
NHBC 2010 Standards Update

Effective from 1 April 2010



Details of changes for 2010

This update details the changes made to NHBC Standards for 2010, which come into effect from 1 April 2010.

All the changes made have been highlighted for ease of reference.

IMPORTANT: This update must be read in conjunction with the printed copy of NHBC Standards 2008.

Contents

Chapter 1.2 A consistent approach to finishes

A paper copy of the latest version is enclosed. See Standards Extra 46 for details of the changes.

Main changes to Standards (other than Chapter 1.2)

P.3 Chapter 2.3 Timber preservation (natural solid timber)

(Refer to page 5 of Standards 2008)

Appendix 2.3-A. A specification has been added for preservative treatment of sole plates.

P.4 Chapter 4.2 Building near trees

(Refer to page 7 of Standards 2008)

Table 10 has been amended to show the correct minimum void dimensions under precast concrete and timber suspended ground floors.

P.4 Chapter 6.1 External masonry walls

(Refer to pages 4, 8 and 11 of Standards 2008)

Clauses D8, M4 and S3 have had references added to cast stone products.

P.4 Chapter 6.7 Doors, windows and glazing

(Refer to pages 1 and 3 of Standards 2008)

Clauses D4 and M6 have had new lock specifications added. The changes reflect the revised and new British Standards (BS 3621, BS 8621 and BS 10621) for locks suitable for different situations.

P.5 Chapter 6.8 Fireplaces, chimneys and flues

(Refer to page 6 of Standards 2008)

Clause S1. References to CORGI have been replaced with GSR (Gas Safe Register).

P.5 Chapter 6.9 Curtain walling and cladding

(Refer to pages 1, 2 and 3 of Standards 2008)

Introduction. Important changes have been made to definitions of primary and secondary components and their durability. Where secondary components are not readily replaceable they will have to meet the requirements for primary components.

P.6 Chapter 7.2 Pitched roofs

(Refer to pages 6 and 20 of Standards 2008)

Clause M5, new BS specification for Natural Slates added.

Appendix G. This new appendix gives the minimum NHBC requirements for slates meeting BS EN 12326.

P.7 Chapter 8.1 Internal services

(Refer to pages 3 and 7 of Standards 2008)

Clauses D12 and S5. References to CORGI have been replaced with GSR.

P.7 Chapter 8.2 Wall and ceiling finishes

(Refer to page 1 of Standards 2008)

Clause D1 now requires that where there is a showerhead over a bath a screen should be provided to contain the water. Wall surfaces which will be subjected to water must also be suitable for that situation.

P.7 Chapter 9.2 Drives, paths and landscaping

(Refer to page 2 of Standards 2008)

Clause D7 has been amended to reflect requirements for timber decking more than 600 mm high. Reference is made to Timber Decking Association guidance.

2.3 Timber preservation (natural solid timber)

Appendix 2.3-A

Table 1 - Timber component groups and preservative treatment required (based on BS 8417)

Component group	Examples	Hazard class	Desired service life	Preservative type required (see note 1)			Preservative treatment not required:
				Copper organic	Organic Solvent or Microemulsion	Boron	
Internal joinery, intermediate floor joists	Architraves, internal doors, intermediate floor joists	1	60	✓	✓	✓	unless a specific request for treatment against insect attack has been made
Roof timbers (dry)	Pitched roofs: rafters, purlins, joists, wall plates	1	60	✓	✓	✓	unless a specific request for treatment against insect attack has been made
Roof timbers (dry) in areas with house longhorn beetle	Ditto	1	60	✓	✓	✓	Where timber used is: <ul style="list-style-type: none"> • softwood - heartwood only (see note 2) and of durability class 1 - 3 (see note 3) or • hardwood
Roof timbers (risk of wetting)	Flat roofs joists, sarking, tiling battens, valley boards, timbers exposed to risk of condensation	2	60	✓	✓	✓	Where timber used is heartwood only (see note 2) and of durability class 1 - 2 (see note 3)
Roof timbers (risk of wetting) in areas with house longhorn beetle	Ditto	2	60	✓	✓	✓	Where timber used is heartwood only (see note 2) and of durability class 1 - 2 (see note 3)
External walls/ground floors	Timber frames, ground floor joists, I-beam studwork	2	60	✓	✓	✓	Where timber used is heartwood only (see note 2) and of durability class 1 - 2 (see note 3)
Sole plates (see note 4)		2	60	✓	✓	✓	Where timber used is heartwood only (see note 2) and of durability class 1 - 2 (see note 3)
External joinery, coated (not in ground contact) (see note 5)	Window frames, door frames, doors, cladding (coated), soffits, fascias, barge boards	3	30	X (see note 6)	✓	✓	Where timber used is heartwood only (see note 2) and of durability class 1 - 3 (see note 3)
Uncoated external timbers (not in ground contact)	Decking, balcony infill, cladding (uncoated)	3	15	✓	X	X	Where timber used is heartwood only (see note 2) and of durability class 1 - 2 (see note 3)
Timber in contact with the ground	Decking timber in ground contact, timber below dpc	4	15	✓	X	X	Where timber used is heartwood only (see note 2) and of durability class 1 - 2 (see note 3)

