A GUIDE TO ELECTRICAL SAFETY IN THE HOME

USEFUL INFORMATION FOR HOME OWNERS
introduction

This leaflet gives some general advice on electricity and electrical appliances in your home. Please contact a qualified electrician if you are unsure as to how to carry out any electrical works.

Fuse Box

The electricity supply into your house is controlled by a main fuse box, usually found in your hall or in a cupboard. This fuse box, and your electricity meter, is owned by the Electricity Company. It’s a legal requirement that your meter must be read at least once a year and changed every 10 years. Apart from this fuse box and meter you are responsible for all other electrical appliances in your home.

Your own fuse box (which is also known as the consumer unit) protects the wiring in your house. The unit may contain wire or cartridge fuses, or possibly circuit breakers if it is less than fifteen years old.

There will be one fuse or circuit breaker for every ‘ring main’ and ‘lighting circuit’ in the house. The bigger the house the more circuits. Not all the fuses in the consumer unit may be in use.

If a fuse or circuit breaker is broken, which commonly happens when a light bulb goes, you can simply flip the individual switch in the fuse box back on. However, if you think a circuit breaker or fuse has blown you should turn the fuse box off by using the main OFF switch before you attempt to replace any parts.

If your fuse box contains cartridge or wire fuses, you should keep some spare cartridges or fuse wire. You can get these from a DIY store.
A cartridge fuse is similar to a fuse in a plug, but usually much bigger. Fuses will normally be 5amp for lighting circuits, 20/30 amp for ring mains and 30/45 amp for cookers and showers. The fuses/circuit breakers in the box should be labelled with a description of what they are and which part of the house they serve e.g. lights, bedrooms etc. They are there for your protection. Always use the correct size of fuse for the job. If you are unsure you should contact an electrician.

**Ring Mains and Lighting Circuits**

‘Ring mains’ connect a number of 13 amp sockets to the fuse box in a loop of cable. Lighting circuits are similar, but with thinner cable. Cooker control units, immersion heaters and showers must have their own fuse/circuit breaker and be connected to their own cable, not a circuit. This is because cookers and showers consume a large amount of power. If your fuses/circuit breakers are not labelled, take the time to find out which ones serve which parts of the house. You can check this quite easily by following the steps below.

**Identifying Lights**

1. Switch the lights on in every room.
2. Switch everything off at the fuse box then take out one of the fuses or switch off a circuit breaker.
3. Switch the fuse box back on again and check which lights are off.
4. You will then know that the fuse or circuit breaker that you removed controls the lights that are off.
Identifying Sockets
You can repeat this process to work out which ring main controls which sockets by using low power items plugged in each room, such as a radio.

Appliances
All appliances that plug into a wall socket should have a fuse in the plug. In some exceptional circumstances the fuse may be in the appliance itself. The fuse should be the lowest possible that will allow the appliance to work and should never be more than a 13amp. If you need to change a fuse, follow the manufacturer’s instructions. If any of your appliances or hanging lights have fabric covered cables this could be a fire hazard. Fabric covered cables are very old and you should change the cable.

Faults
If an appliance stops working, switch it off, unplug it from the wall and try another appliance in the socket. If the second appliance works then this means the original one is faulty or the fuse has blown. You can easily open the plug of an appliance when it is disconnected from the socket to check the plug fuse and cable connections, try replacing the fuse and see if this works. If the second appliance doesn’t work in the socket there may be something wrong with the ring main. Try plugging the appliance into a different socket on the same ring. If the second socket also doesn’t work then you should check the fuse box. If you are unsure of what to do or still can’t solve the problem call an electrician. If an appliance shows signs of overheating or you can smell burning, switch it off and unplug it straight away. The appliance will either need repaired or replaced.
Power Cuts
Scottish Power is responsible for dealing with external electrical power emergencies in the North Lanarkshire area and can advise if you have a power cut in your street. You can call the 24-hour helpline on 0845 2727 999 for advice and to let them know if you have any special needs in the event of a power cut.

