

## Shropshire Council

### A Code of Practice for the Registration, Inspection and Testing of Portable and Transportable Electrical Equipment – CP23

A procedure is in operation for the registering of portable and transportable electrical equipment and the carrying out of periodic inspections of such equipment. This includes equipment owned by the Council and equipment not owned by the Council but operated with the Council's permission on Council premises.

The procedure requires that all portable and transportable electrical equipment be inspected and tested by a nominated **Competent Person** at pre-determined intervals which are dependent on the type of workplace and the conditions of use.

**A Duty Holder** is to be nominated for each premise, establishment, team or workplace to co-ordinate the registration, inspection and testing of equipment.

Where staff are agile/hybrid working (not premise based and typically working from home or using Council hubs) co-ordination of the registration, inspection and testing of their equipment will be the responsibility of their line manager. The Duty Holder in this case is the line or team manager.

Each item of equipment shall be marked with a unique register number and a green safety check label with the expiry date of the period for which it is certified for service. Under no circumstances should any equipment be used after the expiration of the certification period.

All personnel have a responsibility to report immediately any apparent defect in portable or transportable electrical equipment to the **Duty Holder and immediately stop using the item**. In premises, the **Duty Holder** will remove the safety check label and withdraw the item from service until it has been repaired and tested by a competent person. Where personnel are non-premise based the Duty Holder will advise their staff member to arrange for the item to be repaired and tested as per the guidance below.

Unauthorised repairs must not be carried out by user personnel.

It is important to ensure that all new equipment is registered and approved as suitable for the locations in which it will be used before being put into service.

Special consideration may be necessary with equipment that is surplus and is to be disposed of to a third party and to equipment that may be loaned or presented to other persons. Such equipment should be thoroughly tested and certified as being safe before it is passed on.

A handwritten signature in black ink, appearing to read 'A. Begley', written in a cursive style.

Andy Begley, Chief Executive

# Purchase of Portable and Transportable Electrical Equipment

## Introduction

It is essential when purchasing portable and transportable electrical equipment to consider very carefully the use to which such equipment will be put and the conditions in which it will be used in order to ensure that the equipment will be safe to use. The following notes of guidance have been compiled to assist purchasers to make a suitable selection.

## Definitions

Functional Insulation - The insulation necessary for the proper functioning of the equipment and for basic protection against electric shock.

Double-insulated Equipment - Equipment in which double insulation is used throughout, excepting for parts where, because double insulation is impracticable reinforced insulation is used.

All Insulated Equipment - Equipment in which a durable and substantially continuous enclosure of insulating material envelopes all metal parts, excepting small parts such as name plates, screws or rivets which are isolated from other metal parts by insulating material at least equivalent to reinforced insulation.

110-Volt Equipment - Equipment designed to operate at 110-V and supplied by a 230/110-V transformer centre tapped to earth (CTE).

## Classification of Equipment

Equipment is classified in British Standards B.S. EN61140 as follows.

Class 1 - Equipment having some metal parts which are separated from live parts by functional insulation only and which can be touched and hence are required to be earthed.

Class II - All insulated and double insulated equipment which is marked with the symbol: -

Double insulated symbol



## New Equipment

All new equipment should meet the required British Standard and only Class 1 and Class II should be used.

The supplier of the equipment has a duty to supply the equipment in a safe condition for use. This should include confirmation that states that the equipment conforms to the British Standard.

All new appliances must by law be supplied with a pre-fitted moulded 13A plug to BS1363.

Where 13-amp plugs are to be fitted, the MK 655 'Tough plug', or equal and approved, has been specified by the Council. The plug must be fitted by a competent person who is to ensure a fuse of the correct value is used.

Newly acquired equipment is to be entered into the ERP Register immediately by the **Duty Holder**. It should then be tested on the next occasion at which testing is carried out at the premises/team.

### **Secondhand Equipment**

In the case of secondhand equipment, this must also be entered into the ERP Register immediately by the **Duty Holder**, but testing **must** be carried out by a **Competent Person** before use and labelled accordingly dependent upon the results.

