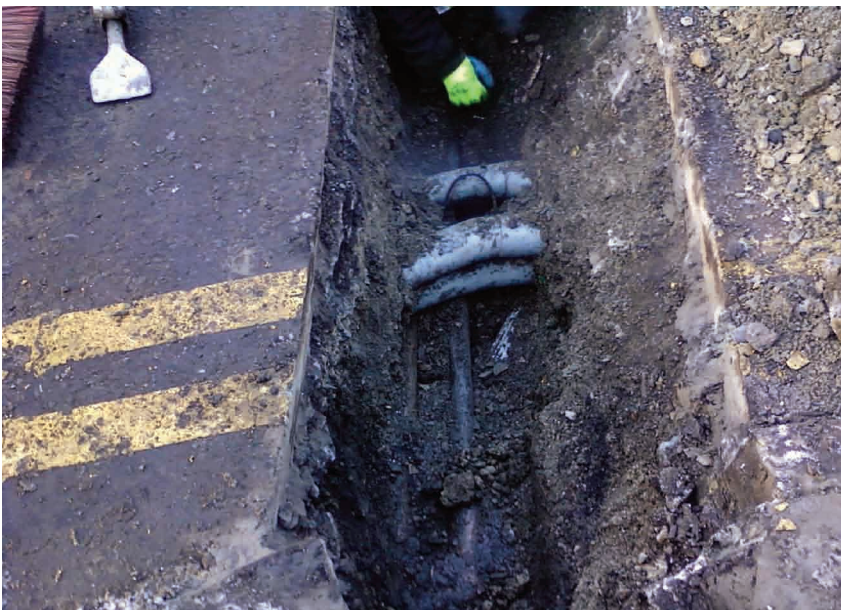




**SP ENERGY  
NETWORKS**

## Case Study: Low Voltage Mains Cable found damaged



The above image demonstrates latent cable damage.

The damage to the Low voltage mains cable was not reported to ScottishPower when the contractor installed the ducting on top of electricity cables.

Customers in the area were experiencing loss of supplies to their properties and ScottishPower engineers located the loss of supply problem to the above location. As the cable damage was not reported to ScottishPower the situation resulted in damage to the newly installed ducting, a situation that could have been avoided if the cable strike had been reported when it happened, as they installed the ducting on top of ScottishPower apparatus.

Please note: separation between underground utilities is important to avoid damage to other utilities apparatus. Reporting cable strikes at the time of occurrence will avoid inconvenience to customers and reduce costs to third parties.

Prior to any excavations taking place cable records should always be consulted.

Always assume cables are present and live until proved otherwise.

**All Cable Record enquiries should be addressed to:**

**SP Energy Networks (North)**

Data Management  
(Correspondence)  
55 Fullerton Drive  
Cambuslang  
Glasgow G32 8FD

t: 0141 567 4155 or 0141 567 4455

e: Requestforplansscotland  
@scottishpower.com

**SP Energy Networks (South)**

Data Management  
(Correspondence)  
North Cheshire Trading Estate  
Prenon Way  
Prenon  
Birkenhead CH43 3ET

t: 0151 609 2373

e: Requestforplansmanweb  
@manweb.co.uk

**All Cable Deviation Requests /Service Alterations enquiries should be addressed to:**

**SP Energy Networks (North)**

Customer Connections  
55 Fullerton Drive  
Cambuslang  
Glasgow G32 8FA

t: 0141 614 9997

**SP Energy Networks (South)**

Customer Connections  
PO Box 290  
Lister Drive  
Liverpool L13 7HJ

t: 0151 221 2110

## Emergency contact

In an emergency, or if there is any damage to SP Energy Networks cables or plant, call the appropriate number:

**SP Energy Networks**

**North**

*Central & Southern  
Scotland*

**0845 272 7999**

**SP Energy**

**Networks**

**South**

*Cheshire,  
Merseyside  
& North Wales*

**0845 272 2424**



## Case Study: Low Voltage Cable Strike With Excavator



The above image clearly demonstrates the impact on the underground ScottishPower network, when an excavator came into contact with a low voltage cable (240 (4) Waveform)

The contractor's task was to carry out excavations to install underground drainage apparatus, ScottishPower cable records and cable locator on site. Contractors on site had installed the cables previously and were clearly aware of the location of the cable route. During the excavations to progress the drainage works the high voltage cable was located, however an excavator came into contact with the low voltage cable, despite a ScottishPower sub-station being situated in close vicinity to the works taking place. Fortunately on this occasion no injuries were sustained to the operatives. Excavations require to be planned professionally to avoid cable strikes/serious injuries to operatives.

