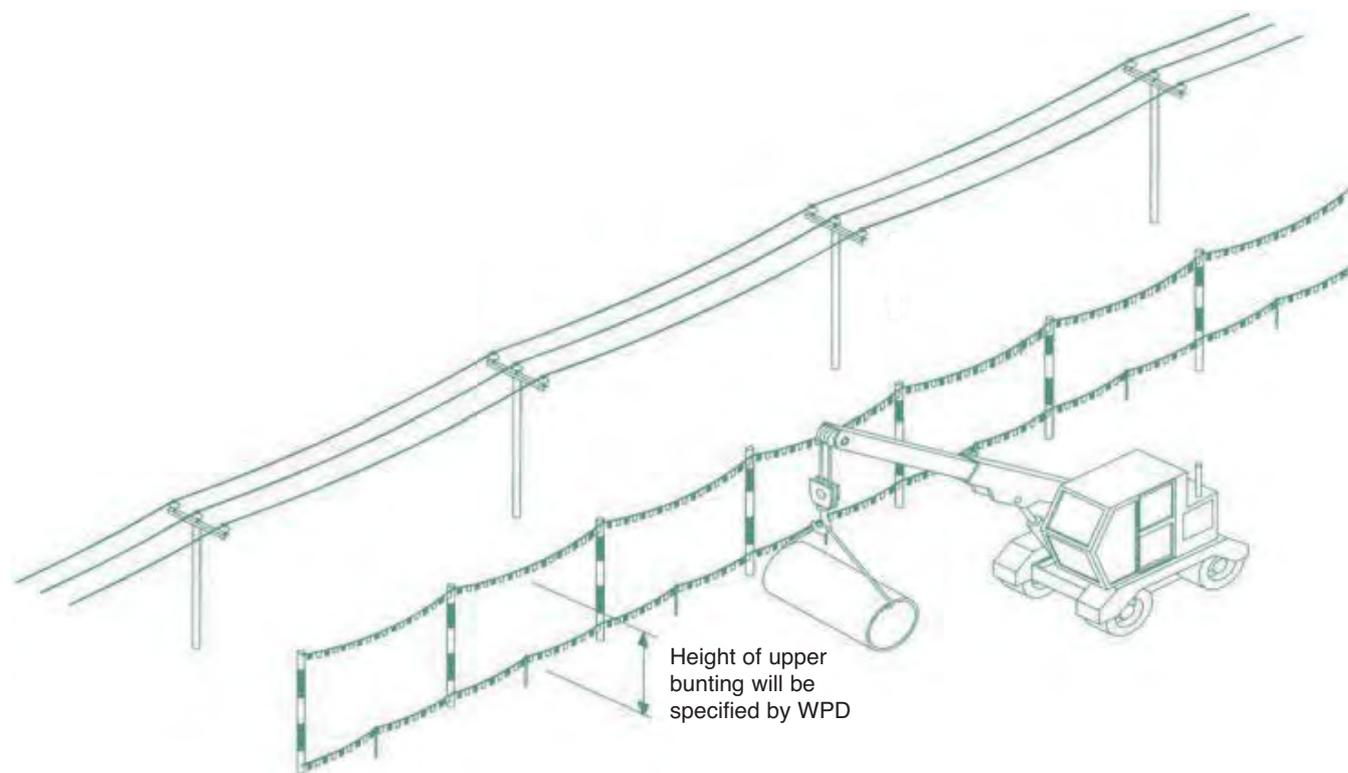
The only people qualified to work on this equipment are our operatives; who have been specifically trained and are authorised in writing to do so.

Overhead lines have the advantage that, unlike underground cables, they can easily be seen.

- Always assume that our overhead lines are live unless we have informed you otherwise in writing.
- We will be able to advise you about the type and voltage of the overhead lines in question and provide you with information about the clearances that you must adhere to during your work. Please ring our regional general enquiries number for further advice.
- If you are in any doubt about whether the overhead lines in question are power or telephone (this is a very common mistake) – please ask us.
- In some circumstances, we may be able to temporarily shroud low voltage overhead lines and services running to buildings if you need to work in the vicinity e.g. for scaffolding erection, fascia repairs and painting work on domestic properties. We don't normally charge for the shrouding of overhead lines, but please give us as much notice as possible.
- If you think that you will be working close to our overhead lines and they need shrouding – please don't start work until we have agreed what needs to be done and all safety precautions are in place.
- Please note that it is not technically possible to shroud high voltage lines, so if you cannot avoid working near to our high voltage lines, contact us and we will be happy to meet with you to discuss safe alternatives.

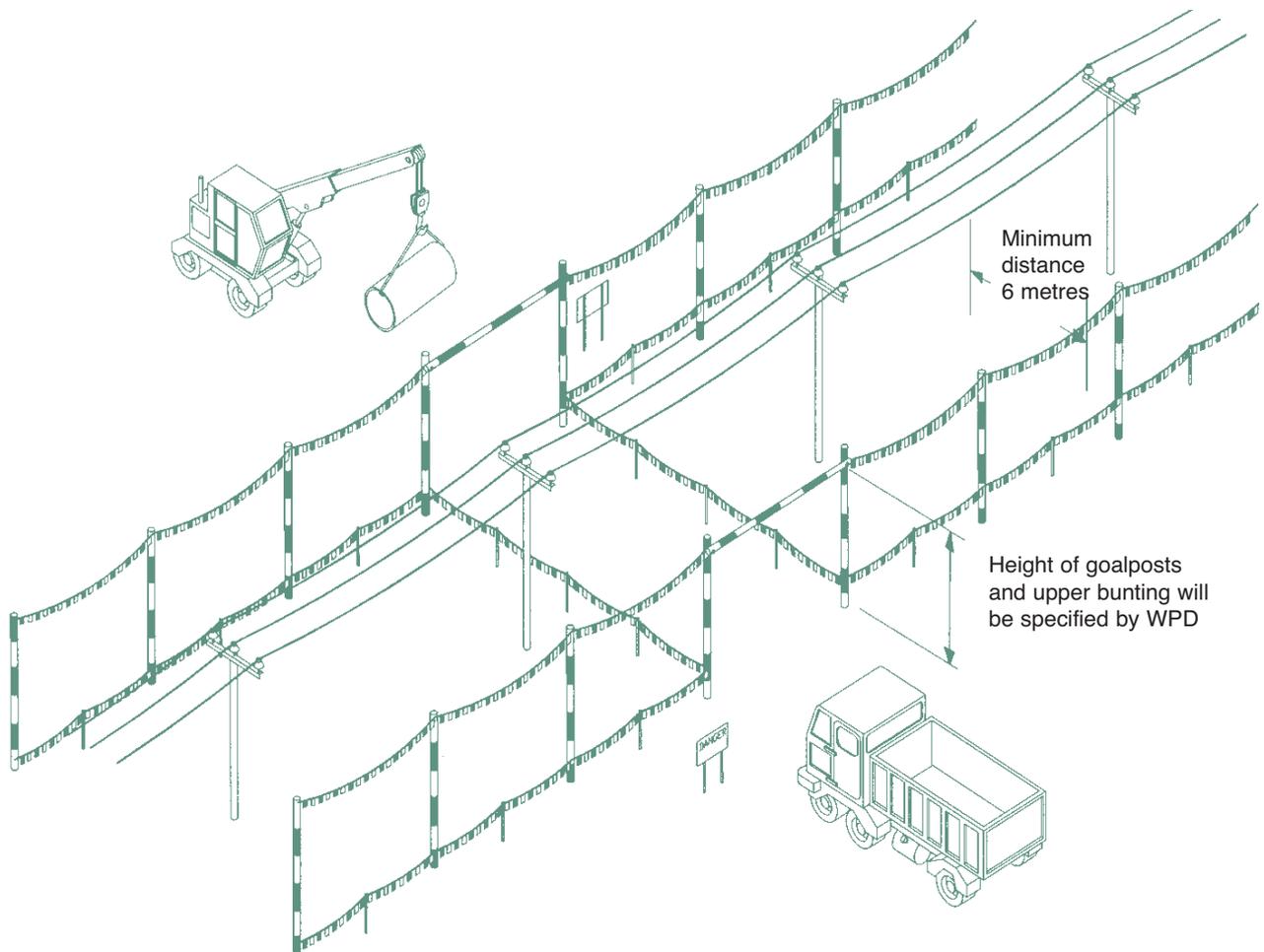
- If it is decided that work can go ahead in the vicinity of our overhead lines but there is a risk of you infringing the safety clearances from the overhead lines, you have a responsibility to erect safety barriers to segregate your works from the area around the overhead lines. The detailed requirements for these barriers are provided in the HSE document GS6 'Avoidance of Danger from Overhead Lines'. As a summary they should consist of:

- Red and white coloured posts erected at 6m intervals, with coloured bunting stretched between their tops, supplemented by low level bunting erected at 1m above ground level, supported at 3m intervals on red and white coloured posts. This is shown below.