### **Availability of Equipment**

It is possible to obtain equipment which offers a combination of the various types of protection, for instance it is possible to obtain 110-V equipment which is double-insulated, and advantage should be taken of this to provide maximum protection for users of the equipment. Step-down transformers for use with 110-V equipment are available with double insulation and this should be specified when ordering.

### **Suitability of Equipment**

Equipment which is to be used on sites to which the Construction (Design and Management) Regulations 2015 (CDM) apply or sites of a similar nature (e.g. caravan sites) which, but for the fact that they are not legally defined as factories or works of engineering construction, would be subject to Construction Regulations must, where manufactured, be of Class 11 insulation operating at 110-V. Certain items of equipment are not manufactured with Class 11 insulation (e.g. soldering irons) but low voltage operation should be specified. Equipment whose use is to be confined to offices, schools, residential homes, workshops, garages, kitchens and domestic environments should, when available, have Class 11 insulation.

### **Conclusion**

The Electricity at Work Regulations 1989, the Provision and Use of Work Equipment Regulations 1998 and the Management of Health and Safety at Work Regulations 1999 impose on the Council an obligation to provide equipment which is safe and without risk to health. This must be observed when purchasing portable and transportable electrical equipment by ensuring that suitable equipment is purchased which incorporates the safety features outlined in this Code of Practice.

# Registration, Inspection and Testing of Portable and Transportable Electrical Equipment

## 1. Introduction

1.1 In the interests of safety and to comply with the Council's obligations, imposed by the Electricity at Work Regulations 1989, the Provision and Use of Work Equipment Regulations 1998 and the Management of Health and Safety at Work Regulations 1999 this document sets out a procedure to ensure that all items of Council owned portable and transportable electrical equipment are inspected and tested at regular intervals. Guidelines on this subject are published by the Health and Safety Executive in Guidance Note HSG107 "Maintaining Portable and Transportable Electrical Equipment".

1.2 All PAT testing test equipment is to be suitable for the range of tests required to be carried out and calibrated at regular intervals in accordance with the manufacturer's guidance, and at no less of a frequency than specified in 1.3.

1.3 The principle is that a register of all portable and transportable electrical equipment shall be maintained and used to initiate periodic inspections and to record the results of the inspections. The inspection and testing of portable and transportable equipment shall be carried out at **no greater intervals** than the following:

Equipment used on construction sites or in similar situations - **every 3 months**

Equipment in Educational Establishments in contact with children, Establishments with workshop environments or other hazardous environments- **every 12 months**

Equipment in all other premises - **every 36 months. This is the maximum period between inspections for equipment used in low-risk environments, such as offices.** It is the responsibility of the **Duty Holder** to carry out risk assessments to determine the actual frequencies for inspection and testing to be used. These frequencies must be kept under review by the **Duty Holder** with respect to the individual risk posed by each item. In carrying out such an assessment it may be determined that individual items of equipment need inspecting and testing every 3 months, 6 months, 12 months, 24 months, or 36 months, dependent on the item of equipment, its frequency of use, its users and the environment that it is used within. *In some hybrid working situations, laptops for example, may be subject to higher frequency connection and disconnection to power sources and so the period between inspections may need to be increased by the duty holder based on their risk assessment.* The HSE's Maintaining portable electrical equipment outlines a recommended maintenance plan based on a system of user checks, formal visual inspection and testing. <https://www.hse.gov.uk/pubns/priced/hsg107.pdf>. Table 1 of this document suggests initial maintenance periods.

1.4 It is the responsibility of every **Duty Holder** to satisfy themselves that all equipment coming within the scope of this circular is dealt with regularly on the basis set out in this document.

## 2. Definition of Portable and Transportable Equipment

2.1 This applies to equipment which is not part of a fixed installation but is, or is intended to be, connected to a fixed installation, or a generator, by means of a flexible cable and either a plug and socket or a spur box, or similar means. It

includes equipment that is either **handheld** or **hand operated** while connected to the supply or is intended to be **moved** while connected to the supply or is **likely** to be moved while connected to the supply.