Notes to table 1

1. Preservative treatment of timber should be in accordance with the recommendations of BS 8417 (with the exception of sole plates - see note 4). For preservatives listed in the supplement to the WPA Manual treatment recommendations are given in table 9, BS 8417.
2. Almost always, packs of timber contain sapwood. It should be assumed that timber is sapwood and preservative treated accordingly unless the timber has been specifically selected as heartwood only.
3. Natural durability classes are given in table 2.
4. Sole plates should be positioned above dpc. Preservatives used should be resistant to leaching or, for boron, treatment should be to full cross section retention standard. Treatment should be carried out in accordance with the WPA manual.
5. The hardwoods known as Meranti, Seraya or Lauan should be treated in the same way as European redwood / Scots Pine when used for joinery.
6. Generally, copper organic preservatives are not used for treating joinery items, but they can be used to treat claddings which are to be coated.

4.2 Building near trees

SITWORK STANDARDS

HEAVE PRECAUTIONS

Table 10 Minimum void dimensions under suspended floors

	Precast concrete and suspended timber floors
Volume change potential	Void dimension [mm] ¹
High	300
Medium	250
Low	200

Note:

¹ The void dimension measurement is from the underside of beam or joist to ground level and includes 150mm ventilation allowance.

6.1 External masonry walls

DESIGN STANDARDS

STONE MASONRY

6.1 - D8 Elements constructed of natural or cast stone masonry shall comply with the performance standards for brick and block masonry, where applicable

Stone masonry (natural or cast stone) should be designed to meet the requirements of BS 5628 'Code of practice for use of masonry'.

MATERIALS STANDARDS

STONE MASONRY

6.1 - M4 Stone masonry shall be capable of supporting the intended loads and have appropriate resistance to the adverse effects of freeze/thaw

Stone for masonry should conform to the requirements of BS EN 771-6.

Cast stone masonry units should comply with BS EN 771-5 or BS 1217 as appropriate.

SITWORK STANDARDS

STONE MASONRY

6.1 - S3 Stone masonry shall be constructed to an acceptable standard

Stone masonry will be acceptable if it:

- complies with brickwork/blockwork clauses (where appropriate)
- gives an adequate weather-resisting structure (in conjunction with any brick or block backing and/or vertical damp-proof membranes)
- is prepared and laid on its natural bed (unless local practice is otherwise)
- follows good local recognised practice.

6.7 Doors, windows and glazing

DESIGN STANDARDS

SECURITY

6.7 - D4 Doors, door frames, windows and locks shall be designed and specified so as to improve their resistance to unauthorised entry

Items to be taken into account include:

(a) locks to main entrance doors of dwellings (including houses, flats and maisonnettes)

DWELLINGS - all

All entrance doors of individual dwellings should be fitted with one (or more) securely fixed lock and keep or multi-point locking system, which has:

- at least 1000 differs, and
- a fixing which, if burst open, would not pull out without breaking the door or its frame, and
- a hardened steel bolt or inserts to prevent sawing, and
- latch and deadlocking facility.

Locking devices fitted to entrance doors should permit emergency egress without the use of a key when the dwelling is occupied. Any glazing which, if open or broken, would permit release of the snib by hand or arm entry should be laminated.