It is a good idea to keep a torch handy in case of a power cut. Keep it somewhere you can easily locate in the dark. If the power goes off in the whole house, check outside in the street to see if the power cut has affected the whole area. If there is a general power failure, switch off as many appliances as possible to help avoid them being damaged when the power comes back on. However you should leave at least one light switched on so you know when the power is back on. If the failure only affects your house then do a full set of checks on your circuits and appliances. Your main fuse may have blown, in which case you should contact an electrician or your power supplier.

Sockets
If your sockets are damaged then they should be replaced. It should not be too difficult, usually you will just need a screwdriver, however if you are unsure of what to do you should call an electrician. **Make sure the ring main is turned off before you begin this kind of job.** Try not to use extension cables or multi plug adapters. If you don’t have enough sockets throughout the house an electrician can fit more sockets and check that you’re not overloading your circuit.

Electricity Bills
Your electricity bills should show two readings, the last one and the present one. If the reading is followed by the letter E, it’s an estimate. Check the estimate against your meter and tell your supplier if it’s not within 10 units. If you get a bill you cannot pay, talk to your supplier, they may be able to find ways to help you spread the cost.
Storage Heaters

If your central heating is electric it’s probably provided by storage heaters. These heaters take power overnight, store it as heat and then release the stored heat during the day. They should be connected to a two-tariff electricity meter which records separately the electricity used during the off-peak period so that it can be billed at a lower rate, and be used in conjunction with a special electricity tariff such as Economy 7 that provides cheap tariff at off peak times, normally at night. Storage heaters use a lot of power so they should be on a completely different wiring circuit from the rest of your power and the meter should have its own fuse box.

Wiring In Your Home

The national standard for electrical safety is BS 7671 (known as the IEE Wiring Regulations) and is published by the Institution of Engineering and Technology (IET). It is advisable to get the electrics in your home inspected and tested at least every ten years to make sure they have not deteriorated and become unsafe (if they have been checked before a notice will usually be fixed on or near the fuse board recommending the next inspection date), or if you are considering buying a property it would be wise to invest in an inspection before making your final decision. Electrical surveys are referred to as a Periodic Inspection.

Periodic Inspection Report

A Periodic Inspection is an electrical survey on the condition of the existing electrics to identify any signs of damage, wear and tear or ageing components. This inspection should only be undertaken by an approved electrician who is registered with a Certification Scheme Provider. In Scotland, the scheme is currently operated independently by Electrical Contractors Association of Scotland (SELECT) and the National Inspection Council for Electrical Installation Contracting (NICEIC). The cost of the inspection can vary and will depend on the number of circuits to be tested.

The Electrician will check the consumer unit or fuse board, main supply, earthing, sockets, switches and light fittings to make sure the cables supplying them are installed properly and are suitable for the intended purpose and continued use, and will identify:
• if any electrical circuits or equipment is overloaded
• potential electrical shock risks and fire hazards
• defective DIY electrical work
• lack of earthing or bonding

Cables that are concealed in walls under floors or in conduit or trunking however are not inspected, as this would not be practical.

The electrician will provide a schedule of circuits and a summary of the inspection in a periodic inspection report which will state the overall condition of the electrical installation as either ‘satisfactory’, in which case no immediate remedial work is required, or ‘unsatisfactory’ which means remedial work is required to make the electrics safe to use.

If the assessment is unsatisfactory, each observation and recommendation is attributed a code (1-4) depending on the seriousness of the deficiency. Code 1 means that the electrical installation is dangerous, or potentially dangerous, to use and requires urgent attention to make it safe.

Rewiring

If your Periodic Inspection Report has been assessed as unsatisfactory, or the wiring in your home is very old and you need a rewire, follow these simple guidelines.

Obtain quotes from at least three electricians registered with a Certification Scheme Provider such as SELECT or NICEIC, as rewiring must comply with Building Regulations.