### 3. Registration of Equipment

3.1 A register of all portable and transportable electrical equipment is to be prepared, using a standard format within ERP; Wherever possible the manufacturers equipment serial number will be recorded.

3.2 A **Duty Holder** is to be nominated for each premise/team whose duties will include the coordination of the registration, inspection, and testing of equipment.

3.3 Line managers are by definition the Duty Holder where their staff teams are not premise based. It is their role to coordinate the registration, inspection and testing of equipment belonging to their teams.

### 4. Preparation and Maintenance of Register

4.1 Each appropriate **Duty Holder** will update ERP regarding the portable and transportable electrical equipment

4.2 The acquisition of additional equipment or loss of existing equipment shall be notified to the **Duty Holder** who will amend ERP registers as necessary.

### 5. Inspection Schedules

5.1 At the appropriate time, as described in the previous sections, the register and the equipment will be assembled for inspection and testing. The ERP Register will be used to record the periodic inspection and testing of equipment, certified entries being made by **competent persons**.

5.2 Completed inspection registers shall be uploaded to the ERP platform.

### 6. Initiation of Inspections

6.1 Each **Duty Holder** is responsible for ensuring that the inspection and testing of portable and transportable electrical equipment is carried out within his/her team/department.

6.2 The inspection and testing at the required intervals will be initiated by the appropriate **Duty Holder** the establishment or team and is to be carried out in accordance with the instructions contained in Appendix A to this document. When all items have been inspected and tested the details will be entered on to ERP. The **Duty Holder** is to ensure that any action necessary as a result of the inspection and testing is carried out.

- Certain establishments have appointed technicians or caretakers to carry out the inspection and testing. These persons are appointed as "**competent**" only after attending an approved training course and satisfying examiners of their competence.
- The inspection and testing of all portable and transportable equipment from other teams/premises/workplaces will be carried out by appointed technicians from Property Services Group.

## 7. Competent Persons

7.1 The inspection of portable and transportable electrical equipment must be closely controlled and is confined to **Competent Persons** who have been appointed to undertake the inspection and testing of such equipment.

7.2 Within the meaning of this Code of Practice a **Competent Person** is as shown in (a) to (c) below.

- a) Must be at least 21 years of age
- b) Must have had adequate practical training in electrical installation work
- c) Must have attended an approved competent person training PAT testing course.

A competent person may have also completed City & Guilds 2377 Level 3 Certificate for the Inspection and Testing of Electrical Equipment however this is not a statutory requirement.

N.B. Certificates of competence will remain valid for 3 years only. New certificates will be issued only after successful re-examination.

The approved competent person training PAT testing course will ensure that the engineer has sufficient knowledge of the following to enable the required testing and any minor repairs/replacements to be carried out in a safe manner:

- a. The properties of electricity.
- b. The hazards of electricity.
- c. Action to be taken in the event of electric shock.
- d. General safety requirements of individual items of portable and transportable electrical equipment, e.g. mechanical guarding of fans and the exposed elements of fires, toasters etc., as required under consumer protection legislation.
- e. Purpose of a fuse and the fuse ratings of equipment.
- f. Fitting and replacement of plugs, connectors and fuses.
- g. Types and ratings of flexible cables.
- h. Insulation of equipment.

They must always be thoroughly conversant with:

- a. IEE Code of Practice – In-Service Inspection and Testing of Electrical Equipment 5<sup>th</sup> Edition.
- b. H.S.E. Guidance Note HSG107 – Maintaining Portable and Transportable Electrical Equipment.
- c. Shropshire Council Code of Practice CP23 - Registration, Inspection and Testing of Portable and Transportable Electrical Equipment.
- d. Safe use of the appropriate test instrument (including any limitations on its use with solid state equipment).

## 8. Visual Inspection

8.1 User checks (visual) In addition to the periodic inspections detailed in 1.3 above and in Appendix A, any employee who uses portable and transportable electrical equipment must check, before using the equipment, to ensure there is no outward sign of mechanical damage to the equipment, flexible cable or plug and that the

equipment is within its current test period, i.e., “next test before” date on the safety check label has not passed.

