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Agrément Certificate

05/4249

Product Sheet 1

WICKES CLADDING SYSTEMS

WICKES 125 SHIPLAP CLADDING

This Agrément Certificate Product Sheet⁽¹⁾ relates to Wickes 125 Shiplap Cladding, PVC-UE cladding planks, rigid PVC-U trims and ancillary items for use as protective/decorative cladding over external brick or block masonry walls and timber stud walls (with or without sheathing) of new and existing domestic and non-domestic buildings.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production[†]
- formal three-yearly review.[‡]



KEY FACTORS ASSESSED

Strength and stability — the system can withstand dynamic wind pressures not exceeding 1750 Pa (see section 6).

Performance in relation to fire — the system achieved a reaction to fire classification of D-s3, d2 to BS EN 13501-1 : 2007. The use of the cladding is restricted (see section 7).

Durability — the system will remain effective as a cladding system for a period in excess of 35 years, with only minor changes in surface appearance (see section 11).



The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 27 April 2020

Originally certificated on 23 September 2005

Hardy Giesler
Chief Executive Officer

This Certificate was amended on 22 May 2024 as part of a transition of The BBA Agrément Certificate scheme delivered under the BBA's ISO/IEC 17020 accreditation. This Certificate was issued originally under accreditation to ISO/IEC 17065. Sections marked with the symbol † are not issued under accreditation. Full conversion to the ISO/IEC 17020 format will take place at the next Certificate review. The BBA is a UKAS accredited Inspection Body (No.4345). Readers **MUST** check the validity of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly. Any photographs are for illustrative purposes only, do not constitute advice and must not be relied upon.

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Regulations

In the opinion of the BBA, Wickes 125 Shiplap Cladding, 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 presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



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

| | | |
|---------------------|-----------------|---|
| Requirement: | A1 | Loading |
| Comment: | | The system is acceptable for use as set out in section 6 of this Certificate. |
| Requirement: | B3(4) | Internal fire spread (structure) |
| Requirement: | B4(1) | External fire spread |
| Comment: | | The system achieved a reaction to fire classification of D-s3, d2 and its use is restricted under these Requirements. See sections 7.1 and 7.2 of this Certificate. |
| Requirement: | C2(b)(c) | Resistance to moisture |
| Comment: | | The system can contribute to satisfying this Requirement. See section 8 of this Certificate. |
| Regulation: | 7(1) | Materials and workmanship |
| Comment: | | The system is acceptable. See section 11.1 and the <i>Installation</i> part of this Certificate. |
| Regulation: | 7(2) | Materials and workmanship |
| Comment: | | The cladding is restricted by this Regulation. See sections 7.1 and 7.2 of this Certificate. |



The Building (Scotland) Regulations 2004 (as amended)

| | | |
|--------------------|------------------|---|
| Regulation: | 8(1)(2) | Durability, workmanship and fitness of materials |
| Comment: | | The system is acceptable. See sections 10 and 11.1 and the <i>Installation</i> part of this Certificate. |
| Regulation: | 9 | Building standards applicable to construction |
| Standard: | 1.1(a)(b) | Structure |
| Comment: | | The system can contribute to satisfying this Standard, with reference to clause 1.1.1 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate. |
| Standard: | 2.4 | Cavities |
| Comment: | | The system is restricted by this Standard, with reference to clause 2.4.2 ⁽¹⁾⁽²⁾ . See section 7.1 this Certificate. |
| Standard: | 2.6 | Spread from neighbouring buildings |
| Comment: | | The system is restricted by this Standard, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ and 2.6.6 ⁽²⁾ . See sections 7.1, 7.3 and 7.4 of this Certificate. |
| Standard: | 2.7 | Spread on external walls |
| Comment: | | The system is restricted by this Standard, with reference to clause 2.7.1 ⁽¹⁾⁽²⁾ . See sections 7.1, 7.3 and 7.4 of this Certificate. |
| Standard: | 3.10 | Precipitation |
| Comment: | | The system can contribute to satisfying this Standard. See section 8 of this Certificate. |