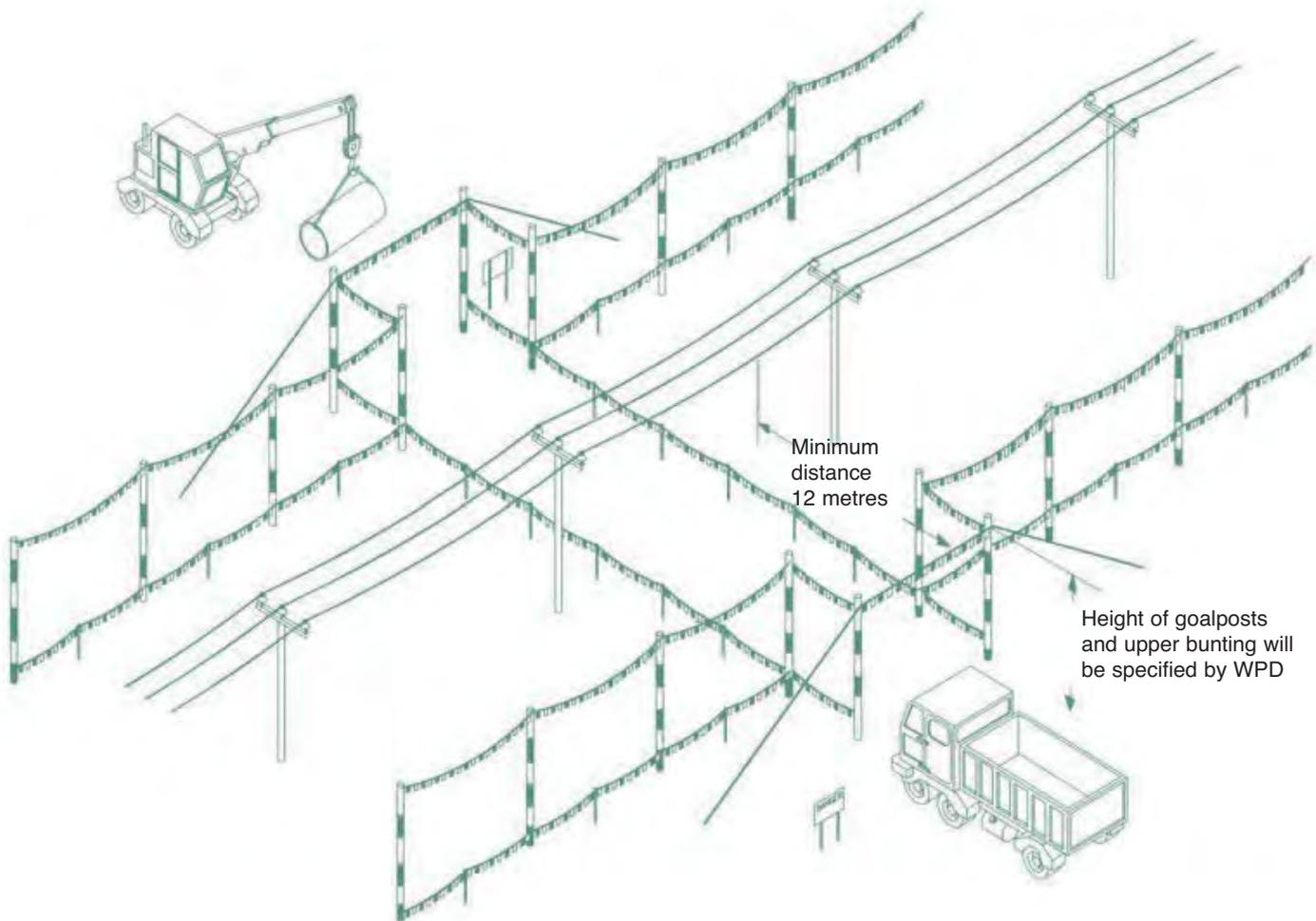
- We are able to advise you on the height of the barriers and any additional clearances necessary if you are using large plant on your site.
- Any bunting, ropes and lanyards used should be made from an insulating material.
- These barriers should be erected parallel to the overhead line at a minimum distance of 6m horizontally from the outermost conductor of the overhead line.

- The supports may be supported by rubble or concrete filled barrels or buried directly in the ground.
- Danger Notices should be fixed to all of your high level supports.
- The ground enclosed within these barriers is best regarded as “dead ground” in which all foot and vehicular traffic is forbidden, in all circumstances, for the duration of your work.
- Where it is necessary for foot and vehicular traffic to pass under the line, you will need to form a marked access way between the barriers as shown below.



- This access way should comprise of bunting erected 1m above ground, supplemented by high level “goal-posts” erected at either end.
- The goal post cross bars should be rigid, made of insulating material and positioned in a location and at a height specified by us.

- The access route should be as narrow as possible and should not normally exceed 10m in width.
- If it is necessary to make the access route wider than this, you may find it impractical to use rigid cross bars, so you may use a tensioned rope and bunting instead. If you use rope and bunting as a cross bar, you should move the entrance to the access route out to a minimum distance of 12m from the outermost conductor of the line. This is to allow for any stretching of the rope if pulled by your plant.



- If you decide to use steel wire rope to support the barrier, this must be effectively connected to earth at both ends.
- You should also install Danger Notices at all probable directions of approach and clearly display the cross bar height.
- If you are working at night, or in conditions of poor visibility, you should ensure the area is well lit and that the overhead lines are clearly visible.
- Whatever measures you take, you should ensure that everyone working in the vicinity of overhead lines is briefed about the risks and what safety measures are in place. Do not permit anyone to carry long objects, especially scaffold poles, ladders and irrigation pipes in the vicinity of overhead lines.
- You should ensure that all shrouding, barriers and signs are regularly inspected and maintained so that they remain effective.
- Overhead lines are not normally insulated and electricity at high voltages may jump, so a dangerous situation can arise just from a close approach.
- Cranes and excavators working near overhead lines are at increased risk because of the possibility of the jib/arm slewing or being raised into the overhead line, or the load swinging into the overhead line. You may therefore also need to fit plant and vehicles with restricting chains etc. to physically restrain their operation – we can advise on this if you wish.
- If you are planning to carry out tree cutting or arboriculture work in the vicinity of our overhead lines, you need to be aware that this is a complex, high risk activity and we recommend that you employ a competent tree surgeon, who complies with all of the requirements of Forestry industry Safety Accord (FISA) publication FISA 804 - Electricity at work: Forestry.

## If contact is made with an overhead line

you must immediately clear the area and suspend all work within 50m of the damage because the line could still be live, or become live again.

The operator of a machine that is in contact with an overhead line should:

- **if the machine is still operable and the operator is still in the cab:**

provided that you do not risk breaking the overhead line or dragging it to the ground, immediately lower the raised parts of the machine USING ONLY THE CONTROLS IN THE CAB and/or drive the vehicle clear of the overhead line.

contact us immediately on our emergency number so that we can check the overhead lines.

instruct other people in the vicinity not to approach the vehicle.

- **if the machine is not operable, cannot be driven clear of the overhead line or there is a risk that doing so will break the line or drag it to the ground:**

stay in the cab.

contact your site manager or us immediately on our emergency number by radio or mobile phone or as soon as possible by any other method.

instruct everyone outside the vehicle not to approach it.

do not exit the cab until given confirmation BY WPD PERSONNEL that it is safe to do so.

- **if the machine is inoperable or cannot be driven free and there is risk of fire or other immediate hazard:**

JUMP clear of the vehicle, avoiding simultaneous contact with any part of the machine and the ground.

try to land with your feet as close together as possible.

where possible, continue to move away from the vehicle using “bunny hops” with your feet together until at least 15m from the vehicle.

instruct other people in the vicinity not to approach the vehicle.

contact us immediately on our emergency number.

do not return to the vehicle until given confirmation by WPD PERSONNEL that it is safe to do so.

Whatever the circumstances please contact us on our emergency number immediately and tell us what has happened. Please be ready to provide us with a contact telephone number and an accurate location or set of directions – this will help us in getting our staff to site quickly to minimise any danger and lessen any disruption to your work.

**Please report any damage or contact no matter how minor they may seem to you at the time. The damage may not cause a serious problem at the time of damage, but it could fail later, causing danger to our staff and members of the public, disruption to our customers' supplies, and – if we trace the damage back to you – a large repair bill.**

## MORE INFORMATION

For your information, we are legally obliged to report all contact with our system to the Health & Safety Executive (HSE), and, if you are an employer, you may be obliged to report incidents involving your staff or contractors to the HSE. Even if no one is hurt, you could be prosecuted for failing to report such an incident.

More detailed general information on this subject is available in the following publications from the HSE:

HSG(47) – Avoiding Danger from Underground Services

GS6 – Avoidance of Danger from Overhead Lines

Along with Forestry Industry Safety Accord (FISA) publication FISA 804 – Electricity at Work: Forestry

If you require more site-specific information relating to our equipment at your location please contact us on our regional general enquiries numbers.

Our general enquiries numbers are;

Midlands 0845 724 0240

General Enquiries

South Wales 0845 601 3341

General Enquiries

South West 0845 601 2989

General Enquiries

FINALLY...

Please, always remember that electricity cables and overhead lines can be very dangerous – the general rule is **STAY AWAY** and stay safe.

# NOTES



This booklet is issued by the Safety Team

Western Power Distribution (East Midlands) plc. Registered in England and Wales No. 2366923

Western Power Distribution (West Midlands) plc. Registered in England and Wales No. 3600574

Western Power Distribution (South Wales) plc. Registered in England and Wales No. 2366985

Western Power Distribution (South West) plc. Registered in England and Wales No. 2366894

Registered Office: Avonbank, Feeder Road, Bristol BS2 0TB

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2014, 4th issue

Our emergency number is:  
0800 6783 105

Calling from a mobile?

