Department of the Environment and
The Welsh Office

The Building Regulations 1991

Materials and workmanship

APPROVED DOCUMENT

to support regulation 7

HMSO

1992 EDITION

MAIN CHANGES IN THE 1992 EDITION

This edition of the Approved Document for regulation 7: Materials and workmanship replaces the 1985 edition. The main changes are:

a. **Regulation 7:** the regulation has been amended to meet some of the requirements of the Construction Products Directive (89/106/EEC). This directive requires (under Article 6) that member states must ensure that products carrying the EC mark of conformity ("CE") are not impeded. In the context of the Building Regulations this means that the application of the requirements must not preclude the use of EC-marked products where they are in a satisfactory condition and being used appropriately.

b. **European standards and technical approvals:** there is a brief explanation of the status and meaning of the EC mark which signifies conformity with a harmonised European standard, a national technical specification recognised at community level or a European Technical Approval.

c. **Natural materials:** specific reference is made to natural materials such as stone, timber and thatch.

d. **Quality Assurance:** the contribution that quality assurance makes to consistent quality is emphasised rather than its usefulness as a way of establishing fitness.

e. **Abbreviations and glossary:** a list of organisations, relevant documents etc together with their abbreviations is included as an appendix at the end of this Approved Document.

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Use of guidance

THE APPROVED DOCUMENTS

The Building Regulations 1991, which come into operation on 1 June 1992, replace the Building Regulations 1985 (SI 1985 No. 1065) and consolidate all subsequent revisions to those regulations. This document is one of a series that has been approved by the Secretary of State as practical guidance on meeting the requirements of Schedule 1 and regulation 7 of the Building Regulations.

At the back of this document is a list of those documents currently published by the Department of the Environment and the Welsh Office which have been approved for the purpose of the Building Regulations 1991.

The detailed provisions contained in the Approved Documents are intended to provide guidance for some of the more common building situations. In other circumstances, alternative ways of demonstrating compliance with the requirements may be appropriate.

Evidence supporting compliance

There is no obligation to adopt any particular solution contained in an Approved Document if you prefer to meet the relevant requirement in some other way. However, should a contravention of a requirement be alleged then, if you have followed the guidance in the relevant Approved Documents, that will be evidence tending to show that you have complied with the Regulations. If you have not followed the guidance then that will be evidence tending to show that you have not complied. It will then be for you to demonstrate by other means that you have satisfied the requirement.

Other requirements

The guidance contained in an Approved Document relates only to the particular requirements of the Regulations which that document addresses. The building work will also have to comply with the requirements of any other relevant paragraphs in Schedule 1 to the Regulations. There are Approved Documents which give guidance on each of the requirements in Schedule 1.

LIMITATION ON REQUIREMENTS

In accordance with regulation 8, the requirements in Parts A to K and N of Schedule 1 to the Building Regulations do not require anything to be done except for the purpose of securing reasonable standards of health and safety for persons in or about the building.

TECHNICAL SPECIFICATIONS

Building Regulations are made for specific purposes; health and safety, energy conservation and the welfare and convenience of disabled people. Standards and technical approvals are relevant guidance to the extent that they relate to these considerations. However, they may also address other aspects of performance such as serviceability or aspects which although they relate to health and safety are not covered by the Regulations.

When an approved document makes reference to a named standard, the relevant version of the standard is the one listed at the end of the publication. However, if this version of the standard has been revised or updated by the issuing standards body, the new version may be used as a source of guidance provided it continues to address the relevant requirements

The Requirement

This Approved Document, which takes effect on 1 June 1992, deals with regulation 7 of the Building Regulations 1991

Materials and workmanship

7. (1) So much of any building work as is required to comply with any relevant requirement of Schedule 1 shall be carried out-
(a) with proper materials which are appropriate for the circumstances in which they are used; and
(b) in a workmanlike manner.

(2) Subject to paragraph (1), 'proper materials' shall include materials which-
(a) bear an appropriate EC mark in accordance with the Construction Products Directive; or

(b) conform to an appropriate harmonized standard or European technical approval; or

(c) conform to an appropriate British Standard or British Board of Agrément certificate; or
(d) conform to some other national technical specification of any member state which provides, in use, an equivalent level of protection and performance with respect to the relevant requirements of Schedule 1, as an appropriate British Standard or British Board of Agrément certificate.

