



**QUEEN'S
UNIVERSITY
BELFAST**

PORTABLE APPLIANCE INSPECTION AND TESTING POLICY AND PROCEDURE

Policy Number	ED-PO-26
Version Number	003
Publishing Availability	University-wide
Cross Reference to Compliance Review	HSR33
Approval Date	28 April 2021
To be Approved By	Health and Safety Management Group
Review Date	27 April 2024
Lead Responsibility	Director of Estates
Lead Author	Head of Administration and Resources

Overview

This Policy and Procedure details the University's requirement for all business units to undertake Portable Appliance Testing when it is appropriate to do so. The testing of portable appliances is a devolved responsibility to Faculties, Schools and Directorates. Technical input of the requirements has been provided by Estates Maintenance and the contracted service provider has been arranged by the Procurement Office. Compliance and monitoring is carried out by the University Safety Service. This Policy does not cover electrical inspection and testing of Laboratory Class Equipment, Medical Devices or in-house manufactured research equipment.

Contents

- 1. Rationale4
- 2. Objectives4
- 3. Policy Statement4
- 4. Scope5
- 5. Supporting Procedures5
- 6. Consultation5
- 7. Authorisation5
- 8. Responsibility6
 - 8.1 Heads of School/Directors6
 - 8.2 Staff/Student Responsibility6
 - 8.3 Students in University Residential Accommodation7
 - 8.4 Visitors7
 - 8.5 Leased Equipment7
- 9. Communication, Co-operation and Co-ordination7
- 10. Procedures8
- 11. Information and Instruction9
- 12. Supervision9
- 13. Training9
- 14. Record-keeping9
- 15. Implementation/Monitoring/Audit9
- 16. Regulations and Guidance10
- 17. Approval10
- 18. Review Date10

19. Further Information11

20. Appendices11

Appendix 1 User and formal visual inspection checks for portable electrical equipment

Appendix 2 PAT register format

Appendix 3 Frequency of testing

Appendix 4 Responsibilities and Actions

Definitions

The following definitions are used within the Policy and Procedure.

TERM	MEANING
Competent Person	A person suitably trained in the procedure for carrying out portable appliance testing or inspections and is certified as competent to do either or both as deemed necessary. Evidence of competency to carry out electrical testing should be obtained and recorded locally in respective safety management systems.
EMG	Estates Management Group
HSMG	Health and Safety Management Group
Inspection	A visual inspection of a portable appliance to determine if there are any concerns with regard to its condition, the condition of plugs, leads and soundness. It does not require a “Test” with Portable Appliance Test equipment.
Planon	The University’s computer-aided facilities management system.
PAT	Portable Appliance Testing to confirm an item is electrically safe and fit for use performed on a Portable Appliance Test device.
Portable	An appliance that can be moved from location to location without the use of tools to carry out electrical disconnection.
Test	A test of electrical soundness as part of PAT, this description is to distinguish between Inspection and Testing.

1. Rationale

The maintenance, inspection and testing of portable appliances is a key element of the overall Health and Safety Management System for the University. By following the approved Policy and Procedure the risk of injury and the potential for fire from portable appliances can be minimised.

2. Objectives

The overall objectives of this policy and procedure are to:

- Minimise the risk of injury to staff, students and visitors from the use of portable appliances.
- Minimise the risk of fire from faulty portable appliances that could lead to damage to building and interruption to teaching, research and support activities.
- Ensure that all relevant staff are aware of their responsibilities to have all portable appliances under their control tested/inspected at the recommended frequency and repair/remove/replace items that fail.
- Provide technical expertise through appointment of an external service provider to undertake Portable Appliance Testing for business units.
- Ensure that where Portable Appliance Testing / Inspection carried out by University staff is to the agreed applicable standard by suitably trained and approved individuals.
- Provide a centralised system for the instigation of Portable Appliance Tests/Inspections and subsequent remedial actions.
- Ensure all business units have a central point of contact to request advice on Portable Appliance Testing/Inspection and to provide technical advice as required.
- Obtain a service from service providers to an agreed quality and price.
- Promote the requirement to carry out inspections where this is more appropriate and to identify items where testing should be completed.

3. Policy Statement

Portable electrical equipment, 'portable appliances', must be maintained in a safe condition through the operation of an appropriate system of maintenance and inspection. The University will put in place a system governing this activity including Policy, Procedures, Training and Resources to ensure compliance with the Regulations.

4. Scope

This policy is applicable to all portable appliances which are supplied at a voltage greater than 50V ac and which are connected to the electrical mains via a flexible cable/plug and socket (usually a 13 amp outlet). (Portable does not mean that the appliance is readily portable, only that it can be moved from location to location without the need for using tools.) It applies to all portable electrical equipment owned by the University or in use on University premises including portable equipment provided by the University and which is in use within living accommodation.