East Midlands

0330 123 5009

West Midlands

0330 123 5008

South Wales

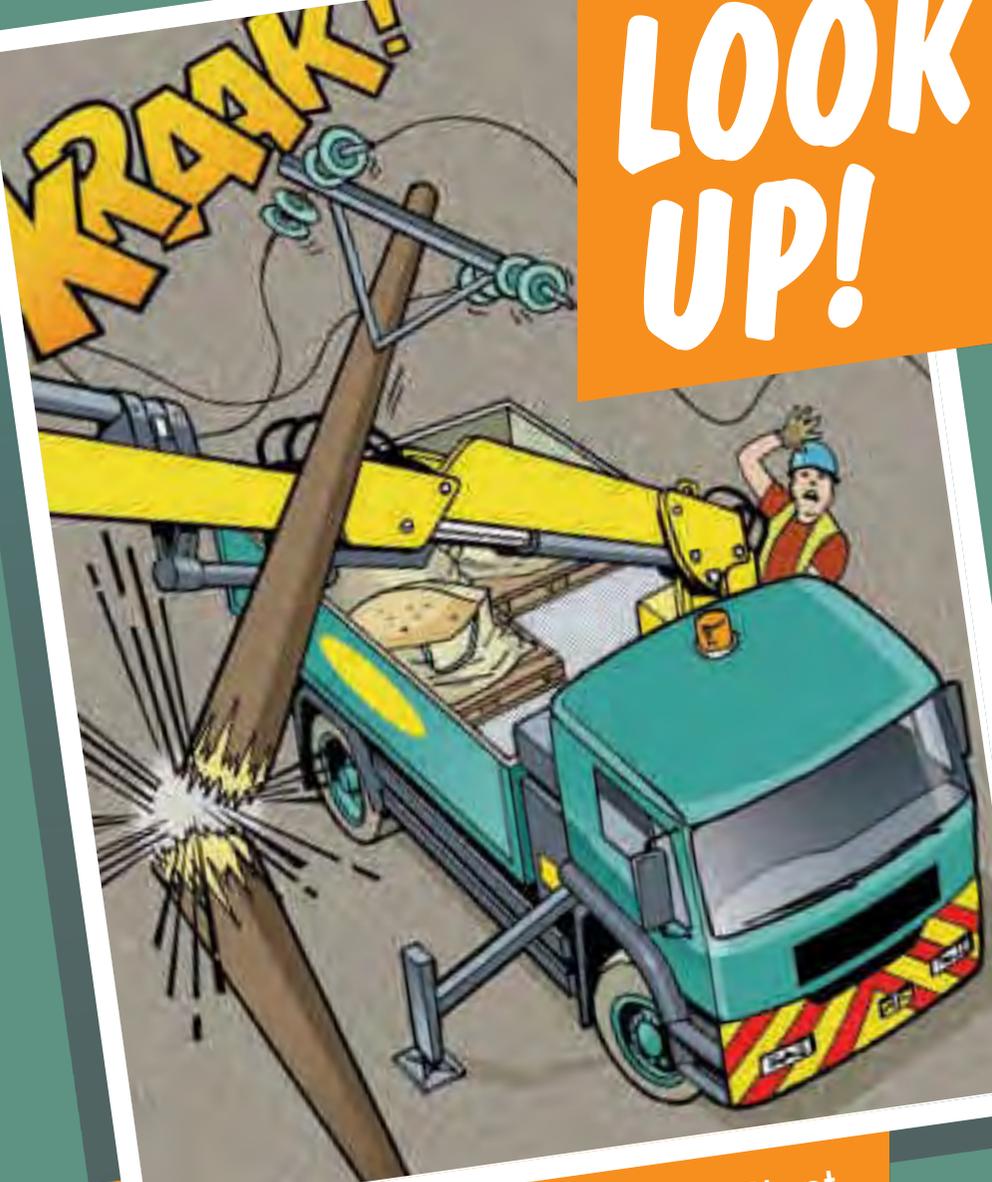
0330 123 5002

South West

0330 123 5001

**LOOK OUT.**

**LOOK UP!**



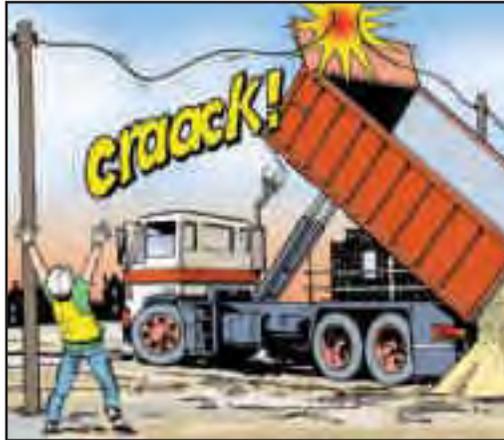
**A Guide to the Safe Use of Mechanical Plant  
in the Vicinity of Electricity Overhead Lines**

# The Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines

## Introduction

Every year in the UK on average, two people are killed and many more are injured when mechanical plant and machinery comes into contact or close proximity to overhead electricity lines.

This booklet has been produced for anyone who uses mobile plant, (such as Hiabs, MEWPs, Tipper Lorries and Trailers, Grab Lorries, Concrete Conveyors and Excavators) for short duration work and provides general guidance on how to avoid becoming part of these statistics.



## 1 BEFORE STARTING WORK

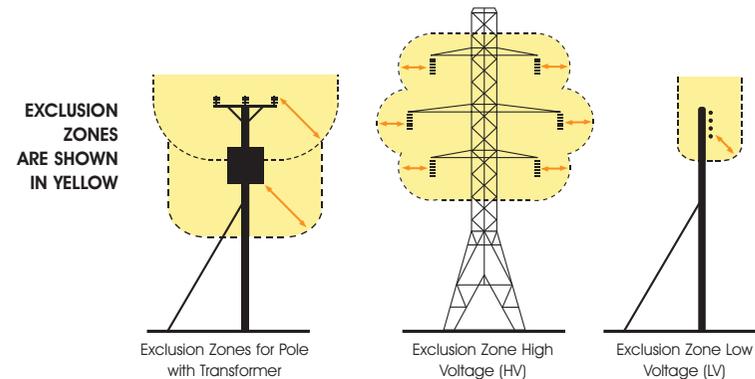
- Overhead lines have the advantage that they can easily be seen, so before you set up your vehicle or plant always:

### STOP AND LOOK UP!

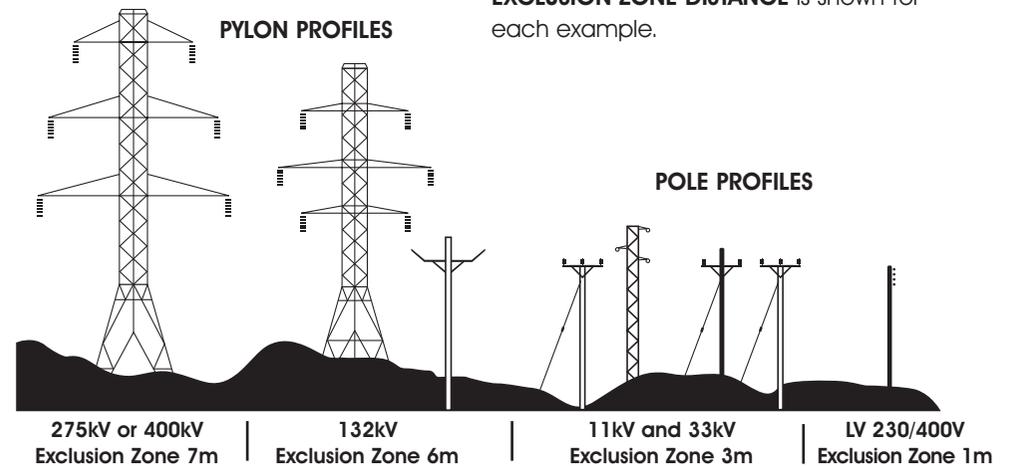
- If you are working at night, or in conditions of poor visibility, you should use spotlights or a torch to carefully check that there are no overhead lines within your vehicle's reach.
- Always assume that our lines are live unless we have informed you otherwise in writing.
- If you are in any doubt about whether the lines in question are power or telephone (this is a very common mistake) – always assume that they are power lines and are live.
- It is not normally practical for electricity companies to shroud high voltage conductors and even when low voltage conductors are shrouded, the shrouding is not designed to protect against contact by mechanical plant – again, always assume the lines are live.

## 2 EXCLUSION ZONES

- Overhead power lines are not normally insulated and so any contact can result in serious or fatal injuries.
- Electricity at high voltages can also jump gaps with no warning whatsoever, so it is also dangerous to let your plant approach too close to a line.
- The distance that electricity can jump depends on the voltage of the line. The higher the voltage, the further you must stay away from the line and any other equipment that may be fitted to the pole or pylon. This distance is called the **EXCLUSION ZONE**. Examples of this are shown highlighted in the diagram below.



- You must not allow any part of your plant to enter the **EXCLUSION ZONE**.
- The diagram below shows typical types of overhead lines and provides a guide to help you assess the line voltage of lines on wooden poles or steel pylons. The minimum **EXCLUSION ZONE DISTANCE** is shown for each example.

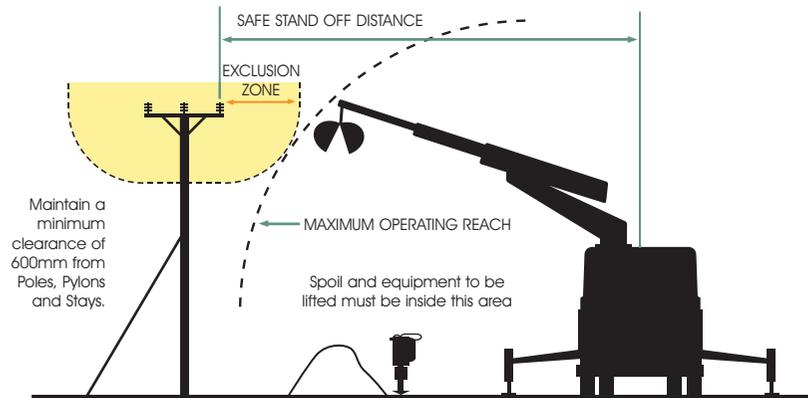


- Please note that these are absolute minimum distances that should under no circumstances be infringed. **If you do – it could prove fatal.**

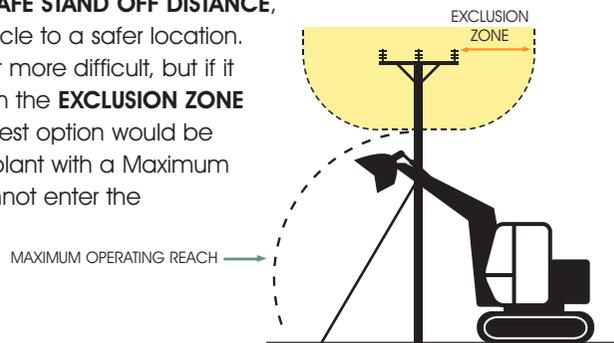
- As well as staying away from the lines or equipment, you should also stay at least 600mm away from any part of poles, pylons and stay wires.
- Please remember that is for guidance only, and if you are in any doubt, please call us for advice before setting up your plant or starting work.

### 3 STAND OFF DISTANCES

- If there are power lines in the vicinity of your work the best way to make sure you stay out of the **EXCLUSION ZONE** is to position your vehicle at a **SAFE STAND OFF DISTANCE** so that, even when fully extended, no part of it can accidentally reach inside the **EXCLUSION ZONE**.
- This **SAFE STAND OFF DISTANCE** can be calculated by adding the **EXCLUSION ZONE** distance for the appropriate voltage of the line to the Maximum Operating Reach of your vehicle. This is shown in the diagram below.



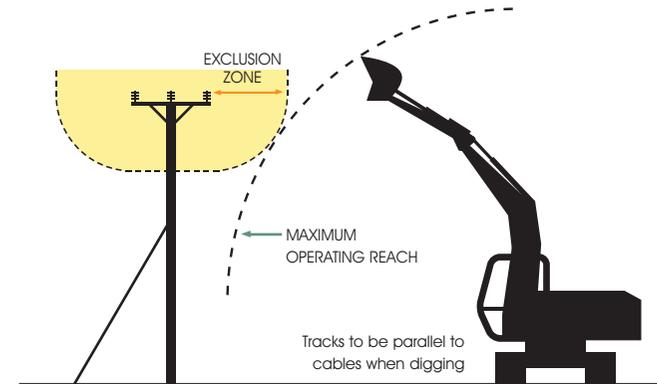
- If you position your vehicle outside of the **SAFE STAND OFF DISTANCE**, there is no risk of accidental contact with the lines and no danger of electricity jumping from the line to your vehicle.
- If you cannot achieve a **SAFE STAND OFF DISTANCE**, consider moving your vehicle to a safer location. It may make your job a bit more difficult, but if it means you stay away from the **EXCLUSION ZONE** - it will be safer. The next best option would be to consider using smaller plant with a Maximum Operating Reach that cannot enter the **EXCLUSION ZONE**.



- You may not be able to achieve either of these options, so, as a last resort, if you cannot avoid operating large items of plant in the vicinity of lines, you **MUST** make sure that the plant is fitted with restraints to ensure that the **EXCLUSION ZONE** cannot be entered. These restraints may be electrical or hydraulic systems fitted to the plant, or mechanical devices such as chains.

Please seek advice from the plant manufacturer for more information on choices available for your particular item of plant.

- If you are using a mechanical excavator to dig parallel to the line, it is good practice to position the excavator with the tracks or wheels parallel to the line, so as you move along the excavation the **SAFE STAND OFF DISTANCE** is easily maintained.



- Care must also be taken to avoid non-mechanical equipment, (e.g. scaffold poles, ladders and long loads such as lengths of steel or timber) from entering the **EXCLUSION ZONE**.
- Always maintain at least 600mm clearance from your plant to any of our poles, stay wires or pylons. Any contact with these by your plant could cause the line to break and fall to the ground.

