

Technical Handbook - Domestic

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Table of Contents

Technical Handbook - Domestic	1
0. General	2
0.1 Application	2
0.2 Citation, commencement and interpretation	6
0.3 Exempted buildings and services, fittings and equipment	9
0.4 Changes in the occupation or use of a building that cause the regulations to apply	15
0.5 Buildings work, services, fittings and equipment not requiring a warrant	17
0.6 Limited life buildings	23
0.7 Measurements	24
0.8 Durability, workmanship and fitness of materials	25
0.9 Building standards applicable to construction	32
0.10 Building standards applicable to demolition	33
0.11 Building standards applicable to the provision of services, fittings and equipment	33
0.12 Building standards applicable to conversions	34
0.13 Provision of protective works	35
0.14 Clearing of footpaths	36
0.15 Securing of unoccupied and partially completed buildings	36
0.16 Relaxations	37
0.17 Continuing Requirements	37

Technical Handbook - Domestic

General

0.1 Application

0.1.1 Introduction

The Building (Scotland) Act 2003 gives Scottish Ministers the power to make building regulations to:

- secure the health, safety, welfare and convenience of persons in or about buildings and of others who may be affected by buildings or matters connected with buildings
- further the conservation of fuel and power and
- further the achievement of sustainable development.

This document gives guidance on how to comply with these regulations.

This is one of two Technical Handbooks, one covering domestic buildings and the other non-domestic buildings. These Technical Handbooks have been issued by Scottish Ministers for the purpose of providing practical guidance with respect to the requirements of the provisions of the building regulations under a notice given in accordance with Section 4(2) of the Building (Scotland) Act 2003. Each Handbook has eight sections. Section 0, this section, is identical in both Handbooks. It covers general issues and sets out how and when the regulations apply to buildings and works.

The 2013 Edition of the Handbooks are being published electronically and are available free on the Scottish Government, Building Standards Division website.

Sections 1 to 7 give guidance on how to achieve the standards set by the regulations, and there are different sets for domestic buildings and non-domestic buildings. The seven sections each cover a number of related standards. They are:

Section 1 Structure

Section 2 Fire

Section 3 Environment

Section 4 Safety

Section 5 Noise

Section 6 Energy

Section 7 Sustainability

Each of the seven sections consists of an introduction and then general guidance on the standards within the section. This is followed by each standard which has specific introductory information and guidance on how to comply with the standard. At the end of the Handbook, after Section 7, there are the following two sections:

Appendix A: Defined terms.

Appendix B: List of standards and other publications.

The Technical Handbooks are supported by a Procedural Handbook, published separately, which clarifies the intent of the Building (Scotland) Procedures Regulations 2004. A separate procedural guidance document for Crown buildings has also been produced.

0.1.2 The Building (Scotland) Regulations 2004

This Technical Handbook gives guidance on achieving the standards set in the Building (Scotland) Regulations. The standards themselves can be found in schedule 5 to regulation 9, and are in the form of 'expanded functional standards'. That is, the standards describe the functions a building should perform, such as 'providing resistance to the spread of fire'.

The Building (Scotland) Regulations made by the Scottish Ministers are subject to approval by the Scottish Parliament. The content of the regulations, so far as it relates to technical specifications, is also scrutinised by the European Commission (EC). The EC checks with all the other countries that have adopted the Construction Products Regulations (CPR) to ensure that no barriers to trade in construction products are created, either directly or indirectly by the way products are described.

To meet the requirements of the CPR, materials and construction methods must be described by use of suitable European Standards wherever these exist. As there is a rolling programme of change to these National and European Standards, which includes conversion to, and the further provision of, ENs and harmonised ENs, the Handbooks have been designed to be readily updated. An explanation of the relevance and status of specific European and British standards referred to in the Handbooks is in the section concerned. There is also a list of the publications referred to in the Handbooks provided in Appendix B.

The arrangement of Sections 1 - 7 within the Handbooks relates directly to the Basic Works Requirements of the CPR (as published by the EC), which construction works are expected to satisfy when they have been properly designed and built. The arrangement is as follows:

Section 1 Structure (EC - Mechanical resistance and stability)

Section 2 Fire (EC - Safety in case of fire)

Section 3 Environment (EC - Hygiene, health and the environment)

Section 4 Safety (EC - Safety and accessibility in use)

Section 5 Noise (EC - Protection against noise)

Section 6 Energy (EC - Energy, economy and heat retention)

Section 7 Sustainability (EC - Sustainable use of natural resources)

0.1.3 The building standards system

The building regulations are enforced through the building standards system that is established by the Building (Scotland) Act 2003. The Act sets out the enabling powers that allow Scottish Ministers to make, not only the building regulations, but also procedural regulations, fees regulations and the other supporting legislation needed to operate the system. The system is designed to ensure that new buildings and works achieve the objectives of the Act in terms of health, safety, welfare, convenience, conservation of fuel and power, and sustainable development.

The roles of those operating the building standards system are explained in detail in the guidance on the procedural regulations. Briefly, the duty to comply with the building regulations lies with the owner, or in some cases the client, for the work. Before work begins a building warrant must be obtained.

For some simpler works a warrant is not required (see regulation 5 and schedule 3), but the regulations still apply. The owner or client again has the duty to comply. The role of

issuing warrants and accepting completion certificates rests with verifiers, enforcement is by local authorities, and the system is overseen and updated by the Building Standards Division (BSD). BSD forms part of the Scottish Government and acts on behalf of, and is responsible to, Scottish Ministers. These bodies are further explained in the guidance to the procedural regulations.

The building standards system is pre-emptive, ensuring so far as possible that the proposed works will comply with the regulations. It recognises that proposals can change during construction, so there are requirements for amendments to the proposals to be agreed and recorded. On completion, the owner or client must certify that the works have been constructed in accordance with the building warrant and the building regulations. The verifier will make reasonable inquiry to ensure the completion certificate is accurate before accepting the certificate. Usually an inspection of the works will be made, and on most projects some inspection of work in progress will also have been carried out. However verifiers cannot inspect all materials and work on every building site. It is the client that should put in place the contractual and practical arrangements needed to assure themselves that the desired quality of work has been achieved.

0.1.4 Status of Technical Handbooks

The regulations are mandatory, but the choice of how to comply lies with the building owner. This Technical Handbook has been issued by Scottish Ministers, through the Building Standards Division, for the purpose of providing practical guidance with respect to the building regulations. If the guidance is followed in full then this should be accepted by the verifier as indicating that the building regulations have been complied with. However it is quite acceptable to use alternative methods of compliance provided they fully satisfy the regulations.

Failure to comply with the Technical Handbook does not render a person liable to civil or criminal procedures, but proof of compliance with the guidance may be relied on in any proceedings as tending to negative liability for an alleged contravention of the building regulations.

Following the advice in the Technical Handbooks is therefore likely to be the normal way of complying with the building regulations. However, a designer may put forward other ways of meeting the regulations, in the form of alternative solutions.

There are a further three guidance documents that have the same standing as the Technical Handbooks. Scottish Ministers have issued these under Section 4(1) of the Building (Scotland) Act 2003. These are:

- Guide for practitioners 7: Fire Safety Management in Traditional Buildings, published by Historic Scotland, and
- The Scottish Building Standards - Technical handbook - Conservatories published by the Building Standards Division.

In due course other documents may be issued by Scottish Ministers to provide further guidance. Such guidance might deal with specific building types, or provide alternative methods of showing compliance with those provided in the Technical Handbooks.

0.1.5 Alternative solutions

The use of expanded functional standards, backed up by detailed guidance, provides a flexible system of control. Consideration of alternative solutions is assisted by the expansion of the functional standards previously used in the building standards regulations to clarify the necessary properties of each building. The need for a formal relaxation of standards is reduced as meeting the full details of given solutions is no longer mandatory. The professional judgement of the verifier, assisted by guidance on questions referred to

Scottish Ministers, through the Building Standards Division, decides whether a standard is met.

In considering alternative solutions, however it is necessary to have regard to the details of this guidance. Where performance standards or policy statements are given, every part of the solution is expected to meet them. As a result, alternative solutions that appear suitable may not be acceptable in detail. For example, some of the solutions offered in relation to the English and Welsh building regulations, in the 'Approved Documents' (ADs), are not suitable because the levels of thermal insulation recommended are not the same. Similarly different approaches are taken to the control of fire size and the design of compartmentation which means that constructions meeting the AD on fire safety may not be acceptable. This will vary in time as both ADs and the Scottish Technical Handbooks are updated. Solutions based on other documents, such as British or European Standards, will have to be carefully evaluated to see if the Scottish standards are being met in an appropriate manner.

0.1.6 Domestic and non-domestic buildings

Where any building contains both domestic uses and non-domestic uses, the appropriate parts from each Technical Handbook will need to be used to ensure the standards are complied with in full, for example a caretakers flat in an office building. However, communal rooms or other areas in a block of dwellings that are exclusively associated with the dwellings should be considered using the domestic guidance. Examples of this might be a room used as an office for the operation of a sheltered housing complex or a lounge communal to a block of dwellings. It is also a general principle that where a building or part of a building might be seen as falling into more than one category it should be designed to meet the most stringent recommendations.

