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Agrément Certificate

05/4275

Product Sheet 1 Issue 4

CELCON BLOCKS

CELCON STANDARD AND HIGH STRENGTH BLOCKS FOR FLOOR INFILL

This Agrément Certificate Product Sheet⁽¹⁾ relates to Celcon Standard and High Strength Blocks for Floor Infill, autoclaved aerated concrete (aircrete) blocks for use in beam and block floors in single-occupancy dwellings and domestic garages (excluding separating floors).

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Fourth issue: 15 January 2026

Originally certified on 8 December 2006

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Celcon Standard and High Strength Blocks for Floor Infill, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	A1	Loading
Comment:		The products can contribute to satisfying this Requirement. See sections 1 and 9 of this Certificate.
Requirement:	B3(1)	Internal fire spread (structure)
Comment:		The products are unrestricted by the Requirement. See section 2 of this Certificate.
Requirement:	C2(a)	Resistance to moisture
Comment:		The products can contribute to satisfying this Requirement. See sections 3 and 9 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The products can contribute to limiting the risk of condensation. See sections 3 and 9 of this Certificate.
Requirement:	E2(b)	Protection against sound within a dwelling-house etc
Comment:		With a suitable finish, floors incorporating the products can satisfy this Requirement. See section 5 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		Floors incorporating the products can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	25B	Nearly zero-energy requirements for new buildings
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new dwellings (applicable to England only)
Regulation:	26A	Primary energy rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Regulation:	26C	Target primary energy rates for new buildings (applicable to England only)
Regulation:	26C	Energy efficiency rating (applicable to Wales only)
Comment:		Floors incorporating the products can contribute to satisfying these Regulations. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	8(3)	Fitness and durability of materials and workmanship
Comment:		The products are unrestricted by the Regulation. See section 2 of this Certificate.

Regulation:	9	Building standards - construction
Standard:	1.1(a)(b)	Structure
Comment:		The products can contribute to satisfying this Standard. See sections 1 and 9 of this Certificate.
Standard:	2.3	Structural protection
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 2.3.1 ⁽¹⁾⁽²⁾ to 2.3.3 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	3.15	Condensation
Comment:		The products can contribute to satisfying by this Standard, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See sections 3 and 9 of this Certificate.
Standard:	5.2	Noise reduction between rooms
Comment:		Floors incorporating the products can contribute to satisfying this Standard. See section 5 of this Certificate.
Standard:	6.1(b)(c)(d)	Energy demand and Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The products can contribute to satisfying these Standard, with reference to clauses 6.1.1 ⁽¹⁾ , 6.1.2 ⁽¹⁾ , 6.1.4 ⁽²⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽²⁾ , 6.2.5 ⁽²⁾ , 6.2.6 ⁽¹⁾ , 6.2.7 ⁽¹⁾ , 6.2.8 ⁽¹⁾⁽²⁾ , 6.2.9 ⁽¹⁾⁽²⁾ , 6.2.10 ⁽²⁾ , 6.2.11 ⁽¹⁾⁽²⁾ and 6.2.12 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant Requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards - conversion
Comment:		All comments given for the products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23(1)(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	23(2)	Fitness of materials and workmanship
Comment:		The products are unrestricted by this Regulation. See section 2 of this Certificate.
Regulation:	28(a)(b)	Resistance to moisture and weather
Comment:		The products can contribute to satisfying this Regulation. See sections 3 and 9 of this Certificate.
Regulation:	29	Condensation
Comment:		The products can contribute to limiting the risk of condensation. See sections 3 and 9 of this Certificate.
Regulation:	30(a)(b)	Stability
Comment:		The products can contribute to satisfying this Regulation. See sections 1 and 9 of this Certificate.
Regulation:	35(1)	Internal fire spread – Structure
Comment:		The products can contribute to satisfying this Regulation. See section 2 of this Certificate.

Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Regulation:	43B	Nearly zero-energy requirements for new buildings
Comment:		The products can contribute to satisfying these Regulations. See section 6 of this Certificate.
Regulation:	50(b)	Protection against sound within a dwelling or room residential purposes
Comment:		Floors incorporating the products can contribute to satisfying this Regulation. See section 5 of this Certificate.

