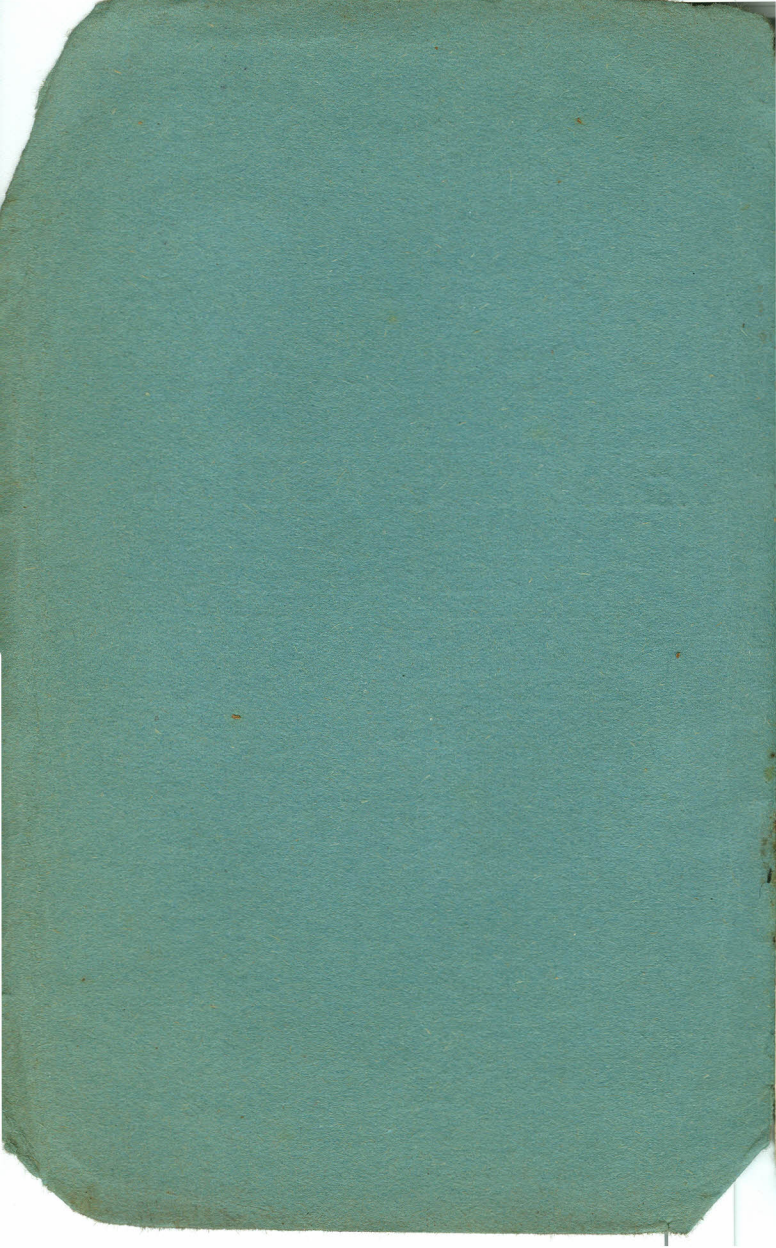


NOTES ON
ELECTRICITY
FOR
AIR RAID WARDENS

Issued by

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NOTES ON
ELECTRICITY
FOR
AIR RAID WARDENS.

Electricity is so universally used throughout the country that all A.R.P. personnel will find it useful to have some knowledge of electricity supply arrangements. They should know what precautions should be taken and what to avoid when damage to cables, installations and equipment is encountered.

**INSIDE DOMESTIC AND BUSINESS
PREMISES.**

During or after raids householders will probably seek your advice and assistance to deal with defects or damage to their installations.

Every electrical installation is controlled by at least one main switch. When consumers use electricity for heating, cooking and power, as well as for lighting, there may be a main switch for each section. Similarly, where there is more than one tenant in a building, there is usually at least one main switch for each tenant.

Main switches are always fitted as near as possible to where the main cable enters the building, just as the main gas or water cocks are placed where the pipes rise through the floor.

Most main switches look like oblong or square iron boxes with an iron handle on the right hand side. To switch off, pull the handle down. If you are not quite sure, look on the cover or lid, and you will see the "on" and "off" positions marked quite clearly.

In premises where the installation has been in many years, the main switch may consist of two brass covered switches with the "dollies" linked by a cross bar. This should be pushed **up** to turn off the current.

If lamps fail to light when switched on, do not assume that the current is off: concussion may have broken the filaments, fuses may have melted ("blown"), following actual damage to the installation, or a connection or wire may be broken.

Take no risks—before you inspect a damaged building, turn off main switches.

Do not open the service fuses—these are the pieces of apparatus connected direct to the incoming cable; you will recognise them by the lead seals wired to the covers.

