



Electrical Testing Policy

Version 4.0



1.0 Purpose

This corporate topic-based health and safety policy details the specific responsibilities for the management and control of electrical hazards/risks within Warwickshire County Council (WCC). This Policy therefore does not duplicate the general health and safety requirements as stated within the corporate WCC health and safety policy. To access this policy please refer to the health and safety intranet or school document library (refer to section 9 for details).

2.0 Objective

The objective is to ensure that all health, safety and wellbeing issues relating to fixed electrical installations and portable electrical equipment are adequately managed.

3.0 Warwickshire County Council Commitments

- All fixed electrical installations and portable electrical equipment under the control of or used within County Council premises are adequately inspected, tested and maintained to ensure they are fit for purpose and safe during normal use.
- All electrical inspections, tests, maintenance repairs and installation work is undertaken by appropriately trained and competent persons.
- Live electrical working is prohibited (although live testing is permitted in exceptional circumstances whereby it is unreasonable in all circumstances for it to be dead, providing appropriate controls are taken and suitable equipment is used).
- All relevant statutory requirements and, where reasonably practicable, best practice guidance is adhered to.

4.0 Scope

The Policy is applicable to all areas and activities of Warwickshire County Council.

5.0 Definitions

The key terms used within this Policy are outlined below:

5.1 Competent Person - Is a person who has sufficient experience, knowledge and other qualities to enable them to undertake the task safely and without risk to health.

Those deemed competent under this policy are:

5.1.1 Fixed Electrical Installations

WCC Property Services employees advising on the testing of fixed electrical installations must either be a qualified Chartered Building Services Engineer, Electrical Engineer or Technician Engineer and/or be members of one of the following organisations:

- The Institute of Engineering and Technology (I.E.T)
- National Inspection Council of Building Service Engineers (C.I.B.S.E)

Contractors selected to undertake the testing of fixed electrical installations shall be members of one or both of the following:

- Electrical Contractors Association (ECA)
- National Inspection Council for Electrical Installation Contracting (NICEIC).
- National Association of Professional Inspectors and Testers (NAPIT)

5.1.2 Portable Electrical Equipment

- A member of staff with the required competency as stated within HSE HSG107 Maintaining Portable Electrical Equipment publication
- A contractor with the required competency. If a contractor is to be used, the contractor's employees who are testing equipment must be competent as stated within HSE HSG107 Maintaining Portable Electrical Equipment publication

A contractor can be sourced by:

- Telephoning WCC Property Services Hotline 01926 414123.
- Contacting ESPO by telephoning 0116 265 7877
- Contacting a contractor directly in compliance with the [Managing Contractor Work Guidance \(Part 2\)](#)

Any contractors used must have the necessary arrangements in place to comply with this policy.

5.2 Fixed Electrical Installation - Fixed electrical installations are installations that are securely connected to an electrical power supply and feed additional electrical outlets or static appliances/equipment. They are normally permanent fixtures but on occasions they may be temporary in nature and includes all hard wiring in a building and includes items such as main panels, distribution boards, lighting, socket outlets, wiring to static machines/equipment/ air conditioning and other fixed plant.

5.3 Hand-held power tools - Portable electrical equipment which is fully held in the hand during normal operation e.g. power drills (they do NOT include vacuum cleaners, mowers etc.).

5.4 Portable Electrical Equipment - WCC accepts the Health and Safety Executive's (HSE) definition of portable electrical equipment as being equipment that has a lead (cable) and plug which is normally moved around or can easily be moved from place to place. This may include, although not limited to, drills, saws, mowers, vacuum cleaners, kettles, heaters, fans, televisions, desk lamps as well as other larger items such as photocopiers, fax machines, desk top computers and fridges. It also includes extension leads.

5.5 Portable Appliance Testing (PAT) - is the term used to describe the examination of electrical appliances and equipment to ensure they are safe to use.

Within WCC this includes formal visual inspection and testing by a competent person which is undertaken at appropriate intervals, depending upon the type of equipment and the environment in which it is used (refer also to section 7.3). The inspection carried out in conjunction with testing should usually include checking:

- the correct polarity of supply cables;
- the correct fusing;
- effective termination of cables and cores;
- the equipment is suitable for its environment.

