# 3.12 ELECTRICITY AT WORK

## Guidance and Procedures

### Introduction

The Electricity at Work Regulations 1989, place a duty on employers to manage electrical safety in the workplace. The regulations demand that electrical systems/equipment must be suitable for their intended use and designed, constructed, installed and maintained in such a way so as to prevent danger and/or personal injury.
South Tyneside Council recognises this duty under the Electricity at Work Regulations 1989 and in order to comply with its statutory duty requires all sections/departments within the Council, to assess the work activities that utilise electricity, or which may be affected by it, and identify all foreseeable risks associated with its use that may give rise to danger and/or personal injury.

HSE guidance can be found at http://www.hse.gov.uk/electricity/index.htm

### Aims

South Tyneside Council place great emphasis on the management and control of activities on or around electrical installation and equipment, it is therefore the aim of the Council, to be pro-active in its approach to electrical safety by ensuring the following:

- That electrical equipment, systems, and appliances are suitable for their intended purpose and do not give rise to danger or personal injury
- That competent persons will be appointed to assess the risks form electrical equipment, systems, and appliances:
- That competent persons are appointed to undertake electrical work and advise on appropriate maintenance regimes;
- That safe systems of work are adopted for work on electrical systems, where assessment dictates;
- Personal Protective equipment is provided for employees involved in electrical work where risk assessment dictates;
- Adequate information, instruction, training and supervision is provided for employees involved in or affected by work on electrical systems and those using electrical equipment and appliances.

### Achieving Compliance

In order to comply with the Electricity at Work Regulations 1989 the following guidance will be used.

## Responsibilities of Managers

Managers who have responsibility under the South Tyneside Councils Policy for their departments/sections will;

- Appoint competent persons to undertake identification of foreseeable risks associated with the use of electrical systems/equipment/appliances and subsequent risk control systems (Foreseeable risks may already have been identified on risk assessments under the Management of Health and Safety at Work regulations)
- Ensure that electrical appliances/systems/equipment within their section are suitable for their intended use, and do not give rise to danger/personal injury including during maintenance procedures. Preference must be given to low voltage systems
- Restrict working on electrical appliances/systems/equipment to competent personnel;
- Ensure that safe systems are adopted for work on electrical systems;
- Ensure that there is a system for the periodic visual inspection and testing of fixed electrical systems, equipment and portable appliances.
- Provided employees within their departments, adequate information, instruction, supervision and training regarding electrical appliances/equipment they are to use during their work activities.
- Provide suitable and sufficient Personal Protective Equipment where risk assessment dictates.

## Responsibilities of All Employees

All employees have a responsibility under this policy to:

- Follow specific procedures identified by risk assessment.
- Wear personal protective equipment where risk assessment dictates
- Report all electrical problems to their direct supervisor
- Receive relevant training to ensure electrical safety

## Procurement of Electrical Equipment

Prior to the purchase of electrical equipment priority must be given to the selection of low or reduced voltage systems.

## Portable Hand Held Equipment

Portable hand held equipment is moved around frequently and sustains damage during moving, it must therefore be inspected before each use and after movement.
Around 95% of faults and damage to portable electrical appliances can be found just by observation.
Desktop equipment which is predominantly static can have a less rigorous inspection/testing regime.
Before the equipment is plugged in to a power supply the competent user must carry out pre start checks as a workplace precaution.

## Pre Start Checks

The competent user will check the following

- Damage to the power cable e.g. cuts and abrasions;
- Damage to the plug such as charring (a sign of an over-rated fuse) cracks in the casing, loose plug pins, bent pins, cable grip;

- Non-standard joints including taped joints in the cable;
- Damage to the cable;
- Cable grip, where it enters the appliance;
- The case or cover of the appliance its self;
- The on/off switch on the appliance being damaged or not working;
- Blocked vents;
- The environmental conditions it is to be used in;
- Signs of overheating (charring) to the appliance its self;
- After plugging the appliance in checking for any unusual running noises.

## Formal Visual Inspection

This is in addition to pre use checks and is carried out by a competent person, the competent person does not need to be an electrician but must be trained in inspection technique.

- That the correct fuse is being used;
- The cord grip is holding the outer sheath correctly;
- The wires, are attached to the correct terminals on the plug;
- No bare wire is visible other than at the terminals;
- The terminal screw are tight
- There is no sign of internal damage, overheating or entry of dirt, liquid or dust.

These rules do not apply to moulded plugs where only the fuse can be checked.

## Combined Inspection and Testing

Sections/departments within the Council must introduce a testing regime for all portable appliances, the time scale for testing will be dictated by, the regularity of use of the equipment, the environment in which it is used, manufacturers recommendations and previous inspection results. Portable appliance testing PAT must be carried out by a competent person, who does not necessarily have to be a qualified electrician, but must be trained in the use of a PAT tester.
Tested equipment will either pass or fail the test.
Procedure must be introduced to either repair failed PAT equipment or dispose of it.
Guidance of PA testing for down load can be found at www.hse.gov.uk/pubns/indg236.pdf

## Frequency of Formal Inspections and Tests

The table at Annex B will be used as a guide for inspection and testing.

## Record Keeping

Records should be kept of the following.

- Inspections and tests of the following (detailing date tested, name of tester and date of next test) plus details of any modifications or repairs made:
  - fixed electrical installations
  - portable and transportable appliances
  - personal protective equipment.
- Electrical Risk assessments and procedures
- Matters relevant to personal competence and training in respect of persons who carry out, supervise, manage or assess electrical work.

# Frequencies for Inspection and Testing of Appliances

| Appliance/Environment | User Check | Formal Visual Inspection | Combine Inspection and Test |
|---|---|---|---|
| **Battery Operated** | **No** | **No** | **No** |
| **Extra low voltage (less than 50 Volts** | **No** | **No** | **No** |
| **Desk top equipment, computers, VDU** | **No** | **Yes 2 – 4 years** | **If Double Insulated No Otherwise up to 5 years** |
| **Photo-copiers, fax, equipment which is not held often** | **No** | **Yes 2 – 4 years** | **If Double Insulated No Otherwise up to 5 years** |
| **Double insulated appliances NOT HAN HELD but moved occasionally Table, lamps, fans, slide projectors** | **No** | **Yes 2 – 4 years** | **No** |
| **Double insulated appliances, HAND HELD** | **Yes** | **Yes 6 months to 1 Year** | **No** |
| **Earthed appliances, kettles, floor cleaners** | **Yes** | **Yes 6 months to 1 Year** | **Yes 1 to 2 years** |
| **Cable leads and plugs connected to the above** | **Yes** | **Yes 6 months- 4 years dependant on the type of equipment** | **Yes 1 – 5 Years depending on the type of equipment it is connected to** |
| **Extension leads, mains voltage** | **Yes** | **Yes 6 months- 4 years dependant on the type of equipment** | **Yes 1 – 5 Years depending on the type of equipment it is connected to** |

**It should be noted that doubly insulated equipment will be marked with the following symbol:**