0.1.7 Latest changes

The following is a summary of the changes which have been introduced since 1 May 2011. Very minor changes to text have not been included here.

- **Standard 0.8** - completely re-written for the CPR.
- **Standard 0.9** - change to the name of Section 4, Safety and Section 6, Energy to reflect Construction Product Regulation requirements.
- **Regulation 3, Type 1 of schedule 1** - updated to reflect the replacement of the Explosive Regulations 2005 by the 2014 version.

0.1.8 Updating

It is intended that this Technical Handbook will be available in electronic form and available free of charge on the Building Standards Division website <http://www.scotland.gov.uk/topics/built-environment/building/building-standards/>. It is not expected that the standards will change regularly as these are set in the building regulations and can only be changed with Parliamentary approval. Therefore it is anticipated that the guidance will be replaced more regularly than the standards themselves.

0.1.9 Arrangement of Section 0

Section 0 is arranged to follow the actual regulations. This sub-section provides an introduction to the building standards system. Sub-section 0.2 covers regulations 1 and 2 which are the citation, commencement and interpretation. Sub-sections 0.3 to 0.15 cover the significant technical regulations with each sub-section setting out and discussing the regulation with the same number (sub-section 0.3 covering regulation 3 etc.). Regulation 16 establishes which regulations cannot ever be relaxed by Scottish Ministers. These are

the regulations on citation and commencement, interpretation, exempted buildings, work not requiring a warrant and the methods of measurement. Regulation 17 was introduced in 2007 to help with the implementation of the Energy Performance of Buildings Directive.

0.1.10 Certification

Scottish Ministers can, under Section 7 of the Building (Scotland) Act 2003, approve schemes for the certification of design or construction for compliance with the mandatory functional standards. Such schemes are approved on the basis that the procedures adopted by the scheme will take account of the need to co-ordinate the work of various designers and specialist contractors. Individuals approved to provide certification services under the scheme are assessed to ensure that they have the qualifications, skills and experience required to certify compliance for the work covered by the scope of the scheme. Checking procedures adopted by Approved Certifiers will deliver design or installation reliability in accordance with legislation.

0.2 Citation, commencement and interpretation

Regulations 1 & 2

Regulation 1

These regulations may be cited as the **Building (Scotland) Regulations 2004** and shall come into force on **1 May 2005**.

Regulation 2

Regulation 2 sets out the defined terms within the regulations. It is not reproduced in Section 0; instead the terms have been incorporated in the list of defined terms which form Appendix A.

0.2.1 Explanation of Regulation 1

Regulation 1 contains the citation and commencement of the building regulations. They apply to buildings and works as defined in the Building (Scotland) Act 2003, other than works exempted by regulation 3, schedule 1. The full text is:

The Act defines a building as any structure or erection, whether temporary or permanent. This is very wide, but there are exceptions in the The Act for:

- any public road (including any bridge on which the road is carried)
- any private road (bridges on private roads are not excluded in The Act)
- any sewer or water main vested in Scottish Water
- any aerodrome runway
- any railway line
- any large raised reservoir within the meaning of the Reservoirs Act 1975

- any wires and cables, their supports above ground and other apparatus used for telephonic or telegraphic communications.

The term building is, subject to context, taken to include a prospective building, a part of a building and, for extensions, alterations and conversions, it can mean the extension alone or the part subject to alteration or conversion. Works in relation to a building is defined in The Act as including works carried out in relation to the enclosure and preparation of the site. Works therefore includes all construction, demolition and conversion work, the provision of services fittings and equipment, and any work carried out in relation to the site.

The Building (Scotland) Regulations 2004 apply to all buildings and works where an application for warrant is made on or after 1 May 2005. In the case of a Crown building, the regulations apply to all buildings and work where an application for warrant is made on or after 1 May 2009. However, full exemption from the building standards system is provided for defence and national security buildings in legislation under The Building (Scotland) Act 2003 (Exemptions for Defence and National Security) Order 2009, SI 2009 No.822 (S.6).

The Building (Scotland) Act 2003 (Commencement No.2 and Transitional Provisions) Order 2009 allows work to Crown buildings that has started prior to 1 May 2009 to continue with immunity from building regulations. In addition, work carried out pursuant to a contract entered into prior to 1 May 2009 will continue with immunity on the basis that work commenced before 1 November 2009. In both cases, work must be complete before 1 May 2012.

Buildings and works related to earlier warrant applications or exempt works commencing before 1 May 2005 are subject to previous building standards and procedures regulations, in particular the time by when these works must be completed. Previously exempt works, in particular any no longer exempt, must have been completed by 2 September 2005, otherwise the exemption falls and a warrant for any outstanding work may be required.

On completion of the works, before the period specified in the building warrant expires, a completion certificate must be submitted. If a completion certificate is submitted for work done without a warrant, the regulations that are applicable are those in force at the time of submission of the certificate, which may well be more onerous than those which would have applied when the work started. Fuller details of the arrangements for submitting warrant applications and completion certificates will be given in the guidance on the procedure regulations.

The building regulations also incorporate requirements previously set in separate Building Operations Regulations (regulations 13-15). These cover the provision of protective works, clearing of footpaths and securing of unoccupied buildings.

The following is a list of all amendments made to the Building (Scotland) Regulations 2004, together with the date they came into force and a summary of the major changes.

The Building (Scotland) Amendment Regulations 2006 (1 May 2007)

- New regulation 17 inserted to implement the terms of Article 9 of EPBD regarding the inspection of air conditioning systems.
- Schedule 1 - changes to building types 1 and 20.
- Schedule 3 - changes to building types 1,2,5,6 and 19.
- Schedule 5 - minor changes to functional standards. New functional Standards 6.9 and 6.10.

The Building (Scotland) Amendment Regulations 2007 (28 March 2007)

- Replacement Schedule 2 for that contained in 2006 amendments.

- Schedule 5 - minor changes to functional Standards 6.9 and 6.10.

The Building (Scotland) Amendment Regulations 2008 (4 January 2009)

- Minor changes to reflect requirements of energy performance certificates.

The Building (Scotland) Amendment Regulations 2009 (1 May 2009)

- Schedule 1 - change to paved areas or hardstanding exempt from regulations 8-13.
- Schedule 3 - amended to include certain Crown buildings.

The Building (Scotland) Amendment Regulations 2010 (1 October 2010)

- Schedule 3 - rewording of building type 2A.
- Schedule 5 - minor changes to several functional standards. Re-write of functional Standard 5.1 and new functional Standard 5.2.

The Building (Scotland) Amendment Regulations 2011 (1 May 2011)

- Definition of 'statement of sustainability'.
- Schedule 3 - new work type for any work associated with affixing a statement of sustainability to a building.
- Schedule 5 - introduction of Section 7 (Sustainability).

The Building (Scotland) Amendment Regulations 2012 (9 January 2013)

- Regulation 17 - change to require issue of inspection reports following an air conditioning system inspection.
- Schedule 5 - change to limitation to functional Standard 6.9(c) requiring display of EPC in buildings with a floor area of more than 500 square meters which are frequently visited by the public.

Building (Miscellaneous Amendments) (Scotland) Regulations 2013 (1 October 2013)

- Schedule 5 - change to limitations to functional Standards 2.15 and 3.25; new Standard 3.27 Water Efficiency introduced; change to Standard 7.1.
- Schedule 6 - new Standard 3.27 introduced.

0.2.2 Explanation of Regulation 2

Regulation 2 sets out the defined terms within the regulations. It is not reproduced in Section 0, instead the terms have been incorporated in the list of defined terms which form Appendix A. The Appendix also includes definitions from the Building (Scotland) Act 2003 and those used in these Technical Handbooks.

In the determination of the description of a building, any use which is ancillary to another use or which is of a minor nature should be disregarded and the building taken to be that of the principal description. Minor uses within the curtilage of a dwelling may also be disregarded, for example a single-room office for use by up to two people. Notwithstanding the above, parts of a building may be considered to be of a separate description where the context requires (for example a caretakers flat should be taken separately from any other part of the building in which it is located).

A dwelling may include any surgeries, consulting rooms, offices or other accommodation, of a floor area not exceeding in the aggregate 50 square metres, forming part of the dwelling and used by an occupant of the dwelling in a professional or business capacity. A

dwelling may provide bed and breakfast facilities provided this does not exceed two double bedrooms and is not in use for more than half of the year.

Where further guidance on building types is needed to define the proposals for particular buildings, it is included in the relevant section.

