# Approved Document P: Electrical safety – Dwellings

## Summary

**0.1** This approved document gives guidance on how to comply with Part P of the Building Regulations. It contains the following sections:

**Section 1:** Technical requirements for electrical work in dwellings
**Section 2:** The types of building and electrical installation within the scope of Part P, and the types of electrical work that are notifiable
**Section 3:** The different procedures that may be followed to show that electrical work complies with Part P
**Appendix A:** Key terms
**Appendix B:** Standards referred to.

## Interaction with other parts of the Building Regulations

**0.2** Other parts of the Building Regulations contain requirements that affect electrical installations. Examples include, but are not limited to, the following:

a. Part A (Structure): depth of chases in walls, and size of holes and notches in floor and roof joists

b. Part B (Fire safety): fire safety of certain electrical installations; provision of fire alarm and fire detection systems; fire resistance of service penetrations through floors, walls and ceilings

c. Part C (Site preparation and resistance to contaminants and moisture): resistance of service penetrations to rainwater and contaminants such as radon

d. Part E (Resistance to the passage of sound): soundproofing of service penetrations

e. Part F (Ventilation): dwelling ventilation rates

f. Part L (Conservation of fuel and power): energy efficient lighting

g. Part M (Access to and use of buildings): height of socket-outlets and switches.

# Requirement P1: Design and installation

This approved document deals with the following requirement from Part P of Schedule 1 to the Building Regulations 2010.

## Requirements

| *Requirement* | *Limits on application* |
|---|---|
| **Design and installation** | |
| **P1.** Reasonable provision shall be made in the design and installation of electrical installations in order to protect persons operating, maintaining or altering the installations from fire or injury. | The requirements of this part apply only to electrical installations that are intended to operate at low or extra-low voltage and are:<br>(a) in or attached to a dwelling;<br>(b) in the common parts of a building serving one or more dwellings, but excluding power supplies to lifts;<br>(c) in a building that receives its electricity from a source located within or shared with a dwelling; or<br>(d) in a garden or in or on land associated with a building where the electricity is from a source located within or shared with a dwelling. |

## Performance

In the Secretary of State's view, the requirements of Part P will be met if low voltage and extra-low voltage electrical installations in dwellings are designed and installed so that both of the following conditions are satisfied.

a. They afford appropriate protection against mechanical and thermal damage.

b. They do not present electric shock and fire hazards to people.

# Section 1: Design and installation

## General

**1.1** Electrical installations should be designed and installed in accordance with **BS 7671:2008** incorporating Amendment No 1:2011.

### Provision of information

**1.2** Sufficient information should be provided to ensure that people can operate, maintain or alter an electrical installation with reasonable safety.

The information should comprise items listed in **BS 7671** and other appropriate information including:

a. electrical installation certificates or reports describing the installation and giving details of the work carried out

b. permanent labels, for example on earth connections and bonds, and on items of electrical equipment such as consumer units and residual current devices (RCDs)

c. operating instructions and logbooks

d. for unusually large or complex installations only, detailed plans.

### Functionality requirements

**1.3** Part P of the Building Regulations covers the safety of electrical installation work; it does not cover system functionality. Other parts of the Building Regulations and other legislation cover the functionality of electrically powered products such as fire alarm systems, fans and pumps.

## New dwellings

**1.4** Wall-mounted socket-outlets, switches and consumer units in new dwellings should be easy to reach, in accordance with Part M of the Building Regulations (Access to and use of buildings).

**NOTE:** Approved Document M recommends that in new dwellings only, switches and socket-outlets for lighting and other equipment should be between 450mm and 1200mm from finished floor level. Approved Document M does not recommend a height for new consumer units. However, one way of complying with Part M in new dwellings is to mount consumer units so that the switches are between 1350mm and 1450mm above floor level. At this height, the consumer unit is out of reach of young children yet accessible to other people when standing or sitting.

## New dwellings formed by a change of use

**1.5** Where a material change of use creates a new dwelling, or changes the number of dwellings in a building, regulation 6 requires that any necessary work is carried out to ensure that the building complies with requirement P1. This means that in some cases the existing electrical installation will need to be upgraded to meet current standards.

**NOTE:** If existing cables are adequate, it is not necessary to replace them, even if they use old colour codes.

## Additions and alterations to existing electrical installations

**1.6** Regulation 4(3) states that when building work is complete, the building should be no more unsatisfactory in terms of complying with the applicable parts of Schedule 1 to the Building Regulations than before the building work was started. Therefore, when extending or altering an electrical installation, only the new work must meet current standards. There is no obligation to upgrade the existing installation unless either of the following applies.

a. The new work adversely affects the safety of the existing installation.

b. The state of the existing installation is such that the new work cannot be operated safely.