Portable electrical equipment will include appliances such as:

Visual display units, computers, kettles, electric drills, photocopiers, fridges, mobile phone chargers, vacuum cleaners, televisions, musical instrument amplifiers and public address systems, space heaters, washing machines, extension leads, hot plates, desk lamps, portable computer/tablet device power supplies etc.

5. Supporting Procedures

The procedure governing Portable Appliance Testing/Inspections is detailed in Section 10.

6. Consultation

Consultation on this Policy and Procedure has been undertaken with Estates, the University Safety Service, Procurement, Student Plus, the Health and Safety Consultative Committee, the Health and Safety Compliance Committee Schools and Directorates.

7. Authorisation

The use of any portable electrical appliance outside of the provisions of this policy, such as specialist research equipment etc., must have the authorisation of the Head of School /Director/Directors of Operations.

In these circumstances the equipment must only be used following a suitable risk assessment and ensuring that an appropriate safe system of work is in place.

It is the responsibility of local management, in these areas, to ensure that such equipment is electrically safe to use and that appropriate control measures are in place to maintain the safety of staff, students or any person likely to come into contact with the equipment.

8. Responsibility

8.1 Heads of School/Directors/Directors of Operations

Heads of School/Directors/Directors of Operations are responsible for ensuring that all portable electrical equipment within their School/Directorate is maintained in a safe condition. They must also ensure that a register of portable electrical appliances and records of inspections and tests are maintained and that an annual report of portable appliance testing/inspection is produced. A centralised system is in place through the Estates Helpdesk to facilitate the booking of portable appliance tests/inspections. The test results and schedule of items tested will be recorded by the competent person/contractor carrying out the test.

The Head of School/Director must ensure that only competent persons carry out the Portable Appliance Testing and/ or inspections. The Estates Directorate, in conjunction with the Procurement Office, will ensure there is an approved Portable Appliance Testing contractor appointed. This contractor will be available to be used by Faculties, Schools and Directorates to carry out testing.

Where the approved contractor is not used, competency of organizations or personnel proposed to carry out testing must be determined by the Local Management Team.

In the case of visual "Inspection", selected personnel from Schools, Directorates and Faculties should carry out this task in accordance with the procedure detailed in Appendix 1, and should be provided with labels for equipment where a "Test" is not required.

The Head of School/Director/Directors of Operations shall ensure that all employees, students and visitors are aware of relevant sections of this policy.

8.2 Staff/Student Responsibility

All staff and students are responsible for carrying out the appropriate user checks, as detailed in Appendix 1, before portable appliances are used. They are also responsible

for bringing equipment requiring inspection or test to the attention of management. Staff wishing to use personal portable electrical appliances on University premises, on a regular basis, must obtain permission from their Head of School, Directorate, Faculty Office or Business Unit. Such appliances must be added to the Portable Appliance Register and inspected/tested in accordance with this policy. Any equipment failing this inspection/test must not be used and shall be removed from site, or disposed of. The use of non UK-approved plug adaptors is strictly forbidden, all such items must be suitable for use in the UK and have an integral fuse (replaceable or single use) with a maximum fuse rating of 13 amps. Any non UK-approved plug adaptors will be removed from use by the Portable Appliance Tester and this will be reported on the test record.

8.3 Students in University Residential Accommodation

Students residing in University student accommodation must ensure that any personal portable electrical appliances brought onto the residential estate are in a safe working condition and conform to current safety standards. Personal portable electrical equipment must be made available for a formal visual inspection (see Appendix 1) as required by the University. Any equipment failing this inspection must not be used and shall be removed from site, or disposed of. A facility is available to have items tested/inspected and this can be arranged through Queen's Accommodation Reception.

8.4 Visitors

Portable electrical appliances belonging to and being used by persons visiting the University must be in an electrically safe condition. The University reserves the right to prohibit the use of any electrical equipment brought onto site by visitors.

8.5 Leased Equipment

Where equipment is purchased and maintained under a lease, the leaser shall be made responsible for compliance with this policy. This requirement shall be included in the lease contract documents.

9. Communication, Co-operation and Co-ordination

This Policy must be clearly communicated to all management, employees and students. It will be available centrally from the University Safety Policy Library. All staff, students and visitors

are expected to co-operate fully with the University in meeting the standards set out in this policy.