0.3 Exempted buildings and services, fittings and equipment

Regulation 3

1. **Regulations 8 to 12 shall not apply to any building or any services, fittings and equipment the whole of which falls into any one or more of the exempted types described in schedule 1.**
2. **The provision of:**
 - a. **services, fittings and equipment to, or the demolition or removal of, exempted buildings is exempt, and**
 - b. **services, fittings and equipment to, or the demolition of, exempted services, fittings and equipment is exempt.**
3. **For the purposes of this regulation, for the avoidance of doubt, each such exempted type does not include any of the exceptions expressed in relation to that type.**

0.3.1 Explanation

Regulation 3 and schedule 1 set out what buildings and work are exempted from the building regulations. The general principles applied to establish exemption are that the regulations do not need to apply where:

- other legislation covers the buildings or work (types 1 - 3)
- the buildings or work are covered by another regulation (type 4)
- the buildings or work are not normally frequented by people (types 5 - 8)
- the buildings or work are so separated that the regulations are largely inappropriate, and are likely in any case to be supervised by specialists including civil engineers (types 9 - 12)
- the buildings or work are sufficiently minor that they have little or no impact on the public interest and it is not in the public interest to seek to enforce the regulations (types 13 - 15 and 17 - 21)
- the buildings or work are temporary (type 16).

Particular care is necessary where exempted work is in the vicinity of, or attached to, an existing building. The level of compliance of the existing building with building regulations should not be adversely affected when exempt works are undertaken.

Where exempt work requires that alteration is made to an existing building to maintain the level of compliance with building regulations, a building warrant may be required.

For example where it is intended to construct a porch, which falls within type 18, over an accessible entrance and a new accessible entrance is required.

0.3.2 Schedule 1

Table 0.1 Exempted buildings and services, fittings and equipment

Reason	Type	Description	Exception
Buildings etc. controlled by other legislation	1.	<p>1. Any building in which explosives are manufactured or stored under a licence granted under the Explosive Regulations 2014 where the whole building is used for that manufacture or storage.</p> <p>2. Where only a part of a building is used for the manufacture or storage of explosives under a licence granted under the Explosive Regulations 2014, that part of the building where the licence specifies that that manufacture or storage may take place.</p> <p>3. Except - sub-paragraphs (1) and (2) do not include any building or, as the case may be, any part of a building as is referred to in, respectively, sub-paragraph (1) or (2) in relation to which -</p> <p>a. no minimum separation distance is required to be maintained by virtue of regulation 27(2)(a) or (3) of the Explosives Regulations 2014, or</p> <p>b. a minimum separation distance of 0 metres is prescribed by virtue of regulation 27(1) of, and Schedule 5 to the Explosive Regulations 2014 and the requirement for the assent of the local authority under regulation 13(3) of those Regulations did not apply by virtue of regulation 13(4)(a) of those Regulations.</p>	
	2.	A building erected on a site which is subject to licensing	<ul style="list-style-type: none"> • A dwelling, residential building,

Reason	Type	Description	Exception
		under the Nuclear Installations Act 1965.	office, canteen or visitor centre.
	3.	A building included in the schedule of monuments maintained under section 1 of the Ancient Monuments and Archaeological Areas Act 1979.	<ul style="list-style-type: none"> • A dwelling or residential building.
Protective works	4.	Protective works subject to control by regulation 13.	
Buildings or work not frequented by people	5.	A building into which people cannot or do not normally go.	<ul style="list-style-type: none"> • A building within 6m or the equivalent of its height (whichever is the less) of the boundary. • A wall or fence. • A tank, cable, sewer, drain or other pipe above or below ground for which there is a requirement in these regulations.
	6.	Detached fixed plant or machinery or a detached building housing only fixed plant or machinery, the only normal visits to which are intermittent visits to inspect or maintain the fixed plant or machinery.	<ul style="list-style-type: none"> • A building within 1m of a boundary.
Agricultural and related buildings	7.	An agricultural greenhouse or other building of mainly translucent material used mainly for commercial growing of plants.	<ul style="list-style-type: none"> • A building used to any extent for retailing (including storage of goods for retailing) or exhibiting.
	8.	A single-storey detached building used for any other form of agriculture, fish farming or forestry.	<ul style="list-style-type: none"> • A building used to any extent for retailing (including storage for retailing) or exhibiting. • A building exceeding 280 square metres in area. • A building within 6m or the equivalent of its height (whichever

Reason	Type	Description	Exception
			<p>is the less) of a boundary.</p> <ul style="list-style-type: none"> • A dwelling, residential building, office, canteen or visitor centre. • A dungstead or farm effluent tank.
Works of civil engineering construction	9.	A work of civil engineering construction, including a dock, wharf, harbour, pier, quay, sea defence work, lighthouse, embankment, river work, dam, bridge, tunnel, filter station or bed, inland navigation, reservoir, water works, pipe line, sewage treatment works, gas holder or main, electricity supply line and supports, any bridge embankment or other support to railway lines and any signalling or power lines and supports, and a fire practice tower.	<ul style="list-style-type: none"> • A bridge or tunnel forming part of an escape route or an access route provided to meet a requirement of these regulations. • A private sewage treatment works provided to meet a requirement of these regulations.
Buildings of a specialist nature	10.	A building essential for the operation of a railway including a locomotive or carriage shed, or for the operation of any other work of civil engineering contained in type 9 of this schedule and erected within the curtilage of such a railway or work.	<ul style="list-style-type: none"> • A signalling and control centre for a railway or dock. • A building to which the public is admitted, not being a building exempted by type 11 of this schedule. • A dwelling, residential building, office, canteen, or warehouse.
	11.	A single- storey detached road or rail passenger shelter or a telephone kiosk which in so far as it is glazed complies with the requirements of regulation 9 and paragraph 4.8 of schedule 5.	<ul style="list-style-type: none"> • A building having a floor area exceeding 30 square metres. • A building containing a fixed combustion appliance installation.
	12.	A caravan or mobile home within the meaning of the Caravan Sites and Control of Development Act 1960, or a tent van or shed within the	<ul style="list-style-type: none"> • Any wastewater disposal system serving a building of this type.

Reason	Type	Description	Exception
		meaning of Section 73 of the Public Health (Scotland) Act 1897.	
Small buildings	13.	A detached single- storey building having an area not exceeding 8 square metres.	<ul style="list-style-type: none"> • A dwelling or residential building. • A building ancillary to and within the curtilage of a dwelling. • A building within 1m of a boundary. • A building containing a fixed combustion appliance installation or sanitary facility. • A wall or fence.
Construction & development buildings	14.	A building used only by people engaged in the construction, demolition or repair of any building or structure during the course of that work.	<ul style="list-style-type: none"> • A building containing sleeping accommodation.
	15.	A building used in connection with the letting or sale of any building under construction until such time as the letting or sale of all related buildings is completed.	<ul style="list-style-type: none"> • A building containing sleeping accommodation.
Temporary buildings	16.	A building which, during any period of 12 months, is either erected or used on a site – for a period not exceeding 28 consecutive days, or for a number of days not exceeding 60, and any alterations to such buildings.	
Buildings ancillary to houses	17.	A detached single- storey building ancillary to and within the curtilage of a house.	<ul style="list-style-type: none"> • A building exceeding 8 square metres in area. • A building within 1m of the house unless it is at least 1m from any boundary.

Reason	Type	Description	Exception
			<ul style="list-style-type: none"> • A building containing sleeping accommodation. • A building containing a flue, a fixed combustion appliance installation or sanitary facility. • A wall or fence.
	18.	A single- storey building attached to an existing house, which is ancillary to the house and consists of a conservatory or porch which insofar as it is glazed complies with the requirements of regulation 9 and paragraph 4.8 of schedule 5.	<ul style="list-style-type: none"> • A building exceeding 8 square metres in area. • A building containing a flue, a fixed combustion appliance installation or sanitary facility. • A building within 1m of a boundary.
	19.	A single- storey building which is detached, or is attached to an existing house and which is ancillary to the house and consists of a greenhouse, carport or covered area.	<ul style="list-style-type: none"> • A building exceeding 30 square metres in area. • A building containing a flue, a fixed combustion appliance installation or sanitary facility.
Buildings ancillary to flats or maisonettes	20.	A detached single- storey building ancillary to and within the curtilage of a flat or maisonette.	<ul style="list-style-type: none"> • A building exceeding 8 square metres in area. • A building within 1m of the flat or maisonette or within 3m of any other part of the building containing the flat or maisonette. • A building within 1m of a boundary. • A building containing a flue,

Reason	Type	Description	Exception
			a fixed combustion appliance installation or sanitary facility. <ul style="list-style-type: none"> • A wall or fence. A swimming pool deeper than 1.2m.
Paved areas	21.	A paved area or hardstanding.	<ul style="list-style-type: none"> • A paved area or hardstanding exceeding 50 square metres in area. • A paved area forming part of an access to meet a requirement of these regulations.

0.4 Changes in the occupation or use of a building that cause the regulations to apply

Regulation 4

For the purposes of section 56(1) of the Act and these regulations, the changes in occupation or use of buildings set out in schedule 2 shall be conversions to the extent specified by regulation 12.