DWELLINGS - with an alternative means of escape via a door

Lock(s) should provide initial security by use of a latch operable with a key externally and a handle/thumb turn release internally. The full deadlocking facility should be engaged and be operable with a key externally and a handle/thumb turn release internally. Locks which comply with BS 8621, meet these requirements. External handles on multi-point locking systems should be twin or split spindle to avoid operating the latch.

Enhanced security can also be achieved by providing the facility to deadlock the internal/thumb turn when leaving the dwelling un-occupied. Locks which comply with BS 10621, meet these requirements.

DWELLINGS - opening direct to outside without an alternative means of escape via a door

The door should be held closed by use of a latch operable with a key externally and a handle/thumb turn release internally. The full deadlocking facility should be engaged and be operable with a key externally and a handle/thumb turn release internally. Locks which comply with BS 8621, meet these requirements. External handles on multi-point locking systems should be twin or split spindle to avoid operating the latch.

DWELLINGS - opening onto a communal access without an alternative means of escape

The door should be held closed either on a latch operable with a handle both internally and externally or a roller bolt so that the door cannot slam shut locking the homeowner out without a key. The full deadlocking facility should be engaged and be operable with a key externally and a handle/thumb turn release internally. Locks which comply with BS 8621, meet these requirements.

(b) opening limitation devices to main entrance doors

A securely fixed opening limitation device should be fitted to main entrance doors in houses and the entrance doors of individual flats and maisonnettes.

In sheltered accommodation opening limitation devices should be not inhibit emergency access. Alternative methods for residents to identify and communicate with visitors, without opening their door, should be considered in place of opening limitation devices.

(c) view outside main entrance door

There should be a means of giving a wide angle view of the area immediately outside the main entrance door of individual dwellings. Acceptable ways include:

- a through-door viewer
- clear glazing either to part of the door or a convenient window
- closed circuit camera and display, which is not linked to television sets.

(d) secondary external access doors

The door should be held closed on a latch and operable by use of a handle both internally and externally. A deadlocking facility should be operable by use of a key both internally and externally. Locks complying with BS 3621 meet these requirements. Alternatively a thumb turn may be used internally in place of key operation. Locks complying to BS 8621 meet these requirements.

In addition bolts should be fixed securely at both top and bottom of the door on the internal opening edge.

Where multi-point locking systems are used bolts may be omitted.

External sliding doors should be secured by way of multi-point locking system with a minimum of three locking points

incorporating mushroom headed bolts, hookbolts or shoot bolts. Where shoot bolts are fitted they should engage into the head and sill of the door frame. An anti-lift device should also be fitted so that doors cannot be lifted from their frame from the outside.

Connections between door and/or frame components which can be easily released from outside should not be used. This includes accessible screw connections.

(e) fittings for windows

Ironmongery for windows should be supplied as follows:

- hinges and fastenings of opening lights of windows should be of a type which prevents them from being opened from the outside when in the closed position
- opening lights on all ground floor windows and others which are readily accessible from the outside may be fitted with lockable devices which cannot be released without a key
- where the windows are required by Building Regulations to have background ventilation they may be fitted with trickle ventilators or some other means of providing ventilation which is controllable and located to avoid undue draughts. Windows with 'night vent' positions are not accepted as meeting these recommendations.

MATERIALS STANDARDS

IRONMONGERY

6.7 - M6 Ironmongery shall be of the type and material required by the design

Items to be taken into account include:

(a) relevant standards

Ironmongery should be provided in accordance with the design and specification. For critical functions, materials should comply with appropriate standards, including the following:

BS EN 1935	Building hardware - single axis hinges - Requirements and test methods
BS 3621	Thief resistant lock assembly. Key egress
BS 8621	Thief resistant lock assembly. Keyless egress
BS 10621	Thief resistant dual mode lock assembly
BS 4951	Specification for builders' hardware: lock and latch furniture (doors)
BS 5872	Specification for locks and latches for doors in buildings
BS 6459	Door closers.

6.8 Fireplaces, chimneys and flues

SITWORK STANDARDS

6.8 - S1 All sitework shall:

- (a) meet the Technical Requirements
- (b) take account of the design
- (c) follow established good practice and workmanship

Sitework that complies with the design and the guidance below will be acceptable for fireplaces, chimneys and flues. Gas appliances should be fitted by a Gas Safe Register (GSR) installer to comply with the Gas Safety (Installation and Use) (amendment) Regulations 1998.