5.6 Premise Representative - This relates to those employees with the overall day-to-day responsibility for the site (see 6) and this term is associated with Facilities Management Centralised Properties.

5.7 Site Responsible Person - Is the person with the overall day-to-day responsibility for health and safety on that premise / site. This person may be the Premise Representative or Facilities Support Manager for Facilities Management (FM) centralised properties, or the manager at non-FM centralised properties, or Head teacher at a school.

5.8 Premise / Site Definition

Centralised premises/sites: supported by Facilities Management and where FM is the Site Responsible Person.

Non-centralised premises/sites: not supported by Facilities Management. This includes schools.

6. Roles and Responsibilities for Electrical Testing

The arrangement section of this Policy provides more detail on how these roles and responsibilities can be implemented.

Property Services to ensure:	Site Responsible Persons (Non-FM centralised Property only - see definition above 5.8) to ensure:	Managers to ensure:	Employees to ensure :
<ul style="list-style-type: none"> • All fixed electrical installations, (whether permanent or temporary) in all WCC buildings, are installed and maintained in a safe condition, in accordance /compliance with statutory legislation, approved codes of practice and HSE guidance as relevant, by a competent person. (see 5.1) • All permanent / fixed electrical installations are tested by a competent person every 5 years (12 months for electrical installations in swimming pools). • PAT testing is undertaken on a rolling programme of no greater than 36 months by a competent person. 	<ul style="list-style-type: none"> • PAT testing is undertaken on a rolling programme of no greater than 36 months by a competent person.(see 5.1) • All items (portable electrical equipment and fixed) that have been tested are labelled to inform users of the test date and the due date for the next test and the results / test records are made available on AtlasWeb • That any hand held power tools and 110 volt “step down” transformers used on the site are PAT tested at intervals no longer than 12 months. 	<ul style="list-style-type: none"> • Fixed installations are used safely and correctly by employees /users and that defects are reported promptly to Hotline on 01926 414123 • Employees / users are aware of the need to visually check portable equipment before use and how to raise any defects found • Any failed or faulty equipment is repaired promptly or where this is not possible the item is taken out of use action e.g. disposed. • All electrical equipment is made available for inspection and PAT testing on the scheduled date (this includes equipment used by contracted home workers) 	<ul style="list-style-type: none"> • All portable electrical equipment is visually checked prior to use (these checks do not require the internal inspection of a plug or tool and do not need to be recorded). Details are listed in Section 7.3.1 of this Policy • Report any defects immediately to their manager • Stop using any faulty equipment immediately and label appropriately until it has been replaced or repaired by a competent person. Report to line manager. • Use equipment in accordance with manufacturer’s instructions, any risk assessments or safe systems of work, e.g: <ul style="list-style-type: none"> • Fully extend cable extension leads when in use

<ul style="list-style-type: none"> • That any hand held power tools and 110 volt “step down” transformers used on the site are PAT tested at intervals no longer than 12 months. • All items portable electrical equipment that have been tested are labelled to inform users of the test date and the due date for the next test. Results / test records are made available on AtlasWeb 		<ul style="list-style-type: none"> • Any items missed during the scheduled inspection or testing are reported to FM, Property Services or outside contractor and arrangements to ensure their examination is made immediately • Employees are aware of their responsibilities for the safe use of electricity, together with the acquisition and use of electrical machinery and portable equipment and that all electrical equipment is used in accordance with manufacturer’s instructions • Equipment should be assessed for its compatibility in the environment which it is used , such as wet, dirty, high / low temperatures and for the work being undertaken and to ensure appropriate controls are in place such as the use of a residual-current device (RCD). • There are systems in place to enable isolation / shut off to electrical equipment when necessary 	<ul style="list-style-type: none"> • Never plug an extension lead into another extension lead • Never overload a socket • Never use a mains socket adapter / multiplier
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7.0 Organisational Arrangements

7.1 New Installations, Adaptations or Alterations including Rewiring

- All fixed electrical installations, whether permanent or short term, should be designed by a competent electrical engineer who must be able to certify that the design has been undertaken in compliance with appropriate statutory legislation and codes of practice.
- All electrical design calculations carried out within Property Services must be carried out to the current edition of the I.E.E wiring regulations and also endorsed by a competent engineer.
- An Electrical Installation Certificate or Minor Works Certificate shall be issued by a competent Electrical Installation Contractor and shall be signed by all relevant parties. The original copy shall be retained on site and copies retained by WCC.

