Designers Pre Construction Information

Project: 10026 – Milford, Foundry Lane River Bank Reinforcement Works Design

Client: Amber Valley Borough Council

Document Number:	**10026/04**
Revision:	**A**
Date:	**19th July 2019**

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Project:10026 Amber Valley Borough Council
Milford, Foundry Lane River Bank Reinforcement Works

Designers Pre-Construction Information

Revision Control Schedule

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Rev	*Date*	*Description*	*Prepared by*	*Checked & Approved by*
A	19.7.2019	Initial issue	RCD	CG

Limitations

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The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by ALLIANCE has not been independently verified by ALLIANCE, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by ALLIANCE in providing its services are outlined in this Report. The work described in this Report was undertaken between July 2018 and July 2019 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this Report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

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Contents

1.0 Introduction

Alliance Group Solutions Ltd was commissioned by Amber Valley Borough Council in March 2017 to carry out the Design of river bank stabilisation works on the River Derwent at Milford, Derbyshire. The river bank is being destabilised by erosion, resulting in damage to an adjacent riverside footpath. The river bank is in need of stabilisation to prevent further damage to the footpath.

Amber Valley Borough Council is understood to be the riparian owners of the riverbank area and also the riverside footpath that is constructed on top of the riverbank.

1.1 Project Description

This project requires the repair and reinforcement of the existing river bank together with necessary repairs to the footpath on top of the river bank that has suffered from erosion resulting in damage to the tarmac footpath surface.

The affected length of the river bank and footpath is on the northern side of the River Derwent and where the river is reasonably fast flowing prior to a weir and redundant mill streams as shown by the red rectangle in Figure 1.1.1 below.

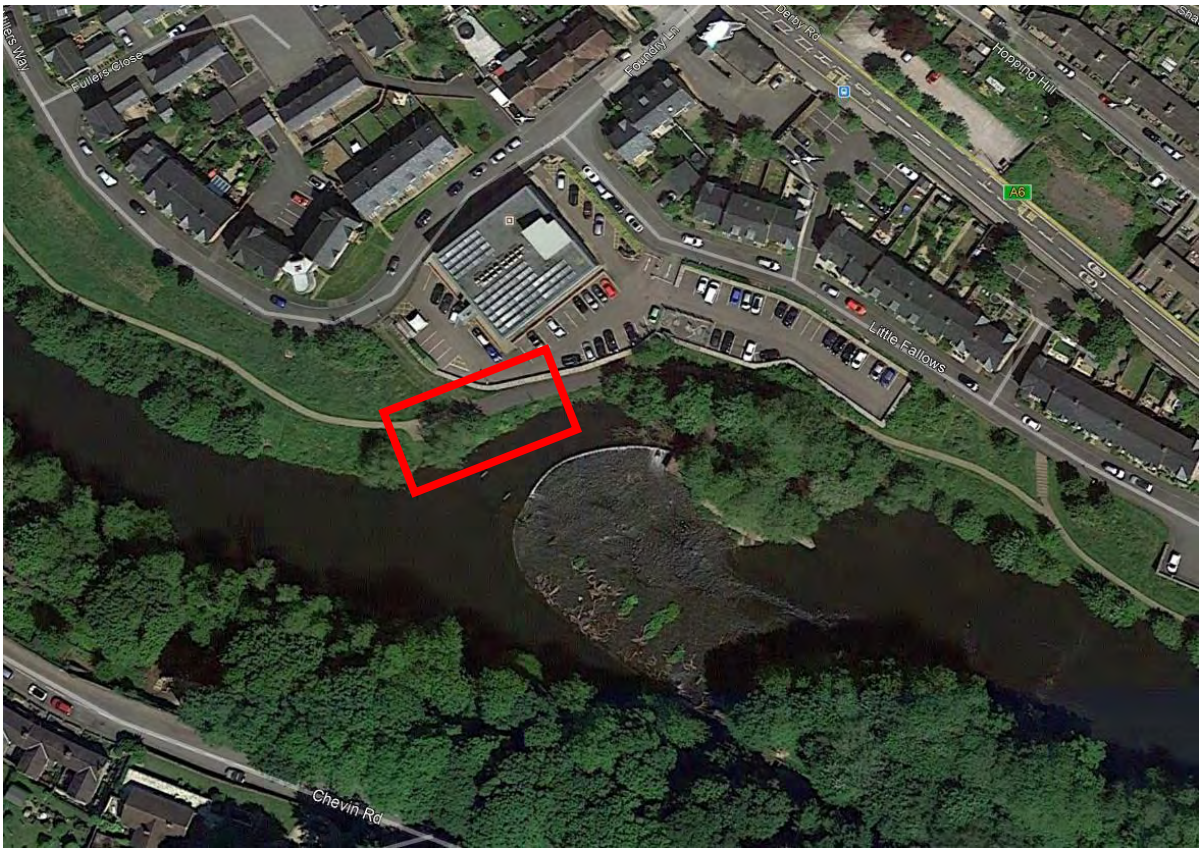

Fig 1.1.1 Location of The Site

Prior to the construction of the development known as Millers Way the adjacent area on the northern side of the River Derwent was entirely industrial and contained a large foundry as shown in Figure 1.1.2 below.

Fig 1.1.2 Previous Site Use

It is assumed that the construction of the footpath was implemented as part of the adjacent residential development known as Millers Way circa 2008.

The works therefore consist of:

- Stabilisation of the river bank to prevent further erosion
- Reconstruction of the riverside footpath.
- Planting of trees to further stabilise the bank.

1.2 Project Location

The project is located as shown in Figure 1.2.1 below.

Fig 1.2.1 Location of the Site

The address of the project site is:

Riverbank Footpath
off Foundry Lane/Millers Way
Milford
Belper
Derbyshire
DE56 0UL

1.3 Application of Workplace (Health, Safety & Welfare) Regulations 1992

The completed project is not envisaged to be classified as a workplace in accordance with the definitions contained in Workplace Health Safety and Welfare Regulations 1992.

All project Designers for the project shall ensure that they take suitable accounts of the Workplace Health Safety and Welfare Regulations 1992 in their design particularly in relation to the health and safety for the future use and maintenance of the structure. It must be remembered that even though the project may not be a workplace, normal considerations must be given towards maintenance activities and the safe access and egress to and from the project by and with adequate segregation of vehicular and pedestrian movements.

1.4 Programme details

The current programme key milestone dates are not known at this point in the project.

1.5 Project Team

The project team is as follows:

Client

Name of organization:	Amber Valley Borough Council
Address:	Town Hall, Market Place, Ripley. Derbyshire DE5 3BT
Tel:	01773 570222
Mobile:	
Contact person:	Mr Paul Marshal-Day
Email address:	paul.marshall-day@ambervalley.gov.uk

Designers

Name of organization:	Alliance Consulting Solutions
Address:	Lowmoor Business Park, Kirkby in Ashfield, Nottinghamshire, NG17 7JZ
Tel:	01623 750231
Mobile:	
Contact person:	Chris Glenn
Email address:	Chris.glenn@alliancegs.co.uk

Principal Designer

Name of organization:	Alliance Consulting Solutions
Address:	Lowmoor Business Park, Kirkby in Ashfield, Nottinghamshire, NG17 7JZ
Tel:	01623 750231
Mobile:	07866 245168
Contact person:	Bob Draper
Email address:	Bob.draper@alliancegs.co.uk

Principal Contractor

Name of organization:	To be confirmed
Address:	
Tel:	
Mobile:	
Contact person:	
Email address:	

Contractors

Name of organization:	To be confirmed
Address:	
Tel:	
Mobile:	
Contact person:	
Email address:	

Others

Name of organization:	To be confirmed
Address:	
Tel:	
Mobile:	
Contact person:	
Email address:	

Principal landowners

The principal landowner on and adjacent to the site is:

Amber Valley Borough Council
Town Hall
Market Place,
Ripley
Derbyshire
DE5 3BT

1.5 Extent and Location of Existing Records and Plans

Results of searches undertaken with regard to obtaining existing records and plans have revealed that there are no existing underground or overhead utility apparatus in the vicinity of the site.

A copy of the utility search report is included in Appendix B

It is expected that the Principal Contractor/Contractor will undertake further up to date searches particularly with regard to consultation with Utility Companies prior to the commencement of the site works.

2.0 Clients Considerations and Management Requirements

2.1 Planning for and Managing the Construction work

2.1.1 Organization structure

The Project Team Organogram is as shown in Fig 2.1.1 below.

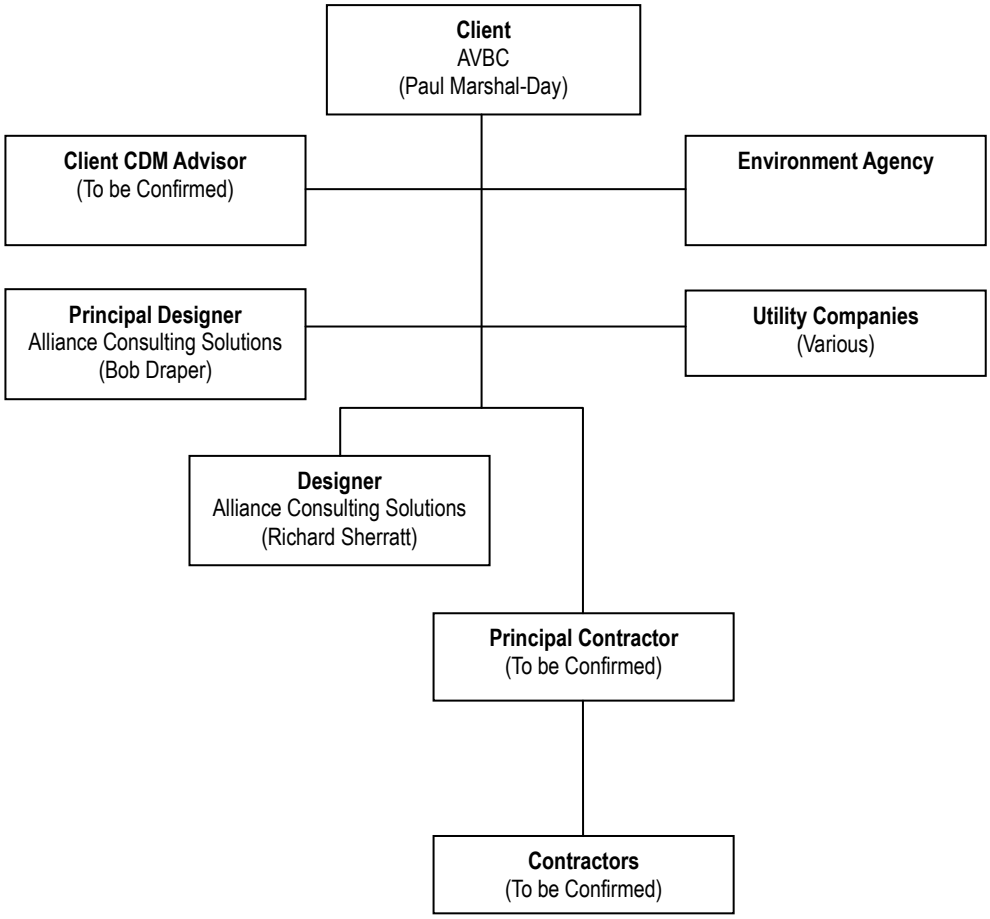

Fig 2.1.1 Project Team Organogram

2.1.2 Construction Phase Plan

The Principal Contractor or Contractor shall prepare a suitable Construction Phase Plan (CPP) which is to be submitted to the Client (or his CDM Advisor) as early as practicable but at least a minimum of 10 working days prior to the planned start of the construction phase (including advanced works, site investigation or other construction activities). The CPP will be checked by the Client (or his CDM Advisor) against the Assessment form contained in Appendix A.

No works will be allowed to commence until the CPP in deemed suitable by the Client (or his CDM Advisor) and an instruction is given by the Client for commencement.

The Principal Contractor or Contractors must plan, manage and co-ordinate work during the construction phase taking account of the information contained in this PCI provided by the Client (or his CDM Advisor), and any other information provided by contractors.

2.2 Health and Safety Goals

All of us have the right to remain healthy and injury free at work. We are all vital to improving health and safety and we will:

- Prevent all injuries and occupational illnesses;
- All be responsible for health and safety;
- Always check and learn from what we are doing;
- Challenge and respond to challenge.

Remember health and safety is a way of life both at home and at work.

The following project specific goals will be implemented. In all instances the designers, principal contractor and contractor's performance will be expected to meet or exceed the minimum standards required under the appropriate legislation and achieve:

- Elimination of hazards for construction, future maintenance and public safety during the design process as far as possible;
- No notifiable accidents;
- Encouragement of behavioural safety culture amongst in-house and contractor's staff through toolbox talks;
- Prevention of interaction between works and members of the public;
- Prevention of any cable, pipe or ducting strikes or damage during the works;
- Prevention by use of banksmen to keep distance from plant during operations (the use of walkie-talkies is recommended).
- Taking best practice and lessons learned from similar projects.

2.3 Proposed Communication/Liaison Process

The Clients representative will not be resident on site but is expected that a Principal Contractors representative will be resident on site. A communication/liaison process will be agreed with AVBC to comply with the mutual procedures.

2.4 Site Security

Site security and preventing unauthorized persons entering the site area is paramount importance at this site and to achieve this, the minimum standard of security shall include the following:

- Access to the site will be via Foundry Lane and Millers Way off the main A6 Derby to Belper trunk Road.
- Construction materials will only be brought to site when required and only minimum quantities will be retained in the site compound at the end of each working day.