Additional Information

NHBC Standards 2026

In the opinion of the BBA, Celcon Standard and High Strength Blocks for Floor Infill, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 5.2 *Suspended ground floors*.

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

Fulfilment of Requirements

The BBA has judged Celcon Standard and High Strength Blocks for Floor Infill to be satisfactory for use as described in this Certificate. The products have been assessed as autoclaved aerated concrete (aircrete) blocks for use in beam and block floors in single-occupancy dwellings and domestic garages (excluding separating floors).

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. Celcon Standard and High Strength Blocks for Floor Infill are produced from cement, lime, pulverized fuel ash (pfa) and coarse sand, with aluminium powder used as an aerating agent.

Celcon Standard and High Strength Blocks for Floor Infill, consists of:

- floor blocks — infill blocks for use between beams
- coursing bricks — for infill closing of beams at ends
- coursing slips — for bedding on the wall and for closing edges of the floor.

The products have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of product

Characteristic (unit)	Standard	High Strength
Face dimensions (mm)	215 x 440 x 100 - 540 x 440 x 100	440 x 215 x 100
Gross dry density ($\text{kg}\cdot\text{m}^{-3}$)	600 ± 50	730 ± 50
Average unit compressive strength ($\text{N}\cdot\text{mm}^{-2}$)	3.6	7.3
Minimum individual block compressive strength ($\text{N}\cdot\text{mm}^{-2}$)	2.9	5.8
Drying shrinkage ($\text{mm}\cdot\text{m}^{-1}$)	0.4	0.4

Ancillary Items

The following ancillary items are essential to use with the products and have not been assessed with the product:

- water vapour control layer — must be necessary in areas of high humidity where additional insulation and particle board are used
- gas-proof barrier — must be used in areas where there might be landfill gas or methane, and in areas where full radon precautions are required.
- Suitable finish floor

Product assessment – key factors

The products were assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Properties in relation to loading

The products were assessed for compressive strength and achieved the results given in Table 2.

Table 2 Compressive strength ($N \cdot mm^{-2}$)

Product assessed	Assessment method	Requirement	Result
Standard	Mean compressive strength to BS EN 771-4 : 2011	$> 3.6 N \cdot mm^{-2}$	Pass
	Minimum individual block compressive strength to BS EN 771-4 : 2011	$> 2.9 N \cdot mm^{-2}$	Pass
High Strength	Mean compressive strength to BS EN 771-4 : 2011	$> 7.3 N \cdot mm^{-2}$	Pass
	Minimum individual block compressive strength to BS EN 771-4 : 2011	$> 5.8 N \cdot mm^{-2}$	Pass

1.2 Floor loading

1.2.1 The products in a grouted floor construction subjected to point loading achieved the results given in Table 3.

Table 3 Ultimate floor loading

Product assessed	Assessment method	Requirement	Result
			Ultimate failure load (kN)
Standard:	BS EN 1990 : 2002 and BS EN 1991-1-1 : 2002	Value achieved	
215 x 440 x 100/ $4.1 N \cdot mm^{-2}$			14.5
540 x 440 x 100/ $4.1 N \cdot mm^{-2}$			8.0
540 x 440 x 100/ $2.9 N \cdot mm^{-2}$			6.7 ⁽¹⁾
High Strength:	BS EN 1990 : 2002 and BS EN 1991-1-1 : 2002	Value achieved	
215 x 440 x 100/ $4.1 N \cdot mm^{-2}$			14.5
540 x 440 x 100/ $4.1 N \cdot mm^{-2}$			8.0
540 x 440 x 100/ $2.9 N \cdot mm^{-2}$			6.7 ⁽¹⁾

(1) 6.7 kN may be assumed as a conservative figure when considering 540 x 440 x 100 mm/ $3.6 N \cdot mm^{-2}$ blocks.

1.3 On the basis of data assessed, the products will be unrestricted under the documents supporting the national Building Regulations.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The products achieved the reaction to fire classification given in Table 4.