### **Adherence To HSG47 Strongly Recommended**

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## Case Study: Low voltage service cable repair



The above image highlights a repair to a ScottishPower low voltage service cable.

The cable was evident on the contractor's cable records; however the operatives still managed to strike the cable with a mini-excavator with the potential to cause injuries to himself and his colleagues. Prior to main excavations taking place, trial holes should always be carried out to locate the line and depth of all utilities throughout the project. Before the use of a mechanical excavator takes place a risk assessment should always be carried out to confirm that it is safe to progress the works with the mini excavator/JCB/track machine etc.

**Adherence to HSG47 strongly recommended.**

**Report any damage to the ScottishPower Network on these numbers:**

**0845 272 7999(North) 0845 272 2424(South)**

**All Cable Record enquiries should be addressed to:**

**SP Energy Networks (North)**

Data Management  
(Correspondence)  
55 Fullerton Drive  
Cambuslang  
Glasgow G32 8FD

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**0845 272 2424**



## Case Study: Low Voltage Cable Strike With Mini Excavator



**The above image highlights the consequences of utilising a mini excavator in close proximity to a low voltage cable.**

The low voltage cable strike occurred when the operatives were carrying out excavations to install kerbing in a grassy area. In this case the cable strike was entirely preventable, if the contractor/operatives had adhered to HSG47 the cable strike would not have occurred. Engaging an excavator prior to hand excavating / locating underground services is a clear case of non adherence to HSG47 with the real possibility of serious injuries to personnel.

To avoid cable strikes to the ScottishPower underground network seek advice prior to excavations commencing.

**For Advice Regarding Safer Excavations/ HSG47  
Visit - [www.spenergynetworks.com/safety/saferexcavations](http://www.spenergynetworks.com/safety/saferexcavations)**

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## Case Study: Low Voltage Cable Damaged At Tee Joint



The above image highlights a low voltage cable strike to ScottishPower's underground electrical network.

The above image highlights a low voltage cable strike to ScottishPower's underground electrical network. The service cable, 0.225(2) was damaged at the lead tee joint, this type of cable is an older type cable wrapped in taped armours. The task for the operatives at this location was to install street-lighting ducting for the local authority. The cable strike was not reported to ScottishPower at the time of the incident occurring, for some reason the operatives on site presumed that the cable was out of use, the cable was in fact live. When a cable strike has taken place the correct course of action is to evacuate the excavation immediately, secure/protect the area and report the incident to the Network Operator.

Prior to any excavations taking place cable records should always be consulted.

Always assume cables are present and live until proved otherwise.

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### SP Energy Networks (North)

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### SP Energy Networks South

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0845 272 2424



## Case Study: Cable Damage To Low Voltage Main Cable With Moling Appliance



The above image highlights a situation when a moling device came into contact with a low voltage (.3(4) PILC) main cable, the operatives task was to install an underground pipe at the locus. During the works the moling device inadvertently came into contact with the cable causing a loss of electricity supplies to customers. This design of cable is an older type cable called PILC, (Paper Insulated, Lead Covered) looking at the cable it can clearly be seen that the outer skin of the cable is covered in taped armour, this type of cable was widely used on the underground electricity network. SP Energy Networks cable records were supplied to the operatives by the contractor and were accurate, cable locator on site, depth of cable 600mm. The investigation into this incident found that contact with the electricity cable was avoidable if adherence to HSG47 had been implemented.

**Setting A Moling Device In the Direction Of Underground Electricity Cables Is Not Recommended This Type Of Action Could lead to Serious Injuries**

**All Cable Record enquiries should be addressed to:**

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