### 4 EMERGENCY PROCEDURES

**If contact is made with an overhead line**, you must immediately clear the area and suspend all work within 50m of the damage because the line could still be live, or become live again.

The operator of a machine that is in contact with an overhead line should take the following steps:

- **If the machine is still operable:**
  - lower any raised parts that are controlled from the driving position and/or drive the vehicle clear of the line, as long as neither of these actions risk breaking the line or dragging it to the ground.

● **If the machine is not operable or cannot be driven clear of the line:**

- stay in the cab.
- contact your site manager or us immediately by radio or mobile phone or as soon as possible by any other method.
- instruct everyone outside the vehicle not to approach it.
- do not exit the cab until given confirmation BY WPD PERSONNEL that it is safe to do so.

● **If the machine is inoperable or cannot be driven free and there is risk of fire or other immediate hazard:**

- jump clear of the vehicle, avoiding simultaneous contact with any part of the machine and the ground.
- try to land with your feet as close together as possible.
- where possible, continue to move away from the vehicle using "bunny hops" with your feet together until at least 15m from the vehicle.
- instruct other people in the vicinity not to approach the vehicle.
- do not return to the vehicle until given confirmation BY WPD PERSONNEL that it is safe to do so.

***Whatever the circumstances please contact us on our emergency number immediately and tell us what has happened.***

Please be ready to provide us with a contact telephone number and an accurate location or set of directions – this will help us in getting our staff to site quickly to minimise any danger and to reduce any disruption to your work.

Our emergency number is:

**105 or 0800 6783 105**

Please report any damage or contact no matter how minor they may seem to you at the time. Whilst the damage may not cause a serious problem at the time of contact it could fail later, causing danger to our staff and members of the public, disruption to our customer's supplies, and – if we trace the damage back to you – a larger repair bill!

## 5 MORE INFORMATION

- Proximity Warning Systems (such as Wire Watcher – see [wirewatcher.co.uk](http://wirewatcher.co.uk) for information) may be fitted to your vehicle. Never turn these devices off or disable them in any way.
- Take note of any warnings these proximity warning systems may provide but do not use the presence of such devices as a reason not to follow the advice provided in this leaflet.
- For your information, we are legally obliged to report all contact with our system to the Department of Trade and Industry (DTI), and, if you are an employer, you may be obliged to report incidents involving your staff or contractors to the Health & Safety Executive (HSE). Even if no one is hurt, you could still find yourself being prosecuted for causing a dangerous occurrence.

## 6 FURTHER READING

For advice related to signing and guarding at longer term work sites please also refer to WPD booklet "Avoidance of Danger from Electricity Overhead Lines and Underground Cables"

More detailed information is also published in the following documents available from the HSE.

**GS6 – Avoidance of Danger from Overhead Lines.**

**HS(G) 47 – Avoiding Danger from Underground Services.**

Along with Forestry Industry Safety Accord (FISA) publication **FISA 804 - Electricity at Work: Forestry.**

If you require more site-specific information relating to our equipment at your location please contact us on the relevant **GENERAL ENQUIRIES NUMBER:**

**0800 096 3080**

**FINALLY....** Please, always remember that electricity overhead lines can be very dangerous – **the general rule is STAY AWAY and STAY SAFE!**

# **For the Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines ALWAYS FOLLOW THESE SIMPLE RULES – THEY COULD SAVE YOUR LIFE!**

- **Treat all overhead lines as live and dangerous**
- **Any contact may be fatal or cause very serious injuries**
- **Electricity can jump gaps**
- **Before you set up or use plant near to lines – STOP and LOOK UP**
- **Take special care and use lights in the dark or poor light conditions**
- **If there are lines in the vicinity of your work – stay well away**
- **Set up your plant with care to reduce the chance of contact**
- **If you are unsure or need advice**
  - please ask us before starting work

Our emergency number is: **105 or 0800 6783 105**

You can also call 105 if you spot damage to electricity power lines, poles and substations which could put you or someone else in danger.

If there's a serious immediate risk, you should also call the emergency services.

This booklet is issued by the Safety Team: [wpdsafetyhelpline@westernpower.co.uk](mailto:wpdsafetyhelpline@westernpower.co.uk)



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Western Power Distribution (South Wales) plc. Registered in England and Wales No. 2366985  
Western Power Distribution (South West) plc. Registered in England and Wales No. 2366894  
Registered Office: Avonbank, Feeder Road, Bristol BS2 0TB

# Electricity Network Information Plans Fees 01 December 2015

## LinesearchbeforeUdig (LSBUD) – online service

<b>Non Chargeable</b> e.g. Local Authority, Utility, Architect, Developer, Electrical Design Consultants or, Independent Connection Providers (ICP) including contractors excavating on their behalf	
<b>LSBUD</b> internet/email	Free
<b>Chargeable - Commercial use of plans and data</b> e.g. Solicitor, Conveyancer, Search Company. Including, but not limited to, resellers and speculative consultancy	
<b>LSBUD</b> internet/email (Pay As You Go and <b>Monthly Invoice*</b> )	£15 per enquiry

**\*Monthly Invoice** - Standard payment terms are 30 days net of receipt of invoice

## Paper Plans – Map Response Team (see below for contact details)

<b>Private Domestic Enquiry</b> e.g. homeowner requesting plans of their own property	
<b>Single Paper Plan</b> Postal service	Free
<b>Chargeable</b> e.g. Solicitor, Conveyancer, Search Company, Local Authority, Utility, Architect, Consultant, Developer or, Independent Connection Providers (ICP) including contractors excavating on their behalf. Including, but not limited to, resellers and speculative consultancy	
<b>Single Paper Plan</b> Postal service	£30.00 <i>Multiple plans price on application</i>

- All prices are **exclusive of VAT**
- Plans are not suitable for black and white photocopying

To register for **LSBUD** go to <http://www.westernpower.co.uk/locationplans> or <http://www.linesearchbeforeudig.co.uk>

For more information please contact the Map Response Team:

Email: WPDWebMap@westernpower.co.uk  
 Post: Map Response Team, Western Power Distribution, Mapping Centre  
 Toll End Road, Tipton, West Midlands DY4 0HH  
 Phone: 0121 623 9780  
 Fax: 0121 623 9223

Our Ref: 10247151      Your Ref: Pyenest Street, Stoke-On-Trent

Thursday, 13 April 2017

Matthew Chadwick  
Quay West at MediaCityUK Trafford Wharf Road, Trafford Park, Manchester  
Manchester  
Greater Manchester  
M17 1HH

**Western Power Distribution,**  
Mapping Centre  
Toll End Road  
Tipton  
West Midlands  
United Kingdom  
DY4 0HH  
www.westernpower.co.uk

Dear Matthew Chadwick

Thank you for your enquiry dated Thursday, 13 April 2017

I now enclose a copy of our plan showing existing Western Power Distribution (WPD) Electricity / WPD Surf Telecom apparatus in the vicinity of your proposed works. This information is given as a general guide only and its accuracy cannot be guaranteed. Please note that all WPD equipment on site should be assumed to be LIVE until WPD prove otherwise and provide you with confirmation to this effect in writing. Recent additions to our network, or service connections between the main cable and a building or street lamp may not be shown.

Map Response  
T 0121 623 9780  
F 0121 623 9223  
WPDMapResponse  
@westernpower.co.uk

Damage to underground cables and contact with overhead lines can cause severe injury or may prove fatal. If you are excavating on site in the vicinity of either WPD Electrical apparatus or WPD Surf Telecom apparatus you must comply with the requirements of the following:-

**LinesearchbeforeUdig**  
Help Desk 0845 437 7365

Health & Safety Executive guidance HS(G)47, Avoiding Danger from underground services.

Work taking place in the vicinity of our plant is also regulated under the:-

Electricity at Work Regulations 1989, Health and Safety Act 1974, CDM Regulations 2015.  
Safe working procedures should be defined and practiced

Please ensure that the use of mechanical excavators in the vicinity of our plant is kept to a minimum. WPD Surf Telecom ducts contain fibre cables, which are expensive to repair. Therefore, extreme care must be taken whilst working in the vicinity of these ducts, hand digging methods being used to determine their precise position.

If there are overhead lines crossing your site and your proposal involves building works which may infringe the clearance to our overhead system then you should call the relevant general enquiries number (see page 2 of this letter) for advice. Where overhead lines cross your site you must comply with the requirements of Health & Safety Executive guidance as laid down in GS6, Avoidance of Danger from Overhead Electric Lines.

Western Power Distribution PLC  
South West - 02366894  
South Wales - 02366985  
East Midlands - 02366923  
West Midlands - 03600574

Where diversions to WPD apparatus are needed to allow change to occur on site, the cost of these alterations may be charged to the persons responsible for the works.

If you require advice in connection with your proposals please contact the relevant general enquiries number (see page 2 of this letter)

Registered in  
England and Wales

Following consultation the local Western Power Distribution team will where necessary prepare detailed proposals and provide a quotation for any necessary alterations and/or development of our equipment on the site.

Registered Office:  
Avonbank  
Feeder Road  
Bristol  
BS2 0TB

Yours sincerely  
WPD Map Response Team

## Contact Us

### Emergency or Power Supply issues

In an emergency call 0800 6783 105, 24 hours a day.

### Mapping Enquiries

If you have an enquiry relating to this letter or the attached map plan, please contact us using the following information:

Telephone 0121 623 9780  
Fax 0121 623 9223  
Email [WPDMapResponse@westernpower.co.uk](mailto:WPDMapResponse@westernpower.co.uk)

### General Enquiries

If you have a general enquiry, please call us on the following telephone number:

All areas 0800 096 3080

### LinesearchbeforeUdig

If you have an enquiry relating to the use of the LinesearchbeforeUdig website please contact LinesearchbeforeUdig using the following information:

Telephone 0845 437 7365  
Email [enquiries@linesearchbeforeudig.co.uk](mailto:enquiries@linesearchbeforeudig.co.uk)  
Website [www.linesearchbeforeudig.co.uk](http://www.linesearchbeforeudig.co.uk)

## Steps to help keep you safe

- **If you are working within 10 metres of our 33kV, 66kV, 132kV underground electricity cables or within 10 metres of an overhead electricity line you should call the relevant General Enquiries for free safety advice.**

**Safety Documents** – please download our informative safety documents to help ensure that you, your staff and the public are kept safe whilst working in the vicinity of electricity.