Note: Attention is drawn to the requirements of regulation 8 (Limitation on requirements) of the Building Regulations 1991:

"8. Parts A to K and N of Schedule 1 to these regulations shall not require anything to be done except for the purpose of securing reasonable standards of health and safety for persons in or about buildings (and any others who may be affected by buildings or matters connected with buildings)."

Guidance

Performance

0.1 In the Secretary of State's view the requirements of regulation 7 will be met where materials are:

a. of a suitable nature and quality in relation to the purposes and conditions of their use, and

b. adequately mixed or prepared, and

c. applied, used or fixed so as to perform adequately the functions for which they are intended.

Materials: include products, components, fittings, naturally occurring materials e.g. stone, timber and thatch, items of equipment, and backfilling for excavations in connection with building work.

0.2 For parts A to K and N of Schedule 1, the standards of materials and workmanship need be no more than are necessary to secure reasonable standards of health or safety for persons in or about the building.

0.3 For Parts L and M of Schedule 1, the standards of materials and workmanship need be no more than are necessary to conserve fuel and power and to provide access and facilities for disabled people respectively.

0.4 There are no provisions under the Building Regulations for continuing control over the use of materials following the completion of building work.

Section 1

MATERIALS

1.1 Approved Documents contain references to materials or products covered by British Standards, by Agrément Certificates or by other technical specifications but the references are not exclusive and other materials or products may be suitable in the particular circumstances.

Ways of establishing the fitness of materials

1.2 It may be useful to consider the following aids for establishing the fitness of materials:

a. EC marks

The material has an EC mark (see Diagram 1). The EC mark signifies that the material complies with a harmonised standard i.e. a CEN or CENELEC standard mandated by the Commission, a European Technical Approval, or a national technical specification recognised at Community level.

A material bearing an EC mark in accordance with the provisions of the Construction Products Directive must be accepted as fit for its purpose by the Building Control Authority or Approved Inspector if it is in a satisfactory condition and is being used appropriately. Under these conditions, an EC-marked material can only be rejected by the Building Control Authority or Approved Inspector on the basis that its performance is not in accordance with its technical specification. The onus of proof in such cases is on the Building Control Authority or Approved Inspector, who must notify the Trading Standards Officer. This will enable the UK Government, where necessary, to notify the Commission. An EC-marked material must not be rejected by the Building Control Authority or Approved Inspector on grounds relating to the manufacturer or the testing or certification organisation.

Diagram 1 **The EC Mark**

b. Standards

i. The material conforms to the relevant provisions of an appropriate British Standard; or

ii. The material conforms to the relevant provisions of an equivalent standard which may include a national standard of any Member State of the European Community or elsewhere. It is up to the person intending to carry out the work to provide evidence that in use the material will be equivalent to i. above.

Note: Materials produced under the ægis of BS 5750: Quality systems or the equivalent ISO or CEN Standards can be expected to be of consistent quality although they may not necessarily conform to an appropriate standard.

c. Technical approvals

i. The material is covered by an Agrément Certificate issued by the British Board of Agrément and the conditions of use are in accordance with the terms of the certificate.

ii. The material is covered by an equivalent technical approval which may include a national technical approval of any Member State of the European Community or elsewhere. It is up to the person who intends to carry out the work to show that in use the material will be equivalent to c.i. above and the conditions of use are appropriate to that technical approval.

d. Independent certification schemes

There are many UK product certification schemes. One example is the Kitemark scheme operated by the British Standards Institution. Such schemes certify compliance with the requirements of a recognised document which is appropriate to the purpose for which the material is to be used. Materials which are not so certified may still conform to a relevant standard. Accreditation of such schemes in the UK is carried out by the National Accreditation Council for Certification Bodies (NACCB).

If a product has been tested and certified as complying with a British Standard by an approved body in another Member State of the European Community, in accordance with the special procedure under Article 16 of the Construction Products Directive, then it shall be accepted by the Building Control Authority or Approved Inspector as complying with that standard. If it is not so accepted then the onus of proof in such a case is on the Building Control Authority or Approved Inspector, who must notify the Trading Standards Officer. This will enable the UK Government, where necessary, to notify the Commission.

e. Tests and calculations

It can be shown by tests, by calculation or by other means that the material will be capable of performing the function for which it is intended. The Accreditation Scheme for Testing Laboratories run by NAMAS together with similar schemes run by equivalent certification bodies (including any EC Member State's certification body designated under the provisions of the Construction Products Directive) offer ways of ensuring that tests are carried out in accordance with recognised criteria.

f. Past experience

The material can be shown by experience, such as in a building in use, to be capable of performing the function for which it is intended.

g. Sampling

Local authorities have the power to take samples of materials used in building work . Regulation 17 allows them to take and test such samples as they consider necessary to establish compliance with the requirements of Schedule 1.