It is also recommended that the Principal Contractor considers the use of CCTv cameras (8point8 Vanguard or similar) to remotely monitor the security of the site while it is unoccupied.

2.5 Welfare Provisions

It is proposed that part of the grassed area off that lies between Millers Way and the river will be provided to the contractor for use as a site compound during the works and whilst AVBC require that the size of the area to be occupied by the compound is kept to a minimum, AVBC will enable sufficient area to be provided as part of discussions with the contractor prior to the work commencing. The Principal Contractor will provide full welfare provisions for the site in accordance with Regulation 13(7), 22(1) (c) and Schedule 2 of the CDM regulations. Proposals shall be fully detailed in the CPP submitted to AVBC for review under Regulation16. This shall include a schematic showing the compound layout and welfare facilities. The Principal Contractor will be required to fully reinstate the compound area to its original condition upon completion of the works.

2.6 Health and Safety

2.6.1 Competency and training

The Client requires that all personnel employed to carry out the construction of this project are trained and competent to carry out their individual duties during the course of the project. The qualifications of trades people employed on the project must be demonstrated at the commencement of the works on site and all works must be supervised by a suitably qualified and competent person.

2.6.2 Site hoarding/fencing requirements

The site will be securely fenced using 'Heras' type fencing (with each panel clipped together at the top and bottom of each panel) around both the site compound area and the working area. The fencing will also contain a lockable gate to prevent un-supervised access during the works and while the site is unoccupied. It is also recommended that the Principal Contractor considers the use of CCTv cameras (8point8 Vanguard or similar) to remotely monitor the security of the site while it is unoccupied.

2.6.3 Site transport/vehicle movement restrictions

Delivery of materials and machinery will be via Foundry Lane and Millers Way off the main A6 Derby to Belper trunk road. It is recommended that all deliveries enter Foundry Lane from the southern direction so that they turn left into the site.

Movement of vehicles along Foundry Lane and Millers Way will need to be carefully controlled by a qualified banksman and may be restricted to specific times to be agreed with the Highway Authority (Derbyshire County Council) and AVBC.

Suitable off loading and turning areas are to be established by the Principal Contractor and detailed in the CPP.

2.6.4 Client permit to work system

The Client has no permit to work systems specific to this project but this does not remove the Principal Contractors own requirements for permit operation where required through their own quality assurance system.

2.6.5 Fire precautions

The client has no existing site fire risk assessments, plans and procedures.

The Principal Contractor shall carry out suitable fire risk assessments and arrange their own procedures and fire plan. Details must be included in the CPP prior to commencement of work on site. It is expected that site specific plans are produced covering:

- Main compound area
- Fuel and chemical storage facilities
- Other areas as assessed by the contractor.

2.6.6 Emergency procedures areas of escape

The Client has no existing site emergency plans and procedures for the site.

The nearest accident and emergency facility is located at:

Royal Derby Hospital
Derby
Derbyshire
DE22 3NE
Tel. 01332 340131

The Principal Contractor shall carry out suitable assessment for emergency planning and arrange his own procedures. Details must be including in the CPP prior to commencement of work on site. It is expected that site specific emergency plans are produced covering:

- Conflict with members of the public

- Falling from height
- Fire evacuation
- Environmental incidents
- Excavations

The principal Contractor should ensure that their RIDDOR reporting procedure is detailed in the CPP.

2.6.7 Details of "no-go" or authorization requirements

The Client has not specifically identified any no-go areas.

2.6.8 Designated confined spaces

There are no designated confined spaces associated with this project

2.6.9 Designated open water

The site is immediately adjacent the River Derwent and it can be fast flowing due to the close proximity of weir immediately downstream of the site area.

The Principal Contractor shall carry out suitable risk assessments and arrange their own procedures for ensuring the safety of their personnel while they are working in such close proximity to the fast flowing river. Details must be included in the CPP prior to commencement of work on site.

2.6.10 Smoking restrictions

In accordance with the Smoking at Work Act 2007 the site will be designated as a workplace therefore no smoking will not be permitted whilst working within the site boundary and especially in or around any fuel/oil storage areas or while refuelling plant or equipment.

2.6.11 Parking

Only vehicles essential for the construction work should be parked within the site compound. No vehicles are to parked on Millers Way or in the residential parking areas associated with the residential properties off Millers Way. Other vehicles may be left on Foundry Lane but must not block any accesses to existing properties.

The contractor shall ensure that a traffic management plan is produced. Details must be included in the CPP prior to commencement of work on site. It is expected that traffic management plans are produced detailing the following as a minimum:

- Access to site
- Vehicular traffic routes to and from the site
- Pedestrian walkways around the site
- Parking areas
- Storage areas

3.0 Existing Site Risks and Environmental Restrictions.

3.1 Safety Hazards

3.1.1 Access to site

The site access route is via Foundry Lane and Millers Way off the main A6 Derby to Belper trunk road. Millers Way is purely a residential cul-de-sac providing access to a number of residential parking areas associated with the residential properties. Foundry Lane is a little wider than Millers way but again provides access to a number of residential properties. It is recommended that all deliveries enter Foundry Lane from the southern direction on the A6 so that they turn left into the site. It is also recommended that they turn left onto the A6 when leaving Foundry Lane as the visibility of oncoming traffic at this junction is not considered suitable for large vehicles to turn right.

The Principal Contractor is to develop and supply to the Client a traffic management plan covering how they will manage the delivery of plant, machinery and materials to the site.

3.1.2 Boundaries

The site boundary is as shown on drawing 10026/0104 in Appendix B

3.1.3 Restrictions on Deliveries and Waste Requirements

Plant, equipment, material deliveries and waste removal and may be restricted to specific times to be agreed with the Highway Authority (Derbyshire County Council) and AVBC to avoid conflict with other users (pedestrians and vehicles) of Millers Way and Foundry Lane as far as possible.

3.1.4 Adjacent Land Use and Known Construction Activity

The existing adjacent land use is residential with a small amount of industrial. The land affected by the works is used for leisure (walking) purposes. The land is all owned by the AVBC (The Client). There is no other construction activities known to be planned in the adjacent area at this time.

3.1.5 Utility Apparatus

A utilities search has been carried out using data from 'Cornerstone' and the results of this are contained within Appendix B.

Results of this search has revealed that there are no existing underground or overhead utility apparatus in the vicinity of the site.

Detailed utility search using ground penetrating radar has not been carried out.

3.1.6 Ground Conditions

No detailed ground investigation has been carried out.

3.1.7 Unexploded Ordnance

An unexploded ordnance search has not been carried out.

3.1.8 Existing Structures

There are no existing structures that may be affected by the proposed works.

3.2 Health hazards

3.2.1 Asbestos(including results of surveys)

The Designer is not aware of asbestos on site. No asbestos surveys have been carried out.

3.2.2 Existing Storage for Hazardous Materials

The Designer is not aware of existing storage of hazardous materials on the site.

3.2.3 Contaminated Land (including results of surveys)

The Designer is not aware of any contaminated land that may affect the works.

3.2.4 Hazardous Materials within Structures.

The Designer is not aware of existing hazardous materials within the existing structures on the site.

3.2.5 Health Risks from Clients Activities

The Designer is not aware of any hazardous activities carried out by the Client.

4.0 Significant Design and Construction Hazards.

4.1 Design Information.

The detailed design information is contained on the following drawings that shall be referred to in conjunction with the information provided in this document.

Plan/Drawing No	Title	Revision	Date
10026/0104	Location and Layout Plan	B	5.7.2019
10026/0105	Bank Stabilisation Details and Sections, Footpath Construction Details	B	5.7.2019

4.2 Information on Significant Risks Identified During Design.

The Designer has produced a Designers Hazard Elimination and Management Register identifying residual risks and assumed control measures based upon the design and this is contained in Appendix C.

The list below highlights those significant risks that the Designer has not been able to 'Design Out' and will therefore need to be dealt with by the Principal Contractor. These are not listed in any order of priority or significant of the risk:

1. The requirement to work adjacent to deep fast flowing water
2. The ejection of missiles during strimming operations
3. The requirement to lift heavy loads.
4. The potential of trapping when installing the rock filled mattresses.
5. The existing pedestrian and vehicular traffic along the access routes to the site
6. The movement of plant and machinery within the restricted area of the site.

The Contractor will need to produce specific risk assessments and method statements (RAMS) to identify any special controls to protect personnel from the above risks.

4.3 Materials Requiring Particular Precautions.

The Designer has identified the following substances which will require significant health precautions during their use in the construction (i.e. CoSHH products).

- Cement (including concrete)
- Fuel (petrol, diesel etc)

The Contractor will need to produce specific risk assessments (CoSHH) detailing the use of these materials and their Method Statements will also have to identify any special controls to protect personnel during their use.

4.4 Arrangements for Co-ordination of On-going Design.

The Client's representative will not be resident on site but will be responsible for co-ordination. A communication/liaison process will be agreed with the Contractor to comply with the mutual procedures.

4.5 Information on Significant Environmental Risks Identified

An Environmental Action Plan (EAP) must be in place for the project before any works commence on site (including set-up). The specific environmental risks are listed below:

- Spillage of fuels and oils and entry to the river.
- Dust
- Noise

5.0 Health and Safety File.

5.1 Client Requirements

A Health and Safety File is to be prepared for the project and available for use by all those who will have a responsibility for the on-going maintenance of the finished project.

The Principal Contractors , Contractors and Designers shall, where applicable, provide the Principal Designer with all relevant information for inclusion in the Health and Safety File. The Health and Safety File format and content is to be issued as a separate document.

The Health and Safety File shall be substantially complete and available at project handover and to facilitate this all parties shall cooperate fully with the Principal Designer in his duty to prepare this and meet agreed deadlines for preparing and submitting the requisite information requested.

5.2 File Arrangement

The Principal Contractor, Contractors, Designers and the Client shall ensure that information is collated during the project and issued at the completion of the project.

Appendix A – Construction Phase Plan Assessment Form

ACOP Recommendation	Comment	Location in plan
1. Description of Project		
a) project description and programme details;	• Project Description: • Programme • Schedule of method statements/RA:	
b) extent and location of existing records and plans that are relevant to health and safety on site, including information about existing structures when appropriate		
2. Communication and management of the work		
a) management structure and responsibilities;	• Organisation chart: • Management Responsibilities:	
b) health and safety goals for the project and arrangements for monitoring and review of health and safety performance;	• Project safety goals: • Monitoring arrangements	
c) arrangements for:		
• regular liaison between parties on site including any key dates;		
• consultation with the workforce		
• the exchange of design information between the client, designers and contractors on site;		
• Handling design changes during the project;		
• The selection and control of contractors		
• The exchange of health and safety information between contractors		
• Site security		
• Site induction	• Safety is Paramount included	
• First aid arrangements		
• Welfare arrangements	• Compound Layout Plan • Sanitary conveniences • Female facilities • Washing facilities	

ACOP Recommendation		Comment		Locations in plan
		•	Showers • Drinking water • Changing rooms and lockers • Facilities for rest	
•	The reporting and investigating of accidents and incidents including near misses;			
•	The productions and approval of risk assessments and written system of work;			
d)	Site rules			
e)	Drugs & alcohol policy			
f)	Emergency procedures	•	Fire & evacuation: • Water rescue: • Confined spaces: • Harness rescue: • UXO: • Other:	
3.	**Arrangements for controlling significant site risks**			
a)	Safety risks, including;			

Appendix B – Results of Utility Apparatus Search and Site Investigation

CORNERSTONE PROJECTS LTD

Utilities Search Report

Monday, 29 Jul 2019

Alliance Consulting Solutions

10026

Milford Riverbank

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

CORNERSTONE PROJECTS LTD

Table of contents:

Utility / Service	Included
Basic Search	
Gas	**Yes**
Water	**Yes**
Sewers	**Yes**
BT	**Yes**
Electricity	**Yes**
3rd Party Searches*	**Yes**
Cable Search	
Vodafone	**Not Requested**
Virgin Media	**Not Requested**
GTT	**Not Requested**
BSkyB	**Not Requested**
Colt	**Not Requested**
KPN	**Not Requested**
Sota	**Not Requested**
CGI Logica	**Not Requested**
Energetics	**Not Requested**
City Fibre	**Not Requested**
Telia Sonera	**Not Requested**
Instalcom**	**Not Requested**
KCom	**Not Requested**
Verizon	**Not Requested**
Trafficmaster	**Not Requested**
Zayo Group	**Not Requested**
Tata Communications	**Not Requested**
Gamma	**Not Requested**
Gigaclear Plc	**Not Requested**

Utility / Service	Included
Independent Utilities	
GTC	**Not Requested**
Energetics	**Not Requested**
SSE	**Not Requested**
Harlaxton	**Not Requested**
Utility Assets	**Not Requested**
UK Power Distribution	**Not Requested**
Albion Water	**Not Requested**
Leep Utilities	**Not Requested**
ESP	**Not Requested**
Fulcrum Pipelines	**Not Requested**
Energy Assets	**Not Requested**
Others	
CAD Pack	**Not Requested**
Smart pdf	**Not Requested**
Coal Authority Report	**Not Requested**
Others	**Not Requested**

*Includes Utilibilly and Linesearch

**Includes Level3, GC(UK) Ltd, GC PEC, Fibrenet UK and Fibrespan

NB: All plans / responses are valid for a maximum of three months unless noted otherwise