Good workmanship and effective supervision during construction are essential to ensure that fireplaces, chimneys and flues function correctly in use.

Additional construction details are shown in Appendix 6.8-C.

6.9 Curtain walling and cladding

INTRODUCTION

RAINSCREEN CLADDING

This Chapter deals with rainscreen cladding systems that comprise:

- an outer skin of panels, which have open, baffled, or labyrinth (rebated) joints. Joints should not be sealed
- a pressure equalised air gap at least 50mm wide between the insulation and the panels (open jointed rainscreen only)
- an insulated airtight backing wall.

DEFINITIONS (FOR THIS CHAPTER)

Cladding panels

The outer layer of a rainscreen cladding system that shields other parts of the system from direct rain.

CWCT

The Centre for Window and Cladding Technology at Bath University.

CWCT Standards

The current CWCT Standard for Systemised Building Envelopes.

Primary components

Framing, fixings, insulation, vapour control layers, weathering components, cladding panels and other secondary components that are not easily replaceable.

Replaceable components

Secondary components are those that can be easily replaced without compromising the design and durability of the building (see Technical Requirement R3), or the need for progressive dismantling of the envelope system. Where this cannot be achieved components should be designed as primary components. A method statement should be provided to demonstrate how components will be replaced with specific reference to accessibility as detailed in clause 6.9 - D4.

Secondary components

Cladding panels, internal linings, external finishes, window and door furniture, glazing, gaskets, seals and sealant that are easily replaceable.

Curtain walling

CERTIFICATION

6.9 - D5 Curtain walling systems shall be designed and certificated in accordance with appropriate Standards

Curtain walling systems should have certification confirming satisfactory assessment in accordance with the current CWCT Standard for Systemised Building Envelopes by an appropriate independent technical approvals authority accepted by NHBC. The CWCT Standard provides detailed guidance on performance and testing.

Other certification bodies or test documentation may be acceptable if they are considered by NHBC to be a suitable alternative.

The certification, together with all test documentation should be made available to NHBC before work on the curtain walling or cladding begins on site.

The use of the system should be within the scope of the certification and test documentation.

Rainscreen cladding

CERTIFICATION

6.9 - D7 Rainscreen cladding systems shall be designed and certificated in accordance with appropriate Standards

Rainscreen cladding systems, including panels, should have current certification confirming satisfactory assessment by an appropriate independent technical approvals authority accepted by NHBC, including: British Board of Agrément (BBA) or Building Research Establishment (BRE) Certification.

Systems that are assessed and certificated by an appropriate independent technical approvals organisation in accordance with the CWCT Standard for Systemised

Building Envelopes will normally be acceptable to NHBC.

Other certification bodies or test documentation, may be acceptable if they are considered by NHBC to be a suitable alternative.

The certification, together with all test documentation should be made available to NHBC before work on the rainscreen begins on site.

The use of the system should be within the scope of the certification and test documentation.

IN-SERVICE PERFORMANCE

6.9 - D8 Rainscreen cladding systems shall be designed and specified to ensure adequate in-service performance

Items to be taken into account include:

(f) compartmentation

A rainscreen cladding system that has open joints between the panels should be designed as a pressure equalised system.

Rainscreen cladding

WEATHER RESISTANCE

6.9 - S12 Rainscreen cladding systems shall be correctly installed to prevent moisture entering the building

Items to be taken into account include:

(d) compartmentation

To help achieve pressure equalisation in open jointed rainscreen cladding systems, the cavity should be compartmented by:

- a horizontal cavity closer at each floor level, and
- vertical cavity closers at centres not exceeding 6.0m, and
- vertical cavity closers at centres not exceeding 1.5m in the area within 6.0m of an internal or external corner, and
- a vertical cavity closer as close as possible to an external corner, normally within 300mm.

- fibre cement slates and fittings to BS EN 492
- natural slates to BS EN 12326 (see Appendix 7.2 - G)
- shingles should be of Western Red Cedar and pre-treated with CCA preservative to BS 4072 and be Grade 1 to the Canadian Standards Association. Care is needed in the selection of flashing materials and nail fixings to avoid corrosion. Follow the recommendations of the supplier.