If a fire occurs at this point, control it by throwing on sand; if the sand extinguishes it, so much the better. On no account use water or soda acid extinguishers.

If the fire still persists and you think it is due to electricity, report it promptly and your headquarters will notify the electricity authority who will deal with it as soon as possible.

You may also be needed to deal with damaged installations—wires hanging loose as the result of explosion or blast. Turn off the main switch before you touch them.

If there are two or more main switches and if you know which of these control the damaged sections you need only turn off the affected parts. If in doubt—don't take risks; turn all off. There will then be no danger of electric shock or fire.

It is worth a little trouble to identify the installation controlled by each main switch so that you can avoid causing needless inconvenience in buildings only slightly damaged—some may control essential services such as butcher's refrigerators, water pumps, ventilation, or lifts.

If only parts of damaged premises are without light after a raid, it is probable that damage to wiring has caused some of the branch fuses (which act like safety valves) to blow.

Remember :

DON'T USE WATER TO CONTROL OR EXTINGUISH ELECTRICAL FIRES.

TURN OFF MAIN SWITCHES WHEREVER NECESSARY.

STREET MAINS.

Electricity is distributed to consumers' premises by cables under pavements and roads. They are laid direct in the subsoil, in earthenware or fibre ducts, or in iron pipes. In some districts most of the cables are overhead.

Underground cables may be disturbed or exposed by bomb explosion particularly where craters are formed in the streets; fire may follow.

Serious damage to cables will probably cause the current to be cut off automatically; hence a very extensive electrical fire is unlikely.

The public should be kept back from exposed cables. If there is fire near a building, you may attempt to control it with *sand*; *not* water.

If there is no fire you should still assume the cables are alive and leave them alone. If you move them you may receive a shock and will probably start a fire.

Remember :

KEEP THE PUBLIC BACK.

REPORT AS SOON AS POSSIBLE.

THE MAINS ARE PROBABLY ALIVE.

IF ON FIRE—DON'T USE WATER.

Minor explosions may occur some distance from visible damage, caused in many ways, though most likely by short circuits. Likely places are under manhole covers, in the base of street lighting standards, under inspection covers and in pillars which house electrical equipment.

Rope-off affected and exposed equipment, and if any fire is visible—use sand.

Assume affected metal work is alive; don't touch by hand.

HIGH TENSION SUPPLIES.

Many factories and some large buildings and shops derive electricity from a transformer sub-station on the premises. This is usually in the basement and its entrance is always indicated by a special danger notice.

You should not attempt to enter a sub-station unless you are qualified and authorised, or requested to do so by an authorised person.

Many sub-stations are equipped with automatic protection against fire. When the temperature becomes excessive carbon dioxide is released automatically and smothers the fire.

Respirators afford no protection whatever against carbon dioxide.

Most of the high tension cables which supply a sub-station are protected automatically and become "dead" if damaged. Until you have been assured by a competent person that supply has been turned off, always assume any exposed cable is definitely "alive".

DEMOLITION.

If damaged buildings have been made safe electrically by the electricity supply authority, the demolition squad can be advised accordingly. If, in the absence of the electrical authority you have done your own best by following the foregoing instructions, you should describe exactly what you have done.

DECONTAMINATION.

Any exposed cables or electrical equipment should be indicated to the decontamination squad unless you know they are no longer alive. This will enable the decontamination squad to defer using water in the immediate vicinity of electrical equipment until it has been made safe electrically.

A SUGGESTION :

Your value to the community will be enhanced if time can be saved in an emergency. Two ways of achieving this are :

1. Know exactly where the service cables or pipes enter the buildings on your sector and how to reach them.
2. In the case of business or tenemented premises, try to have each main switch boldly labelled to indicate its duty.

ELECTRIC SHOCK AND BURNS.

(i) Artificial Respiration.

Persons who come into contact with live electrical equipment may suffer from shock and possibly burns.

If the patient is unconscious apply artificial respiration, which should be continued for several hours if necessary.

Schafer's method is recommended—it is not fatiguing, and can be carried out single handed.

(ii) First Aid.

Move the patient to First Aid post quickly, or if this is impracticable, treat for shock—keeping the patient warm with hot water bottles, blankets etc. Loosen tight clothing. Give hot drinks but not alcohol.

Electrical burns are similar to others, but are usually deeper, and underlying tissue may be charred. Apply suitable dressings of lint, linen or gauze. Tannic acid is the best treatment if available in a form (such as jelly) ready for use. Apply to the dressing and bandage on lightly.

If a tannic acid dressing is not available, soak dressings in a solution of baking powder (bicarbonate of soda—not washing soda) one dessertspoon to a pint of warm water.

Or soak them in warm strong tea, then wring out and allow to dry.

Get patient to First Aid post as quickly as possible.

DO NOT USE OIL—it has to be removed and its removal is painful and distresses the patient.

NOTES

