



Planned preventive maintenance

Maintenance includes performing routine actions, known as Planned Preventive Maintenance (PPM) which aim to prevent issues from arising. PPM can be defined as works of a routine nature where annual costs can realistically be estimated and forecast. Both building equipment and fabric can be maintained to a planned regime, without waiting for failure or damage to occur. Regular PPM should be performed to keep the building and its equipment in good working order and to avoid equipment or technical systems failures and potential violations of health and safety and other legislation.

All schools are different and some of the maintenance items listed here may not exist within the school (e.g. a primary school is unlikely to have fume cupboards or technical workshops). Many schools will also have items requiring maintenance which are not included here. Schools are therefore encouraged to review this section to establish which of these items exist within their premises, whether any others need to be added and to seek professional advice if in doubt.

Examples of activities not covered by this note include:

- Food hygiene and catering requirements
- Maintenance of practical lesson machinery and equipment
- Kiln servicing
- General health, safety and security management
- Safety signage
- Maintenance of CCTV and security equipment

Important certification and information to hold

The following significant elements of a building require formal certification or evidence to be available to demonstrate they are being appropriately managed. The requirement to hold evidence or certification is well defined in other guidance or legislation. It is important that you meet this requirement and that providers of services with regard to these elements hold appropriate qualifications or certifications.

This table shows the major items likely to be required in most schools, listed alphabetically. It is not exhaustive; the full list of maintenance and management certification and information for each school will vary depending on the specific construction type and building services installed.

Building element/aspect of management	Contractor accreditation	Requirements
Air conditioning systems (see also Water Supply for wet systems)	Qualified Energy Assessor	Applicable to installations with a total cooling capacity of 12 kW or greater. No longer than 5 years between reports
Asbestos	See Asbestos management in schools	All schools should hold a record of all known asbestos and have management plans in place to prevent exposure of staff, students and visitors (including contractors). This should be reviewed regularly
Boilers (and other gas installations)	See Get gas safe at school	Annual Test Certificate and Gas Installation Maintenance Plan. Maintenance required by GSIUR Regulation 35, should be in accordance with manufacturer recommendations and any plan identified by duty holder risk assessment
Fire escape and safety	Regulatory Reform (Fire Safety) Order 2005	The responsible person must assess and record the risks of fire and take steps to reduce or remove

Building element/aspect of management	Contractor accreditation	Requirements
	Appointment of Responsible Person (NB: Requirements for testing, fire drills, logs etc. are covered under BS5839 and other relevant standards)	them. The results of all inspections, testing and checks must be recorded. Those completing fire risk assessments and/or providing advice in relation to them should be appropriately qualified and / or experienced
Fixed wiring	NICEIC or other approved scheme	5 Yearly test of 100% of the installation (can be phased – say 20% of installation per year)
Lifts	HSE guidance Thorough examinations and inspections of lifting equipment	Inspection frequencies at least every 6 months.
Local Exhaust Ventilation (LEV) extraction systems	Competent LEV Thorough Examination and Test Engineer (Institute of Local Exhaust Ventilation Engineers)	Thorough Examination and Test every 14 months.
Water supply	Legionnaires' disease. The control of Legionella bacteria in water systems (2013) Appointment of Competent Person	Identify the sources of risk and prepare and implement a scheme to prevent and control the risk. Keep records of all checks and reviews of the scheme.

Table 2: Major items likely required by most schools

Maintenance checks and testing

Electrical and lighting systems

Electrical safety

Portable appliance testing (PAT)

A portable or moveable electrical appliance can be defined as any item that can be moved, either connected or disconnected from an electrical supply. Portable or movable items generally have a lead (cable) and a plug. The Electricity at Work Regulations 1989 (EAWR) state that electrical equipment must be maintained if it can cause danger. This includes any electrical equipment used by employees at work.

Not all electrical equipment will need a portable appliance test.

Items deemed unsafe to operate should be immediately rendered incapable of use until repaired or replaced.

Fixed electrical installation tests

Electrical equipment should be visually checked to spot early signs of damage or deterioration. Equipment should be more thoroughly tested by a competent person often enough that there is little chance that the equipment will become dangerous between tests. Equipment used in a harsh environment should be tested more frequently than equipment that is less likely to become damaged or unsafe.

It is good practice to decide on how often each piece of equipment should be checked, write this down, make sure checks are carried out accordingly and write down the results. You should change how often you carry out checks, according to the number and severity of faults found.

For illustrative purposes, many organisations plan inspection of fixed electrical installations every five years, which can be phased into annual inspections of 20% of circuits for practical purposes.

You should always have your electrical installation inspected and tested by a person who has the competence to do so.

Emergency lighting

Emergency lighting is lighting that is installed in a building to provide a degree of illumination when the normal lighting fails.

In terms of fire safety the most important component of an emergency lighting system is the “escape lighting” which is provided to illuminate escape routes to an extent sufficient to enable occupants to evacuate the building in safety.

Schools are encouraged to undertake and record a monthly flash test. A more detailed six-monthly condition test, including a three-hour battery test by a competent person is also recommended.