SITWORK STANDARDS

STRAPPING

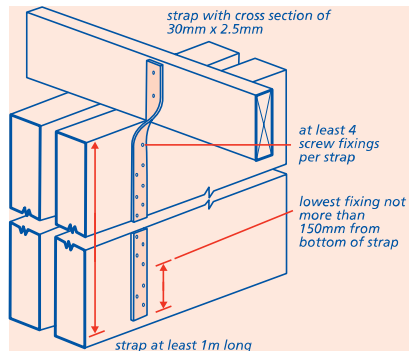
7.2 - S3 Straps shall be used, where necessary, to restrain gable and separating walls and hold down the roof against wind uplift

HOLDING DOWN STRAPS

If the design specifies holding down straps to prevent the roof being lifted off the supporting structure, they should be at 2.0m centres (maximum).

Where straps are fixed to masonry, hardened nails 4mm in diameter x 75mm long or No 12 wood screws x 50mm long into plugs should be used.

The number of fixings should be in accordance with design requirements and the lowest fixing should be within 150mm of the bottom of the vertical strap.



7.2 Pitched roofs

MATERIALS STANDARDS

ROOFING MATERIALS

7.2 - M5 Roofing materials shall be of the quality, type and dimensions required by the design

Items to be taken into account include:

(a) roof coverings

The following roof coverings are acceptable:

- clay tiles and fittings to BS 402
- concrete tiles and fittings to BS EN 490 and BS EN 491

Appendix 7.2-G

Durability classification of natural slates

Natural slates should have the characteristics given in the tables below.

Characteristics	Code/grade from BS EN 12326
Water Absorption (not more than 0.6%)	A1
Thermal Cycle	T1
Carbonate Content (not more than 20%)	S1

8.1 Internal services

DESIGN STANDARDS

GAS SERVICE

8.1 - D12 Where provided, gas services shall be adequate and in accordance with relevant standards and codes

All gas services must comply with the Gas Safety (installation and use) Regulations.

British Standards relevant to the design of gas installations include BS 6891 and for Butane and Propane gas, BS 5482. Other authoritative publications such as those prepared by the Institution of Gas Engineers and Managers and Gas Safe Register (GSR) can be used.

Gas pipework to be installed in timber frame construction should allow for the likely differential movement. Reference should be made to Chapter 6.2 'External timber framed walls'.

Where a gas supply is provided, there should be a gas point at the cooker space.

For details of hearths, flues and air supply, refer to Chapter 6.8 'Fireplaces, chimneys and flues'.

SITWORK STANDARDS

GAS SERVICE

8.1 - S5 Where a gas service is installed, it shall comply with relevant codes and standards to ensure safe and satisfactory operation

Items to be taken into account include:

(a) compliance with Standards

Service pipework up to and including the emergency control valve and meter should be in accordance with the requirements of the gas transporter, gas supplier and primary meter owner. Installation pipework and appliances should meet with relevant standards and codes including those published by Institution of Gas Engineers and Managers (IGEM) or Gas Safe Register (GSR).

Gas pipework to be installed in timber frame construction should allow for likely differential movement. Reference should be made to Chapter 6.2 'External timber framed walls'.

8.2 Wall and ceiling finishes

DESIGN STANDARDS

8.2 - D1 Design shall meet the Technical Requirements

Design that follows the guidance below will be acceptable for wall and ceiling finishes.

Where a fixed shower or showerhead fixing is provided over a bath at a height that will permit persons to stand under, a screen or other suitable means of containing the water should be provided.

Surfaces which will be subjected to water from the use of a showerhead over a bath should be tiled or have an appropriate alternative water resistant finish.

9.2 Drives, paths and landscaping

DESIGN STANDARDS

GARDEN AREAS

9.2 - D7 Patios and decking shall be suitable for their purpose

Items to be taken into account include:

(b) timber decking

Timber used in the construction of decking should either be naturally durable or treated with preservative. See Chapter 2.3 'Timber preservation (natural solid timber)' (each section).

Decking and its support more than 600mm above ground level should be in accordance with guidance published by the Timber Decking Association or designed by an Engineer in accordance with Technical Requirement R5.



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