**1.7** Any new work should be carried out in accordance with **BS 7671**. The existing electrical installation should be checked to ensure that the following conditions are all satisfied.

a. The rating and condition of existing equipment belonging to both the consumer and to the electricity distributor are suitable for the equipment to carry the additional loads arising from the new work.

b. Adequate protective measures are used.

c. The earthing and equipotential bonding arrangements are satisfactory.

# Section 2: Application of Part P

## General

**2.1** All electrical installation work carried out in a dwelling is subject to requirement P1, and should comply with the design and installation guidance in Section 1. Section 2 sets out:

a. the types of building and electrical installation that are within the scope of Part P

b. the types of electrical work that are notifiable and must be certified as complying with the Building Regulations.

Certification procedures are set out in Section 3.

## Scope

**2.2** Part P applies to electrical installations:

a. in a dwelling-house or flat, and to parts of the installation that are:

(i) outside the dwelling – for example fixed lighting and air conditioning units attached to outside walls, photovoltaic panels on roofs, and fixed lighting and pond pumps in gardens

(ii) in outbuildings such as sheds, detached garages and domestic greenhouses.

b. in the common access areas of blocks of flats such as corridors and staircases

c. in shared amenities of blocks of flats such as laundries, kitchens and gymnasiums

d. in business premises (other than agricultural buildings) connected to the same meter as the electrical installation in a dwelling – for example shops and public houses below flats.

**2.3** Part P does not apply to electrical installations:

a. in business premises in the same building as a dwelling but with separate metering

b. that supply the power for lifts in blocks of flats (but Part P does apply to lift installations in single dwellings).

**NOTE:** Schedule 2 to the Building Regulations identifies buildings – for example unoccupied, agricultural, temporary and small detached buildings – that are generally exempt from the requirements of the Regulations. However, conservatories, porches, domestic greenhouses, garages and sheds that share their electricity with a dwelling are not exempt from Part P (by virtue of regulation 9(3)) and must comply with its requirements.

**2.4** The scope of Part P is illustrated in Diagram 1.

See paragraphs 2.2 to 2.4

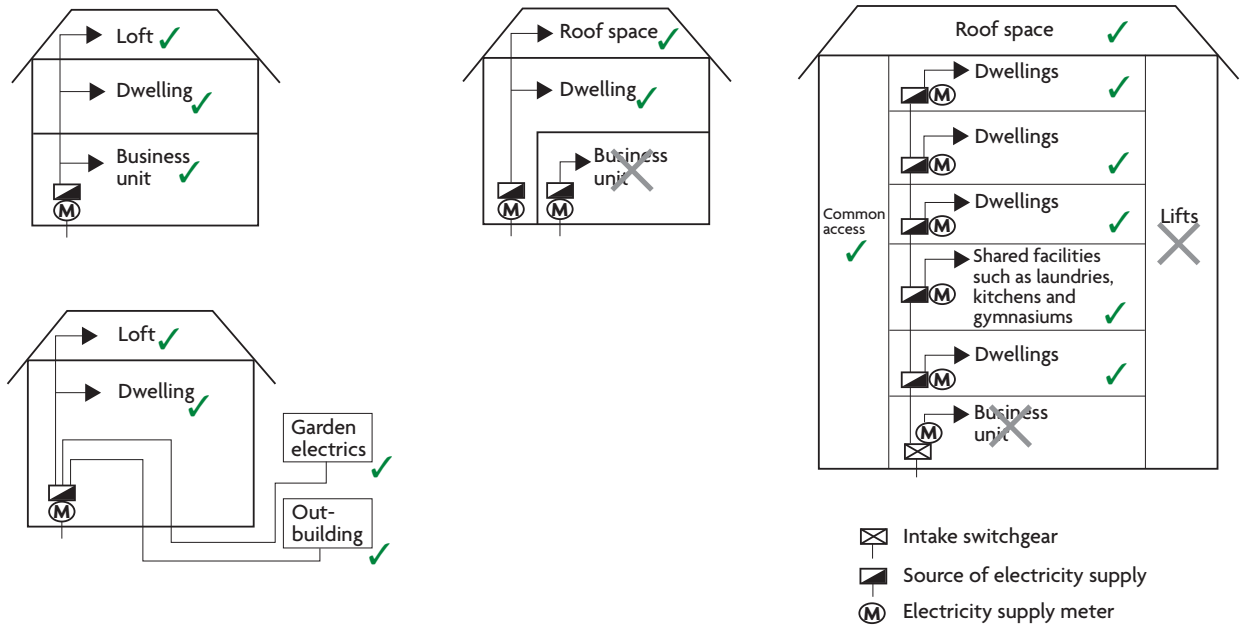


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Diagram 1 Scope of Part P

## Notifiable work

**2.5** Electrical installation work that is notifiable is set out in regulation 12(6A).

**12.**—(6A) A person intending to carry out building work in relation to which Part P of Schedule 1 imposes a requirement is required to give a building notice or deposit full plans where the work consists of—

(a) the installation of a new circuit;
(b) the replacement of a consumer unit; or
(c) any addition or alteration to existing circuits in a special location.