<http://www.westernpower.co.uk/Health-and-Safety/Public-Safety>

- **Make sure you have up to date plans** - remember that recent additions to our network or service connections between the main cable and a building or street lamp may not be shown.
- **Look for signs of service cables** - an electricity meter box or nearby streetlamp may give you an indication that service cables are present in your area of work.
- **Non WPD Network** - electricity cables, lines and equipment owned by others may also be present in addition to WPD network. They are unlikely to be shown on our plans.
- **Use a cable locator** - trace electricity cables and mark the position of them using paint or other waterproof marking on the ground.
- **Hand dig trial holes** - to confirm the position of cables in close proximity to your area of your work and use spades and shovels rather than picks, pins or forks.
- **Have an emergency plan** - so that everyone working on site understands what to do in the event of an underground electricity cable being damaged or contact being made with an overhead electricity line.
- **If you are working within 10 metres** of an overhead electricity line then it may be necessary for you to erect warning signs and markers, or height restriction goal posts. Ensure that you comply with the requirements of Health & Safety Executive guidance laid down in GS6, Avoidance of Danger from Overhead Electric Lines.
- **If you are erecting a structure** that could allow anyone standing on it, or its access device (ladder, scaffold, MEWP), to come within 3m of any overhead electric line then **you must inform us**. This is your duty and a legal requirement under the Electricity Safety, Quality & Continuity Regulations 2002.
- **If you cannot work safely** around the underground electricity cable or overhead electricity line, then you may need to get it moved to allow your works to go ahead. Call the general enquiry numbers above for guidance.
- **It is possible that cables or pipes may be embedded in concrete** - electricity cables embedded in concrete **MUST** be made 'dead' by Western Power Distribution or the cable owner before the concrete is broken out. Alternatively, another safe way of working should be agreed.

**Cables are sometimes covered by tiles or a marker tape** - these can be concrete, polythene or earthenware and are a useful early warning of the presence of cables; you should avoid disturbing any tiles or tape to expose the cable. Not all cables have these warning indicators.



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

Matthew Chadwick  
WYG  
QuayWest @ MediaCityUK  
Trafford Wharf Road  
Trafford Park  
Manchester  
Manchester  
M17 1HH

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

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

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

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

**Date:** 19/04/2017  
**Our Ref:** WM\_TW\_Z2\_3SWX\_322768  
**Your Ref:** A090070-276  
**RE: Proposed Works, Pyenest Street**

Thank you for your enquiry which was received on 19/04/2017.  
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to National Grid Electricity Transmission plc's, National Grid Gas plc's and National Grid Gas Distribution Ltd'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 National Grid's network areas please see the National Grid website (<http://www.nationalgrid.com/uk/Gas/Safety/work/>) 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. National Grid 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 National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

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

- National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to 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 National Grid.
- 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 National Grid's easements or wayleaves nor any planning or building regulations applications.

NGG, NGET and NGGD 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 National Grid Plant Protection team via e-mail ([click here](#)) or via the contact details at the top of this response.

Yours faithfully

National Grid Plant Protection Team

# ASSESSMENT

## Affected Apparatus

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

- High or Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment
- 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)

## Requirements

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

- Carefully read these requirements including the attached guidance documents and maps showing the location of National Grid apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe 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 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

## **High Pressure Gas Pipelines Guidance:**

If working in the vicinity of a high pressure gas pipeline the following document must be followed: 'Specification for Safe Working in the Vicinity of National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22). This can be obtained from:

<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33968>

## **Dial Before You Dig Pipelines Guidance:**

<http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33969>

## **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):**

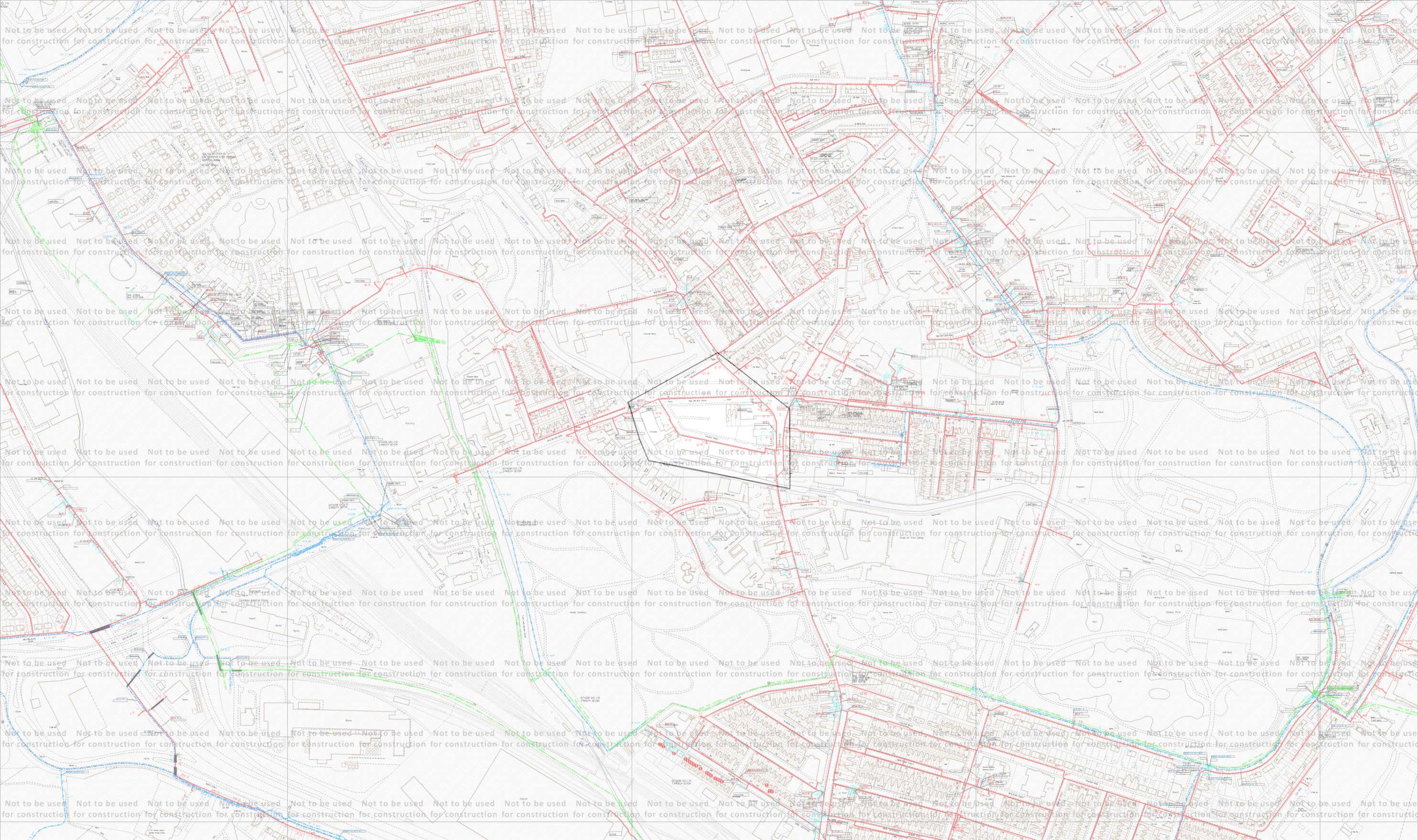
<http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf>

### **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: WM_TW_Z2_3SWX_322768		View extent: 2060m, 1220m		<b>Map not to be used for construction</b>		Map 1 of 1 (GAS)	
USER: MatthewChadwickwyg		LP MAINS  MP MAINS  IP MAINS  LHP MAINS  NHP MAINS 		<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: 19/04/2017		 Approximate scale 1:5000 on A3 Colour Landscape					
DATA DATE: 18/04/2017							
REF: A090070-276							
MAP REF: SJ8746				This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office.			
CENTRE: 387612, 346582				Crown Copyright Reserved. Ordnance Survey Licence number 100024886			

# ENQUIRY SUMMARY

## Received Date

19/04/2017

## Your Reference

A090070-276

## Location

Centre Point: 387612, 346582

X Extent: 236

Y Extent: 199

Postcode: ST1 4PE

Location Description: Pyenest Street

## Map Options

Paper Size: A3

Orientation: LANDSCAPE

Requested Scale: 1250

Actual Scale: 1:5000 (GAS)

Real World Extents: 2060m x 1220m (GAS)

## Recipients

matthew.chadwick@wyg.com

## Enquirer Details

Organisation Name: WYG

Contact Name: Matthew Chadwick

Email Address: matthew.chadwick@wyg.com

Telephone: 01618748780 (07854508160)

Address: QuayWest @ MediaCityUK, Trafford Wharf Road, Trafford Park, Manchester, Manchester, M17 1HH

## Description of Works

Residential Redevelopment

## Enquiry Type

Proposed Works

## Activity Type

Development Project

## Work Types

Work Type: Plans Only



**SEVERN TRENT WATER Ltd**  
Asset Data Management  
GISmapping Team  
PO Box 5344  
Coventry  
CV3 9FT

Tel: 0345 601 6616 opt.1

Our Ref: 06376

20 February 2017

### **Apparatus Location Enquiry**

**Further to your enquiry re: Pyenest Street, Stoke on Trent ST1 4PE  
(Your ref: A090070-276)**

Enclosed is a copy of the plans showing the approximate positions of the **public sewers and water mains** situated within the vicinity of the land/property which is the subject of your enquiry.

**Asset Data Management can only provide plans of the location of the Company's underground assets.** Therefore service pipes and drains are the responsibility of the property owner and should be anticipated during any excavation.