| | | |
|--|--------|--|
| Standard: | 3.15 | Condensation |
| Comment: | | The system can contribute to satisfying this Standard, with reference to clauses 3.15.4 ⁽¹⁾ and 3.15.5 ⁽¹⁾ . See section 8 of this Certificate. |
| Standard: | 7.1(a) | Statement of sustainability |
| Comment: | | The system 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 applicable to conversions |
| Comment: | | All comments in relation to the system 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 | Fitness of materials and workmanship |
| Comment: | | The system is acceptable. See section 11.1 and the <i>Installation</i> part of this Certificate. |
| Regulation: | 28(b) | Resistance to moisture and weather |
| Comment: | | The system can contribute to satisfying this Regulation. See section 8 of this Certificate. |
| Regulation: | 29 | Condensation |
| Comment: | | The system can contribute to satisfying this Regulation. See section 8 of this Certificate. |
| Regulation: | 30 | Stability |
| Comment: | | The system is acceptable for use as set out in section 6 of this Certificate. |
| Regulation: | 35(4) | Internal fire spread — structure |
| Regulation: | 36(a) | External fire spread |
| Comment: | | The system achieved a reaction to fire classification of D-s3, d2 and its use is restricted under these Regulations. See sections 7.1 and 7.2 of this Certificate. |

Construction (Design and Management) Regulations 2017

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.

See sections: 3 *Delivery and site handling* (3.1 and 3.2) and 13 *General* (13.6) of this Certificate.

Additional Information

NHBC Standards 2020

In the opinion of the BBA, Wickes 125 Shiplap Cladding, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 6.1 *External Masonry Walls* (section 6.1.16 — *Cladding*) and 6.2 *External timber framed walls*.

CE marking

The Certificate holder has taken the responsibility of CE marking the system in association with harmonised European Standard BS EN 13245-2 : 2008.

1 Description

1.1 Wickes 125 Shiplap Cladding comprises protective and decorative white cellular PVC-U cladding planks with matching rigid PVC-U trims (see Figures 1 and 2).

