

**Operation / Activity: Buried Services.**  
 Excavation or invasive works in order to lay new services or replace / repair existing services. Detection of existing underground services is necessary to avoid fracturing gas pipes, electricity cables, high pressure water pipes, fuel lines etc.

**Site / Location:**

**Persons at Risk (tick appropriate boxes)**

<b>Employee</b>	<input checked="" type="checkbox"/>	<b>Pregnant Women</b>	
<b>Visitor</b>	<input checked="" type="checkbox"/>	<b>Disabled Persons</b>	
<b>General Public</b>	<input checked="" type="checkbox"/>	<b>Lone Workers</b>	
<b>Young Persons</b>	<input type="checkbox"/>	<b>Others</b>	<input checked="" type="checkbox"/>

*GUIDE TO RATINGS:*

RISK SEVERITY	RISK LIKELIHOOD	RISK RATING
1 Negligible	1 Unlikely	1 - 6 Low
2 Minor	2 Possible	7 - 14 Medium
3 Significant	3 Quite Possible	15 - 25 High
4 Major	4 Likely	
5 Catastrophic	5 Very Likely	

**Overall Risk Rating = Low**

**Describe the hazards associated with the activity/operation.**

		Summary of Assessment Overleaf				
		Risk Rating (Before Controls)	Likelihood (L)	Severity (S)	Risk (L x S)	Risk Rating
<b>H1</b>	Damage or severed services pipes resulting in flood, gas escape. (Serious injury from fire / explosion. Asphyxiation from gas escape. Drowning from flood ingress).	High	2	3	<b>6</b>	<b>Low</b>
<b>H2</b>	Damaged sewer pipework (toxic / flammable gases). (Serious injury or fatalities from fire / explosion. Infection from toxic / zoonotic agents). Secondary risks from contact with other services e.g. electricity.	High	2	3	<b>6</b>	<b>Low</b>
<b>H3</b>	Damage to electrical cables. (Internal and external burns and fatalities from contact with live electricity).	High	1	5	<b>5</b>	<b>Low</b>

<b>Assessed By:</b>	<b>Date:</b>
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<b>Monitored By:</b>	<b>Date:</b>
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Hazard	Risk Control Measures	Residual Risk		
		Likelihood	Severity	Risk
<b>General</b>	<p>Plans must be obtained from the cable / piper owners, service owners, local authorities or private landowners prior to commencing work, however, it should NOT be assumed that such plans are accurate.</p> <p>All operatives involved in excavation work will be instructed in safe digging practice, including hand digging of trial holes to confirm the location of services.</p> <p>All services must be assumed to be LIVE until proved otherwise.</p> <p>Adequate precautions against the accidental collapse of adjacent structures must be in place</p> <p>Spoil heaps must be removed at regular intervals to reduce trip and environmental hazards and must be positioned at least one metre from the edge of the excavation.</p> <p>Procedures must be in place to prevent falls of persons and materials by using suitable access equipment, working platforms and / or physical barriers.</p> <p>No excavation is to be left unattended (for whatever reason) without being suitably guarded to prevent accidental contact.</p> <p>Ensure that the correct plant &amp; equipment is provided for the task which will be inspected in line with the manufacturer's recommendations.</p> <p>PPE as listed below must be worn at all times.</p> <ul style="list-style-type: none"> <li>• Protective footwear</li> <li>• Hard Hat</li> <li>• Gloves</li> <li>• Hi Vis Vest/Jacket.</li> </ul> <p>Operatives must not wear loose clothing.</p> <p>HSE and other guidance</p> <ul style="list-style-type: none"> <li>• HS(G)47 ' Avoiding danger from underground services '</li> <li>• National Joint Utilities Group Publications No 3, 4 &amp; 8.</li> <li>• The Health and Safety at Work Act 1974 (HASWA).</li> <li>• The Management of Health and Safety at Work Regulations 1999.</li> <li>• The Provision and Use of Work Equipment Regulations 1998.</li> <li>• The Electricity at Work Regulations 1989.</li> <li>• The Gas Safety (Management) Regulations 1996.</li> <li>• The confined spaces Regulations 1997.</li> </ul>			

<p><b>H1</b></p>	<p>Cable and metal detection equipment, duly calibrated and in good working order, must be used to locate services.          Located services must then be identified i.e. gas, electricity etc. and clearly indicated by the use of waterproof paint on roads, or wooden pegs on open ground.          Before commencing to dig, the safe digging distance from existing pipe work must be confirmed with the relevant service owner, especially in the case of gas.          Obtain plans of the gas pipes from the pipeline operator.          If pipes operating at pressures of 2 bar and above are indicated, contact the pipeline operator before work begins.          Adopt safe digging practices. For example, mechanical excavators should not be used within 500mm of a gas pipe and excavations should be done using hand tools.          In the event of a gas strike cease work, evacuate and cordon off the site / area by erection of physical barriers and warning signs and contact the relevant Gas company IMMEDIATELY. Post a watch at all access points to ensure that no member of the public enters the area.          All flames must be extinguished so no ignition of gas occurs.</p>	<p>2</p>	<p>3</p>	<p><b>6</b></p>
<p><b>H2</b></p>	<p>Cable and metal detection equipment duly calibrated and in good working order, must be used to locate services.          All operatives involved in excavation work will be instructed in safe digging practice, including hand digging of trial holes to confirm the location of services.          Ensure emergency procedures have been planned</p>	<p>2</p>	<p>3</p>	<p><b>6</b></p>

<b>H3</b>	<p>Contact the service owner to enquire whether the service can be isolated. More so than other service types there is often a need to disconnect the supply and 'make dead' any service before work begins.</p> <p>Cable and metal detection equipment, duly calibrated and in good working order, must be used to locate services</p> <p>Located services must then be identified i.e. gas, electricity etc. and clearly indicated by the use of waterproof paint on roads, or wooden pegs on open ground.</p> <p>Machine operators must be instructed that digging within 0.5 metres of an electric cable is prohibited. Safe digging practice must be practised when hand digging in the proximity of an electrical service. Spades / shovels must be used instead of picks or power tools, and horizontal digging techniques must be used to locate the exact position of a cable to avoid fracturing it.</p> <p>All services must be assumed to be LIVE until proved otherwise.</p> <p>Do not use exposed services as hand holds or foot supports.</p> <p>Use insulated tools, such as shovels with non-metallic shafts, to stop electricity travelling up them in the event of striking an electrical service (ask your supervisor about these kinds of tools if in doubt).</p>	1	5	<b>5</b>
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<b>Personnel Informed of Risk Assessment Content, Received and Understood</b>		
Name	Signature	Date