0.4.1 Explanation

The building regulations always apply where construction occurs, unless exempted by regulation 3, and construction includes alterations and extensions as well as entirely new buildings. When there is a conversion it will be necessary to seek a warrant and possibly to undertake works to improve the standards of the building, or part of the building, concerned.

Regulation 4 and schedule 2 set out what changes of occupation or use of a building are defined as conversions and for which the owner must obtain a warrant before making the change. The warrant for a conversion will only be granted if the standards set out in regulation 12 are achieved and this might well require building works.

Those changes of use or occupation listed in schedule 2 are those which are considered critical due to the risks involved. They relate to:

a. domestic buildings, for example:

- a hotel to a dwelling (type 1)
- use of an attic space as a room within a dwelling (type 1)
- use of a garage attached to a dwelling as a room (type 2)

- sub-division of a house into two flats (type 3)
 - use of a house as shared residential accommodation (type 4)
- b. residential buildings, for example:
- use of a hotel as office (type 5)
 - use of a hotel as a residential care home (type 6)
 - use of offices as a backpackers hostel (type 7)
- c. whether a building falls within the exemptions of schedule 1, for example:
- use of a railway signal box as a house (type 8)
- d. public access to buildings, for example:
- development of a retail trade in a storage building (type 9)
- e. division of a building into different occupancies, for example:
- use of a single shop to provide space for two different occupancies (type 10).

Type 6 in schedule 2 refers to the significant alterations in the type and the number of expected occupants. A significant alteration of type could be considered to occur when there was a significant change in the mobility, the familiarity with building, or the awareness of danger, of the occupants. For example, significantly different types would include:

- patients receiving care and/or treatment in a residential care home/hospital
- children in a residential institution or residential school
- guest in a hotel
- people held in lawful detention.

A significant alteration in number could be considered to occur where it amounted to an increase greater than 25%.

Type 9 in schedule 2 refers to allowing access by the general public where previously there was none. Access by the general public refers to permitting members of the general public to enter a building during opening hours and allowing them to access all parts of the building, other than those parts restricted to staff only.

For conversions it is the intention that the standards achieved in the converted building should be broadly similar to those achieved by entirely new buildings. Schedule 6 to regulation 12 guides the verifier as to where discretion is expected to be necessary. It identifies those standards where it is not expected to be reasonably practicable to have existing buildings fully comply. However for these standards improvement of the existing building is expected where it is reasonably practicable. This means that matters such as thermal insulation now have to be improved even if meeting the full standard is not practically achievable. Guidance on what is normally reasonably practicable is given in schedule 6 and in the individual sections. Guidance is also given on the treatment of historic buildings.

It is also relevant that the requirements of other legislation, for example regulations made under Health and Safety at Work or licensing legislation, will apply to changes of use, so that risk assessments of changed circumstances will provide protection to the occupants of buildings.

0.4.2 Schedule 2

Table 0.2 Conversions to which the regulations apply

Type	Conversion
1.	Changes in the occupation or use of a building to create a dwelling or dwellings or a part thereof.
2.	Changes in the occupation or use of a building ancillary to a dwelling to increase the area of human occupation.
3.	Changes in the occupation or use of a building which alters the number of dwellings in the building.
4.	Changes in the occupation or use of a domestic building to any other type of building.
5.	Changes in the occupation or use of a residential building to any other type of building.
6.	Changes in the occupation or use of a residential building which involve a significant alteration to the characteristics of the persons who occupy, or who will occupy, the building, or which significantly increase the number of people occupying, or expected to occupy, the building.
7.	Changes in the occupation or use of a building so that it becomes a residential building.
8.	Changes in the occupation or use of an exempt building (in terms of schedule 1) to a building which is not so exempt.
9.	Changes in the occupation or use of a building to allow access by the public where previously there was none.
10.	Changes in the occupation or use of a building to accommodate parts in different occupation where previously it was not so occupied.

0.5 Buildings work, services, fittings and equipment not requiring a warrant

Regulation 5

For the purposes of section 8 (8) of the Act, any work which consists solely of a building or conversion, including the provision of services, fittings or equipment, of a kind specified in schedule 3, shall meet the standards required by regulations 8 to 12 but shall not, subject to the exceptions and conditions, require a warrant.

0.5.1 Explanation

Regulation 5 and schedule 3 specifies what work can be done without the need to obtain a building warrant. However such work must still comply with the regulations.

Building type 1 means much more work to or in houses does not need a warrant. This could include:

- work external to, but immediately adjoining, the house (e.g. patio, decking, wall, fence, steps or ramp)

- small penetrations of the external walls or roof (e.g. balanced flues, sanitary pipework, mechanical extract ducts or vent pipes)
- small attachments to the external walls (e.g. canopies or micro-renewables)
- erection, demolition or alteration of non-loadbearing partitions
- electrical work
- an en-suite bathroom or shower room (including associated drainage)
- a central heating system.

The exceptions are intended to safeguard against changes that might have significant effect, such as the removal of structural walls. The following list provides some examples of the various exceptions:

- increasing the floor area of the house (e.g. creation of a mezzanine floor or the infill of a stair well)
- demolition or alteration of the roof (e.g. forming a dormer window or construction of a masonry chimney through the roof)
- demolition or alteration of the external walls (e.g. slapping a new window or door, applying insulation to the external wall surface)
- demolition or alteration of an element of structure (e.g. removal of a loadbearing wall)
- work adversely affecting a separating wall (e.g. installing recessed electrical sockets)
- work involving a change to wastewater discharge (e.g. disconnection from the mains system).

The exception about increasing the floor area applies because there will be significant implications arising from such work. Other changes, such as the development of a roof space or a garage as habitable space are conversions in terms of regulation 4, a warrant is required and the standards also apply. Where a roof space has limited boarding inserted to allow access to services or to allow attic storage, or where the removal of a non-loadbearing wall creates a marginal increase in floor area these should not be considered as increasing the floor area.

Building type 2 - buildings, other than domestic buildings or residential buildings, where the public are not normally admitted are granted a similar concession in type 2, allowing many offices and factories for example, to make the kind of small alterations necessary to accommodate changes in production or process. Again however the building work done should be to the standard of the building regulations. Exemptions have been added under type 2 to recognise security concerns relating to a prison, a building where a person may be legally detained or legally held in custody, the Scottish Parliament and property owned by Her Majesty in right of Her private estates.

Thus, types 1 and 2 permit virtually any work to be carried out to 1 or 2 storey houses and to non-domestic buildings not more than 7.5m high, other than the exceptions listed.

Building types 3 - 23 - the broad types described above are followed by types 3 to 23 covering more specific work that can be carried out to a wider range of buildings without restricting the work allowed by types 1 and 2. Types 3 to 23 begin with small buildings, particularly those within the curtilage of dwellings (types 4 and 5). Note that some of these may now be in the curtilage of flats or maisonettes provided they are a sufficient distance from the dwellings. A sanitary facility should not be considered to be a wet-floor shower room and such work is not intended to be covered by type 11.

Building types 24 - 26 - are different in that they cover work that is closer to a repair than new work. These replacements are therefore required to be to a standard no worse than the existing, rather than to the standard for completely new work.

Doors, windows and rooflights which are a complete replacement are not considered to be a repair and have to meet the full requirements of the standards (see type 20). For historic buildings, where there is a specific need to match existing doors, windows or rooflights, the principle of 'like for like' may still be permitted.

0.5.2 Schedule 3

Table 0.3 Description of building and work, including the provision of services, fitting and equipment, not requiring a warrant

Type	Description	Exception
A	On condition that types 1 – 23 in all respects and/or in the manner of their fitting meet any standards required by the regulations.	
1.	Any work to or in a house.	<ul style="list-style-type: none"> • Any work which increases the floor area of the house. • Any demolition or alteration of the roof, external walls or element of structure. • Any work involving underpinning. • Any work adversely affecting a separating wall. • Any work involving a change in the method of wastewater discharge. • Work, not being work of types 3 to 26 below, to a house having a storey, or creating a storey, at a height of more than 4.5m.
2.	Any work to or in a non-residential building to which the public does not have access.	<ul style="list-style-type: none"> • A non-residential building within which there is a domestic or residential building. • Any work which increases the floor area of the building. • Any demolition or alteration of the roof, external walls or element of structure. • Any work involving underpinning. • Any work adversely affecting a separating wall. • Any work involving a change in the method of wastewater discharge. • Work, not being work of types 3 to 26 below, to a building having a storey, or creating a storey, at a height of more than 7.5m.
2A.	Any work to or in a building that is a prison or a building where a person may be legally	<ul style="list-style-type: none"> • Any work which increases the floor area of the building by more than 100 square metres.