**Local authorities have the power to require the removal or alteration of work that does not comply with regulations.**

Discuss the quotation with each contractor; the lowest price may not necessarily be the best. Don’t forget to ask if there is a charge for the quotation, and discuss payment terms such as the deposit and/or stage payments before work begins.

Agree a timescale of the installation with a definite start and finish date. Don’t be afraid to ask questions – no reputable electrician will have a problem with that.
The Job

1. Make a list of the number of sockets and lighting points you would like in each room

2. If you want wires concealed and accessories flushed in, make sure the electrician clearly understands this.

3. If you plan to buy your own light fittings or accessories for the electrician to fit, check with the contractor that they are suitable

Things to Consider

Rewiring can cause major disruptions to the household as carpets and floorboards are up. You could also be without cooking facilities and hot water for some time so you should try to keep young children and pets out of the way.

To minimise disruption set some ground rules with your electrician before work begins:

- Get agreement that they will clear up after each day’s work
- Get agreement that they will screw down all floorboards raised after completion
- Get agreement that upon completion they will re-lay all carpets

If, during the course of the work, you require alterations or additions to the installation, request a fixed price for these additional works. Finally, check with your electrician if Scottish Power requires to disconnect and re-connect the electrical supply as there may be additional charges for this.

When your rewire and other installations are completed, the electrician will give you an electrical installation certificate which confirms the work has been carried out, inspected and tested in accordance with the national safety standard for electrical installations. Do not give the final payment until you are completely satisfied with the work and have got your certificate.
Hiring a Contractor

PLEASE NOTE NORTH LANARKSHIRE COUNCIL DOES NOT RECOMMEND ANY TRADESPERSONS OR PROFESSIONAL SERVICES

Do

• Ask for references, quality tradesperson or professionals will be happy to supply details of happy customers.

• Ask if the tradesperson or professional is a member of a reputable trade association.

• Obtain quotations from at least 3 different contractors.

• Ask for a warranty or guarantee on the work and materials supplied and ensure you obtain any necessary certificates.

• Make sure you receive an invoice and a receipt for any work.

Don’t

• Trust companies when their literature does not contain an address.

• Employ anyone you do not trust.

• Pay cash upfront or before you are fully satisfied with the works.
Further Information

Local contractors are listed in directories including Yellow Pages www.yell.com and Thomson Local www.thomsonlocal.com. Alternatively, you can contact the following organisations, many of whom provide online search facilities to find local contractors:

- **Care and Repair** offer independent advice and assistance to help elderly and disabled homeowners repair, improve or adapt their homes so that they can live in comfort and safety in their own community.
  
  **t:** 0800 048 2882
  www.northlan.care-and-repair.org

- **SELECT** provides an online directory of electrical contractors in Scotland
  
  **t:** 0131 445 5577
  www.select.org.uk/index.php

- **NICEIC Certification Services** provide an online directory of NICEIC of registered electricians.
  
  **t:** 0870 013 0382
  www.niceic.com

- **Gas Safe Register** provides an online directory of Gas Safe registered engineers.
  
  **t:** 0800 408 5500
  www.gassaferegister.co.uk

- **Scottish Power** is responsible for dealing with external electrical power emergencies in the North Lanarkshire area and can advise if your street has a power cut.
  
  **t:** 0845 272 7999 (24-hour helpline)
  www.scottishpower.co.uk

- **The Scottish Government** provide information on Building Standards and Certification in Scotland.
  
  www.scotland.gov.uk/Topics/Built-Environment

- **National Grid Gas Emergency Helpline** If you smell gas call the free 24-hour National Grid Gas Emergency Helpline.
  
  **t:** 0800 111 999 (24-hour helpline)

- **Under One Roof** provides impartial advice on repairs and maintenance for flat owners in Scotland.
  
  **e:** info@underoneroof.scot
  www.underoneroof.scot