91 Market Street Hoylake Wirral CH47 5AA
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CORNERSTONE PROJECTS LTD

AREA PLAN

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Re Space Shop + Cafe
Fullers Cl
Millers Way
Hopping Hill
Stratasys Consulting
ECS Derby
Derby Rd
Little Fallows
River Derwent
Chevin Rd
Google
Map data ©2019 Imagery ©2019 , DigitalGlobe, Getmapping plc, Info
Report a map error

PRINT

CORNERSTONE PROJECTS LTD

GAS

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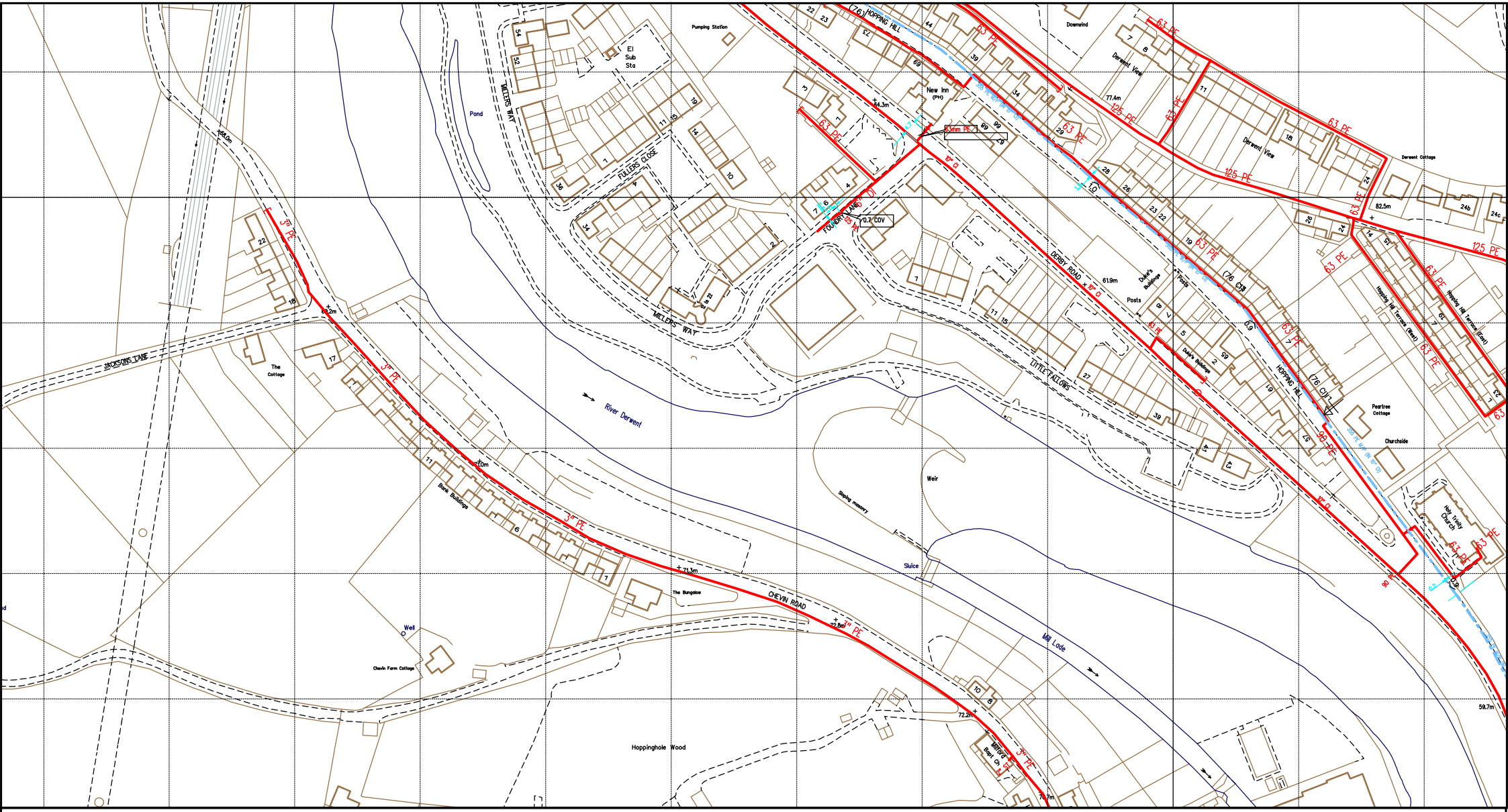

SCALE: Not to scale	LP MAINS
USER ID: Sam Alexander	MP MAINS
DATE: 24/07/2019	IP MAINS
EXTRACT DATE: 02/03/2019	LHP MAINS
MAP REF: SK3445	
CENTRE: 434833, 345417	

Some examples of Plant Items:

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

This plan shows those pipes owned by Cadent Gas Ltd in their 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 Cadent Gas Ltd 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. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAPS Viewer Version 5.8.0.1

Local Machine

CORNERSTONE PROJECTS LTD

WATER & SEWER

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VAT Reg. No. 851 4941 19
Company No. 5132353

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

Tel: 0345 601 6616 opt.1

Our Ref: 72149

29 July 2019

Apparatus Location Enquiry

Further to your enquiry re: Milford Riverbank footpath, off Foundry Lane, Millers Way, Milford DE56 0RN
(your ref: 10026)

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.

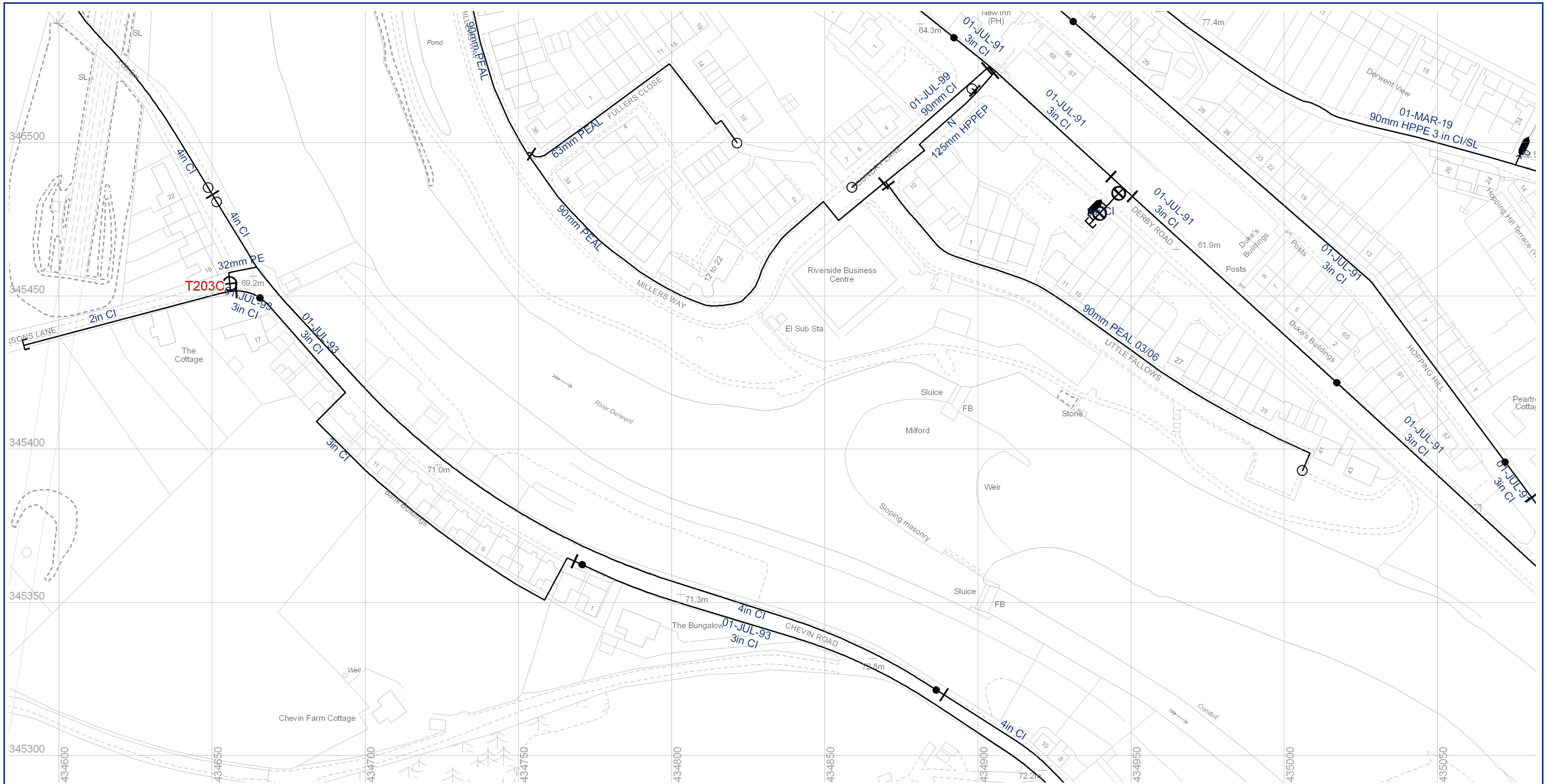
However, we wish to inform you that although most private lateral drains and sewers were transferred to Severn Trent Water's ownership on 1st October 2011, the Company does not possess complete records of these assets and therefore they may not be shown on these maps.

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

Kind Regards

GISmapping Team

Enquiry received
GISmapping:
29 July 2019



- Distribution Main
- Trunk Main (local/primary)
- Strategic Main
- Fire Supply Main
- Fire Main
- Non-Domestic Customer Service Pipe
- Domestic Customer Service Pipe
- Abandoned Main
- Elevated Main
- Aqueduct
- Duct
- Cable, Earthing
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other

- Pumping Facility
- Booster Facility
- Potable Water Storage
- Water Tower
- Well / Borehole
- Intake
- Water Treatment Works / Chamber
- Draw-off Tower
- Bowser Point
- Water Facility Connection
- Quality Sample Point

- Water Isolation Valve (Closed)
- Water Isolation Valve (Open)
- Water Isolation Valve (Partially Open)
- Water Air Valve
- Pressure Reducing Valve
- Pressure Sustaining Valve
- Non-Return Valve
- Float Valve
- Hydrant (Single/Double)
- Washout (Single/Double)
- Bulk Meter
- Water Hatch Box
- Pressure Tapping
- Insertion Flow Meter Point
- Water Chemical Injection Point
- Motive Water Point

- Change In Characteristic
- Marker Post
- Cable Junction
- Anode
- Boundary Box
- Stop tap
- Cross Piece
- Strainer
- Listening Post
- Revenue Meter
- Housing, Building
- Housing, Kiosk
- Housing, Other
- Pipe Support Structure
- Open Pipe
- Discharge
- End Cap
- SSSI Area
- Access Right
- Pre-1937 Properties

MATERIALS

AC - ASBESTOS CEMENT
AK - ALKATHENE
C - CONCRETE
CI - CAST IRON
CU - COPPER
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
O - 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

LINING

BI - BITUMEN
CL - CEMENT
PL - PLASTIC
RL - RESIN
O - OTHER

N W E S

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

WATER MAINS RECORD

O/S Map scale: 1:1250

Date of issue: 29.07.19

This map is centred upon:
O / S Grid reference:

x : 434833

y : 345417

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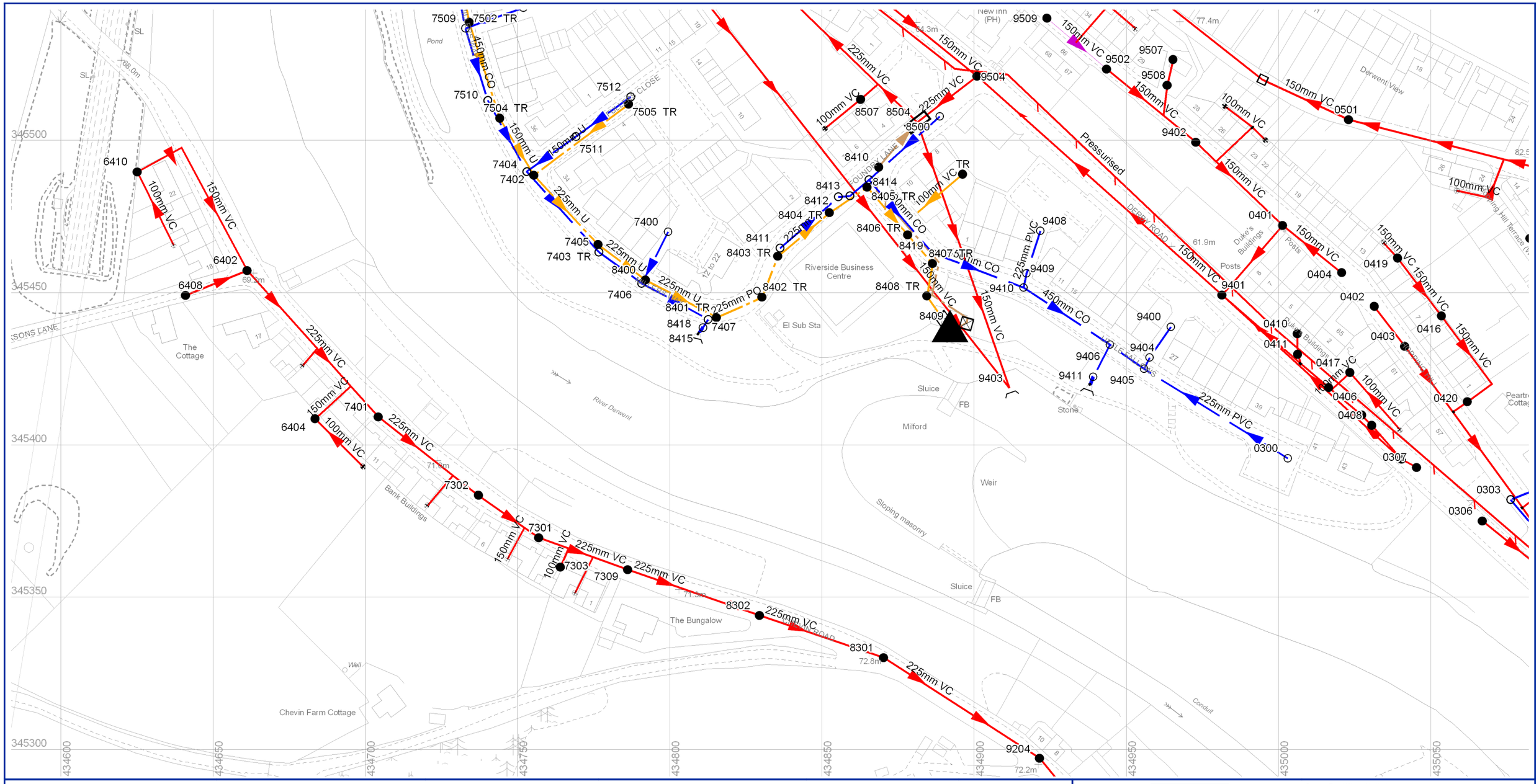
3.