Table 4 Reaction to fire

Product assessed	Assessment method	Requirement	Result
Standard	BS EN 13501-1 : 2018	Value achieved	A1
High Strength	BS EN 13501-1 : 2018	Value achieved	A1

2.1.2 On the basis of data assessed, the products will be unrestricted under the documents supporting the national Building Regulations.

3 Hygiene, health and the environment

3.1 Moisture content

The moisture movement of the blocks may be taken as a nominal value of $0.4 \text{ mm} \cdot \text{m}^{-1}$.

3.2 Water vapour Permeability

The products were assessed for water vapour permeability and achieved the results given in Table 5.

Table 5 Water vapour diffusion coefficient (μ)

Product assessed	Assessment method	Requirement	Result
			Water vapour diffusion coefficient (μ)
Standard	BS EN 771-4 : 2011	Value achieved	5/10
High Strength	BS EN 771-4 : 2011	Value achieved	5/10

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

5.1 Resistance to passage of sound

5.1.1 The products were assessed for resistance to airborne and impact sound transmission, the results are given in Table 6.

Table 6 resistance airborne and impact sound tests

Construction assessed	Assessment method	Requirement	Result
An intermediate floor comprising Standard and High Strength Celcon beam and block infill overlaid with 50 mm sand/cement screed with a 12.5 mm plasterboard ceiling on 50 mm timber battens	Resistance to airborne sound transmission to BS EN ISO 140-4 : 1998	> 40 dB	Pass
	Resistance to impact sound transmission to BS EN ISO 140-4 : 1998	> 40 dB	Pass

5.1.2 On the basis of the data assessed, constructions incorporating the products can achieve acceptable resistances to airborne and impact sound transmission, in accordance with the guidance given in the national Building Regulations.

6 Energy economy and heat retention

Data were assessed for the following characteristics.

6.1 Thermal performance

6.1.1 The products achieved the thermal conductivities given in Table 7.

Table 7 Thermal conductivity values

Product assessed	Assessment method	Requirement	Result
Standard	BS EN ISO 6946 : 2017	declared values	0.15 W·m ⁻¹ ·K ⁻¹
High Strength	BS EN ISO 10211 : 2017	declared values	0.18 W·m ⁻¹ ·K ⁻¹

6.1.2 On the basis of the data assessed, the products can contribute to energy economy and heat retention, to satisfy the requirements of the documents supporting the national Building Regulations.

6.1.3 Calculations of thermal transmittance (U-values) for a construction incorporating the products must be determined in accordance with BRE Report BR 443 : 2019, BS EN ISO 10211 : 2017 and BS EN ISO 6946 : 2017, using the thermal conductivity values in Table 7 of this Certificate.

7 Sustainable use of natural resources

The products comprise materials which can be recycled.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the products were assessed.

8.2 The exposure conditions beneath a suspended floor over a ventilated void and soil, with no oversite concrete or other surface seal, are classified as XC3, with XØ applying to the unreinforced autoclaved aerated concrete blocks, in accordance with BS EN 1992-1-1 : 2004, Table 4.1, and its UK National Annex. The products will have adequate durability for these exposure conditions for the service life of the building.

8.3 Service life

Under normal service conditions, the products will have a life at least equivalent to the structure in which they are incorporated, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Load-spans for concrete beams must be determined in accordance with BS EN 1990 : 2002 and BS EN 1991-1-1 : 2002, and their UK National Annexes. The following partial factors should be included in these calculations:

- a partial factor for permanent actions of 1.35
- a partial factor for variable actions of 1.5
- a partial factor for materials (unreinforced masonry) of 2.3.

Fire resistance

9.1.3 When the products are used above a basement or at upper-floor levels, the ceiling finish must provide a reaction to fire capable of satisfying the requirements of the national Building Regulations.

Condensation risk

9.1.4 Ground floors must be constructed and designed in accordance with the relevant recommendations of BS 5250 : 2021. Thermal insulation placed above the floor can limit the risk of surface condensation. A water vapour control layer placed between the insulation and the floor finish can reduce the risk of interstitial condensation. The underfloor void must be adequately ventilated.