Figure 1 Wickes 125 Shiplap PVC-UE Cladding

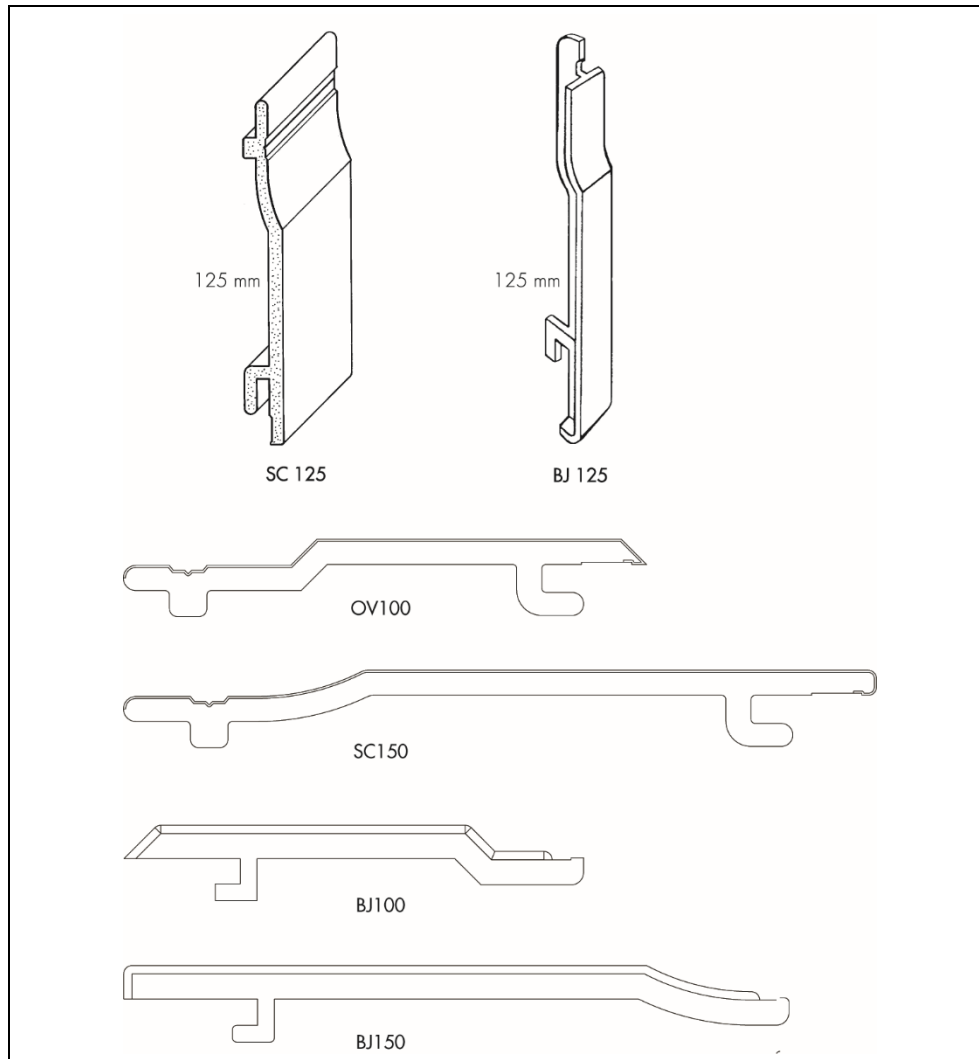
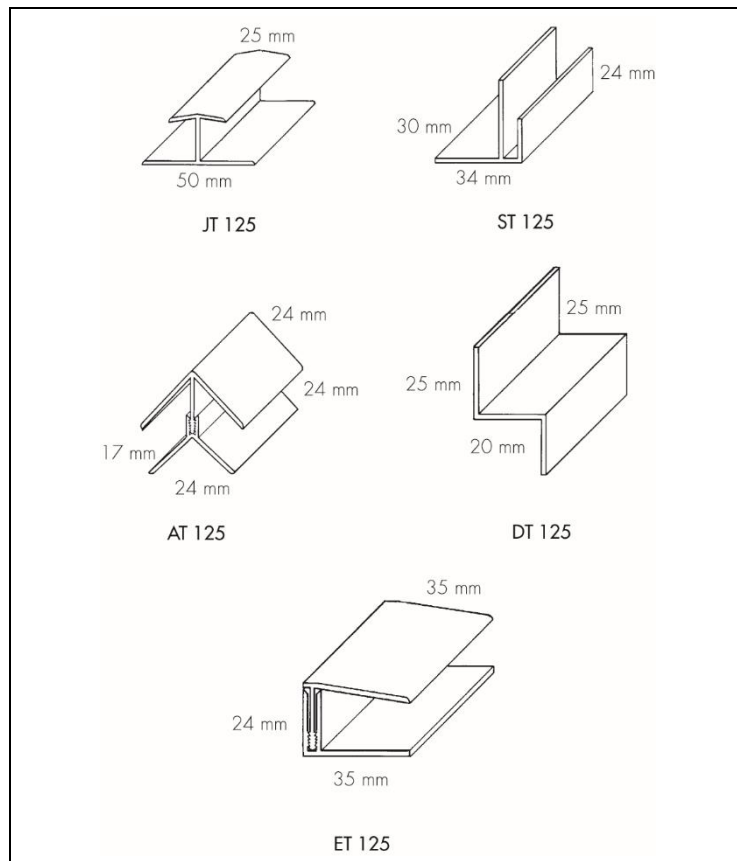


Figure 2 Trims



1.2 The interlocking planks' characteristics are given in Table 1. The planks are composed of a cellular calcium/zinc PVC-U core beneath a rigid outer weathering impact-modified calcium/zinc PVC-U skin.

Table 1 Characteristics of planks

| Characteristic (unit) | Nominal value |
|---|---------------|
| Standard length (m) | 5 |
| Cover width (mm) | 125 |
| Nominal thickness (mm) | 6 |
| Thickness of rigid outer surface (mm) | 0.5 |
| Nominal weight ($\text{kg}\cdot\text{m}^{-1}$) | 0.64 |
| Average density ($\text{kg}\cdot\text{m}^{-3}$) | 490 |

1.3 The trims consist of extrusions and injection mouldings of impact-modified PVC-U.

2 Manufacture

2.1 The PVC-UE planks are manufactured by co-extruding the high-impact calcium/zinc PVC-U skin compound onto a calcium/zinc foamable core compound, and cooling and forming to section. A transparent polyethylene film is applied to the outer face of the extrusion before the plank is cut to length.

2.2 The trims are manufactured from rigid PVC-U by conventional extrusion and injection-moulding techniques.

2.3 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities

- checked that equipment has been properly tested and calibrated
- undertaken to carry out 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.

3 Delivery and site handling

3.1 Standard 5 m lengths of planks and rigid extruded trims are sold in packs sealed in polythene sleeves bearing the Certificate holder's product code. Pack quantities vary depending on the type of profile. Moulding are generally supplied in bags.