4.



- Abandoned Gravity Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Public Combined Gravity Sewer
- Public Foul Gravity Sewer
- Public Surface Water Gravity Sewer
- Trunk Combined Gravity Sewer
- Trunk Foul Use Gravity Sewer
- Trunk Surface Water Gravity Sewer
- Combined Use Pressurised Sewer
- Foul Use Pressurised Sewer
- Surface Water Pressurised Sewer
- Highway Drain
- Combined Lateral Drain (SS)
- Foul Lateral Drain (SS)
- Surface Water Lateral Drain (SS)

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 1st October 2011, but have not been surveyed and confirmed by Severn Trent Water are shown in orange

- Culverted Watercourse
- Cable, Earthing
- Cable Junction
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other
- Housing, Building
- Housing, Kiosk
- Disposal Site
- Sewage Treatment Works
- Housing, Other
- Pipe Support Structure
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet

- Blind Shaft
- Combined Use Manhole
- Flushing Chamber
- Foul Use Manhole
- Grease Trap
- Head Node
- Hydrobrake
- Lamphole
- Outfall
- Overflow
- Penstock
- Petrol Interceptor

- Sewer Chemical Injection Point
- Sewer Junction
- Sewerage Air Valve
- Sewerage Hatch Box Point
- Sewerage Isolation Valve
- Soakaway
- Surface Water Manhole
- Vent Column
- Waste Water Storage
- Pre-1937 Properties

MATERIALS

-	- NONE
AC	- ASBESTOS CEMENT
BR	- BRICK
CC	- CONCRETE BOX CULVERT
CI	- CAST IRON
CO	- CONCRETE
CSB	- CONCRETE SEGMENTS (BOLTED)
CSU	- CONCRETE SEGMENTS (UNBOLTED)
DI	- DUCTILE IRON
GRC	- GLASS REINFORCED CONCRETE
GRP	- GLASS REINFORCED PLASTIC
MAC	- MASONRY IN REGULAR COURSES
MAR	- MASONRY RANDOMLY COURSED
PE	- POLYETHLENE
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

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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

CATEGORIES

W	- WEIR
C	- CASCADE
DB	- DAMBOARD
SE	- SIDE ENTRY
FV	- FLAP VALVE
BD	- BACK DROP
S	- SIPHON
HD	- HIGHWAY DRAIN
S104	- SECTION 104

N
W E
S

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: 29.07.19

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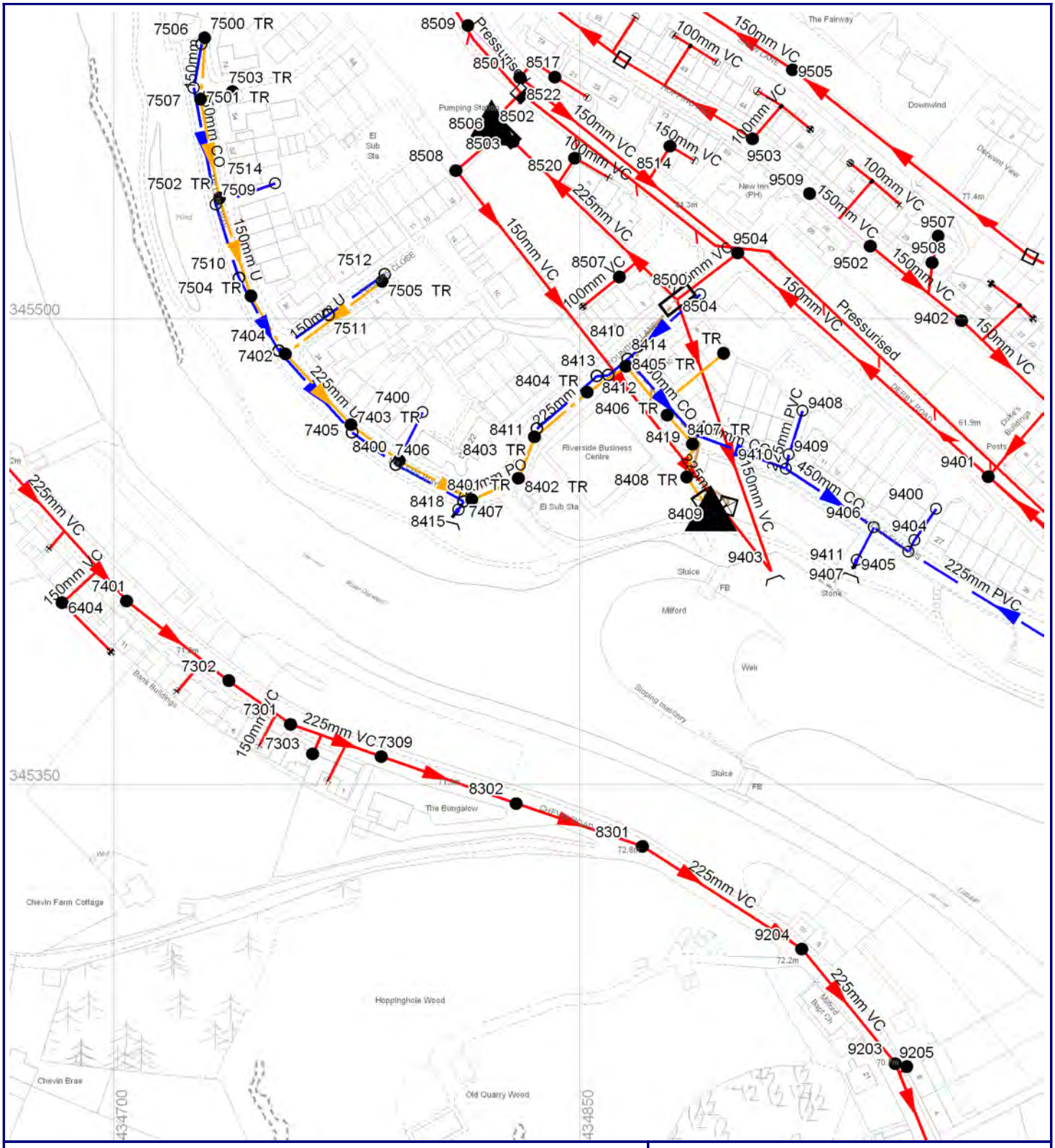

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- Abandoned Pressurised Sewer
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- Highway Drain
- Combined Lateral Drain (SS)
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- Surface Water Lateral Drain (SS)

- Blind Shaft
- Combined Use Manhole
- Disposal Site (DS)
- Flushing Chamber
- Foul Use Manhole
- Grease Trap
- Head Node
- Hydrobrake
- Lamphole
- Outfall
- Overflow
- Penstock
- Petrol Interceptor
- Sewage Treatment Works (STW)

- Sewer Chemical Injection Point
- Sewer Junction
- Sewerage Air Valve
- Sewerage Hatch Box Point
- Sewerage Isolation Valve
- Soakaway
- Surface Water Manhole
- Vent Column
- Waste Water Storage
- Culverted Watercourse
- Pre-1937 Properties
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet

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SEWER RECORD

O/S Map scale:	1:1750	**This map is centred upon: O / S Grid reference:**	
Date of issue:	29.07.19	**x :**	434833
Sheet No:	1 of 3	**y :**	345417

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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.

Sewer Node / Sewer Pipe Data

REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SK34456404	nil	nil	nil	C	VC	C	150	nil	0.00	nill
SK34457301	71.59	66.34	65.67	C	VC	C	225	nil	46.45	nill
SK34457302	nil	nil	66.37	C	nil	nil	nil	nil	0.00	nill
SK34457303	nil	nil	nil	C	VC	C	100	nil	0.00	nill
SK34457309	71.00	65.66	64.96	C	VC	C	225	nil	65.46	nill
SK34457400	61.13	59.86	59.67	S	PVC	C	225	nil	0.00	2006
SK34457401	70.84	66.78	nil	C	VC	C	225	nil	0.00	nill
SK34457402	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34457403	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34457404	61.04	59.74	59.63	S	CO	C	525	nil	323.11	2006
SK34457405	61.08	59.48	59.39	S	CO	C	525	nil	193.62	2006
SK34457406	60.99	59.39	59.25	S	CO	C	600	nil	176.94	2006
SK34457407	61.20	59.25	59.21	S	CO	C	600	nil	77.00	2006
SK34457500	nil	nil	nil	F	nil	nil	nil	150	0.00	nill
SK34457501	nil	nil	nil	F	U	nil	nil	150	0.00	nill
SK34457502	nil	nil	nil	F	U	nil	nil	150	0.00	nill
SK34457503	nil	nil	nil	F	nil	nil	nil	150	0.00	nill
SK34457504	nil	nil	nil	F	U	nil	nil	150	0.00	nill
SK34457505	nil	nil	nil	F	U	nil	nil	150	0.00	nill
SK34457506	61.54	60.37	60.14	S	PVC	C	300	nil	62.18	2006
SK34457507	61.10	60.08	59.93	S	CO	C	450	nil	255.41	2006
SK34457509	61.22	59.92	59.85	S	CO	C	450	nil	352.86	2006
SK34457510	61.06	59.85	59.74	S	CO	C	450	nil	242.06	2006
SK34457511	61.19	60.24	59.85	S	PVC	C	300	nil	50.89	2006
SK34457512	61.99	60.76	60.24	S	PVC	C	300	nil	42.73	2006
SK34457514	61.40	60.30	60.10	S	PVC	C	150	nil	0.00	2006
SK34458301	70.93	63.81	65.61	C	VC	C	225	nil	0.00	nill
SK34458302	70.90	64.95	63.82	C	VC	C	225	nil	38.06	nill
SK34458400	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34458401	nil	nil	nil	F	PO	nil	225	150	0.00	nill
SK34458402	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34458403	nil	nil	nil	F	nil	nil	225	150	0.00	nill
SK34458404	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34458405	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34458406	nil	nil	nil	F	nil	nil	225	150	0.00	nill
SK34458407	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34458408	nil	nil	nil	F	U	nil	225	150	0.00	nill
SK34458410	nil	nil	nil	F	VC	nil	nil	150	0.00	nill
SK34458411	60.41	59.11	58.98	S	PVC	C	225	nil	196.19	2006
SK34458412	60.00	58.98	58.94	S	PVC	C	225	nil	93.96	2006
SK34458413	60.01	58.94	58.90	S	PVC	C	225	nil	204.10	2006
SK34458414	60.29	58.91	58.76	S	CO	C	300	nil	0.00	2006
SK34458415	61.11	58.43	58.40	S	CO	C	600	nil	90.83	2006
SK34458415	61.11	58.43	58.40	S	CO	C	600	nil	0.00	2006
SK34458419	61.00	58.69	58.61	S	CO	C	450	nil	0.00	2006
SK34458500	62.16	60.45	58.98	S	PVC	C	225	nil	21.29	2006

MATERIALS

-	- NONE
AC	- ASBESTOS CEMENT
BR	- BRICK
CC	- CONCRETE BOX CULVERT
CI	- CAST IRON
CO	- CONCRETE
CSB	- CONCRETE SEGMENTS (BOLTED)
CSU	- CONCRETE SEGMENTS (UNBOLTED)
DI	- DUCTILE IRON
GRC	- GLASS REINFORCED CONCRETE
RP	- GLASS REINFORCED PLASTIC
MAC	- MASONRY IN REGULAR COURSES
MAR	- MASONRY RANDOMLY COURSED
PE	- POLYETHLENE
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

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
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TABULAR KEY

A. Sewer pipe data refers to downstream sewer pipe.

B. Where the node bifurcates (splits) X and Y indicates downstream sewer pipe.

C. Gradient is stated a 1 in...

SEVERN TRENT WATER

Severn Trent Water Limited
Asset Data Management
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Telephone: 0845 601 6616

SEWER RECORD DATA TABLE

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Sheet No.	2 of 3	**y :**	345417