9.1.5 If the products are to be used in floors of rooms expected to have high humidities, adequate permanent ventilation must be provided to avoid possible problems from the formation of interstitial condensation in the floor.

9.1.6 When designing floors, reference may be made to the TSO publication *Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings* and BRE Report BR 262 : 2002.

Resistance to the passage of sound

9.1.7 Intermediate floors incorporating the products must incorporate suitable ceiling and floor finishes to limit airborne and impact sound transmission. Constructions achieving an R_w of at least 40 dB in England, Wales and Northern Ireland, and 43 dB in Scotland are acceptable.

9.1.8 Good working practices must be adopted for sealing all joints. Relevant practices detailed within the relevant regulatory guidance must be adopted during design and installation, to avoid direct paths for airborne sound transmission and to minimise paths for flanking sound transmission.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information and a site visit carried out to witness an installation in progress. To achieve the performance described in this Certificate, installation of the products must be carried out by competent general builder, or a contractor, experienced with these types of products.

9.4 Maintenance and repair

As the products are confined within the floor and have suitable durability, maintenance is not required.

10 **Manufacture**

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the products are delivered to site in banded or as shrink-wrapped standard packs in packaging bearing the product name, the Certificate holder's name, batch number, health and safety information and weight of contents in kilograms.

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The products must be off-loaded with mechanical grabs or forklift trucks.

11.2.2 The blocks must be stored clear of the ground on a firm, level surface and must be protected from rain and water from the ground. If supplied, shrink-wrapping should be kept in place until the blocks are required for use.

11.2.3 Particular care should be taken when moving and installing the blocks on a floor under construction to mitigate the risk of operatives falling into the sub-floor void.

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by BSI (Certificate FM 10059).

Additional information on installation

Site preparation

A.1 The ground beneath the floor should be free from topsoil and vegetation. Oversite concrete or other surface seal is not normally required.

A.2 Damp-proofing and ventilation arrangements must be in accordance with normal good practice, for example, provision of damp-proof sleeves to ventilators and adequate drainage of the sub-floor (see also section A.6).

A.3 A continuous damp-proof course (DPC) must be laid along the support wall below the floor in accordance with BS 8215 : 1991.

A.4 A void at least 150 mm deep must be provided between the underside of the floor and the ground surface. With good natural drainage or site drains provided to prevent water collection and standing, the ground beneath the floor does not need to be raised to external ground level but, where the levels differ, the ability of the perimeter walls to act as retaining walls must be checked.

A.5 In Scotland, it is considered to be good practice (and is an NHBC [Scotland] requirement) that the solum area beneath all suspended floors be brought up to at least the level of the adjoining ground, except where an arrangement of damp-proof membranes (DPMs) or DPCs is installed to prevent the ingress of groundwater to the solum set at a lower level.

A.6 Opposing external walls must have ventilation openings placed to ensure that ventilating air will have a free path between opposite sides and to all parts of the floor void. The openings should be not less than either a $1500 \text{ mm}^2 \cdot \text{m}^{-1}$ run of external wall or $500 \text{ mm}^2 \cdot \text{m}^{-2}$ of floor areas, whichever gives the greater opening area.