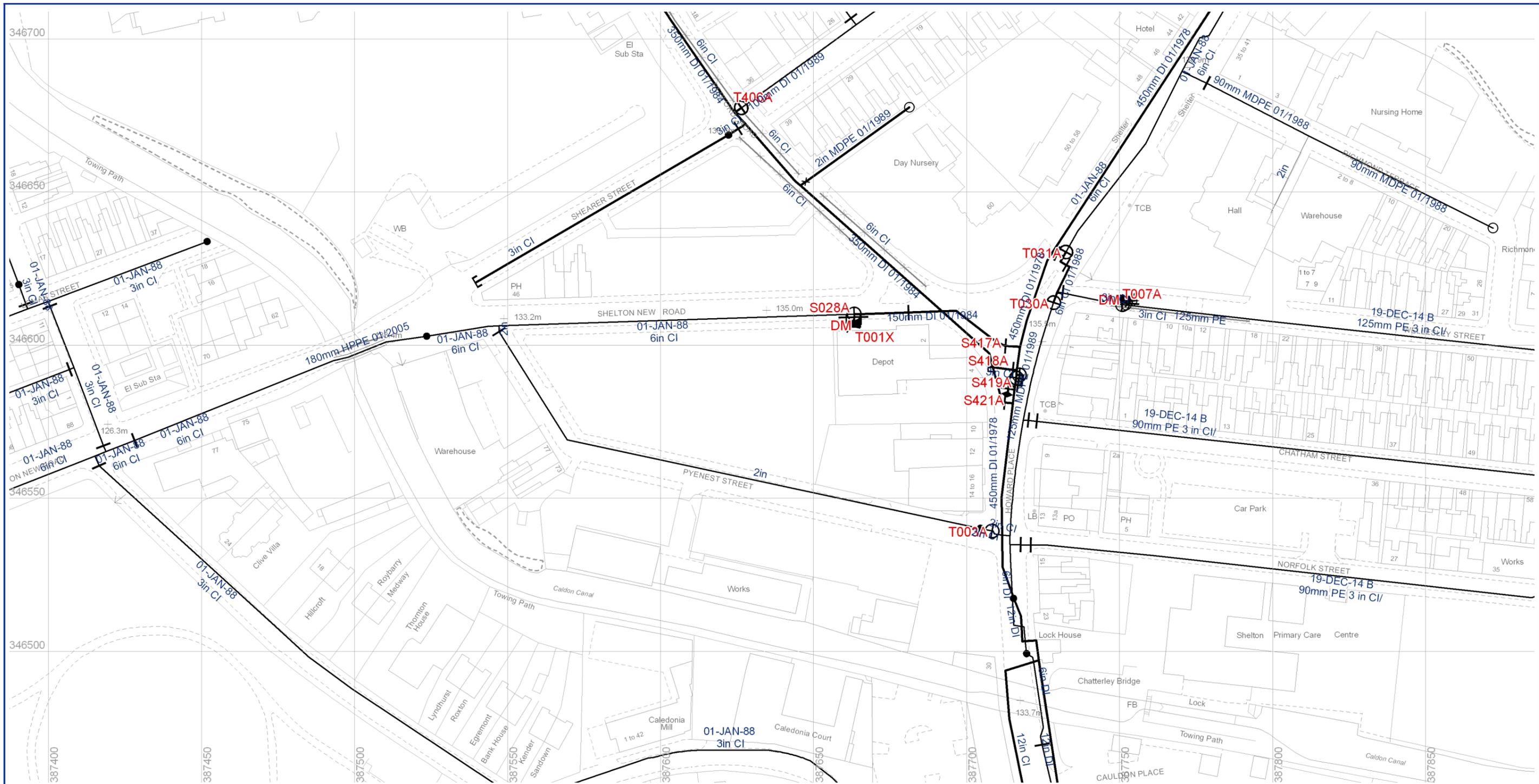
However, we wish to inform you that although most private lateral drains and sewers were transferred to Severn Trent Water's ownership on 1<sup>st</sup> October 2011, the Company does not possess complete records of these assets and therefore they may not be shown on these maps.

Please also find enclosed a copy of Severn Trent Water's General Conditions and Precautions for your information.

**Please forward VAT receipt to your finance department.**

Kind Regards  
**GISmapping Team**

Enquiry received GISmapping: <u>20 February 2017</u>
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<ul style="list-style-type: none"> <li>Distribution Main</li> <li>Trunk Main (local/primary)</li> <li>Strategic Main</li> <li>Fire Supply Main</li> <li>Fire Main</li> <li>Non-Domestic Customer Service Pipe</li> <li>Domestic Customer Service Pipe</li> <li>Abandoned Main</li> <li>Elevated Main</li> <li>Aqueduct</li> <li>Duct</li> <li>Cable, Earthing</li> <li>Cable, Optical Fibre/Instrumentation</li> <li>Cable, Low Voltage</li> <li>Cable, High Voltage</li> <li>Cable, Other</li> </ul>	<ul style="list-style-type: none"> <li>Pumping Facility</li> <li>Booster Facility</li> <li>Potable Water Storage</li> <li>Water Tower</li> <li>Well / Borehole</li> <li>Intake</li> <li>Water Treatment Works / Chamber</li> <li>Draw-off Tower</li> <li>Bowser Point</li> <li>Water Facility Connection</li> <li>Quality Sample Point</li> </ul>	<ul style="list-style-type: none"> <li>Water Isolation Valve (Closed)</li> <li>Water Isolation Valve (Open)</li> <li>Water Isolation Valve (Partially Open)</li> <li>Water Air Valve</li> <li>Pressure Reducing Valve</li> <li>Pressure Sustaining Valve</li> <li>Non-Return Valve</li> <li>Float Valve</li> <li>Hydrant (Single/Double)</li> <li>Washout (Single/Double)</li> <li>Bulk Meter</li> <li>Water Hatch Box</li> <li>Pressure Tapping</li> <li>Insertion Flow Meter Point</li> <li>Water Chemical Injection Point</li> <li>Motive Water Point</li> </ul>	<ul style="list-style-type: none"> <li>Change In Characteristic</li> <li>Marker Post</li> <li>Cable Junction</li> <li>Anode</li> <li>Boundary Box</li> <li>Stop tap</li> <li>Cross Piece</li> <li>Strainer</li> <li>Listening Post</li> <li>Revenue Meter</li> <li>Housing, Building</li> <li>Housing, Kiosk</li> <li>Housing, Other</li> <li>Pipe Support Structure</li> <li>Open Pipe</li> <li>Discharge</li> <li>End Cap</li> <li>SSSI Area</li> <li>Access Right</li> <li>Pre-1937 Properties</li> </ul>
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MATERIALS	LINING
AC - ASBESTOS CEMENT	BI - BITUMEN
AK - ALKATHENE	CL - CEMENT
C - CONCRETE	PL - PLASTIC
CI - CAST IRON	RL - RESIN
CU - COPPER	O - OTHER
DI - DUCTILE IRON	
GF - GLASS FIBRE	
GRC - GLASS REINFORCED CONCRETE	
GRP - GLASS REINFORCED PLASTIC	
HDPE - HIGH DENSITY POLY	
HPPE - HIGH PERFORMANCE POLY	
LDPE - LOW DENSITY POLY	
LEAD - LEAD	
MDPE - MEDIUM DENSITY POLY	
OTHER	
PC - PRE-STRESSED CONCRETE	
PF - PITCH FIBRE	
PP - POLY PROPYLENE	
PSC - PLASTIC STEEL COMPOSITE	
PVC - POLY VINYL CHLORIDE	
RPM - REINFORCED PLASTIC MATRIX	
SI - SPUN IRON	
SST - STAINLESS STEEL	
ST - STEEL	
UPVC - UNPLASTICISED PVC	

Severn Trent Water Limited  
 Asset Data Management  
 PO Box 5344  
 Coventry  
 CV3 9FT  
 Telephone: 0845 601 6616

### WATER MAINS RECORD

<b>O/S Map scale:</b>	1:1250	<b>This map is centred upon:</b>
<b>Date of issue:</b>	20.02.17	<b>O / S Grid reference:</b>
		<b>x :</b> 387636
		<b>y :</b> 346582

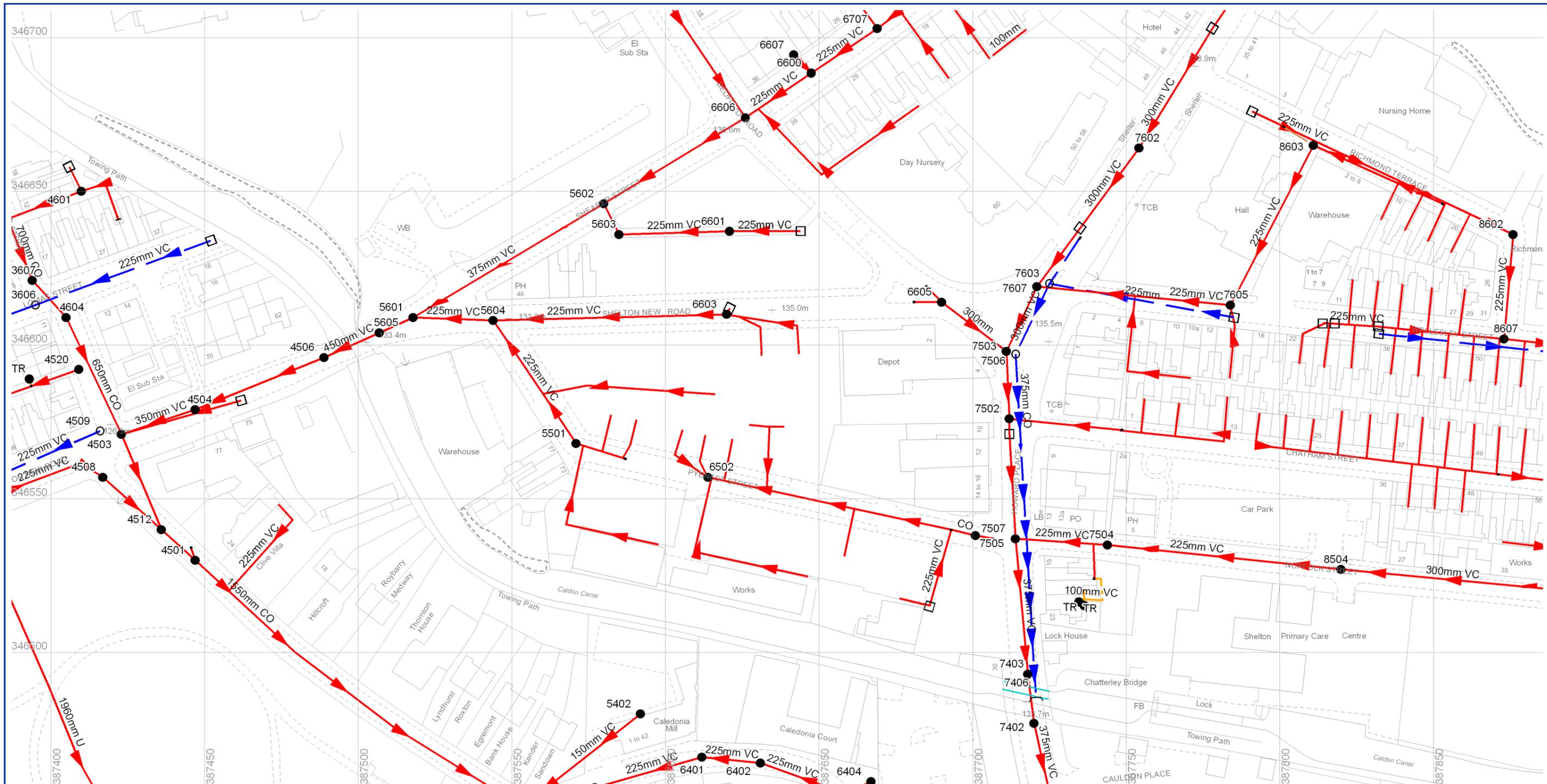
**Disclaimer Statement**

1. **Do not scale off this Map:** This plan and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this plan and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of SEVERN TRENT WATER assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.