Sewer Node — Sewer Pipe Data

REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SK34458501	65.85	63.63	61.72	C	VC	C	150	nil	47.14	nill
SK34458503	59.36	57.55	57.51	C	VC	C	225	nil	123.75	nill
SK34458507	nil	nil	nil	C	VC	C	100	nil	0.00	nill
SK34458508	61.07	59.35	nil	C	VC	C	150	nil	0.00	nill
SK34458509	nil	nil	63.70	C	VC	C	150	nil	0.00	nill
SK34458514	nil	nil	nil	C	VC	C	150	nil	0.00	nill
SK34458517	nil	nil	63.87	C	VC	C	100	nil	0.00	nill
SK34458520	nil	nil	nil	C	VC	C	100	nil	0.00	nill
SK34459203	70.53	65.12	65.22	C	VC	C	225	nil	0.00	nill
SK34459204	72.38	65.61	65.13	C	VC	C	225	nil	98.92	nill
SK34459205	nil	nil	nil	C	VC	C	100	nil	0.00	nill
SK34459400	61.12	59.40	59.27	S	PVC	C	225	nil	0.00	2006
SK34459401	61.53	59.30	58.50	C	VC	C	150	nil	134.91	nill
SK34459402	68.89	67.10	65.41	C	VC	C	150	nil	23.36	nill
SK34459404	61.07	59.27	59.23	S	PVC	C	225	nil	0.00	2006
SK34459405	60.80	59.15	58.75	S	PVC	C	225	nil	0.00	2006
SK34459406	61.00	58.54	58.49	S	CO	C	525	nil	238.02	2006
SK34459407	59.68	56.93	56.90	S	CO	C	525	nil	0.00	2006
SK34459407	59.68	56.93	56.90	S	CO	C	525	nil	0.00	2006
SK34459408	61.30	59.65	58.88	S	PVC	C	225	nil	0.00	2006
SK34459409	61.04	59.27	58.76	S	PVC	C	225	nil	0.00	2006
SK34459410	60.81	58.61	58.54	S	CO	C	450	nil	0.00	2006
SK34459502	69.79	67.77	67.13	C	VC	C	150	nil	59.17	nill
SK34459503	70.02	68.45	nil	C	VC	C	150	nil	0.00	nill
SK34459504	63.60	58.48	58.32	C	VC	C	225	nil	155.13	nill
SK34459505	74.52	73.02	70.98	C	VC	C	150	nil	24.84	nill
SK34459507	nil	nil	nil	C	VC	C	100	nil	0.00	nill
SK34459508	nil	nil	nil	C	VC	C	100	nil	0.00	nill
SK34459509	nil	nil	67.79	C	VC	C	150	nil	0.00	nill

MATERIALS

-	- NONE	PE	- POLYETHLENE
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
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O	- OTHER
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A. Sewer pipe data refers to downstream sewer pipe.

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Sheet No.	3 of 3	**y :**	345417

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 of 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.

CORNERSTONE PROJECTS LTD

BT

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Our Ref: Ref shown on map

email: nnhc@openreach.co.uk

Date of issue shown on map

Dear Customer,

NR & SW ACT 1991 – PROPOSED WORKS AT:

Prior to commencement of work: for free onsite guidance and accurate up to date location of BT plant please contact our Plant Protection Service by the following methods
Email Dial before you dig CBYD@openreach.co.uk
Visit the website www.openreach.co.uk/cbyd

Thank you for your request of describing the above proposals.

Enclosed are copies of our drawing marked up to show the approximate locations of BT apparatus which is present in the immediate vicinity of your works. It 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 made near to British Telecommunications plc apparatus which may exist at various depths and may deviate from the marked route.

To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of British Telecommunications plc plant. If scaffolding is erected, please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by the scaffolding.

In the event of BT apparatus being in the area of works we recommend that your plant/vehicle crossing is either resited, or apply for a budget estimate by submitting detailed plans to the above address, these will be forwarded to the appropriate department for their comments.

Please ensure you quote our reference on any future correspondence.

Yours faithfully,

Openreach Plant Maps Requested

NewSite Office (addresses can be found on the New Developments contact page)

Dear Sir/Madam,

You have downloaded copies of our drawings marked up to show the approximate location of Openreach apparatus, which is present in the immediate vicinity of your works. It 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 made near to Openreach apparatus, which may, exist at various depths and may deviate, from the marked route.

To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of Openreach plant. Please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by your plant. In the event of clearance not being adequate we anticipate that your plant is either resited, or an order is placed with Openreach for rearrangements of its plant. If there are any difficulties with the Map please email cbyd@openreach.co.uk

---

Please contact our Network Protection Service by Email on cbyd@openreach.co.uk giving four calendar weeks notice of your commencement date. This will provide you with on-site advice and a check of location for any Openreach apparatus.

Further to this, I hope the following points will assist you at the new development: -

Openreach has a licence obligation to provide service to any end customer requiring a connection. A Developer would not normally be charged for provision of service, our standard connection charges would apply to the end user when orders are placed with the communication provider of choice. However, should a Developer insist on an underground service in an area where Openreach plant is provided overhead, charges may be incurred.

When the Developer has obtained contract and planning permission Openreach would request a 'Clean', scaled Site Layout, Location Map and a covering letter be sent to the relevant newSite Office. We would particularly request that you give details of your programmed site start date and likely first occupancy date where possible. To obtain contact details of the newSite office covering the development area click on the URL below.

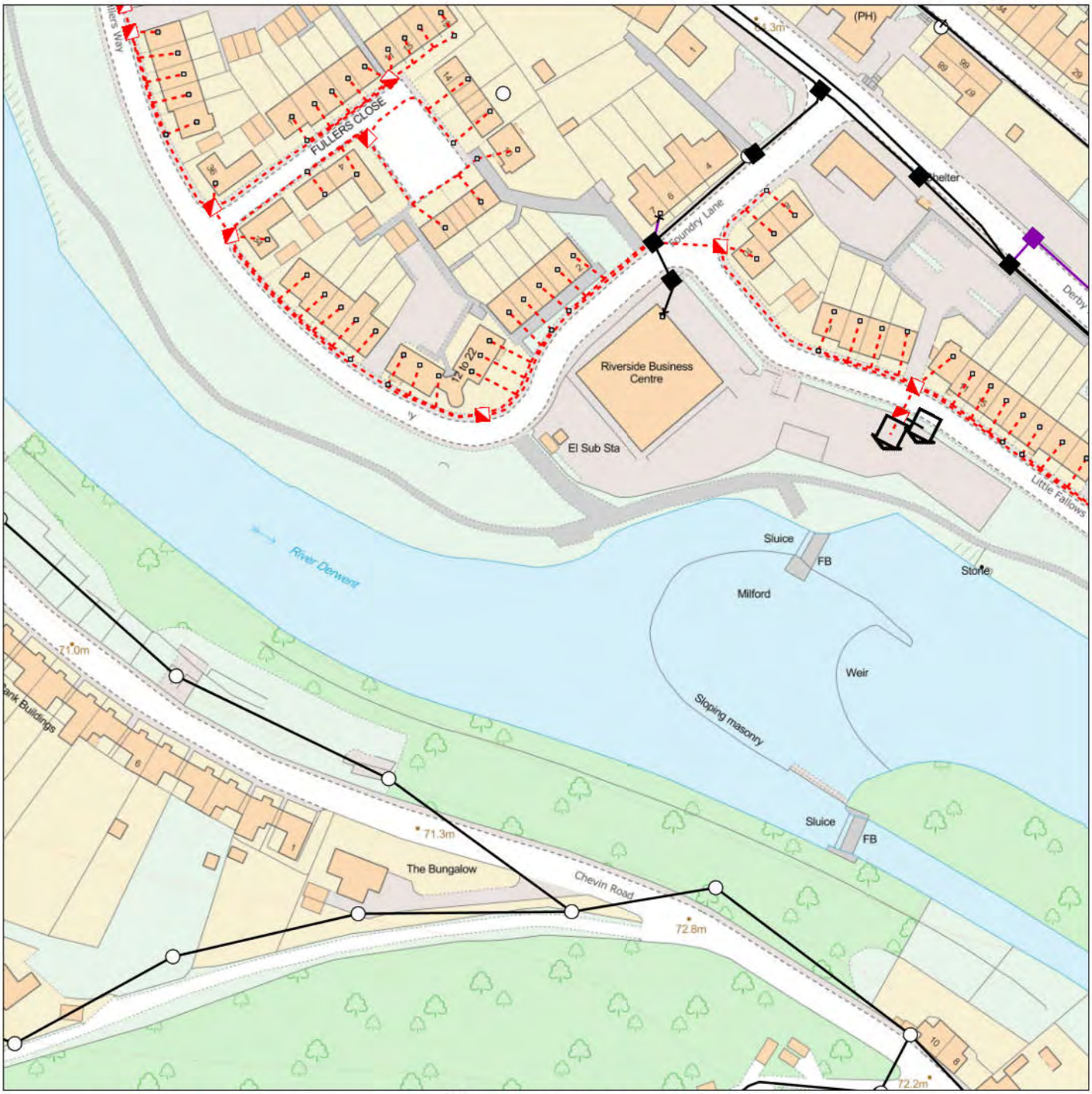
http://www.newdevelopments-openreach.co.uk/ContactUs.aspx

Where a development affects existing Openreach apparatus in the public highway, the cost of any necessary protection or diversionary works must be borne by the Developer. In this case where a budget estimate is required a Site Plan, Location Map and a covering letter should be forwarded to the Repayments Project Office. Please visit www.openreach.co.uk/alterationscontacts for contact details of the Repayments Office covering the development area.

Yours faithfully,

Openreach newSites

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

CLICK BEFORE YOU DIG

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

email cbyd@openreach.co.uk

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

KEY TO BT SYMBOLS

	Planned	Live
PCP		
Pole		
Box		
Manhole		
Cabinet		

Change Of State	+	Hatchings	
Split Coupling		Built	
Duct Tee		Planned	
Building		Inferred	
Kiosk	K	Duct	

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

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

BT Ref : RAV11258B
Map Reference : (centre) SK3483345417
Easting/Northing : (centre) 434833,345417
Issued : 24/07/2019 11:26:01

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

CORNERSTONE PROJECTS LTD

ELECTRIC

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Our Ref: 16071163 Your Ref: 10026

Tuesday, 23 July 2019

Duncan Phillips
91 Market Street
Hoylake
Merseyside
CH47 5AA

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

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

LinesearchbeforeUdig
Help Desk 0845 437 7365

Dear Duncan Phillips

Thank you for your enquiry dated Tuesday, 23 July 2019

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.

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:-

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.

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)

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.

Yours sincerely
WPD Map Response Team

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

Registered in
England and Wales

Registered Office:
Avonbank
Feeder Road
Bristol
BS2 0TB

Safety Documents:
https://www.westernpower.co.uk/customers-and-community/health-safety/public-safety-advice

Contact Us

Emergency or Power Supply issues
In an emergency call 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
Email	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
Website	www.linesearchbeforeudig.co.uk

Safety Documents:
https://www.westernpower.co.uk/customers-and-community/health-safety/public-safety-advice

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.
  https://www.westernpower.co.uk/customers-and-community/health-safety/public-safety-advice

- **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.

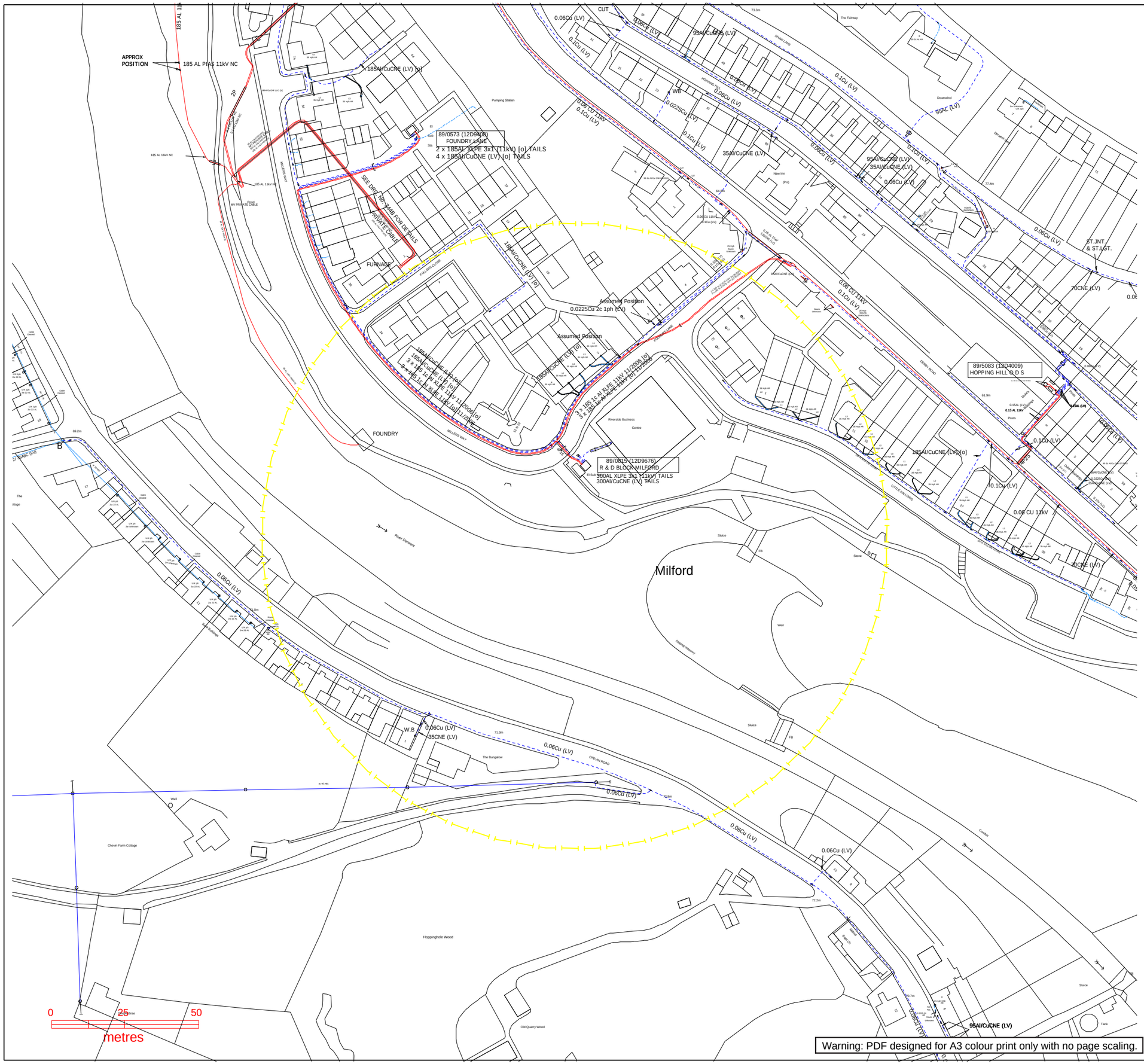
- **If you are working within 10 metres** of an overhead electricity line then it may be necessary for you to erect warning signs and markers, or height restriction goal posts. Ensure that you comply with the requirements of Health & Safety Executive guidance laid down in GS6, Avoidance of Danger from 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.