Type	Description	Exception
	detained or otherwise legally held in custody.	<ul style="list-style-type: none"> • Any demolition or alteration of the roof, external walls or element of structure. • Any work involving underpinning. • Any work adversely affecting a separating wall. • Any work involving a change in the method of wastewater discharge. • Work, not being work of types 3 to 26 below, to a prison or a building where a person may be legally detained or otherwise legally held in custody having a storey, or creating a storey, at a height of more than 7.5m.
2B.	A building or any work to or in a building or the conversion of a building that is the Scottish Parliament.	
2C.	A building or any work to or in a building or the conversion of a building belonging to Her Majesty in right of Her private estates.	
and, without prejudice to the generality of types 1 to 2C above,		
3.	A detached single-storey building, having an area exceeding 8 square metres but not exceeding 30 square metres.	<ul style="list-style-type: none"> • A dwelling or residential building. • A building ancillary to, or within the curtilage of, a dwelling. • A building within 1m of a boundary. • A building containing a fixed combustion appliance installation or sanitary facility. • A swimming pool deeper than 1.2m.
4.	A detached single-storey building, having an area exceeding 8 square metres but not exceeding 30 square metres, ancillary to and within the curtilage of a house.	<ul style="list-style-type: none"> • A building within 1m of the house unless it is at least 1m from any boundary. • A building containing a fixed combustion appliance installation or sanitary facility. • A swimming pool deeper than 1.2m.
5.	A detached single-storey building, having an area exceeding 8 square metres but not exceeding 30 square metres, ancillary to and within the curtilage of a flat or maisonette.	<ul style="list-style-type: none"> • A building within 1m of the flat or maisonette or within 3m of any other part of the building containing the flat or maisonette. • A building within 1m of a boundary. • A building containing a fixed combustion appliance installation or sanitary facility. • A swimming pool deeper than 1.2m.
6.	Any work associated with a combustion appliance	<ul style="list-style-type: none"> • Any work associated with a solid fuel appliance having an output rating more

Type	Description	Exception
	installation or other part of a heating installation, not being work of types 7 or 8 below.	<p>than 50kW, an oil-firing appliance with an output rating more than 45kW or a gas-fired appliance having a net input rating more than 70kW.</p> <ul style="list-style-type: none"> • Any work associated with a chimney, flue-pipe or constructional hearth. • Any work associated with an oil storage tank with a capacity of more than 90 litres, including any pipework connecting the tank to a combustion appliance providing space or water heating or cooking facilities. • Any work adversely affecting a separating wall or separating floor.
7.	Any work associated with a balanced flue serving a room-sealed appliance.	
8.	Any work associated with pipework, radiators, convector heaters and thermostatic controls for, or associated with, type 6 above.	
9.	Any work associated with installing a flue liner.	
10.	Any work associated with refillable liquefied petroleum gas storage cylinders supplying, via a fixed pipework installation, combustion appliances used principally for providing space heating, water heating, or cooking facilities.	
11.	Any work associated with the provision of a single sanitary facility, together with any relevant branch soil or waste pipe.	<ul style="list-style-type: none"> • Any work associated with a water closet, waterless closet or urinal.
12.	Any work associated with the relocation within the same room or space of any sanitary facility, together with any relevant branch soil or waste pipe.	
13.	Any work associated with the provision of an extractor fan.	
14.	Any work associated with a stairlift within a dwelling.	
15.	Any work associated with the provision of a notice or other fixture for which there is no	

Type	Description	Exception
	requirement provided in these regulations.	
15A.	Any work associated with affixing of an energy performance certificate to a building.	
15B.	Any work associated with affixing a statement to a building.	
16.	Any work associated with an outdoor sign that is the subject to the Town and Country Planning (Control of Advertisements)(Scotland) Regulations 1984.	
17.	Any work associated with thermal insulating material to or within a wall, ceiling, roof or floor.	<ul style="list-style-type: none"> Any work associated with the application of thermal insulating material to the outer surface of an external wall.
18.	A wall not exceeding 1.2m in height, or a fence not exceeding 2m in height.	
19.	Any work associated with open raised external decking.	<ul style="list-style-type: none"> Decking at a height of more than 1.2m. Decking that forms part of any access provided to comply with the requirements in regulation 9 and paragraph 4.1 of schedule 5. Decking that forms any escape route other than from a flat or Maisonette, provided to comply with the requirements in regulation 9 and paragraph 2.9 of schedule 5.
20.	A door, window or rooflight when the work includes replacing the frame.	
21.	A paved area or hardstanding exceeding 50 square metres in area but not exceeding 200 square metres in area. A paved area forming part of an access to meet a requirement of these regulations.	
22.	An electrical installation, including a circuit for telecommunication, alarm purposes or for the transmission of sound, vision or data, which operates at extra-low voltage (not exceeding 50 volts alternating current or 120 volts direct current, measured between conductors or to earth) and	

Type	Description	Exception
	which is not connected directly or indirectly to an electricity supply which operates at a voltage higher than either of those specified above.	
23.	The construction of a ramp not exceeding 5m in length.	
B	On condition that this work, service, fitting or equipment is to a standard no worse than at present.	
24.	Any work associated with the replacement of a fitting or equipment, in whole or in part, by another of the same general type, including a sanitary facility (together with any relevant branch soil or waste pipe), rainwater gutter or downpipe, solid fuel combustion appliance, electrical fixture, ventilation fan, chimney or flue outlet fitting or terminal, fire hydrant or main, lift or escalator, solid waste chute or container, kitchen fittings or other fitted furniture and ironmongery.	<ul style="list-style-type: none"> • Any door, window or rooflight. • Any oil firing or gas fired boiler.
25.	Any work associated with the replacement in whole or in part, by material of the same general type, of flooring, lining, cladding, covering or rendering either internally or externally.	
26.	Any work to a door, window or rooflight, including glazing which is not a complete replacement falling within type 20 above.	

0.6 Limited life buildings

Regulation 6

For the purposes of paragraph 3 of schedule 1 of the Act (which enables special provision to be made for buildings intended to have a limited life) a period of five years is hereby specified.

0.6.1 Explanation

Regulation 6 deals with constructions that are intended to have only a short life span on site and in view of this the mandatory standards and associated guidance give some

concessions to such buildings. These concessions only apply to buildings which are not dwellings.

Standard 3.1 in schedule 5 allows a lesser standard for the treatment of the site of a limited life building, other than a dwelling.

Section 6 Energy, indicates that less demanding U-values can be adopted for the insulation envelope of certain types of limited life buildings, other than dwellings and residential buildings.

Section 7 Sustainability, does not apply to these limited life buildings.

0.7 Measurements

Regulation 7

For the purpose of these regulations, measurements shall be made or calculated in accordance with schedule 4.

0.7.1 Explanation

Schedule 4 to regulation 7 specifies those methods of measurement that are necessary for the regulations themselves. In the Technical Handbooks certain additional measurements are also used, and references to additional methods of measurement specific to particular sections are included in the introductions to those sections.

0.7.2 Schedule 4

Measurements

Area

1. Measurement of area shall be taken to the innermost surfaces of enclosing walls or, on any side where there is no enclosing wall, to the outermost edge of the floor on that side.
2. A room excludes any built-in fixture extending from the floor to the ceiling.
3. In the case of a dwelling, a room excludes any part where the height is less than 1.5m.

Height and depth

4. The height of:
 - a. a building shall be taken to be the height from the surface of the ground to the underside of the ceiling of the topmost storey or, if the topmost storey has no ceiling, one-half of the height of the roof above its lowest part, and
 - b. a storey above the ground or the depth of a storey below the ground shall be taken to be the vertical height or depth as the case may be from the ground to the upper surface of the floor of the storey, and the expressions "a storey at a height" and "a storey at a depth" shall be construed accordingly.
5. In the measurement of height or depth from ground which is not level the height or depth shall be taken to be the mean height or depth, except that:
 - a. for the purpose of types 1, 2, 3, 4, 5, 18 or 19 of schedule 3, and

- b. for any other purpose where the difference in level is more than 2.5m the height or depth shall be taken to be the greatest height or depth.

General

6. Except where the context otherwise requires, measurements shall be horizontal and vertical.

0.8 Durability, workmanship and fitness of materials

Regulation 8

- 1. Work to every building designed, constructed and provided with services, fittings and equipment to meet a requirement of regulation 9 to 12 must be carried out in a technically proper and workmanlike manner, and the materials used must be durable, and fit for their intended purpose.**
- 2. All materials, services, fittings and equipment used to comply with a requirement of regulations 9 to 12 must, so far as reasonably practicable, be sufficiently accessible to enable any necessary maintenance or repair work to be carried out.**

0.8.1 Explanation

Regulation 8 applies to all building work, and requires that materials, fittings and components used in the construction of buildings should be suitable for their purpose, correctly used or applied, and sufficiently durable, taking account of normal maintenance practices, to meet the requirements of these regulations. For example, external timber cladding for low-rise buildings that is readily accessible and replaceable need not be as durable as that which is to be used at a higher level on medium-rise buildings.

It also implements the European Regulation 305/2011/EU Construction Products Regulation (CPR), in force on 1 July 2013 that replaces the current Construction Products Directive (89/106/EEC). This Regulation requires that products covered by a harmonised European product standard or conforming to a European Technical Assessment should normally have CE marking.