7.2 Existing Fixed Installations

- All electrical fixed installations, whether permanent or temporary must be maintained in a safe condition in accordance with statutory legislation, approved codes of practice and recommended standards used by Property Services.
- All fixed electrical installation periodic inspection tests must be carried out in accordance with procedures laid out in the current edition of the Institute of Electrical Engineers Regulations and corresponding guidance notes. The results of all such tests must be recorded and an appropriate Periodic Inspection Report issued. The original copy shall be retained on site and copies retained by WCC.
- Each fixed test report must be retained on file with a copy made available on the premise until succeeded by at least two further test reports, after which it may be destroyed.
- All electrical work undertaken on fixed installations must be carried out by a qualified competent electrician. Employees are not permitted to undertake any electrical repairs themselves.

7.3 Portable Electrical Equipment

- All hand held power tools used by WCC employees or used on our WCC premises if not cordless battery powered, must be double insulated and have reduced voltage to 110v by means of a transformer, centre tapped to earth, where possible or as a minimum use a residual current device. Premise Managers, Contracts Officers and Event Organisers must ensure that any hand held power tool used by employees or contractors on their sites comply with this standard.
- The mains lead on all transformers must be restricted to 1.5 metres in length to limit the amount of mains voltage cable exposed.
- All new portable electrical equipment must be visually checked prior to use to ensure it is fit for purpose and safe to use. New equipment does not need to be tested within the first 12 months from the purchase date but must be included on the next appropriate cycle of inspection and testing.

- The competent person will label each item with:
 - A unique reference number
 - Date tested
 - Next test date
- All portable equipment must have a current test label. If equipment is purchased between inspection cycles it will not immediately require to be tested until the next appropriate cycle of inspection but meanwhile it should be visually inspected on a regular basis and the receipt / confirmation of purchase retained to prove the age of the item.
- If employees or customers need to bring in privately owned portable electrical equipment to their workplace they must have permission from their Manager / Site Responsible Person and the equipment must be tested and labelled before being used. This electrical equipment comes within the (arrangements) of the Electricity at Work Regulations when used on WCC Council Premises.
- Any portable electrical equipment to be used temporarily on WCC owned or managed premises by visiting entertainers, invited persons, contractors must be electrically safe and have been tested by a competent person in accordance with their own risk assessment and testing regime. The suitability and sufficiency of the risk assessment and testing regime will need to be considered as part of the process.

7.3.1 Visual Checks

The user check of portable electrical equipment must be carried out prior to use. Checks of equipment should look for the following:

- Damage, e.g. cuts, abrasion (apart from light scuffing) to the cable covering
- Damage to the plug, e.g. casing is cracked or pins are bent
- Non-standard joints including taped joints in the cable
- The outer covering (sheath) of the cable not being gripped where it enters the plug or the equipment
- The coloured insulation of the internal wires is showing
- Equipment that has been used in conditions where it is not suitable, e.g. a wet or dusty environment
- Damage to the outer cover of equipment or obvious loose parts or screws

Where faults or defects are identified the equipment must be switched off, unplugged, and taken out of use immediately until it has been repaired by a competent person. Where it is determined that the equipment is non repairable or surplus to requirements it should be disposed of appropriately.

7.3.2 Formal Inspection

Refer to the table below (7.3.4) for required testing frequencies. Managers may arrange for more frequent testing of electrical equipment due to the work environment or nature of activities taking place. Although items such as vacuums and mowers do not meet the definition of hand held tools, the frequency of use and constant manoeuvrability may warrant more frequent testing.

7.3.3 Combined visual inspection and formal inspections

Some faults, such as loss of earth integrity (e.g. broken earth wire within a flexible cable), deterioration of insulation integrity, or contamination of internal and external surfaces, cannot be detected by visual examination alone. Such faults can only be reliably detected by a combined visual inspection and test. This should be carried out periodically to back up the checks and inspections and is likely to be justified:

- whenever there is reason to suppose the equipment may be defective and this cannot be confirmed by visual examination
- after any repair, modification or similar work;
- or at periods appropriate to the equipment, the manner and frequency of use and the environment.