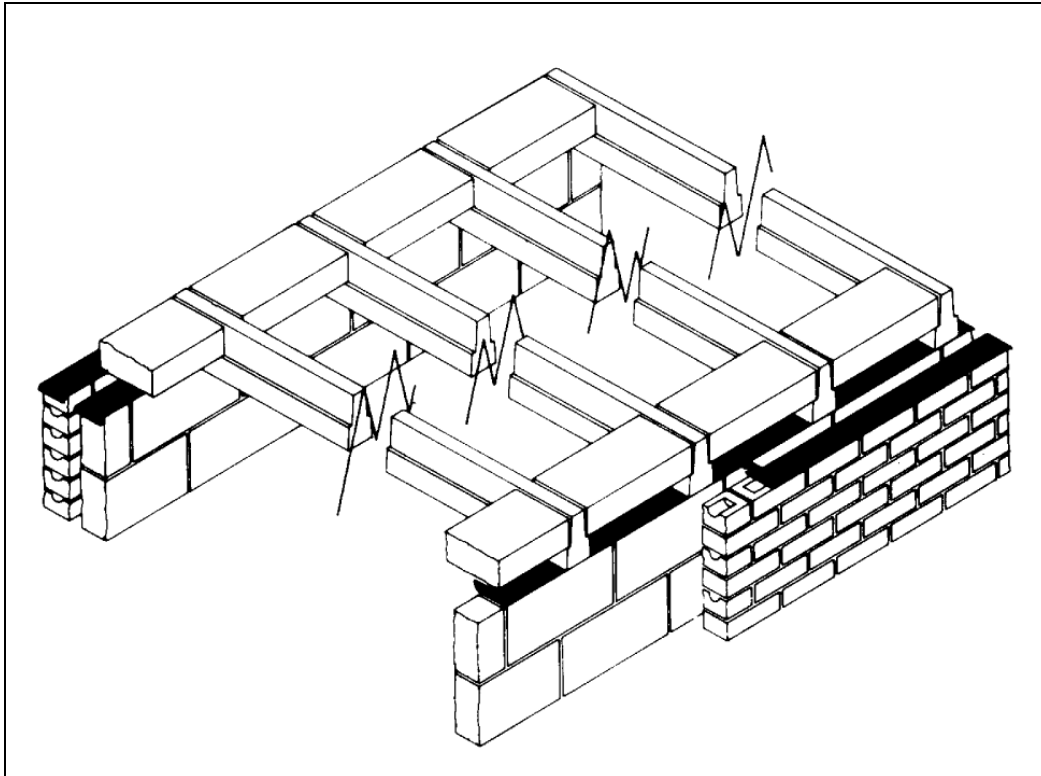
Floor installation

A.7 When deciding on the suitability and specification of any beam to be used with the blocks, reference should be made to prestressed concrete beam flooring systems which carry current BBA certification, and the Certificate holder should be consulted. Reference must also be made to BS EN 15037-1 : 2008, and BS EN 1992-1-1 : 2004 and BS EN 1992-1-2 : 2004 and their UK National Annexes.

A.8 The beam manufacturer's recommendations for placement and fixing must be followed.

A.9 The blocks are placed between the ends of the beam units, which are positioned to ensure correct spacing (see Figure 1). Where transmission of sound via a cavity is a consideration, blocks must be fully bedded and levelled, and vertical joints filled with mortar.

Figure 1 Typical floor arrangement



A.10 Normally, a whole block is used to bear on the first beam and the outside wall of a bay (except when a beam is laid alongside the wall). The block is bedded on the wall with a normal mortar joint. The unit compressive strength of the block must be equal to, or greater than, the unit compressive strength of the blocks used to form the wall. The mortar must be to the same specification as the mortar used for construction of the wall.

A.11 The blocks must be provided with adequate bearing by clearing the joist flanges of debris and ensuring adjacent blocks are abutted as closely as possible.

A.12 The joints between the blocks and beams must not exceed 5 mm and must be grouted. The grout should be a mix of cement/sand with sufficient water added to produce a slurry of suitable consistency to suit the beam profile. The recommended application is by brushing or pouring into the joints.

A.13 Where the block is of a non-standard size (eg next to services), the void can be filled by cutting the blocks to fit. Cutting can be done using a masonry handsaw (specialist equipment is not required). The blocks must not be cut or drilled in such a way as to impair their structural performance.

A.14 Care must be taken to avoid overloading the floor during construction. Once it has been fully grouted, it should only be used for short-term materials storage and construction traffic. Planks should be laid across the joists and as close as possible to the floor bearings, before stacking materials.

A.15 The floor should be thoroughly examined prior to the application of the finish, and any damaged blocks must be replaced.

A.16 Application of the screed should be strictly in accordance with the relevant recommendations of BS 8204-1 : 2003.

A.17 In areas where there might be landfill gas or methane, and in areas where full radon precautions are required, a gas-proof barrier must be used. Full details are given in BRE guidance documents: BRE Report BR 212 : 1991 and BRE Report BR 211 : 2015. Guidance can also be found in CIRIA 665 : 2007.