The intention of the guidance below is to provide adequate flexibility to accommodate new techniques as well as proven traditional practices. This guidance ensures acceptance of products which satisfy the basic works requirements of the CPR to avoid barriers to trade. For example, products bearing a CE mark (European Mark of Conformity) must be accepted as meeting regulation requirements where the declaration of performance satisfies the requirement and the product is being correctly used.

Sections 1 - 7 of the Technical Handbooks are arranged to equate with the 7 basic works requirements of the CPR. This should aid assessment of products against the regulation requirements. There may however be other Directives applicable to certain products or constructions.

A verifier may only reject CE marked products if the declaration of performance does not meet the regulation requirement or the products are being incorrectly used. If the verifier rejects a product the relevant trading standards officer should be notified. This is

a requirement of the CPR, and will enable the UK government, where necessary, to notify the European Commission.

It should be noted that CE marking alone does not show compliance with the building regulations, as the CE mark may be showing compliance with other Directives or Regulations applicable to certain products or constructions. For example, a self contained smoke alarm, manufactured in accordance with the Electro Magnetic Compatibility Directive should be accepted as satisfying requirements only insofar as they relate to prevention of electromagnetic disturbances by, and prevention against disturbances to, such smoke alarms.

0.8.2 Explanation of terms

There are useful terms and acronyms used in this section included below.

BSI - The British Standards Institution is the UK national standards body. BSI publishes European standards in the UK as BS EN. See <http://www.bsi.org.uk>.

CEN - Comité Européen de Normalisation is the European standards body that prepares harmonised product standards. Declarations of Performance against such standards are expected to provide sufficient information for any member state to allow the product onto their market and for specifiers and users to be able to assess whether the product is suitable for its intended use.

CEN also prepares non-harmonised European standards, such as test or calculation standards and standards for products or services that have not been mandated under a CE Marking Directive.

CEN does not issue standards directly, only through national standards bodies; BSI is the designated standards body for the UK. Further information is available at <http://www.cen.eu/cen>.

EA - The European co-operation on Accreditation is the umbrella organisation for all National Accreditation Bodies in Europe. Product certification bodies, inspection bodies and test laboratories approved by national accreditation bodies belonging to EA are equivalent to those approved by **UKAS**. See <http://www.european-accreditation.org/>.

ETA - European Technical Assessments is a favourable technical assessment issued under the European Construction Products Regulation 2011 that allows a manufacturer to affix CE markings on their products. See <http://www.eota.eu/>.

ISO - International Organization for Standardization is the worldwide federation of national standards institutions. Standards are identified by 'ISO' and a number. **ISO** standards may be published separately or transposed into the UK as BS **ISO** or BS EN **ISO**. See <http://www.iso.org/>.

Materials - include manufactured products such as components, fittings, items of equipment and systems. Naturally occurring materials such as stone, timber and thatch, and backfilling for excavations in connection with building work are also included.

NANDO - New Approach Notified and Designated Organisations is an information system produced by the European Commission. It lists the harmonised European standards and bodies notified by member states to carry out conformity assessment tasks for CE marking. See <http://ec.europa.eu/enterprise/newapproach/nando>.

UKAS - United Kingdom Accreditation Service is the sole national accreditation body recognised by the UK Government to assess against internationally agreed standards, organisations that provide certification, testing, inspection and calibration services. Accreditation by UKAS demonstrates the competence, impartiality and performance capability of these organisations. See <http://www.ukas.com/>.

Verifier - the role of the verifier is to protect the public interest by providing an independent check of applications for building warrant to construct or demolish buildings, to provide services, fittings or equipment in buildings, or to convert buildings. Verifiers are appointed by Scottish Ministers.

0.8.3 Performance

Regulation 8 will be met if the following are satisfied:

- a. materials used in the construction of buildings are of a suitable nature, quality and in relation to the purposes and conditions of their use, and
- b. workmanship is such that, where relevant, materials are adequately mixed or prepared and applied, used or fixed so as to perform suitably the functions for which they are intended.

Materials include:

- a. manufactured products such as components, fittings, items of equipment and systems
- b. naturally occurring materials such as stone, timber and thatch, and
- c. backfilling for excavations in connection with building work.

0.8.4 Materials

Building work must meet the functional requirements of Schedule 5 of the Building (Scotland) Regulations 2004, as amended. The Technical Handbooks refer to materials covered by European harmonised product standards, British Standards, and other technical specifications. However, as there is no obligation to adopt any particular solution contained in the Technical Handbooks in order to meet functional requirements, the references are not exclusive and other materials may be suitable in the particular circumstances.

0.8.5 Ways of establishing the fitness of materials

The fitness and suitability of a material for use for a specific purpose can be assessed in the following number of ways.

- **CE marking under the CPR**

Many materials are construction products that have CE marking under the CPR (305/2011/EU-CPR).

The CPR requires that construction products on the EU market covered by a harmonised European product standard should normally have CE marking. In addition, manufacturers of products not covered by a harmonised standard can choose to affix CE marking to their products by obtaining a European Technical Assessment. You can find a list of the harmonised product standards under the CPR on the NANDO information system see www.ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=cpd.hs.

CE marking includes the reference of the product standard and levels or classes of performance being declared against some or all of the characteristics covered by the standard. The CE marking should be on the product, its label, the packaging or accompanying documents. The CE symbol by itself does not necessarily indicate that the material is suitable for building work.

In addition to CE marking, the product will have a declaration of performance containing more detailed information on the product. This may be a paper or electronic document,

or it may be on a website. It is essential to check that the declared performance is suitable for building work.

In the absence of indications to the contrary, the verifier should assume that the information given in the CE marking and declaration of performance is accurate and reliable, and that the product meets the declared performances.

If the declared performance of a product is suitable for its intended use, the verifier should not prohibit or impede the use of the product.

- **CE marking under other EU Directives and Regulations**

Products may have CE marking under other European legislation, such as the Gas Appliances Directive (2009/142/EC) or the Pressure Equipment Directive (97/23/EC). Such CE marking shows that the product meets the essential requirements set out in the legislation, for example, minimum safety requirements, and can be placed on the EU market.

Some products will have CE marking in accordance with both the CPR and other legislation. The CE marking shows that the product complies with the requirements in all relevant EU legislation.

- **British Standards**

Nearly all British Standards for construction products are the British version of harmonised European Standards used for CE marking. The British Standards Institution (BSI) numbering policy is to adopt the European Committee for Standardisation (CEN) numbering, prefaced with BS e.g. BS EN 197-1: 2000.

Some British Standards are the British version of non-harmonised European standards; these also adopt the CEN numbering, prefaced with BS. These do not contain an Annex ZA, so CE marking cannot be affixed to products made to these standards.

Some British Standards for products not covered by a European standard will continue to exist.

Where a construction product has been made and assessed in accordance with one or more British Standards, this may show whether the product is suitable for its intended use.

- **Other national and international technical specifications**

An international technical specification, including those prepared by the International Organization for Standardization (ISO) <http://www.iso.org/iso/home.html>, or on a national technical specification of a country other than the UK, may be used to demonstrate that a product not covered by a harmonised European standard meets the performance requirements of the Building Regulations.

Where necessary, the 'relevant person' who intends to carry out the work should obtain translations of specifications to demonstrate how the material meets the requirements of regulation 8.

It should be noted that the national technical specifications of other EU Member States (and non-EU countries that are full members of CEN) are being progressively replaced by harmonised European standards, as is the case with British Standards.

- **Independent certification schemes**

There are many independent product certification schemes in the UK and elsewhere which may be a further source of information on product performance. Such schemes certify that a material complies with the requirements of a recognised document and

indicates it is suitable for its intended use. These may be in addition to, but not conflict with, CE marking. It should be noted that, materials which are not certified by an independent scheme may still conform to a relevant standard.

Accreditation of a certification body by a national accreditation body belonging to the European co-operation on Accreditation (EA) provides a means of demonstrating that their certification scheme can be relied upon. In the UK, most independent certification bodies are accredited by UK Accreditation Service (UKAS), which belongs to the EA.

It is important to check the scope of the accreditation of certification body, as accreditation may cover only part of the certification body's testing or certification business.

- **Tests and calculations**

Where there is no relevant harmonised European standard, tests, calculation or other means may be used to demonstrate that materials will be capable of performing the function for which they are intended. UKAS or an equivalent national accreditation body belonging to the EA may accredit the testing laboratories. This accreditation provides a means of showing that such tests can be relied on.

- **Past experience**

Past experience, such as in buildings in use may show that materials can perform the function for which they are intended.

0.8.6 Short lived materials

Some materials, in the absence of special care, may be considered unsuitable because of their rapid deterioration in relation to the expected life of the building.

Short-lived materials that are readily accessible for inspection, maintenance and replacement may meet the requirements of the regulations if the consequences of failure are not likely to be serious to the health or safety of persons in and around buildings.

If short-lived materials are not readily accessible for inspection, maintenance and replacement, and the consequences of failure are likely to be serious for health or safety, it is unlikely that the material will meet the requirements of the regulations.