Warning: PDF designed for A3 colour print only with no page scaling.

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

Contact Us

Mapping Enquiries:		General Enquiries:	
All areas	0121 623 9780	All areas	0800 096 3080

Report damage immediately – KEEP EVERYONE AWAY FROM THE AREA
0800 6783 105

Date Requested: 23/07/2019
Job Reference: 16071163
Site Location: 434832 345418
Requested by: Mr Duncan Phillips
Your Scheme/Reference: 10026
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 and may 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

Overhead Line

PL
Service
LV
HV (11kV)
HV (33kV)
HV (66kV)
HV (132kV)

Underground Cable

SURF Telecoms — S — S

Pilot Cables — P — P

Link Box

PME Earth

Pole Mounted Transformer

Site Location

Line/Area

Underground Earth

Ground Mounted Transformer

Avoidance of Danger from Electricity Overhead Lines and Underground Cables

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

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

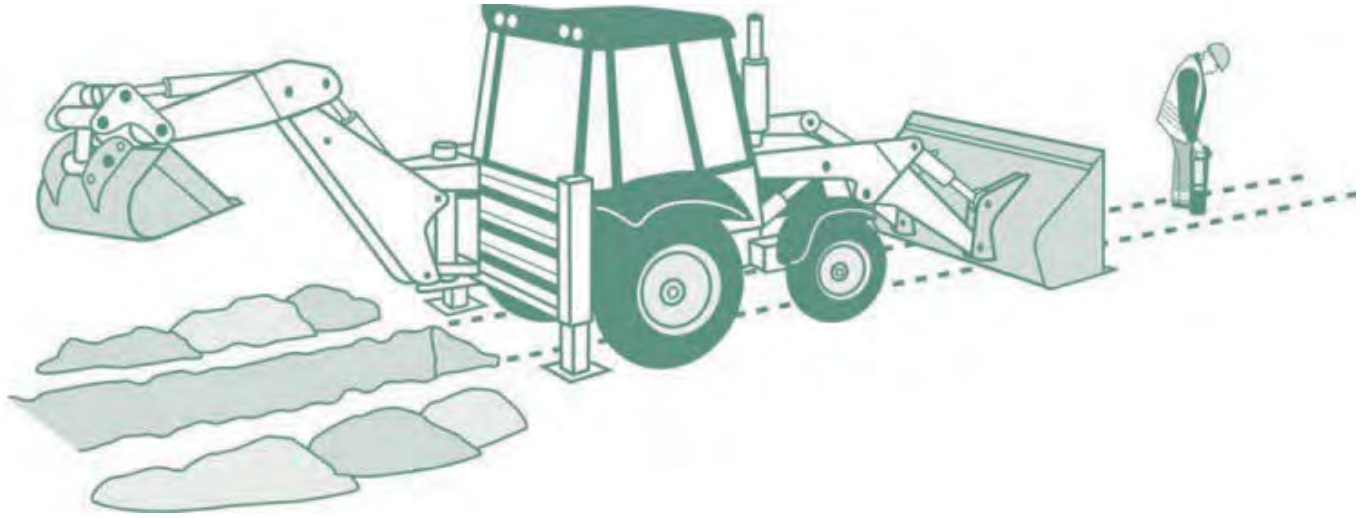
An online mapping service is available at
www.westernpower.co.uk/locationplans

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

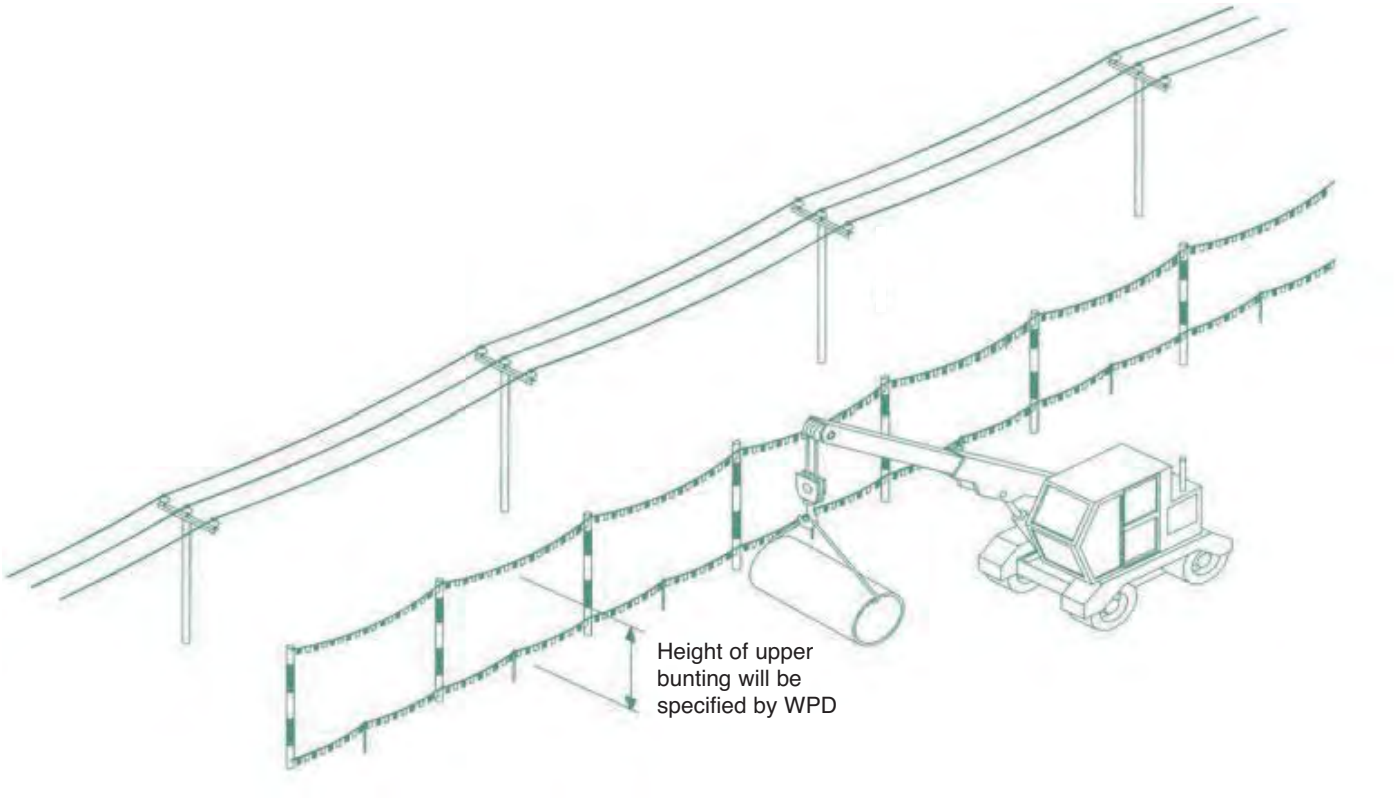
UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT TO WORK ON, OR INTERFERE WITH ANY OF OUR OVERHEAD LINE EQUIPMENT OR SERVICE WIRES.

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.

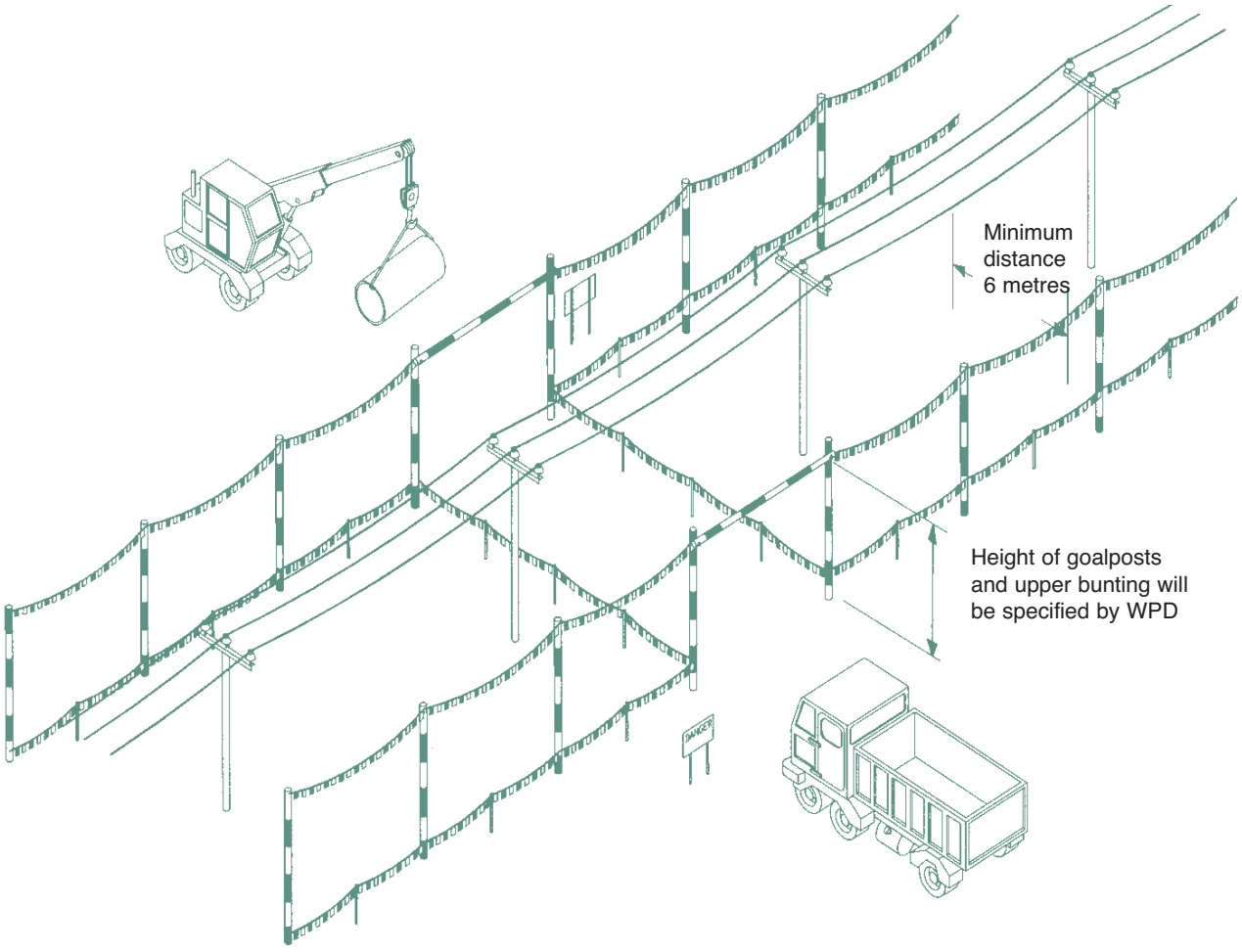
- Always assume that our overhead lines are live unless we have informed you otherwise in writing.
- We will be able to advise you about the type and voltage of the overhead lines in question and provide you with information about the clearances that you must adhere to during your work. Please ring our 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.