The inspection carried out in conjunction with testing should usually include checking:

- the correct polarity of supply cables;
- the correct fusing;
- effective termination of cables and cores;
- the equipment is suitable for its environment.

Combined inspection and testing requires a greater degree of competence (in terms of knowledge, training and experience) than for inspection alone, because appropriate electrical knowledge is needed to undertake the tests and interpret the test results. However, it can often be carried out by a competent employee (see 5.1.2).

For inspecting and testing powered gates and doors please refer to the [Powered Gates and Doors Guidance](#)

People testing portable electrical equipment should be appropriately trained. It is the employer's duty to make sure that they are competent for the work they are to carry out. There are two levels of competency:

Level 1: A person not skilled in electrical work routinely uses a simple 'pass/fail' type of portable appliance tester where no interpretation of readings is necessary. The person would need to know how to use the test equipment correctly. Providing the appropriate test procedures are rigorously followed and acceptance criteria are clearly defined, this routine can be straightforward.

Level 2: A person with appropriate electrical skills uses a more sophisticated instrument that gives readings requiring interpretation. Such a person would need to be competent through technical knowledge or experience related to this type of work.

Combined inspection and testing may occur where employees carry out their own PAT testing and do not use a Facilities Management, ESPO Contractor or own sourced contractor e.g. in non-FM centralised properties such as schools (see 5.8)

7.3.4 Testing Frequencies

Type of business		User checks	Formal visual inspection	Combined inspection and test
Equipment hire		N/A	Before issue/after return	Before issue
Battery operated equipment (less than 40 V)		No	No	No
Extra low voltage (less than 50 V ac), telephone equipment, low-voltage desk lights		No	No	No
Construction	110V equipment	Yes, weekly	Yes, monthly	Yes, before first use on site then 3-monthly
	230V equipment	Yes, daily/every shift	Yes, weekly	Yes, before first use on site then monthly
	Fixed RCDs	Yes, daily/every shift	Yes, weekly	Yes, before first use on site, then 3-monthly (portable RCDs – monthly)
	Equipment site offices	Yes, monthly	Yes, 6-monthly	Yes, before first use on site then yearly
Heavy industrial/high risk of equipment damage (not construction)		Yes, daily	Yes, weekly	Yes, 6–12 months
Light industrial		Yes	Yes, before initial use then 6-monthly	Yes, 6–12 months
Office information technology rarely moved, eg desktop computers, photocopiers, fax machines		No	Yes, 2–4 years	No if double insulated, otherwise up to 5 years
Double insulated <input checked="" type="checkbox"/> (Class II) equipment moved occasionally (not hand-held), eg fans, table lamps		No	2–4 years	No
Hand-held, double insulated <input checked="" type="checkbox"/> (Class II) equipment, eg some floor cleaners, some kitchen equipment		Yes	Yes, 6 months – 1 year	No
Earthed (Class I) equipment, eg electric kettles, some floor cleaners		Yes	Yes, 6 months – 1 year	Yes, 1–2 years
Cables, leads and plugs connected to Class I equipment, extension leads and battery charging equipment		Yes	Yes, 6 months – 4 years depending on type of equipment it is connected to	Yes, 1–5 years depending on the equipment it is connected to

All new portable electrical equipment must be visually checked prior to use to ensure it is fit for purpose and safe to use. New equipment does not need to be tested within the first 12 months from the purchase date but must be included on the next appropriate cycle of inspection and testing.

8.0 Equality & Accessibility Information

If this information is difficult to understand, the Health, Safety and Wellbeing Service can provide it in another format, for example Braille, in large print, on audiotape or another language.

A full Equality Impact Assessment has been undertaken for this Policy.

9.0 Contact Information

All health, safety and wellbeing information is available on the intranet. Go to:
Intranet > HR > Health, Safety and Wellbeing

For Schools, refer to the health and safety document library on
www.warwickshire.gov.uk/SchoolHSdocs

Alternatively you can contact the Health, Safety and Wellbeing Service on
healthandsafety@warwickshire.gov.uk or telephone 01926 476803.