10. Procedures

A Register or Registers of Portable Appliances must be maintained by each School/Directorate/Faculty. Registers must be in the format as detailed in Appendix 2. The University has agreed the format of the register provided by the approved Contractor and providing this as evidence of the testing programme is deemed to be sufficient to comply with the Policy. In practice, providing the printout from the test equipment is sufficient and there is no need to generate a full list of items independently of this.

All portable appliances, including new appliances, must be added to the Portable Appliance Register before being used. In practice, this can be maintained as a separate list or held on the University's inventory system if the value is appropriate. The important principle is that each business area is recording new devices and determining what frequency of testing should apply, together with applying a suitable label to the new device.

Schools/Directorates/Faculties must have testing/inspections carried out in line with the frequencies in Appendix 3. In practice this will usually mean that the contractor/competent person will be required to carry out inspection/testing at least once a year. However, as noted in Appendix 3, annual testing is required for a limited range of items and if none of these items are present in the location there will be no requirement to request an annual visit.

A test/inspection label must be applied to all portable appliances. This test/inspection label must include the test/inspection date, tester identification and an equipment identification number. A re-test date will not be included on the label. The Register must contain the test/inspection date, tester identification and an equipment identification number as well as a re-test date based on the frequency schedule. The Head of School/Director/Directors of Operations will ensure that all equipment is tested/inspected in accordance with the frequencies set out in Appendix 3.

New equipment must be physically labelled with the date-in-service as well as an equipment identification number and these details entered into the Portable Appliance Register. It is not necessary to test new equipment but items should be given a visual inspection and operational check before being used.

The University will require that the contractor records test results on the test database and will add/delete/comment on items as necessary. The tasks and responsibilities for Portable Appliance Testing or Inspection are noted in the Appendix 4.

11. Information and Instruction

All staff/students must be provided with adequate information to enable them to carry out user checks as detailed in Appendix 1 and other requirements of this Policy.

12. Supervision

Line managers and supervisors must ensure that where equipment is provided, it is inspected and/or tested according to this Policy and that staff and students carry out the user checks when necessary.

13. Training

Only competent persons who have undergone appropriate training in portable appliance testing/inspection may carry out testing/inspection on behalf of the University. Further advice can be obtained from the University Safety Service.

Staff/students must be provided with appropriate instruction or briefing on the requirements of this Policy.

14. Record-keeping

The Register of portable appliances and testing records must be kept up-to-date. An example of the PAT Register is included in Appendix 2. Portable Appliance Testing/Inspection records should be kept for at least seven years.

15. Implementation/Monitoring/Audit

Faculties, Schools and Directorates are responsible for implementation of this Policy and Procedure within their respective area of control. Allocation of duties to organise inspection,

testing, recording and remedial action should be arranged within applicable business areas. Nominated staff can arrange Portable Appliance testing through Planon. Where the approved contractor is not being used, competent staff should be nominated to carry out the required testing and/or inspections. Faculties, Schools and Directorates should monitor the compliance of this policy during workplace inspections. A summary of Portable Appliance Testing/Inspection activity must be submitted to the University Safety Service on an annual basis. The PAT/Inspection Register should be made available for inspection by internal/external auditors.

16. Regulations and Guidance

The Electricity at Work Regulations (Northern Ireland) 1991 (SR 1991/13).

Memorandum of Guidance on the Electricity at Work Regulations (Northern Ireland) 1991. HSENI (2001)

Maintaining Portable Electrical Equipment in low-risk Environments. HSE INDG 236 (2012) rev 3 published 09-13.

Provision and Use of Work Equipment Regulations (Northern Ireland) 1999
Management of Health and Safety at Work Regulations (Northern Ireland) 2000

17. Approval

This Policy and Procedure has been approved by the Health and Safety Management Group on 28 April 2021.

18. Review Date

The next review date for this Policy and Procedure will be instigated by the Estates Management Group and this will be due in three years' time, April 2024.

19. Further Information

Further information can be obtained from:

Estates	Tel: 028 9097 5005	email estates@qub.ac.uk
Procurement Office	Tel: 028 9097 3026	email procurement@qub.ac.uk
University Safety Service	Tel: 028 9097 4613	email: safety@qub.ac.uk

20. Appendices

Appendix 1 - User and formal visual inspection checks for portable electrical equipment

Appendix 2 - PAT register format

Appendix 3 - Frequency of testing and/or inspection

Appendix 4 – Tasks and responsibilities

Appendix 1 – User and Formal Visual Inspection Checks for Portable Electrical Equipment

User Checks

Users must carry out a visual inspection of equipment, including plugs and leads, before any item of portable electrical equipment is used.

It is not a requirement to carry out Portable Appliance Testing on new items; however each item should have a label placed on it indicating the date it was first put into use. This will assist with understanding compliance whilst carrying out workplace inspections.