0.8.7 Materials susceptible to change in their properties

The properties of some materials can change in certain environmental conditions. These changes can affect the performance of the materials over time.

Materials that are susceptible to changes in their properties may be used in building work and will meet the requirements of the regulations if the residual properties, including the structural properties:

1. can be estimated at the time of their incorporation in the work, and
2. are shown to be suitable for buildings to perform the function for which they are intended, for the expected life of the building.

0.8.8 Ways of establishing the suitability of workmanship

The term workmanship has been included so that references to methods of establishing workmanship can be included in the Technical Handbooks. For example, where

performance depends on the construction being carried out with a crucial standard of workmanship, say in the construction of separating walls in a dwelling, it will prove useful to consider the information provided in British Standard BS 8000.

It is not the intention that verifiers check workmanship generally, certainly not for purely aesthetic matters.

It may be useful to consider the following as ways of establishing the suitability of workmanship:

- **CE marking**

For materials having a CE marking, workmanship may be specified in the relevant ETA or harmonised product standard.

- **Standards**

Methods of carrying out different types of work are also given in British Standards or other appropriate technical specifications. It should be noted that the BS 8000 series of standards on workmanship on building sites combines guidance from other BSI codes and standards. These are:

- **BS EN ISO 9000: 2005** – Quality management systems. Fundamentals and vocabulary.
- **BS EN ISO 9000: 2008** – Quality management systems. Requirements.
- **BS 8000-1: 1989** - Workmanship on building sites. Code of practice for excavation and filling.
- **BS 8000-2-1: 1990 (AMD 9324 1997)** - Workmanship on building sites. Code of practice for concrete work. Mixing and transporting concrete.
- **BS 8000-2-2: 1990** - Workmanship on building sites. Code of practice for concrete work. Sitework with in situ and precast concrete.
- **BS 8000-3: 2001** - Workmanship on building sites. Code of practice for masonry.
- **BS 8000-4: 1989** - Workmanship on building sites. Code of practice for waterproofing.
- **BS 8000-5: 1990** - Workmanship on building sites. Code of practice for carpentry, joinery and general fixings.
- **BS 8000-6: 1990** - Workmanship on building sites. Code of practice for slating and tiling of roofs and claddings.
- **BS 8000-7: 1990** - Workmanship on building sites. Code of practice for glazing.
- **BS 8000-8: 1994** - Workmanship on building sites. Code of practice for plasterboard partitions and dry linings.
- **BS 8000-9: 2003** - Workmanship on building sites. Cementitious levelling screeds and wearing screeds. Code of practice.
- **BS 8000-11: 2011** - Workmanship on building sites – Internal and external wall and floor tiling. Ceramic and agglomerated stone tiles, natural stone and terrazzo tiles and slabs, and mosaics. Code of practice.
- **BS 8000-12: 1989** - Workmanship on building sites. Code of practice for decorative wall coverings and painting.

- **BS 8000-13: 1989** - Workmanship on building sites. Code of practice for above ground drainage and sanitary appliances.
- **BS 8000-14: 1989** - Workmanship on building sites. Code of practice for below ground drainage.
- **BS 8000-15: 1990** - Workmanship on building sites. Code of practice for hot and cold water services (domestic scale).
- **BS 8000-16: 1997 (A1: 2010)** - Workmanship on building sites. Code of practice for sealing joints in buildings using sealants.

- **Independent certification schemes**

Some independent certification schemes specify how workmanship will deliver a declared level of performance. The relevant person carrying out the work should show that the workmanship will provide the appropriate level of protection and performance.

Schemes, including “Certification of design” and “Certification of constructions” that register installers of materials can provide a means of ensuring that work has been carried out by knowledgeable contractors to appropriate standards. See 0.8.9 Certification.

- **Management systems**

The quality of workmanship is covered by a quality management scheme, such as one that complies with the relevant recommendations of BS EN ISO 9000, and related series of standards. There are a number of such UKAS accredited schemes.

- **Past experience**

Past experience, such as in a building in use, may show that the method of workmanship is capable of performing the function for which it is intended.

- **Tests**

Tests can be used to show that workmanship is appropriate for compliance with building regulations.

Those carrying out building work may voluntarily include testing to demonstrate that the work complies with the requirements of the building regulations.

Verifiers may request a ‘materials test’ under Section 41 (2) of the Building (Scotland) Act 2003 if they consider it necessary, to establish whether building work and materials comply with the requirements of regulations 8 and 9 of the Building (Scotland) Regulations 2004, as amended.

0.8.9 Certification

Scottish Ministers can, under Section 7 of the Building (Scotland) Act 2003, approve schemes for the certification of design or construction for compliance with the mandatory functional standards. See 0.1.10 for works that can be Certified.

0.9 Building standards applicable to construction

Regulation 9

Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

0.9.1 Explanation

Regulation 9 and schedule 5 are the heart of the building standards system as they set out what must be achieved in building work. The standards are given in full along with the associated guidance on compliance in sections 1 – 7 of the Technical Handbooks. Sections 1 - 7 relate directly to the basic works requirements, as published by the EC, which buildings and works are expected to satisfy when they have been properly designed and built.

The seven sections are:

Section 1 Structure (EC - Mechanical resistance and stability)

Section 2 Fire (EC - Safety in case of fire)

Section 3 Environment (EC - Hygiene, health and the environment)

Section 4 Safety (EC - Safety and accessibility in use)

Section 5 Noise (EC - Protection against noise)

Section 6 Energy (EC - Energy, economy and heat retention)

Section 7 Sustainability (EC - Sustainable use of natural resources)

The basic work requirements are also subject to overall requirements related to durability, which are covered in regulation 8.

The guidance on suitable provision to meet the building regulation standards is given without assurance that any other legislative or administrative requirement might apply more onerous standards.

In considering which standards apply, where more than one is relevant to any building work all the standards should be met.

0.9.2 Schedule 5

The mandatory standards in schedule 5 are given in the seven sections of this Handbook (Structure, Fire safety, Environment, Safety, Noise, Energy and Sustainability) and are therefore not repeated here.

0.10 Building standards applicable to demolition

Regulation 10

1. **Every building to be demolished must be demolished in such a way that all service connections to the building are properly closed off and any neighbouring building is left stable and watertight.**
2. **When demolition work has been completed, and where no further work is to commence immediately, the person who carried out that work shall ensure that the site is:**
 - a. **immediately graded and cleared, or**
 - b. **provided with such fences, protective barriers or hoardings as will prevent access thereto.**

0.10.1 Explanation

Regulation 10 sets out the mandatory requirements when undertaking demolition work.

The building regulations do not control the method or process of demolition. This is the responsibility of the Health and Safety Executive and is covered under other legislation.

What the building regulations do seek to control is the area which is left after demolition has been completed, and the state of any surrounding buildings affected by the demolition. Any adjacent buildings must be left safe and watertight and all service connections must be properly sealed. Unless it is intended to build on the cleared site without delay, it must be left in a safe condition. This might be achieved by site clearance and grading, or by ensuring adequate perimeter enclosures.

0.11 Building standards applicable to the provision of services, fittings and equipment

Regulation 11

Every service, fitting or piece of equipment provided so as to serve a purpose of these regulations shall be so provided in such a way as to further those purposes.

0.11.1 Explanation

Regulation 11 requires that every service, fitting or piece of equipment provided so as to serve a purpose of the regulations should be designed, installed, and commissioned in such a way as to fulfil those purposes.

0.12 Building standards applicable to conversions

Regulation 12

Conversions shall be carried out so that the building as converted complies with the applicable requirements of schedule 6.

0.12.1 Explanation

Certain changes of use or occupation were defined as conversions in schedule 2 and are therefore subject to the building regulations. Regulation 12 requires that in these cases the building shall meet the requirements of schedule 6. However it is recognised that this is not reasonably practicable in many existing buildings. Therefore the schedule also lists those standards where a lower level of provision may well be sufficient. It is essential to establish with the verifier where meeting the standards in full is not reasonably practicable, and early discussion will be necessary. The individual sections of the Handbooks give further details.

For historic buildings, the classification of the building should influence the extent to which improvement is required, depending on whether the classification is for the outside, the inside, all parts, etc.

0.12.2 Schedule 6

Every conversion, to which these regulations apply, shall meet the requirements of the following standards in schedule 5:

- a. Standards 2.1, 2.3, 2.5, 2.9, 2.10, 2.11, 2.13, 2.14, 2.15 in Section 2, Fire
- b. Standards 3.5, 3.6, 3.7, 3.8, 3.9, 3.11, 3.12, 3.13, 3.14, 3.17, 3.18, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25, 3.26, 3.27 in Section 3, Environment
- c. Standards 4.5, 4.6, 4.7, 4.9, 4.11, 4.12, 4.13 in Section 4, Safety
- d. Standards 5.1 and 5.2 in Section 5, Noise, and
- e. Standards 6.7, 6.8, 6.10 in Section 6, Energy.