Short-lived materials

1.3 Some materials, in the absence of special care, may be considered unsuitable because of their rapid deterioration in relation to the life of the building. It is not possible to set down any specific criteria from which the length of life of a material can be considered against the requirements of the Regulations.

1.4 A short-lived material which is readily accessible for inspection, maintenance and replacement may meet the requirements of the Regulations provided that the consequences of failure are not likely to be serious to the health or safety of persons in and around the building.

1.5 Where a short-lived material is not readily accessible for inspection and maintenance or replacement and the consequences of failure are likely to be serious for health or safety, it is unlikely that the material will be suitable. If the consequences of failure are likely to have only a minor effect on health or safety, the use of the material may be admissible.

Resistance to moisture

1.6 Any material which is likely to be adversely affected by condensation, by moisture from the ground or by rain or snow will meet the requirements if

a. the construction will resist the passage of moisture to the material or

b. the material is treated or otherwise protected from moisture.

Resistance to substances in the subsoil

1.7 Any material in contact with the ground or in the foundations will meet the requirements if it is capable of resisting attacks by deleterious material in the subsoil such as sulphates (see Section 2 of Approved Document C: Site preparation and resistance to moisture)

High alumina cement (HAC)

1.8 HAC or any material which contains this cement will meet the requirements of the Regulations only where it is used as a heat resisting material. It should **not** be used in structural work, including foundations.

House longhorn beetle

1.9 In the geographical areas specified in Table 1, softwood timber used for roof construction or fixed in the roof space, including ceiling joists within the void spaces of the roof should be adequately treated to prevent infestation by the House Longhorn Beetle (Hylotrupes bajulus L).

Table 1 **Areas at risk from the house longhorn beetle**

Geographical area
The Borough of Bracknell Forest
The Borough of Elmbridge
The Borough of Guildford (other than the area of the former borough of Guildford)
The District of Hart (other than the area of the former urban district of Fleet)
The District of Runnymede
The Borough of Spelthorne
The Borough of Surrey Heath
In the Borough of Rushmoor, the area of the former district of Farnborough
The Borough of Waverley (other than the parishes of Godalming and Haslemere)
In the Royal Borough of Windsor and Maidenhead, the parishes of Old Windsor, Sunningdale and Sunninghill
The Borough of Woking

Section 2

WORKMANSHIP

Ways of establishing the adequacy of workmanship

2.1 It may be useful to consider the following aids for establishing the adequacy of workmanship:

a. Standards

i. The method of carrying out the work is included in the recommendations of a British Standard Code of Practice. Note that BS 8000: Workmanship on Building Sites gathers together guidance from other BSI Codes and Standards; or

ii. The method conforms to an equivalent technical specification which may include a national technical specification of any Member State of the European Community or elsewhere.

b. Technical Approvals

The workmanship is specified for a material covered by an Agrément Certificate issued by the British Board of Agrément, or is covered by an equivalent technical approval (including a technical approval of any other member of the European Organisation for Technical Approvals EOTA), which provides an equivalent level of performance, and the conditions of use are in accordance with the terms of the Certificate or technical approval. It is up to the person who intends to carry out the work to show that the method of workmanship will provide the equivalent level of protection and performance.

c. Management systems

The workmanship is covered by a scheme which complies with the relevant recommendations of ISO 9000 / EN 29000 / BS 5750: *Quality Systems* such as one of the schemes of Registration of Firms of Assessed Capability operated by the British Standards Institution. These schemes relate to products and processes for which there may also be a suitable British or other technical standard.

d. Past experience

It can be shown by experience, such as in a building in use, that the method of workmanship is capable of performing the function for which it is intended.

e. Tests

Local authorities have power to test sewers and drains in or in connection with buildings. Regulation 16 allows them to make such tests as they consider necessary to establish compliance with the provisions of Schedule 1 for -

i. sanitary pipework and drainage and

ii. cesspools, septic tanks and settlement tanks and

iii. rainwater drainage

The Approved Document for Part H (Drainage) contains guidance on testing drainage installations in buildings.

These are the provisions under the Building Regulations that empower or require the testing of installations included in building work.

Appendix

ABBREVIATIONS AND GLOSSARY

BS

British Standards, issued by the British Standards Institution.