The following are examples of visual signs that the equipment is not in sound condition:

- The cable is damaged (apart from light scuffing) e.g. kinks, cuts, abrasions.
- The plug is damaged e.g. the casing is cracked or the pins are bent.
- Equipment with an intermittent fault.
- Inadequate joints e.g. taped "block type" connectors.
- The outer sheath of the cable should be effective and secured where it enters the plug or equipment. There should be no exposed wires (obvious evidence would be if the coloured insulation of the internal cable cores were showing).
- There is damage to external casing of equipment e.g. loose parts, or screws.
- There is evidence of overheating e.g. burn marks or heavy discoloration and/or staining.
- The equipment has been subjected to conditions for which it is not suitable e.g. it is wet or contaminated.
- Protective cable grommets, which protect cables passing through sharp metal cases should be effective. Damaged or loose grommets are a frequent cause of premature cable failure.
- Plug adaptors without a UK British Standard Mark or CE mark and which is not fitted with an integral fuse must not be used and removed from site or disposed of as electrical waste.

Any faults must be reported to line management immediately and the equipment not used until checked and/or repaired by a competent person.

Formal Visual Inspection

A competent person shall routinely carry out a formal visual inspection, which shall include the following:

- All the user checks detailed previously, but more formal and systematic.
- The plug or adaptor is marked with the appropriate BS specification.
- The plug or adaptor contains the correct rating of fuse for the equipment that it is supplying.
- Cable terminations are secure and correct where accessible.
- The cable grip is effective.
- Signs of internal damage to plug.
- Operation of the equipment on/off switch (if fitted).
- Signs of physical damage to the equipment. In particular, no live metalwork shall be exposed.

The pass or fail should be recorded on the School/Faculty/Directorate PAT Register and the appliance labelled accordingly. Any equipment that fails a formal visual inspection and cannot be readily and safely repaired by a competent person, must be labelled with a red fail label and withdrawn from use immediately.

The formal visual inspection may include the opening up of the plug. It will not involve the dismantling of the equipment itself.

The frequency of inspection will depend on the conditions of use and the environment in which the equipment is being used. However, as a minimum, the interval stated in Appendix 3 shall be applied.

Appendix 2 – PAT Register Format

Queen's University - Results for PATs Example

TEST NO	SCHOOL/DEPT.	BUILDING	APP NUMBER	NEW ROOM NUMBER	OLD ROOM NUMBER	DESC.	TYPE	FREQ.	UNIT	LAST TEST	NEXT TEST	STATUS	VISUAL
1381	PHY	10003A	12672716	LG029	LG029	HUMIDIFIER CONVAIR	EPA	24	M	23/01/2017	23/01/2008	PASS	PASS
1382	PHY	10003A	12674434	0G059	G059	HV POWER SUPPLY	EPA	12	M	31/01/2017	31/01/2018	PASS	PASS
1383	PHY	10003A	12661730	LG062	LG062	HV POWER SUPPLY	EPA	12	M	25/01/2017	25/01/2018	PASS	PASS
1384	PHY	10003A	12661731	LG062	LG062	HV POWER SUPPLY	EPA	12	M	25/01/2017	25/01/2018	PASS	PASS
1385	PHY	10003A	12674574	LG064	LG064	HV POWER SUPPLY	EPA	12	M	01/02/2017	01/02/2018	PASS	PASS
1387	PHY	10003A	12674614	0G043	G043	HV SUPPLY SOURCE	EPA	12	M	01/02/2017	01/02/2018	PASS	PASS

Continued below ...

... continued from above

EARTH		EARTH RES	INSULATION		INSUL RES	LOAD		LOAD RES	LEAKAGE		LEAK RES	LEAD
			>99.99	PASS	>99.99	0.06	PASS	0.06	<0.10	PASS	<0.10	
0.080	PASS	0.080	>99.99	PASS	>99.99	<0.05	PASS	<0.05	0.34	PASS	0.34	
0.120	PASS	0.120	>99.99	PASS	>99.99	<0.05	PASS	<0.05	<0.10	PASS	<0.10	
0.110	PASS	0.110	>99.99	PASS	>99.99	<0.05	PASS	<0.05	<0.10	PASS	<0.10	
0.090	PASS	0.090	>99.99	PASS	>99.99	<0.05	PASS	<0.05	<0.10	PASS	<0.10	
0.130	PASS	0.130	>99.99	PASS	>99.99	<0.05	PASS	<0.05	<0.10	PASS	<0.10	