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<ul style="list-style-type: none"> <li>Abandoned Gravity Sewer</li> <li>Private Combined Gravity Sewer</li> <li>Private Foul Gravity Sewer</li> <li>Private Surface Water Gravity Sewer</li> <li>Public Combined Gravity Sewer</li> <li>Public Foul Gravity Sewer</li> <li>Public Surface Water Gravity Sewer</li> <li>Trunk Combined Gravity Sewer</li> <li>Trunk Foul Use Gravity Sewer</li> <li>Trunk Surface Water Gravity Sewer</li> <li>Combined Use Pressurised Sewer</li> <li>Foul Use Pressurised Sewer</li> <li>Surface Water Pressurised Sewer</li> <li>Highway Drain</li> <li>Combined Lateral Drain (SS)</li> <li>Foul Lateral Drain (SS)</li> <li>Surface Water Lateral Drain (SS)</li> </ul>	<ul style="list-style-type: none"> <li>Culverted Watercourse</li> <li>Cable, Earthing</li> <li>Cable Junction</li> <li>Cable, Optical Fibre/Instrumentation</li> <li>Cable, Low Voltage</li> <li>Cable, High Voltage</li> <li>Cable, Other</li> <li>Housing, Building</li> <li>Housing, Kiosk</li> <li>Disposal Site</li> <li>Sewage Treatment Works</li> <li>Highway Drain</li> <li>Housing, Other</li> <li>Pipe Support Structure</li> <li>Sewage Pumping Facility</li> <li>Sewer Facility Connection Inlet / Outlet</li> </ul>	<ul style="list-style-type: none"> <li>Blind Shaft</li> <li>Combined Use Manhole</li> <li>Flushing Chamber</li> <li>Foul Use Manhole</li> <li>Grease Trap</li> <li>Head Node</li> <li>Hydrobrake</li> <li>Lampole</li> <li>Outfall</li> <li>Overflow</li> <li>Penstock</li> <li>Petrol Interceptor</li> </ul>	<ul style="list-style-type: none"> <li>Sewer Chemical Injection Point</li> <li>Sewer Junction</li> <li>Sewerage Air Valve</li> <li>Sewerage Hatch Box Point</li> <li>Sewerage Isolation Valve</li> <li>Soakaway</li> <li>Surface Water Manhole</li> <li>Vent Column</li> <li>Waste Water Storage</li> <li>Pre-1937 Properties</li> </ul>
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All Private Sewers are shown in magenta  
 All section 104 sewers are shown in green  
 All Sewers that have been transferred to Severn Trent Water after the 1<sup>st</sup> October 2011, but have not been surveyed and confirmed by Severn Trent Water are shown in orange

**SEVERN TRENT WATER**

Severn Trent Water Limited  
 Asset Data Management  
 PO Box 5344  
 Coventry  
 CV3 9FT  
 Telephone: 0845 601 6616

**SEWER RECORD**

**O/S Map scale:** 1:1250

**Date of issue:** 20.02.17

**This map is centred upon:**

**O / S Grid reference:**

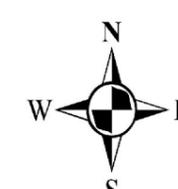
**x :** 387636

**y :** 346582

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 3. On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012 (date to be confirmed).  
 Private pumping stations, which form part of these sewers or lateral drains, will transfer to the ownership of Severn Trent Water on or before 1 October 2016. Severn Trent Water does not possess complete records of these assets.  
 These assets may not be displayed on this Map.  
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MATERIALS		CATEGORIES	
-	- NONE	W	- WEIR
AC	- ASBESTOS CEMENT	C	- CASCADE
BR	- BRICK	DB	- DAMBOARD
CC	- CONCRETE BOX CULVERT	SE	- SIDE ENTRY
CI	- CAST IRON	FV	- FLAP VALVE
CO	- CONCRETE	BD	- BACK DROP
CSB	- CONCRETE SEGMENTS (BOLTED)	S	- SIPHON
CSU	- CONCRETE SEGMENTS (UNBOLTED)	HD	- HIGHWAY DRAIN
DI	- DUCTILE IRON	S104	- SECTION 104
GRC	- GLASS REINFORCED CONCRETE		
GRP	- GLASS REINFORCED PLASTIC		
MAC	- MASONRY IN REGULAR COURSES		
MAR	- MASONRY RANDOMLY COURSED		
PE	- POLYETHYLENE		
PF	- PITCH		
PP	- POLYPROPYLENE		
PSC	- PLASTIC STEEL COMPOSITE		
PVC	- POLYVINYL CHLORIDE		
RPM	- REINFORCED PLASTIC MATRIX		
SI	- SPUN (GREY) IRON		
ST	- STEEL		
U	- UNKNOWN		
VC	- VITRIFIED CLAY		
XXX	- OTHER		



SHAPE		PURPOSE	
C	- CIRCULAR	C	- COMBINED
E	- EGG SHAPED	E	- FINAL EFFLUENT
O	- OTHER	F	- FOUL
R	- RECTANGLE	L	- SLUDGE
S	- SQUARE	S	- SURFACE WATER
T	- TRAPEZOIDAL		
U	- UNKNOWN		

## Sewer Node

## Sewer Pipe Data

REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SJ87464506	129.88	nil	124.06	C	nil	nil	nil	nil	0.00	nil
SJ87465401	126.90	122.76	116.27	C	VC	C	375	nil	5.68	nil
SJ87465402	nil	nil	122.95	C	VC	C	150	nil	0.00	nil
SJ87465403	nil	nil	125.04	C	nil	nil	nil	nil	0.00	nil
SJ87465404	126.90	125.04	123.31	C	VC	C	225	nil	5.24	nil
SJ87465405	127.27	116.27	117.22	C	VC	C	375	nil	0.00	nil
SJ87465501	133.77	130.57	129.90	C	VC	C	225	nil	72.03	nil
SJ87465601	133.27	129.04	127.88	C	VC	C	375	nil	10.41	nil
SJ87465602	135.24	131.43	129.10	C	VC	C	375	nil	30.99	nil
SJ87465603	135.33	132.06	131.85	C	VC	C	225	nil	53.24	nil
SJ87465604	133.37	129.85	129.09	C	VC	C	225	nil	34.24	nil
SJ87465605	133.54	127.79	nil	C	VC	C	450	nil	0.00	nil
SJ87465701	138.09	nil	nil	C	nil	nil	nil	nil	0.00	nil
SJ87465705	137.58	nil	nil	C	nil	nil	nil	nil	0.00	nil
SJ87466401	128.09	125.82	nil	C	VC	C	225	nil	0.00	nil
SJ87466402	128.98	126.42	125.82	C	VC	C	225	nil	31.83	nil
SJ87466403	129.34	126.85	126.45	C	VC	C	225	nil	74.33	nil
SJ87466404	129.54	126.96	126.86	C	VC	C	150	nil	89.40	nil
SJ87466405	128.15	119.46	119.04	C	CO	C	1520	nil	153.36	nil
SJ87466600	nil	nil	nil	C	VC	C	225	nil	0.00	nil
SJ87466601	135.94	132.66	132.07	C	VC	C	225	nil	61.03	nil
SJ87466603	134.87	131.82	129.92	C	VC	C	225	nil	40.02	nil
SJ87466605	136.19	132.79	132.00	C	nil	C	300	nil	33.42	nil
SJ87466606	nil	nil	131.53	C	nil	nil	nil	nil	0.00	nil
SJ87466607	nil	nil	nil	C	P	C	150	nil	0.00	2013
SJ87466702	140.03	137.29	137.15	C	VC	C	225	nil	178.57	nil
SJ87466707	138.45	135.57	nil	C	VC	C	225	nil	0.00	nil
SJ87467402	133.39	127.55	129.09	C	VC	C	375	nil	0.00	nil
SJ87467403	133.81	128.00	127.63	C	CO	C	375	nil	43.57	nil
SJ87467404	127.98	123.99	123.19	C	VC	C	375	nil	89.38	2003
SJ87467502	134.71	130.95	nil	C	VC	C	375	nil	0.00	nil
SJ87467503	135.82	131.82	130.99	C	VC	C	375	nil	26.53	nil
SJ87467504	133.45	129.25	128.89	C	VC	C	225	nil	83.53	nil
SJ87467505	133.82	130.98	nil	C	CO	E	390	500	0.00	nil
SJ87467506	135.76	133.95	nil	S	CO	C	375	nil	0.82	nil
SJ87467507	133.89	128.86	128.13	C	VC	C	375	nil	60.52	nil
SJ87467602	138.00	135.17	nil	C	VC	C	300	nil	0.00	nil
SJ87467603	136.32	134.61	134.05	S	VC	C	300	nil	45.54	nil
SJ87467605	136.18	133.44	133.13	C	VC	C	225	nil	204.16	nil
SJ87467607	136.28	133.11	132.38	C	VC	C	300	nil	31.86	nil
SJ87467701	139.89	137.13	136.12	C	VC	C	225	nil	44.55	nil
SJ87467702	140.39	137.62	137.17	C	VC	C	225	nil	103.60	nil
SJ87467708	140.87	137.88	136.85	C	VC	C	300	nil	35.40	nil
nil	nil	nil	nil	C	U	nil	nil	nil	0.00	nil
nil	nil	nil	nil	F	VC	nil	nil	nil	0.00	nil
nil	nil	nil	nil	F	VC	nil	nil	nil	0.00	nil

### MATERIALS

-	- NONE	PE	- POLYETHYLENE
AC	- ASBESTOS CEMENT	PF	- PITCH
BR	- BRICK	PP	- POLYPROPYLENE
CC	- CONCRETE BOX CULVERT	PSC	- PLASTIC STEEL COMPOSITE
CI	- CAST IRON	PVC	- POLYVINYL CHLORIDE
CO	- CONCRETE	RPM	- REINFORCED PLASTIC MATRIX
CSB	- CONCRETE SEGMENTS (BOLTED)	SI	- SPUN (GREY) IRON
CSU	- CONCRETE SEGMENTS (UNBOLTED)	ST	- STEEL
DI	- DUCTILE IRON	U	- UNKNOWN
GRC	- GLASS REINFORCED CONCRETE	VC	- VITRIFIED CLAY
RP	- GLASS REINFORCED PLASTIC	XXX	- OTHER
MAC	- MASONRY IN REGULAR COURSES		
MAR	- MASONRY RANDOMLY COURSED		

### SHAPE

C	- CIRCULAR
E	- EGG SHAPED
O	- OTHER
R	- RECTANGLE
S	- SQUARE
T	- TRAPEZOIDAL
U	- UNKNOWN

### PURPOSE

C	- COMBINED
E	- FINAL EFFLUENT
F	- FOUL
L	- SLUDGE
S	- SURFACE WATER

### TABULAR KEY

- Sewer pipe data refers to downstream sewer pipe.
- Where the node bifurcates (splits) X and Y indicates downstream sewer pipe.
- Gradient is stated a 1 in...