CEN

Comité Européen de Normalisation. The European standards body recognised by the Commission to prepare harmonised standards to support the Construction Products Directive. There are 18 members, comprising the standards bodies of all the members of the EC and EFTA (European Free Trade Area). The Member States are:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

Standards are identified by 'EN' and a number, and an identical British Standard will probably exist.

CENELEC

The European standards body for electrical standards, analogous to CEN.

Commission

The executive organisation of the European Communities, based in Brussels.

Construction Products Directive

The Council Directive reference 89/106/EEC dated 21 December 1988 and published in the Official Journal of the European Communities No. 140/12 dated 11.2.89.

Construction Products Regulations

The Construction Products Regulations 1991 (SI 1991 No 1620) which come into force on 27 December 1991 and implement the Construction Products Directive.

EC

European Communities, which include the European Economic Community or Common Market. The twelve countries bound by the Treaty of Rome.

EC-mark

The EC conformity mark, more fully described in Annex III 'Attestation of conformity with technical specifications' of the Construction Products Directive. It will be accompanied by a reference to the technical specification to which it conforms, and, where appropriate, by indications to identify the characteristics of the product.

EOTA

European Organisation for Technical Approvals. The umbrella organisation for bodies issuing approvals for individual products. Operates over the same area as CEN.

EOTC

European Organisation for Testing and Certification.

ISO

International Organization for Standardization. The worldwide standards organisation, some of whose standards may be adapted for use with the Construction Products Directive. Standards are identified by 'ISO' and a number.

NACCB

The National Accreditation Council for Certification Bodies.

NAMAS

The National Measurement Accreditation Service

Standard

A BS or EN etc.

Technical specification

A standard or a technical approval.

Technical approval

An approval of an individual material or process issued by a member of EOTA.

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Standards referred to

BS 5750: *Quality Systems:*
Part 1: 1987 *Specification for design/ development, production, installation and servicing.* This standard is the same as ISO 9001 and EN 29001.
Part 2: 1987 *Specification for production and installation.* This standard is the same as ISO 9002 and EN 29002.

BS 8000: *Workmanship on Building Sites:*

Part 1: 1989 *Code of practice for excavation and filling*

Part 2: *Code of practice for concrete work*
Section 2.1: 1990 *Mixing and transporting concrete*
Section 2.2: 1990 *Sitework with in situ and precast concrete*

Part 3: 1989 *Code of practice for masonry*
Amendment slip
1: AMD 6195.

Part 4: 1989 *Code of practice for waterproofing*

Part 5: 1990 *Code of practice for carpentry, joinery and general fixings*

Part 6: 1990 *Code of practice for slating and tiling of roofs and claddings*

Part 7: 1990 *Code of practice for glazing*

Part 8: 1989 *Code of practice for plasterboard partitions and dry linings*
Amendment slip
1: AMD 6475.

Part 9: 1989 *Code of practice for cement/sand floor screeds and concrete floor toppings*

Part 10: 1989 *Code of practice for plastering and rendering*
Amendment slip
1: AMD 6476.

Part 11: *Code of practice for wall and floor tiling*
Section 11.1: 1989 *Ceramic tiles, Terrazzo tiles and mosaics*
Section 11.2: 1990 *Natural stone tiles*

Part 12: 1989 *Code of practice for decorative wallcoverings and painting*

Part 13: 1989 *Code of practice for above ground drainage and sanitary appliances*

Part 14: 1989 *Code of practice for below ground drainage*

Part 15: 1990 *Code of practice for hot and cold water services (domestic scale)*

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Approved documents published by the Department of the Environment and the Welsh Office as at October 1991

The following Approved Documents have been revised in conjunction with the Building Regulations 1991 and will take effect on 1 June 1992

A Structure
B Fire safety
C Site preparation and resistance to moisture
E Resistance to the passage of sound
G Hygiene
K Stairs, ramps and guards
M Access and facilities for disabled people
N Glazing - materials and protection
Reg 7 Materials and workmanship

The following Approved Documents, originally approved for the purposes of the Building Regulations 1985, have not been revised, and will continue to be approved for the purposes of the Building Regulations 1991 with effect from 1 June 1992:

D Toxic substances, 1985 edition
F Ventilation, 1990 edition
H Drainage and waste disposal, 1990 edition
J Heat producing appliances, 1990 edition
L Conservation of fuel and power, 1990 edition

Note that the Manual to the Building Regulations 1985 has been withdrawn.

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