Appendix 3 – Frequency of Inspection and/or Testing

EQUIPMENT/ENVIRONMENT	USER CHECK	FORMAL VISUAL INSPECTION	INSPECTION & TESTING	PROCEDURES
Battery operated (less than 40 volts)	No	No	No	
Extra low voltage (less than 50 volts AC)	No	No	No	
Office IT equipment (eg Personnel Computers, VDU Screens)	No	Yes, 4 Years	No if double insulated - otherwise 5 years	If testing is required it should be carried out during the formal visual inspection.
IT equipment in Student Computing Centres (SCCs).	No	Yes, 2 years	No if double insulated - otherwise 4 - 5 years	Computers from SCCs should be inspected and tested before being reallocated to other areas.
Cables (leads) associated with the above IT equipment.	Yes	Yes, 2 years	Yes, 2 - 4 years	Tested every <u>two</u> years in Student Computing Centres and other high risk environments. <u>Four</u> years in office areas.
Central IT equipment attached to cabinets and racks.	No	Yes, 4+ years	No	Formal inspection by Information Services staff during system maintenance.
Photocopiers/fax machines: NOT hand held (rarely moved)	No	Yes, 2-4 years	No if double insulated - otherwise 5 years	If testing is required it should be carried out during the formal visual inspection.
Double insulated equipment: NOT hand held, only moved occasionally, eg fans, desk lamps, slide/data projectors, fixed workshop equipment.	Yes	Yes, 2-4 years	No	
Double insulated equipment: hand held, eg some types of vacuum cleaners, portable drills, other power tools, workshop equipment	Yes	Yes, 6 months – 1 yr	No	
Earthed equipment (Class 1), eg electric kettles, some types of vacuum cleaners	Yes	Yes, 6 months – 1 yr	Yes, 1–2 years	When testing is required it should be carried out during the formal visual inspection.
Extension leads	Yes	Yes, 6 months – 4 years depending on the type of equipment it is connected to	Yes, 1-5 years depending on the type of equipment it is connected to	When testing is required it should be carried out during the formal visual inspection.

Note: Double insulated equipment (Class 2) is indicated by the square within a square symbol.

Appendix 4 Responsibilities and Actions

Task	School/Directorate/Faculty Person	Contractor/Local Appointed Competent Person	Estates Helpdesk	University Safety
Appoint a Competent Contractor	Head of Administration and Resources, Estates Directorate		Record details of the Competent Contractor on Planon and set-up remote access portal	
Appoint a Local Competent Person for Testing/Inspection and Portable Appliances Co-ordinator if this is the agreed process for the Business Unit	Local Management Team to select appropriate and competent persons. Once trained, pass this information and the area the person covers to Estates Helpdesk Provide training as necessary and appoint as Competent		Receive list of local Competent Persons, local co-ordinator and details of Contractor, update the information to Planon and set-up access portal for receiving requests for electrical checks and recording results of such tests. Provide information and instruction on receiving and record completion of jobs and upload of information to Planon	
Request PAT/Inspection stating number and type of items to be tested.	Local co-ordinator for portable appliances or Safety Co-ordinator to request this on Estates CAFM- Planon		Receive request and direct this to the Competent Contractor or the local Competent Person as agreed	Ensure that a blanket Purchase Order is open to recharge testing costs to appropriate business unit
Carry out PAT or Inspection and record all	Local co-ordinator for portable appliances to	Contractor to arrange with the School/Directorate/Faculty local co-ordinators to	Receive completed job requests as technically	Receive invoice for tests from Contractor, check

Task	School/Directorate/Faculty Person	Contractor/Local Appointed Competent Person	Estates Helpdesk	University Safety
<p>details on the local database for the applicable School/Faculty/Directorate</p>	<p>arrange suitable visit date with the Contractor or local Competent Person</p>	<p>visit and carry out tests. A Contractor PAT label is to be affixed to the item once the test is completed</p> <p>Local Competent Person to arrange to carry out inspections and PAT with local co-ordinator as agreed, a Queen's Inspection/ PAT label is to be affixed to the item on completion. Both the Contractor and Local Competent Person to upload test results in the required format to Planon and technically complete the job request.</p> <p>All new devices to be recorded on register and labelled with date to service label</p> <p>All "Users" to carry out the "User Check" before using items as indicated by a "yes" in the user check column of the table in Appendix 3.</p>	<p>complete, await financial information</p> <p>Receive test results and invoice from the University Safety Service and match to job request, administratively complete the job. Post the recharge through to Finance.</p>	<p>tests have been completed and data provided in correct format. Pass invoice for payment to P2P and that the required data is available and copy invoice to Estates Helpdesk</p>

Portable Appliance Testing