Incorporation of services

A.18 Services must not be attached to beams or blocks in such a way as to impair their durability or strength.

A.19 Services must be protected from potential damage due to floor movement, eg by wrapping in flexible materials or by ducting. Consideration must be given to differential movements between the floor beams and other parts of the building and between adjacent beams, particularly where adjacent beams are of different spans.

A.20 Blocks must not be chased out to accommodate horizontal services. Horizontal services and conduit must be installed within the depth of the floor finish.

A.21 Vertical service pipes can be accommodated between blocks by reinstating the floor with in-situ concrete.

Concrete screeds

House floors

A.22 A minimum thickness of 50 mm⁽¹⁾ sand/cement (3:1) screed in accordance with BS 8204-1 : 2003 is required.

(1) A minimum 65 mm reinforced screed is required if used directly on top of insulation.

A.23 A 50 mm thickness sand/cement screed detailed for house floors can be laid directly on the grouted floor and, unless it is particularly moisture sensitive (as described in BS 8215 : 1991), a DPM is not necessary over the precast floor.

Domestic garages

A.24 The screed must be a minimum of 50 mm thick grade C20/25 concrete. Advice must be sought from the Certificate holder and the beam manufacturers with particular regard to beam spacing and the need for reinforcement.

Other floor deck toppings

A.25 Where floor deck toppings other than those detailed in sections A.22 to A.24 are to be considered, advice must be sought from the Certificate holder.

Bibliography

BRE Report BR 211 : 2015 *Radon : Guidance on protective measures for new dwellings*

BRE Report BR 212 : 1991 *Construction of new buildings on gas contaminated land*

BRE Report BR 262 : 2002 *Thermal insulation : avoiding risks*

BRE Report BR 443 : 2019 *Conventions for U-value calculations*

BS 5250 : 2021 *Management of moisture in buildings — Code of practice*

BS 8204-1 : 2003 + A1 : 2009 *Screeds, bases and in situ floorings — Concrete bases and cementitious levelling screeds to receive floorings — Code of practice*

BS 8215 : 1991 *Design and installation of damp-proof courses in masonry construction*

BS EN 771-4 : 2011 + A1 : 2015 *Specification for masonry units — Autoclaved aerated concrete masonry units*

BS EN 1990 : 2002 + A1 : 2015 *Eurocode — Basis of structural design*

NA to BS EN 1990 : 2002 + A1 : 2015 *Eurocode — Basis of structural design*

BS EN 1991-1-1 : 2002 *General actions — Densities, self-weight, imposed loads for buildings*

NA to BS EN 1991-1-1 : 2002 *UK National Annex to Eurocode 1 — Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*

BS EN 1992-1-1 : 2004 + A1 : 2014 *Eurocode 2 — Design of concrete structures — General rules and rules for buildings*

NA + A2 : 14 to BS EN 1992-1-1 : 2004 + A1 : 2014 *Eurocode 2 — Design of concrete structures — General rules and rules for buildings*

BS EN 1992-1-2 : 2004 + A1 : 2009 *Eurocode 2 — Design of concrete structures — General rules — Structural fire design*

NA to BS EN 1992-1-2 : 2004 *Eurocode 2 — Design of concrete structures — General rules — Structural fire design*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*

BS EN 15037-1 : 2008 *Precast concrete products — Beam-and-block floor systems*

BS EN ISO 6946 : 2017 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation methods*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

BS EN ISO 10211 : 2017 *Thermal bridges in building construction — Heat flows and surface temperatures — Detailed calculations*

BS EN ISO 140-4 : 1998 *Acoustics — Measurement of sound insulation in buildings and of building elements — Field measurements of airborne sound insulation between rooms*

CIRIA 665 : 2007 *Assessing risks posed by hazardous ground gases to building*

TSO 2002 *Limiting thermal bridging and air leakage : Robust construction details for dwellings and similar buildings*

Conditions

1 This Certificate:

- relates only to the product that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.