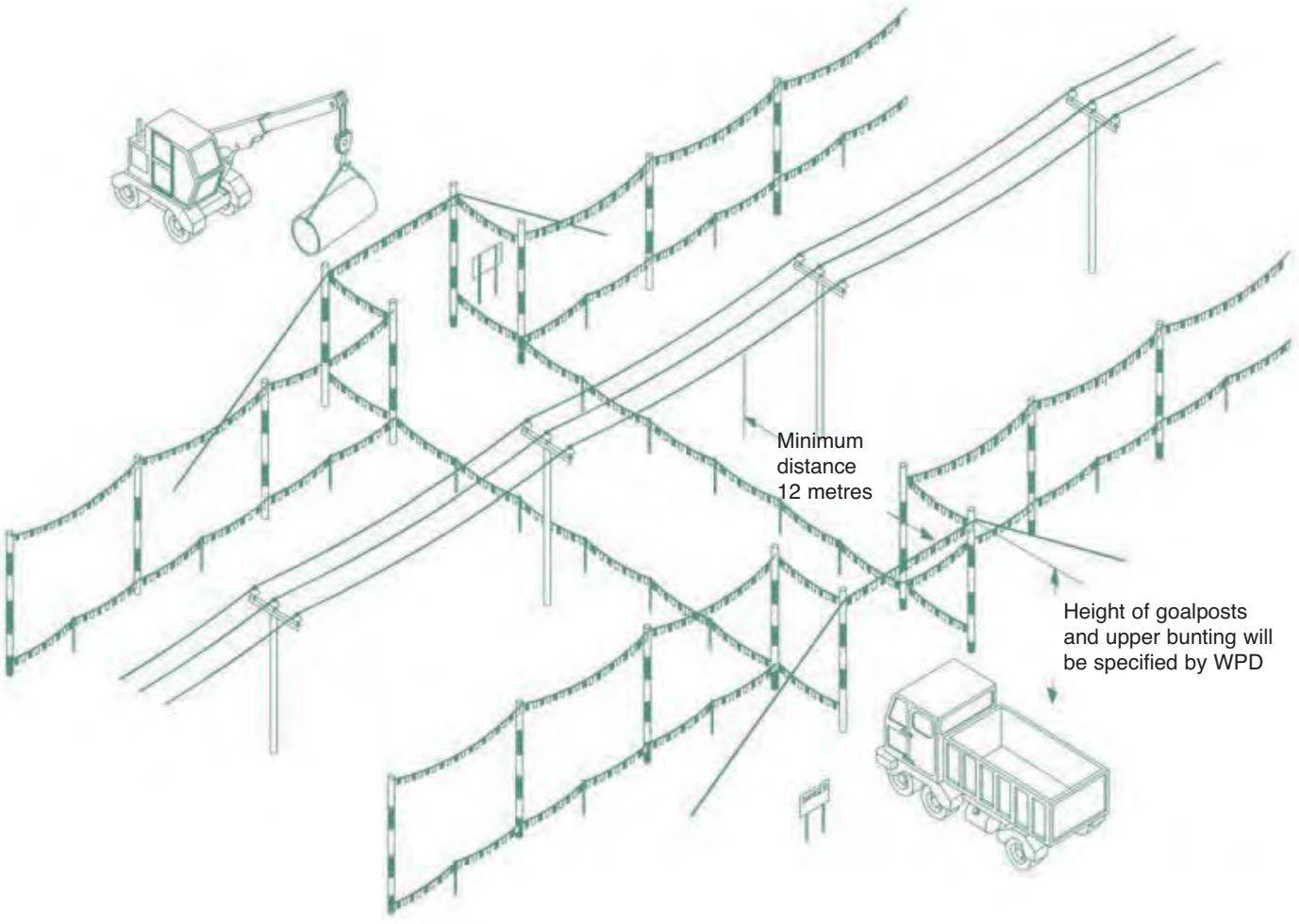
  - We are able to advise you on the height of the barriers and any additional clearances necessary if you are using large plant on your site.
  - Any bunting, ropes and lanyards used should be made from an insulating material.
  - These barriers should be erected parallel to the overhead line at a minimum 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 or 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 General Enquiries	0845 724 0240
South Wales General Enquiries	0845 601 3341
South West General Enquiries	0845 601 2989

FINALLY…

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

NOTES

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

This booklet is issued by the Safety Team

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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

Printed on material sourced from sustainable forests and TCF. Printed using vegetable/mineral oil based environmentally friendly inks.

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

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

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

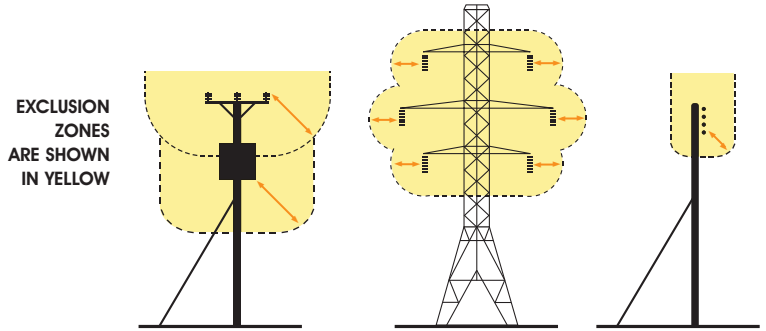
- Overhead lines have the advantage that they can easily be seen, so before you set up your vehicle or plant always:

STOP AND LOOK UP!

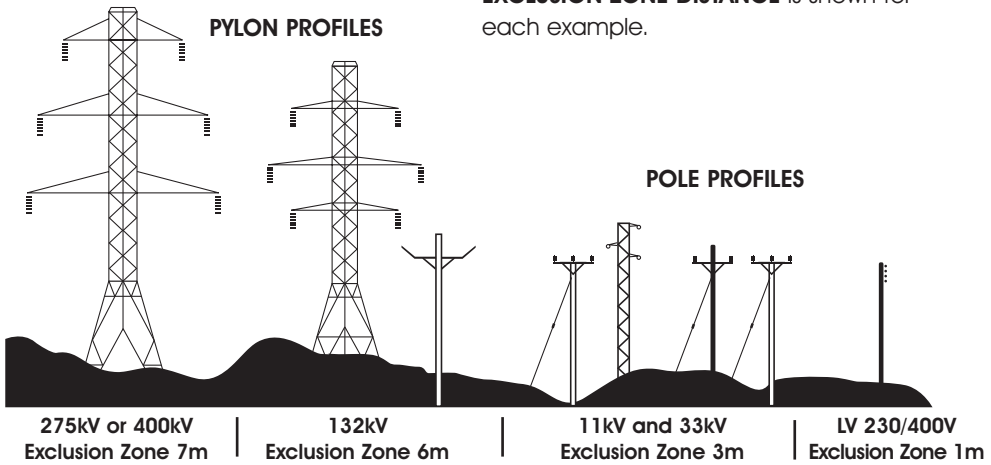
- If you are working at night, or in conditions of poor visibility, you should use spotlights or a torch to carefully check that there are no overhead lines within your vehicle's reach.
- Always assume that our lines are live unless we have informed you otherwise in writing.
- If you are in any doubt 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.

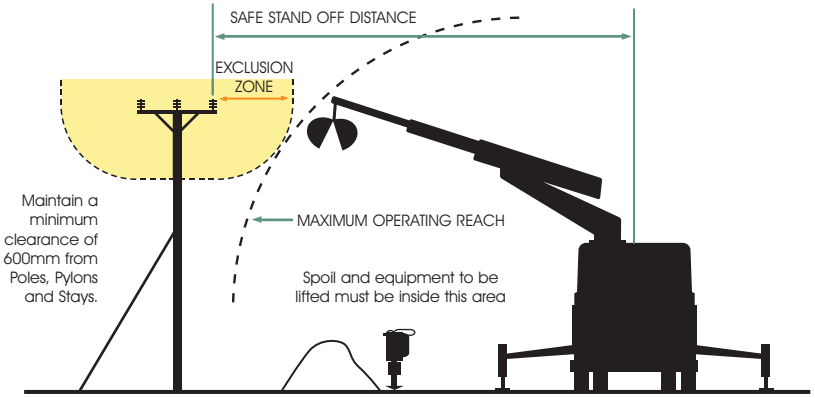


- Please note that these are absolute minimum distances that should under no circumstances be infringed. ***If you do – it could prove fatal.***

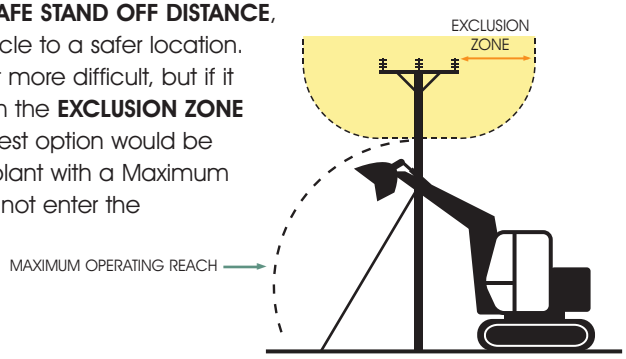
- As well as staying away from the lines or equipment, you should also stay at least 600mm away from any part of poles, pylons and stay wires.
- Please remember that is for guidance only, and if you are in any doubt, please call us for advice before setting up your plant or starting work.

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.

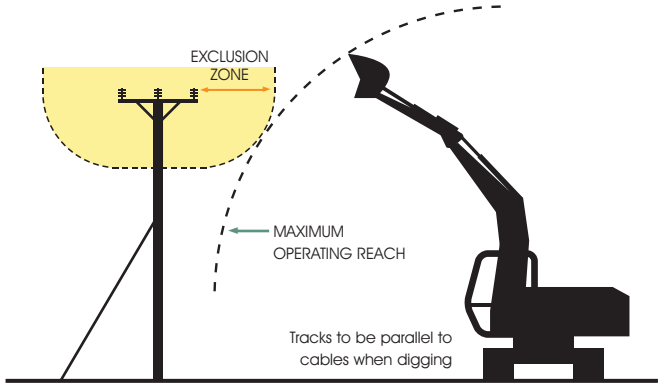


- If you position your vehicle outside of the **SAFE STAND OFF DISTANCE**, there is no risk of accidental contact with the lines and no danger of electricity jumping from the line to your vehicle.
- If you cannot achieve a **SAFE STAND OFF DISTANCE**, consider moving your vehicle to a safer location. 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* 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 - Electricty 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

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

Issue 8, 2016. Printed on material sourced from sustainable forests and TCF.
Printed using vegetable/mineral oil based environmentally friendly inks.

CORNERSTONE PROJECTS LTD

THIRD PARTY SEARCHES

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Enquiry Confirmation

LSBUD Ref: 16071163

Date of enquiry: 23/07/2019
Time of enquiry: 14:42

Enquirer

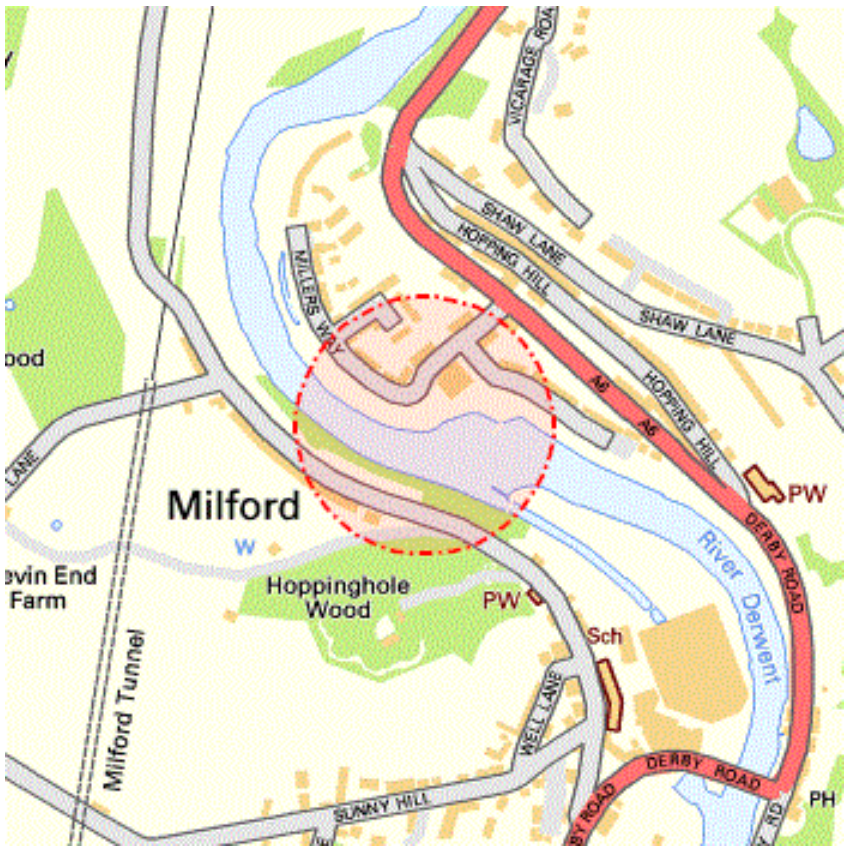
Name	Mr Duncan Phillips	Phone	01516325142
Company	Cornerstone Projects	Mobile	Not Supplied
Address	91 Market Street Hoylake Merseyside CH47 5AA		
Email	searches@cornerstoneprojects.co.uk		

Enquiry Details

Scheme/Reference	10026		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	31/08/2019	Work type	Commercial/industrial
End date	31/08/2019	Site size	215 metres diameter
Searched location	XY= 434833, 345417	Work type buffer*	25 metres
Confirmed location	434832 345418		
Site Contact Name	Not Supplied	Site Phone No	Not Supplied
Description of Works	Not Supplied		

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

Site Map



Enquiry Confirmation

LSBUD Ref: 16071163

Date of enquiry: 23/07/2019
Time of enquiry: 14:42

Asset Owners

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

Notes. Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.

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

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

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

Below are three lists of asset owners:

1. LSBUD Members who have assets registered within your search area. ("Affected")
   a. These LSBUD Members will either:
      i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.

      ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.