Severn Trent Water Limited  
Asset Data Management  
PO Box 5344  
Coventry  
CV3 9FT  
Telephone: 0845 601 6616

### SEWER RECORD DATA TABLE

<b>O/S Map scale:</b>	1:1750	<b>This map is centred upon:</b>	
<b>Date of issue:</b>	20.02.17	<b>O / S Grid reference:</b>	x: 387636
<b>Sheet No.</b>	2 of 2		y: 346582

#### Disclaimer Statement:

- Do not scale off this Map.
- This map and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this Map and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of Severn Trent Water's assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.
- On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012 (date to be confirmed). Private pumping stations, which form part of these sewers or lateral drains, will transfer to the ownership of Severn Trent Water on or before 1 October 2016. Severn Trent Water does not possess complete records of these assets.
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# **SEVERN TRENT WATER**

## **GENERAL CONDITIONS AND PRECAUTIONS TO BE TAKEN WHEN CARRYING OUT WORK ADJACENT TO SEVERN TRENT WATER'S APPARATUS**

Please ensure that a copy of these conditions is passed to your representative and/or your Contractor on site. If any damage is caused to STW apparatus, the person, Contractor or Subcontractor responsible must inform STW immediately on:

**0800 783 4444 (24 hours)**

These general conditions and precautions apply to the public sewerage, water distribution and telemetry systems. The conditions include sewers which are the subject of an Agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the Agreement for the self construction of water mains. Please be aware that due to The Private Sewers Transfer Regulations June 2011, the number of public sewers has increased, but many of these are not shown on the public sewer record. However, some idea of their positions may be obtained from the position of inspection covers and their existence must be anticipated.

On request, STW will issue a copy of the plan showing the approximate locations of STW apparatus although in certain instances a charge will be made. The position of private drains, private sewers and water service pipes to properties are not normally shown but their presence must be anticipated. This plan is furnished as a general guide only and no warranty as to its accuracy is given or implied. The plan must not be relied upon in the event of excavations or other works in the vicinity of STW apparatus. No person or Company shall be relieved from liability for damage caused by reason of the actual position and/or depths of STW apparatus being different from those shown on the plan.

In order to achieve safe working conditions adjacent to any apparatus the following should be observed:

1. All STW apparatus should be located by hand digging prior to the use of mechanical excavators.
2. All information set out in any plans received from us, or given by our staff at the site of the works, about the position and depth of the mains, is approximate. Every possible precaution should be taken to avoid damage to our apparatus. You or your contractor must ensure the safety of our equipment and will be responsible for the cost of repairing any damage caused.
3. Water mains are normally laid at a depth of 900mm. No records are kept of customer service pipes which are normally laid at a depth of 750mm; but some idea of their positions may be obtained from the position of stop tap covers and their existence must be anticipated.
4. During construction work, where heavy plant will cross the line of STW apparatus, specific crossing points must be agreed with the Company and suitably reinforced where required. These crossing points should be clearly marked and crossing of the line of STW apparatus at other locations must be prevented.
5. Where it is proposed to carry out piling or boring within 20 metres of any STW apparatus, STW should be consulted to enable any affected STW apparatus to be surveyed prior to the works commencing.
6. Where excavation of trenches adjacent to any STW apparatus affects its support, the STW apparatus must be supported to the satisfaction of STW. Water mains and some sewers are pressurised and can fail if excavation removes support to thrust blocks to bends and other fittings.
7. Where a trench is excavated crossing or parallel to the line of any STW apparatus, the backfill should be adequately compacted to prevent any settlement which could subsequently cause

damage to the STW apparatus. In special cases, it may be necessary to provide permanent support to STW apparatus which has been exposed over a length of the excavation before backfilling and reinstatement is carried out. There should be no concrete backfill in contact with the STW apparatus.

8. No apparatus should be laid along the line of STW apparatus irrespective of clearance. Above ground apparatus must not be located within a minimum of 3 metres either side of the centre line of STW apparatus for smaller sized pipes and 6 metres either side for larger sized pipes without prior approval. No manhole or chamber shall be built over or around any STW apparatus.
9. A minimum radial clearance of 300 millimetres should be allowed between any plant being installed and existing STW apparatus. - We reserve the right to increase this distance where strategic assets are affected.
10. Where any STW apparatus coated with a special wrapping is damaged, even to a minor extent, STW must be notified and the trench left open until the damage has been inspected and the necessary repairs have been carried out. In the case of any material damage to any STW apparatus causing leakage, weakening of the mechanical strength of the pipe or corrosion-protection damage, the necessary remedial work will be recharged.
11. It may be necessary to adjust the finished level of any surface boxes which may fall within your proposed construction. Please ensure that these are not damaged, buried or otherwise rendered inaccessible as a result of the works and that all stop taps, valves, hydrants, etc. remain accessible and operable. Minor reduction in existing levels may result in conflict with apparatus such as valve spindles or tops of hydrants housed under the surface boxes. Checks should be made during site investigations to ascertain the level of such apparatus in order to determine any necessary alterations in advance of the works.
12. With regard to any proposed resurfacing works, you are required to contact STW on the number given above to arrange a site inspection to establish the condition of any STW apparatus in the nature of surface boxes or manhole covers and frames affected by the works. STW will then advise on any measures to be taken, in the event of this a proportionate charge will be made.
13. You are advised that Severn Trent Water Limited will not agree to either the erection of posts, directly over or within 1.0 metre of valves and hydrants,
14. No explosives are to be used in the vicinity of any STW apparatus without prior consultation with STW.

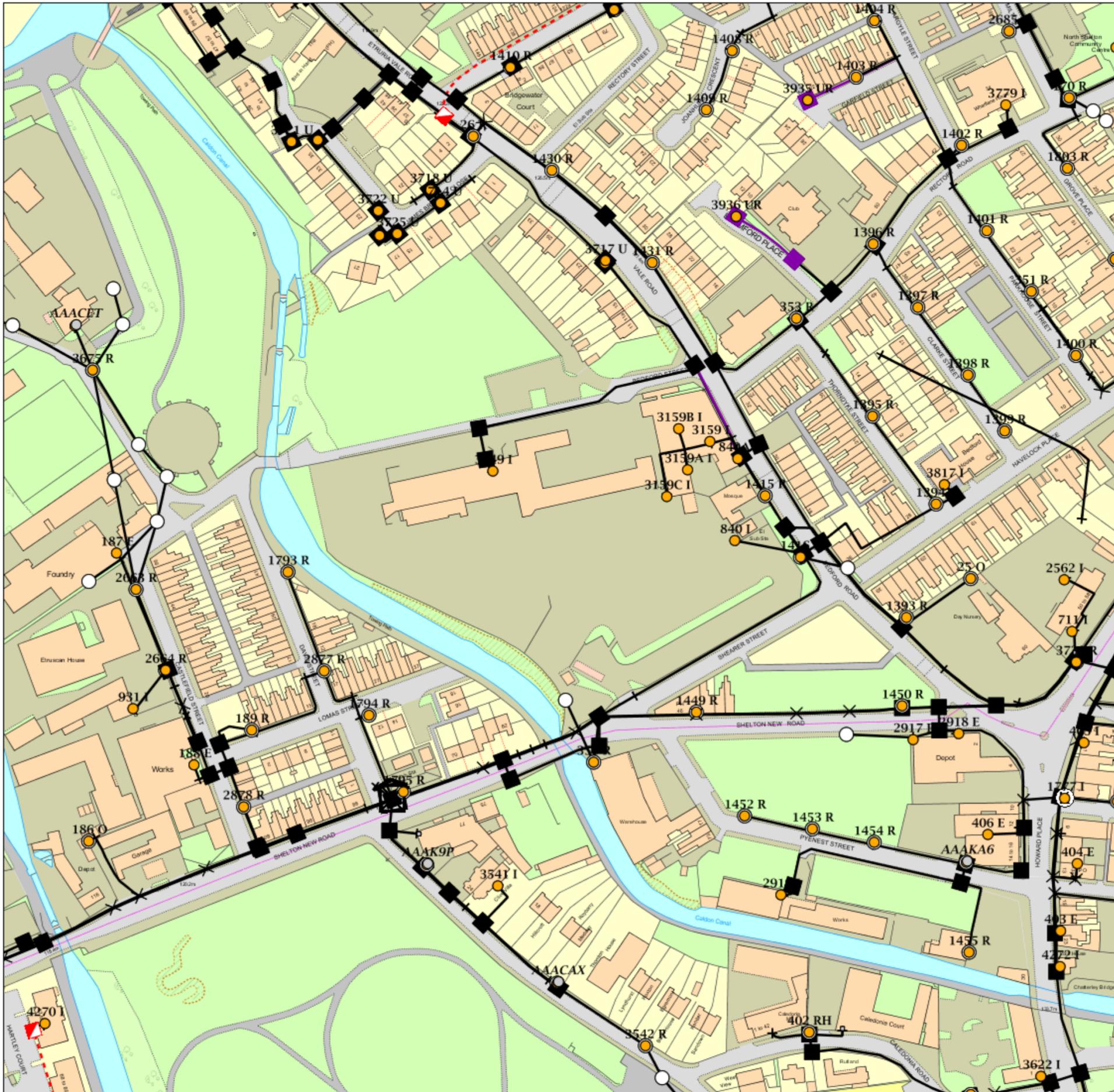
### **TREE PLANTING RESTRICTIONS**

There are many problems with the location of trees adjacent to sewers, water mains and other STW apparatus and these can lead to the loss of trees and hence amenity to the area which many people may have become used to. It is best if the problem is not created in the first place. Set out below are the recommendations for tree planting in close proximity to public sewers, water mains and other STW apparatus.

15. Please ensure that, in relation to STW apparatus, the mature root systems and canopies of any tree planted do not and will not encroach within the recommended distances specified in the notes below.
16. Both Poplar and Willow trees have extensive root systems and should not be planted within 12 metres of a sewer, water main or other STW apparatus.
17. The following trees and those of similar size, be they deciduous or evergreen, should not be planted within 6 metres of a sewer, water main or other STW apparatus. E.g. Ash, Beech, Birch, most Conifers, Elm, Horse Chestnut, Lime, Oak, Sycamore, Apple and Pear.

18. STW personnel require a clear path to conduct surveys etc. No shrubs or bushes should be planted within 2 metre of the centre line of a sewer, water main or other STW apparatus.
19. In certain circumstances, both the Company and landowners may wish to plant shrubs/bushes in close proximity to a sewer, water main or other STW apparatus for screening purposes. The following are shallow rooting and are suitable for this purpose: Blackthorn, Broom, Cotoneaster, Elder, Hazel, Laurel, Privet, Quickthorn, Snowberry, and most ornamental flowering shrubs.

# Maps by email Plant Information Reply



## IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy.

It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



**openreach**  
BT

### 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](mailto:cbyd@openreach.co.uk)

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

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## KEY TO BT SYMBOLS

DP		Pole	
Planned DP		Planned Pole	
PCP		Joint Box	
Planned PCP		Change Of State	
Built		Split Coupling	
Planned		Duct Tee	
Inferred		Planned Box	
Building		Manhole	
Kiosk		Planned Manhole	
Hatchings		Cabinet	
		Planned Cabinet	

Other proposed plant is shown using dashed lines.  
BT Symbols not listed above maybe disregarded.  
Existing BT Plant may not be recorded.  
Information valid at time of preparation

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a BT Group business

BT Ref : JXP01261C

Map Reference : (centre) SJ8749946691

Easting/Northing : (centre) 387499,3466

Issued : 13/04/2017 13:28:52

**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](mailto:nnhc@openreach.co.uk)**