—(9) In this regulation "special location" means—

(a) within a room containing a bath or shower, the space surrounding a bath tap or shower head, where the space extends—
  (i) vertically from the finished floor level to—
    (aa) a height of 2.25 metres; or
    (bb) the position of the shower head where it is attached to a wall or ceiling at a point higher than 2.25 metres from that level; and
  (ii) horizontally—
    (aa) where there is a bath tub or shower tray, from the edge of the bath tub or shower tray to a distance of 0.6 metres; or
    (bb) where there is no bath tub or shower tray, from the centre point of the shower head where it is attached to the wall or ceiling to a distance of 1.2 metres; or

(b) a room containing a swimming pool or sauna heater.

**2.6** Diagram 2 illustrates the space around a bath tub or shower tray (a special location) within which minor additions and alterations to existing circuits, as well as the installation of new circuits, are notifiable.

See paragraphs 2.5 to 2.6

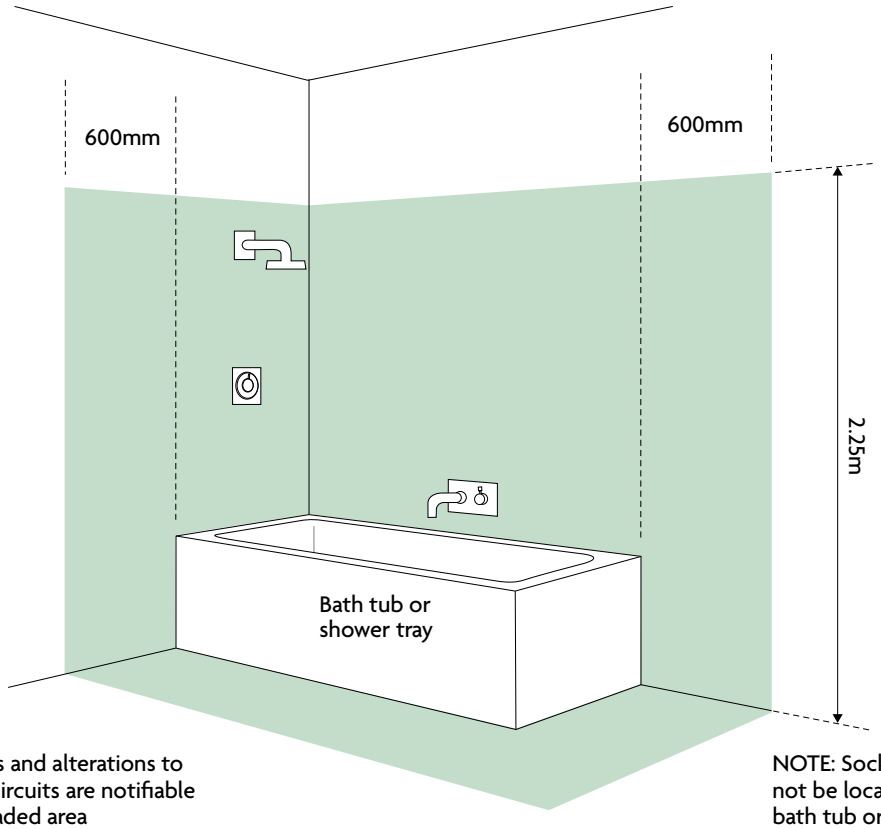


Diagram 2 Notifiable work in rooms containing a bath or shower

## Non-notifiable work

**2.7** Regulation 12(6A) sets out electrical installation work that is notifiable. All other electrical installation work is not notifiable – namely additions and alterations to existing installations outside special locations, and replacements, repairs and maintenance anywhere.

**2.8** Installing fixed electrical equipment is within the scope of Part P, even if the final connection is by a standard 13A plug and socket, but is notifiable only if it involves work set out in regulation 12(6A). For example:

a. installing a built-in cooker is not notifiable work unless a new cooker circuit is needed

b. connecting an electric gate or garage door to an existing isolator switch is not notifiable work, but installing a new circuit from the consumer unit to the isolator is notifiable.