8.2 Where equipment is stored centrally, the person issuing the equipment will carry out a visual inspection before each issue.

## **9. Defective Equipment**

9.1 Apparatus which is found by a user to be faulty shall be immediately withdrawn from service and returned to the Duty Holder or competent person to repair.

All defective equipment shall be kept by the **Duty Holder** in a secure place until it can be handed over to a Competent Person for repair. The equipment will not be reissued or re-used until it has been repaired, tested and a **safety check** label affixed.

9.2 This procedure will apply to all faulty equipment, whether the defect becomes apparent as a result of a routine inspection or during service.

9.3 If an item is withdrawn from service after routine testing the Duty Holder will be responsible for sourcing replacement equipment.

## **10. Certification Period**

10.1 The expiry date of the inspection period shall be indicated on each piece of portable and transportable electrical equipment and all personnel must be instructed that under no circumstances shall equipment be used after the expiry month.

## **11. Marking of Register Numbers and Expiry Dates**

11.1 Each item of equipment shall be marked with its register number by affixing a printed label

11.2 The safety check label shall be affixed to each item of equipment after each successful inspection and test. The label will bear the legend “next test before” and a date indicating the expiry of the test period, after which the equipment will not be used.

## **12. The Use of Privately Owned Equipment**

12.1 The Council cannot accept responsibility for equipment which it does not own and accordingly the use by Council employees of privately owned portable and transportable electrical equipment whilst on Council premises or employed on Council work is expressly forbidden.

12.2 Any portable and transportable electrical equipment to be used temporarily on Council owned or managed premises by Authorised Contractors, visiting Entertainers, invited persons, etc. must be electrically safe. No such equipment is to be used on the premises **until the building manager has evidence that the equipment has been inspected, tested, and has a safety check label attached.**



## Appendix A

### Combined Inspection and Test

#### Inspection and Electrical Tests.

The inspection and test of each item of portable and transportable electrical equipment is conducted by the appointed **Competent Person**.

The inspection and test take the form of a visual examination followed by electrical insulation and earth continuity tests, after which the equipment is marked appropriately, and the register completed.

#### Visual Examination

A detailed examination shall be made of the appliance, flexible cable and plug to ensure there is no outward sign of mechanical damage, particular attention being paid to the cable immediately adjacent to the appliance and the plug.

If there are any doubts concerning the mechanical design, e.g., access to moving parts, hot or live components etc., the appliance should be taken out of service and advice sought.

The plug cover will be removed to ensure that plug terminal connections are secure, the outer sheath is firmly clamped and, if applicable, the correct rating fuse is fitted. Damaged flexible cables shall be replaced and not repaired. However, if a cable is damaged only near the end, it may be cut back, and the remaining sound cable reconnected.

Close attention shall be given to an examination for cracks of the insulating material of the body of an appliance. Damage or deterioration of this type shall be repaired by a Competent Contractor.

A typical arrangement for testing equipment is described and illustrated below.

#### Insulation Resistance

Tests shall be carried out using the appropriate Portable Appliance Tester

#### (P.A.T.). **Continuity of Earth Conductors**

Tests shall be carried out using the appropriate Portable Appliance Tester (P.A.T.). It should be remembered that the above test procedures are for "plug in" portable and transportable appliances, equipment and extension leads only. Any fixed equipment not capable of being disconnected from the supply by unplugging must be tested by a qualified NICEIC registered electrician only. Any fixed wiring within a building must be tested by a qualified electrician only.

#### Record of Inspection and Testing

Upon completing the inspection and test of an item of equipment, the **Competent Person** will make an appropriate entry in the ERP register. If the inspection and test results are satisfactory, he will attach to the equipment a **safety check** label showing the expiry date of the certification period.

**Equipment which fails an inspection or test shall be identified by removal of the safety check label and the fitting of a "defective equipment" label Health and Safety Executive's Guidance Note HSG107 outlines the points to be considered when examining and testing portable and transportable appliance.**