Lifts and hoists

Under the [The Lifting Operations and Lifting Equipment Regulations –LOLOR](#) a duty holder has a legal responsibility to ensure that any lift on the premises is thoroughly examined and safe to use.

There is a requirement to undertake a periodic examination, which typically will be a Written Scheme of Examination detailing the precise nature and frequency of inspections.

A thorough examination will entail a systematic and detailed examination of the lift and all its associated equipment by a competent person. The lift inspector will assess the required inspection intervals.

As well as considering the risks associated with lifts in normal use, it is important to consider the safety of users in the event of the lift breaking down or stopping between floors.

Heating and cooling systems

Gas appliance and fittings

It is recommended that periodic routine maintenance is carried out on gas appliances, pipe work and flues by a registered person. Routine maintenance would normally involve ongoing regular periodic examination of the installation/appliance and remedial action taken where necessary in accordance with manufacturers' recommendations. If manufacturers' recommendations are not available, professional advice should be sought.

Fuel oil storage

All tanks, bunds and pipework should be regularly checked for signs of damage and it is recommended that they are checked at least monthly, with a more detailed annual inspection and service by qualified inspectors to ensure that any potential defects are found and rectified.

Air conditioning systems (including heat pumps)

Air conditioning system should be inspected by an energy assessor at regular intervals not exceeding five years. In addition, an annual certificated inspection to ensure that there is no leakage of refrigerant is required under the Fluorinated greenhouse gases regulations. Bi-annual checks and an annual maintenance schedule should continue as best practice.

Pressure systems

Systems or equipment which contain a liquid or gas under pressure can cause serious injury and damage to property if they are not properly maintained.

Legionella

Legionella bacteria can grow in hot and cold water systems and can be harmful to health if inhaled. Legionnaires' disease is normally only contracted where water is sprayed and small droplets (aerosols) of water containing the bacteria are inhaled – in a shower, for example.

The duty holder is required to:

- Identify and assess sources of risk

- Prepare a scheme (or course of action) for preventing or controlling the risk

- Implement, manage, and monitor the scheme

Glazing

The duty to comply with the Regulations will normally fall to the employer or those in control of the premises. Under the Regulations every window or other transparent or translucent surface in a wall, partition, door or gate should, where necessary for reasons of health or safety, be of a safety material or be protected against breakage and be appropriately marked.

Safety and security systems

Fire detection and alarm systems

Fire detection and alarm systems should have a weekly alarm test with all call points being tested over a 13 week cycle. The system should also be subject to quarterly and annual inspections and tests by a competent person.

All work on the fire alarm system including routine testing must be recorded and be accessible to the fire service.

Ideally, zone diagrams should be available at the main control panel to enable the fire services to determine the location of the incident and to devise the most appropriate methods of fighting the fire.

Fire doors

All fire doors and associated hardware must remain in efficient working order and should be regularly checked and maintained by a competent person. It is advisable to keep a record of any maintenance. The inspection of fire doors should include checks on the following:

- Self-closing devices operate properly

- Hold open devices release when the fire alarm operates

- Glazed panels are intact and undamaged

- Warning signs are in place: "Automatic Fire Door – Keep Clear" if the door has automatic release, or "Fire Door Keep Closed" if manually operated

- Doors open and close freely and are free from damage

- There is no distortion or warping of the door or frame

Intumescent strips and smoke seals are in place and not damaged

Hinges and locks are properly lubricated

Fire doors are not propped open by staff or pupils

Firefighting equipment

Extinguishers

These should be maintained and inspected by a competent person at least once a year. This involves a visual inspection of the extinguisher and a check of the contents and stored pressure. A written record should be kept of the date of the last maintenance examination and this should usually be attached to the body of the extinguisher.

Fire blankets

These should be inspected at least annually and replaced as required.

Hose reels

Hose reels are for the use of the fire service and staff should not normally be trained in the use of this equipment. All hose reels should be inspected on a yearly basis by a competent person. They must also be recorded in the risk assessment for Legionella and maintained accordingly.

Fixed systems

Fixed systems are those which when activated by the warning/alarm system, release the extinguishing medium e.g. sprinkler systems. All fixed systems should be inspected at least on an annual basis or to manufacturer's guidelines. It is advisable to keep a record of any maintenance and testing.

Fire service facilities

Facilities for the fire service may include dry risers, access for emergency vehicles; emergency switches for installations and information in respect of the premises and its contents. Where these facilities are provided they should be maintained and kept in good order. Maintenance and testing is required annually and varies dependent upon the height of the building.

Lightning conductors

These should be inspected and electrically tested by a competent person annually.

Extract systems

These systems may be employed to maintain a safe environment by removing hazardous fumes, as in the case of a laboratory fume cabinet or kitchen extract, or dusts and fumes, as in the case of technical workshops.

Where such systems are installed they should be adequately maintained as advised by the supplier or installer.

Catering extract systems

All extraction systems that are used to maintain a clean safe environment require a statutory thorough examination, test and deep clean.