**2.9** Installing prefabricated, modular wiring (for example for kitchen lighting systems) linked by plug and socket connectors is also within the scope of Part P, but again is notifiable only if it involves work set out in regulation 12(6A).

# Section 3: Certification, inspection and testing

## General

**3.1** For notifiable electrical installation work, one of the following three procedures must be used to certify that the work complies with the requirements set out in the Building Regulations.

a. Self-certification by a registered competent person.

b. Third-party certification by a registered third-party certifier.

c. Certification by a building control body.

**3.2** To verify that the design and installation of electrical work is adequate, and that installations will be safe to use, maintain and alter, the electrical work should be inspected and tested in accordance with the procedures in **BS 7671**.

**NOTE:** Electrical inspection and test forms should be given to the person ordering the work. Building Regulations certificates should normally be given to the occupier, but in the case of rented properties may be given to the person ordering the work and copied to the occupier.

## Self-certification by a registered competent person

**3.3** Electrical installers who are registered competent persons should complete a **BS 7671** electrical installation certificate for every job they undertake. The electrical installer should give the certificate to the person ordering the work.

**3.4** The installer or the installer's registration body must within 30 days of the work being completed do both of the following.

a. Give a copy of the Building Regulations compliance certificate to the occupier.

b. Give the certificate, or a copy of the information on the certificate, to the building control body.

## Certification by a registered third party

**3.5** Before work begins, an installer who is not a registered competent person may appoint a registered third-party certifier to inspect and test the work as necessary.

**3.6** Within 5 days of completing the work, the installer must notify the registered third-party certifier who, subject to the results of the inspection and testing being satisfactory, should then complete an electrical installation condition report and give it to the person ordering the work.

**NOTE:** The electrical installation condition report should be the model **BS 7671** form or one developed specifically for Part P purposes.

**3.7** The registration body of the third-party certifier must within 30 days of a satisfactory condition report being issued do both of the following.

a. Give a copy of the Building Regulations compliance certificate to the occupier.

b. Give the certificate, or a copy of the information on the certificate, to the building control body.

## Certification by a building control body

**3.8** If an installer is not a registered competent person and has not appointed a registered third-party certifier, then before work begins the installer must notify a building control body.

**3.9** The building control body will determine the extent of inspection and testing needed for it to establish that the work is safe, based on the nature of the electrical work and the competence of the installer. The building control body may choose to carry out any necessary inspection and testing itself, or it may contract a specialist to carry out some or all of the work and furnish it with an electrical installation condition report.

**3.10** An installer who is competent to carry out inspection and testing should give the appropriate **BS 7671** certificate to the building control body, who will then take the certificate and the installer's qualifications into account in deciding what further action, if any, it needs to take. Building control bodies may ask installers for evidence of their qualifications.

**3.11** This can result in a lower building control charge as, when setting its charge, a local authority is required by the Building (Local Authority Charges) Regulations 2010 to take account of the amount of inspection work that it considers it will need to carry out.

**3.12** Once the building control body has decided that, as far as can be ascertained, the work meets all Building Regulations requirements, it will issue to the occupier a Building Regulations completion certificate (if a local authority) or a final certificate (if an approved inspector).

## Inspection and testing of non-notifiable work

**3.13** Non-notifiable electrical installation work, like notifiable work, should be designed and installed, and inspected, tested and certificated in accordance with **BS 7671**.

**3.14** If local authorities find that non-notifiable work is unsafe and non-compliant, they can take enforcement action.

# Appendix A: Key terms

## The following are key terms used in this document:

Building control body
A local authority or private sector approved inspector

Building Regulations compliance certificate
A certificate issued by an installer registered with an authorised competent person self-certification scheme, or by a certifier registered with an authorised third-party certification scheme stating that the work described in the certificate complies with regulations 4 and 7 of the Building Regulations 2010 (that is, the work complies with all applicable requirements in the Building Regulations)

Electrical installation*
Fixed electric cables or fixed electrical equipment located on the consumer's side of the electricity supply meter

Extra-low voltage*
A voltage not exceeding 50V ac or 120V ripple-free dc, whether between conductors or to earth

Low voltage*
A voltage exceeding extra-low voltage but not exceeding 1000V ac or 1500V dc between conductors, or 600V ac or 900V dc between conductors and earth

Registered competent person
A competent person registered with a Part P competent person self-certification scheme

Registered third-party certifier
A competent person registered with a Part P competent person third-party certification scheme

**NOTE:** *Terms defined in regulation 2 of the Building Regulations 2010

# Appendix B: Standards referred to

**BS 7671**
Requirements for Electrical Installations
[2008 + A1:2011] (IET Wiring Regulations 17th Edition,
ISBN 978-1-84919-269-9)