Every conversion, to which these regulations apply, shall meet the requirements of the following standards in schedule 5 in so far as is reasonably practicable, and in no case be worse than before the conversion:

- a. the standards in Section 1, Structure
- b. Standards 2.2, 2.4, 2.6, 2.7, 2.8, 2.12 in Section 2, Fire
- c. Standards 3.1, 3.2, 3.3, 3.4, 3.10, 3.15, 3.16, 3.19 in Section 3, Environment
- d. Standards 4.1, 4.2, 4.3, 4.4, 4.8, 4.10 in Section 4, Safety, and
- e. Standards 6.2, 6.3, 6.4, 6.5, 6.6 in Section 6, Energy.

Note: Standard 7.1 (Sustainability) does not apply to conversions.

0.13 Provision of protective works

Regulation 13

1. No person shall carry out work unless the following provisions of this regulation are complied with.
2. Subject to paragraph (3), where work is to be carried out on any building site or building which is within 3.6m of any part of a road or other place to which members of the public have access (whether or not on payment of a fee or charge) there shall, prior to commencement of the work, be erected protective works so as to separate the building site or building or that part of the building site or building on which work is to be carried out from that road or other place.
3. Nothing in paragraph (2) shall require the provision of protective works in any case where the local authority is satisfied that no danger to the public is caused, or is likely to be caused, by the work.
4. The protective works referred to in the preceding paragraphs are all or any of:
 - a. providing hoardings, barriers or fences
 - b. subject to paragraph (5), where necessary to prevent danger, providing footpaths outside such hoardings, barriers or fences with safe and convenient platforms, handrails, steps or ramps, and substantial overhead coverings
 - c. any other protective works which in the opinion of the local authority are necessary to ensure the safety of the public, all of such description, material and dimensions and in such position as the local authority may direct.
5. Nothing in paragraph (4)(b) shall require the provision of a platform, handrail, step or ramp:
 - a. where no part of the existing footpath is occupied by the protective works or in connection with the work, or
 - b. where that part of an existing footpath remaining unoccupied affords a safe means of passage for people, and is of a width of not less than 1.2m or such greater width as the local authority may direct.
6. Any protective works shall be so erected as to cause no danger to the public and shall be maintained to the satisfaction of the local authority.
7. Subject to paragraph (8), any protective works shall be removed:
 - a. in the case of a building which has been constructed by virtue of a warrant, not more than 14 days or such longer period as the local authority may direct from the date of acceptance of the certificate of completion, and
 - b. in any other case, on completion of the work.
8. Nothing in paragraphs (1) to (7) of this regulation shall prohibit the removal of the protective works or any part thereof prior to the completion of the work where the local authority is satisfied that no danger to the public is caused or is likely to be caused as a result of their removal.

9. Any protective works shall be illuminated, and any such works which project on to or over that part of a road which is not a pavement or footpath shall be provided with such markings, as in the opinion of the local authority are necessary to secure the safety of the public.
10. Where work has been carried out without the provision of protective works, or where work on a building site has stopped or a building site has been abandoned, a local authority may require the site owner to carry out protective works.

0.13.1 Explanation

Regulation 13 requires that building sites are fenced off in such a way as to protect the public. It also provides powers to deal with building sites where work has for any reason ceased and the Health and Safety at Work etc. Act provisions are no longer applicable.

0.14 Clearing of footpaths

Regulation 14

Where any work is being carried out on a building site or building, any neighbouring footpath (including any footpath provided so as to form part of the protective works) shall be regularly cleaned and kept free of building debris and related materials by the person carrying out the work, to the satisfaction of the local authority.

0.14.1 Explanation

Regulation 14 requires the keeping free from mud or dust footpaths adjacent to building sites.

0.15 Securing of unoccupied and partially completed buildings

Regulation 15

1. Subject to paragraph (2) a person carrying on work shall ensure that any building which is partly constructed or partly demolished or which has been completed but not yet occupied is, so far as reasonably practicable, properly secured or closed against unauthorised entry at all times when work thereon is not in progress.
2. Nothing in paragraph (1) shall apply to any work where the local authority is satisfied that adequate supervision of the building is being or will be maintained for the purpose of securing the building.

0.15.1 Explanation

Regulation 15 requires that all building sites where there are unfinished or partially complete works are kept safe and secure.

0.16 Relaxations

Regulation 16

No direction may be given under section 3(2) of the Act in relation to regulations 1 to 3, 5 and 7.

0.16.1 Explanation

Regulation 16 sets out the regulations that cannot be relaxed.

0.17 Continuing Requirements

Regulation 17

- 1. Subject to paragraph (2), the owners of buildings shall ensure that:**
 - a. every air-conditioning system within a building is inspected at regular intervals, and**
 - b. following each inspection of that system the owner of the building or, where the owner is not the occupier, the occupier is given a report containing the result of the inspection and including recommendations for the cost-effective improvement of the energy performance of that system.**
- 2. This regulation shall not apply to:**
 - a. air-conditioning systems with a total effective output rating of less than 12kW, or**
 - b. air-conditioning systems solely for processes within a building.**
- 3. In terms of section 2 of the Building (Scotland) Act 2003 the provisions of paragraph (1) are a designated provision in respect of which there is a continuing requirement imposed on the owners of buildings.**

0.17.1 Explanation

Regulation 17 requires the owners of an air-conditioned building to have such plant regularly inspected and to provide advice to the users of the building on related energy efficiency improvement work and how to operate the system efficiently. This regulation implements the terms of Articles 15 & 16 of Directive 2010/31/EU on the Energy Performance of Buildings (EPBD).

Scope - the regulation relates only to larger, fixed air-conditioning systems and does not cover portable systems. It also relates to comfort cooling of people in a building but does not cover any other system, such as cooling solely used in a manufacturing, trade or mechanical process. For example, a system only cooling computer equipment would be exempt.

The efficiency of the system should be assessed and the sizing compared to the cooling requirements of the building and appropriate advice given to the users of the building on possible improvement or replacement of the system and on alternative solutions.

0.17.2 Implementation

Continuing requirement - the regulation imposes a continuing requirement that means inspections are required not only throughout the life of a new building, but also for the life of an existing building, for as long as it has an air-conditioning system. The requirement to inspect systems in existing buildings was introduced in stages, starting with first inspection of larger systems over 250kW by 4 January 2011, followed by first inspection of all remaining systems over 12kW by 4 January 2013.

0.17.3 Procedures to be followed

CIBSE Technical Memorandum 44 (TM44) 'Inspection of air conditioning systems' provides guidance on the regular inspection and assessment of air-conditioning systems and on the provision of advice and alternative solutions.

Inspection frequency - for completely new air-conditioning systems, one way of meeting paragraph 1(a) of this regulation would be to make arrangements at completion for the first inspection. This should be carried out by an accredited expert no later than 5 years after the acceptance of the completion of commissioning of the system to Standard 6.7.

For existing systems over 12kW, one way of meeting paragraph 1(a) of this regulation would be to make arrangements for an inspection to be carried out by an accredited expert.

In all cases, the accredited expert doing the inspection has the discretion to set the frequency of inspections ranging from three years for poorly maintained and inefficient systems up to five years for those systems that are well maintained and demonstrate excellent levels of efficiency. In order to ensure compliance with the continuing requirement, the subsequent inspection should be carried out within the intervening time period.

The following issues should be considered in setting an inspection of systems more frequently than five years:

- a. inefficiency of system
- b. significantly oversized in relation to the cooling requirements
- c. evidence that the design is not fit for purpose
- d. evidence of poor installation
- e. evidence of lack of maintenance
- f. control system out of adjustment
- g. age of system.

Size of systems - a number of individual systems each 12kW or less, but taken together totalling more than 12kW, within one building or fire-separated part of a building, would only qualify for inspection if they are linked by way of a central control.

New buildings - for new buildings, commissioning of building services including air-conditioning systems and the provision of written information shall be in accordance with Standards 6.7 and 6.8 respectively and guidance to these standards is provided in the Domestic and Non-domestic Technical Handbooks.

Accredited experts - inspections of existing air-conditioning systems should be carried out by accredited experts who are members of protocol organisations who are approved by Scottish Government to carry out such inspections.

Information on current protocol organisations can be found on the Building Standards Division web pages at www.scotland.gov.uk/epc

0.17.4 Provision of information to owners and occupiers

Following inspection of a system, the inspection report shall be issued by the member of the protocol organisation to the owner of the building. The inspection report shall contain the result of the inspection and include recommendations for the cost-effective improvement of the energy performance of the inspected system.

Where the owner of the building is not also the occupier, the owner should provide a copy of the report to the occupier.

0.17.5 Other legislative requirements

This guidance relates solely to duties imposed under Articles 15 & 16 of the Directive 2010/31/EU <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:153:0013:0035:EN:PDF> on the Energy Performance of buildings. There are other separate legislative requirements for the inspection of air conditioning systems such as the F-Gas Regulations which are not dealt with in building regulations. However from an operational point of view, building owners should give consideration to the economic benefits of combining such inspections where appropriate.