2. LSBUD Members who do not have assets registered within your search area. ("Not Affected")

3. Non LSBUD Members who may have assets within your search area. Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

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

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

Enquiry Confirmation

LSBUD Ref: 16071163

Date of enquiry: 23/07/2019
Time of enquiry: 14:42

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 and this list may vary for new enquiries in the same area.

List of not affected LSBUD members		
AWE Pipeline	Balfour Beatty Investments Limited	BOC Limited (A Member of the Linde Group)
BP Exploration Operating Company Limited	BPA	Carrington Gas Pipeline
CATS Pipeline c/o Wood Group PSN	Cemex	Centrica Storage Ltd
CLH Pipeline System Ltd	Concept Solutions People Ltd	ConocoPhillips (UK) Ltd
DIO (MOD Abandoned Pipelines)	Drax Group	E.ON UK CHP Limited
EirGrid	Electricity North West Limited	ENI & Himor c/o Penspen Ltd
EnQuest NNS Limited	EP Langage Limited	ESP Utilities Group
ESSAR	Esso Petroleum Company Limited	Fulcrum Pipelines Limited
Gamma	Gateshead Energy Company	Gigaclear Ltd
Gtt	Hafren Dyfrdwy	Heathrow Airport LTD
Humbly Grove Energy	IGas Energy	INEOS FPS Pipelines
INEOS Manufacturing (Scotland and TSEP)	INOVYN Enterprises Limited	Intergen (Coryton Energy or Spalding Energy)
Mainline Pipelines Limited	Manchester Jetline Limited	Manx Cable Company
Marchwood Power Ltd (Gas Pipeline)	Melbourn Solar Limited	Murphy Utility Assets
National Grid Gas (Above 7 bar), National Grid Gas Distribution Limited (Above 2 bar) and National Grid Electricity Transmission	Northumbrian Water Group	NPower CHP Pipelines
Oikos Storage Limited	Ørsted	Perenco UK Limited (Purbeck Southampton Pipeline)
Perenco UK Limited (Purbeck Southampton Pipeline)	Petroineos	Phillips 66
Premier Transmission Ltd (SNIP)	Prysmian Cables & Systems Ltd (c/o Western Link)	Redundant Pipelines - LPDA
RWE - Great Yarmouth Pipeline (Bacton to Great Yarmouth Power Station)	RWEnpower (Little Barford and South Haven)	SABIC UK Petrochemicals
Scottish Power Generation	Seabank Power Ltd	Severn Trent (Chester area only)
SGN	Shell (St Fergus to Mossmorran)	Shell Pipelines
SSE (Peterhead Power Station)	Tata Communications (c/o JSM Construction Ltd)	Total (Colnbrook & Colwick Pipelines)
Total Finaline Pipelines	Transmission Capital	UK Power Networks
Uniper UK Ltd	Vattenfall	Veolia ES SELCHP Limited
Wales and West Utilities	Westminster City Council	Zayo Group UK Ltd c/o JSM Group Ltd

QUALITY CHECK

Checked and issued by:	
Name:	
Date:	
Plans are valid until:	
Unless noted otherwise plans are valid for three months from date of issue - please note the date shown above is approximate. After the above date please contact us to arrange a refreshed utility search pack at www.cornerstoneprojects.co.uk	

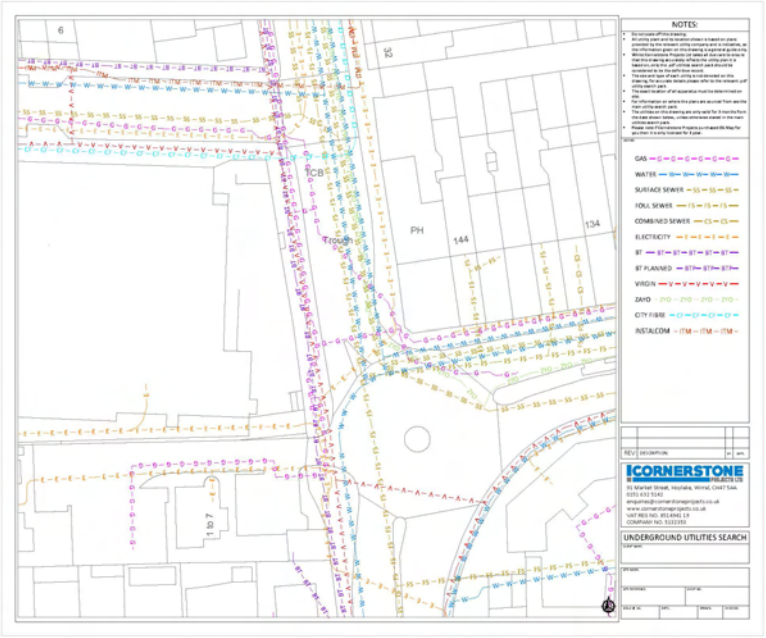
Cornerstone Projects Ltd is a UK wide desktop underground utility search expert:

- Market leading pricing and response times
- Comprehensive utility database
- 14 Years plus experience
- Over 45,000 completed searches
- Over 2000 registered businesses
- Searches to PAS 128 survey level D
- ISO9001 certified company

91 Market Street Hoylake Wirral CH47 5AA
Tel. 0151 632 5142
enquiries@cornerstoneprojects.co.uk
www.cornerstoneprojects.co.uk
VAT Reg. No. 851 4941 19
Company No. 5132353

Want an easier way to interpret your utility search results?

Searching through your utility results can be time consuming and complex. Here at Cornerstone, we have the ability to produce one consolidated drawing which will allow you to view all your results on a single plan. Moreover, as the utilities are drawn in separate layers, you will also be able to turn different layers on and off to allow you to focus on individual utilities.



We can produce your consolidated drawing in .dwg (CAD) format from £60.00 + VAT.
We can also convert this into a Smart .PDF starting from £70.00 + VAT.

Call us on 0151 632 5142 or **email** enquiries@cornerstoneprojects.co.uk for a quote for this site. Please provide your site name/reference.

Need help with administering road opening licences, capacity checks or gaining quotes from the utility companies for connecting or diverting services?

Section 50 /Road Opening Licence – We will complete the application required to obtain the Section 50 and/or road opening licence on your behalf – our fee is from as little as £150.00+VAT plus Council charges.

Capacity check – We will complete an application to determine whether a utility has sufficient capacity for your proposed development and if not, what budget costs would be required to reinforce the network – our fee is from as little as £150.00+VAT per utility plus disbursements.

New Connections/Disconnections – We will complete the administration required to obtain quotes from the utilities to connect or disconnect from as little as £150.00+VAT per utility plus disbursements.

Diversions – We will complete the application required to obtain costs and suggested diversions required for your intended works from as little as £150.00+VAT per utility plus disbursements.

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Appendix C – Designers Hazard Elimination and Management Register

F020 - DESIGN HAZARD ELIMINATION AND MANAGEMENT REGISTER

Form: F020 (0)
Issue: 0

Project Name :	**Milford River Bank Repair and Reinforcement**
Project Number :	**10026**
Client :	**Amber Valley Borough Council**
Principal Designer:	**ACS**
Site Area :	**Off Millers Way, Milford**
Design Drawing Ref No's :	10026/0104 and 0105

Document Ref No :	10026/050 Rev A
Date Commenced :	16.07.2018
Date Completed :	19.02.2019
Completed By :	R Draper
Reviewed & Approved by :	
Approved Date:	

Likelihood	Very unlikely	Unlikely	Possible	Likely	Very likely
	1	2	3	4	5
Severity	1	2	3	4	5
	Minor/trivial injury	Single injury up to 3 days	Over 3 days	Major, RIDDOR injury	Fatality

STEP 1						STEP 2					STEP 3	STEP 4				STEP 5		
Item	Considered by (Name)	Date	Designed Element or Activity	Hazard Type	Hazard Description	Parties Affected	Possible consequences for the affected parties	Initial RA			Measures to eliminate, reduce or manage the risk	Revised RA			Residual Risk	Communicate risk to affected parties? If so by what means?		
								S	L	R		S	L	R		Pre-con Info	H&S File	Drawings or other means
1	R Draper	16.07.2018	Site set up including erection of site fencing, compund site strip and welfare etc	Deep water	Working adjacent to deep water (river Derwent)	PC	Drowning	4	3	H	PC to use suitable PPE (life jackets etc)	4	1	L	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
2	R Draper	16.07.2018	as above	Overhead utility apparatus	Overhead utilities in the area	PC	Electrocution, telecom etc	4	2	M	Design investigations revealed none in the area but PC to confirm fully	4	1	L	PC to use suitable method of locating etc	NO	YES	If any found
3	R Draper	16.07.2018	as above	Moving plant	Use of small excavators	PC	Crushing, trapping etc	3	2	M	PC to use qualified banksman to control	4	1	L	PC to control	NO	NO	
4	R Draper	16.07.2018	as above	Slips/trips	Slips or trips on surface of river bank when wet	PC	Injury from falls	3	3	M	PC to use suitable PPE (boots etc)	3	1	L	PC to control	YES	NO	
5	R Draper	16.07.2018	as above	Heavy loads	Lifting of fencing, welfare unit etc from delivery vehicle into compound	PC, P	Injury from handling of heavy load	4	3	H	PC to devise safe method of lifting from delivery vehilce into place.	4	2	M	PC to control	NO	NO	
6	R Draper	16.07.2018	as above	Fire	Possible destruction of welfare should itcatch fire.	PC, P	Effects of fumes etc, fire etc	3	2	M	PC to prepare fire risk assessment and plan response to incidents of fire	3	1	L	PC to control	YES	NO	
7	R Draper	17.07.2018	Site strip including removal of dead trees, strimming of vegetaion stripping of topsoil from river bank	Deep water	Working adjacent to deep water (river Derwent)	PC	Drowning	4	3	H	PC to use suitable PPE (life jackets, safety ropes etc)	4	1	L	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
8	R Draper	17.07.2018	as above	Ecological	Effects upon existing wildlife resident in site strip area	PC	Ecological damage	4	3	H	Eco survey done March 2017 found no evidence of amphibians, bats, water voles, otters or badgers present, however PC to use qualified ecologist to inspect site prior to work commencing and suspend if wildlife found	4	2	M	PC to control	YES	YES	Eco survey already done but needs another prior to work commencing
9	R Draper	17.07.2018	as above	Ecological	Invasive species	PC	Spreading of invasive species	3	1	L	Eco survey done March 2017 found no invsaive species present however PC to use qualified ecologist to inspect site prior to work commencing and suspend if wildlife found	3	1	L	PC to control	YES	YES	Eco survey already done but needs another prior to work commencing
10	R Draper	17.07.2018	as above	Underground utility apparatus	Underground utilities in the area	PC	Electrocution, gas, telecom etc	4	2	M	Design investigations revealed none in the area but PC to use CAT and careful excavation	4	1	L	PC to use suitable method of locating etc	NO	YES	If any found
11	R Draper	17.07.2018	as above	Ejection (Missiles)	Ejection of debris during strimming operations	PC, P	Injury from flying objects	4	3	H	PC to use suitable PPE (eye protection, clothing) and prevent public wlaking past the site during strimming	4	1	L	PC to control	NO	NO	
12	R Draper	17.07.2018	as above	Pollution from spillages	Potential fuel/oil spillages from equipment into river	PC	Polution of watercourse	4	3	H	PC to ensure machinery is free of defects that could result in spillages. May require use of plant nappies	4	1	L	PC to control	NO	NO	
13	R Draper	18.07.2018	Construction of proposed river bank reinforcement (Rock roll matresses)	Deep water	Falling off river bank into deep fast flowing water (river)	PC	Drowning	4	3	H	PC to use suitable PPE (life jackets, safety ropes etc)	4	1	L	PC to control	YES	YES	
14	R Draper	18.07.2018	as above	Trapping	When installing rock roll mattresses	PC	Injury from trapping in mattresses	4	3	H	PC to devise safe method of lifting mattresses into place.	4	1	L	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
15	R Draper	18.07.2018	as above	Heavy loads	Lifting of mattresses into place	PC	Injury from handling of heavy load	4	3	H	PC to devise safe method of lifting mattresses into place.	4	2	M	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
16	R Draper	18.07.2018	as above	Suspended loads	Lifting of mattresses into place	PC,	Injury from handling heavy loads in constrained site	4	3	H	PC to devise safe method of lifting mattresses into place.	4	2	M	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
17	R Draper	18.07.2018	as above	Underground utility apparatus	Underground utilities in the area	PC	Electrocution, gas, telecom etc	4	2	M	Design investigations revealed none in the area but PC to use CAT to confirm location before inserting stakes	4	1	L	PC to use suitable method of locating etc	NO	YES	If any found
18	R Draper	18.07.2018	Construction of footpath reinstatement	Hazardous substances	Working with cement	PC	Burns	4	3	H	PC to use suitable PPE etc	4	1	L	PC to control	YES	YES	YES. Risk to be highlighted on detailed design drawings
19	R Draper	18.07.2018	as above	Moving plant	Use of small excavators	PC	Crushing, trapping etc	3	2	M	PC may decide to to do all excavation by hand	3	1	L	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
20	R Draper	18.07.2018	as above	Deep water	Working adjacent to water	PC	Drowning	4	2	M	PC to use suitable PPE (life jackets, safety ropes etc)	4	1	L	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings
21	R Draper	18.07.2018	as above	Heavy loads	Lifting of path edgings into place	PC	Injury from handling of heavy load	4	3	H	PC to use safe method of lifting path edgings into place.	4	2	M	PC to control	YES	NO	YES. Risk to be highlighted on detailed design drawings