3.2 The packs should be unloaded by hand to avoid damage and stored flat on a clean, level surface in their protective wrapping. Stacks must not exceed one metre in height and should be restrained to prevent collapse. If stored externally, the packs should be stored under cover.

3.3 Care must be taken when handling the planks and trims to avoid contact with solvents or materials containing volatile organic components.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Wickes 125 Shiplap Cladding.

Design Considerations

4 General

4.1 Wickes 125 Shiplap Cladding is suitable for horizontal, vertical and diagonal fixing as a back-ventilated, decorative and protective external facing over timber frame or masonry wall constructions of new and existing buildings.

4.2 The system is restricted for use in buildings with no storey more than 18 m above the ground in England, Wales and Northern Ireland, and 11 m in Scotland.

4.3 The wall and the sub-frame to which the cladding is fixed should be structurally sound and constructed in accordance with the requirements of the relevant national Building Regulations and Standards.

4.4 Brickwork or blockwork walls should be constructed in the conventional manner in accordance with the national Building Regulations and BS EN 1996-1-1 : 2005 and BS EN 1996-3 : 2006 and their UK National Annexes.

4.5 Timber stud walls should be designed and constructed in accordance with the UK National Annex to BS EN 1995-1-1 : 2004. Studding and framing should be adequately supported by noggins to ensure rigidity.

4.6 When used over a sheathed timber stud frame or a masonry substrate, the cladding should be fixed to preservative-treated, good-quality timber battens (measuring not less than 25 by 38 mm) rigidly fixed to the studding (not the supported sheathing) or masonry substrate at 600 mm centres or closer.

4.7 PVC-UE has a similar coefficient of thermal expansion to that of conventional rigid PVC-U. To avoid distortion in service, care should be taken not to install the cladding in extremes of temperature (ie below 5°C or above 25°C), and to allow adequate gaps for expansion (see the relevant sections of the *Installation* part of this Certificate).

4.8 To comply with the NHBC requirement (see *NHBC Standards* 2020, Chapter 6.9.18), a minimum 38 mm drained and vented cavity behind the cladding is required.

4.9 Ventilation slots of a minimum 5000 mm² per metre run at the top and bottom of the installation is recommended.

5 Practicability of installation

The system is designed to be installed by a competent general builder, or a contractor, experienced with this type of system.

6 Strength and stability

Wind loading



6.1 Under wind loading, the most likely mode of failure of the cladding will be by nail withdrawal under wind suction. Wind loads should be calculated by a suitably competent and experienced individual in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex.

6.2 When installed in accordance with the requirements of this Certificate, onto battens at 600 mm spacings, the cladding can withstand dynamic wind pressures up to 1750 Pa.

6.3 The permissible dynamic wind pressure may be increased by reducing batten spacing. This is particularly recommended at the corners of buildings and in exposed locations. In common with all cladding, the adequacy of a proposed installation should always be checked by a suitably qualified and experienced individual, who should also check the adequacy of the fixing of battens to the substrate, which is not covered by this Certificate.

6.4 When designing a timber stud wall to resist racking forces, the cladding should not be taken into account.

Resistance to impact

6.5 The cladding is not recommended for use at ground-floor level, where severe impacts may occur. It is suitable for use above ground-floor level in locations where it is unlikely to be subjected to impact from thrown or kicked objects, and at ground floor level in private areas where there is some incentive to exercise care.

7 Performance in relation to fire



7.1 The system achieved a reaction to fire classification of D-s3, d2 to BS EN 13501-1 : 2007.



7.2 In England, Wales and Northern Ireland, the system is not classified as 'non-combustible' or 'of limited combustibility' and may be used on buildings with no storey 18 m or more above the ground, and 1 m or more from a boundary. With minor exceptions, the system should be included in calculations of unprotected areas.



7.3 In Scotland, the system is not classified as 'non-combustible' and may be used on buildings more than 1 m from a boundary. With minor exceptions, the system should be included in calculations of unprotected areas.

7.4 In Scotland, the system should not be used on buildings with a storey more than 11 m above the ground, or on any entertainment or assembly building with a total storey area more than 500 m², or on any hospital or residential care building with a total storey area more than 200 m².

7.5 Designers should refer to the relevant national Building Regulations and guidance for detailed conditions of use, particularly in respect of the requirements for substrate fire performance, cavity barriers, service penetrations and combustibility limitations for other materials and components used in the overall wall construction (for example, thermal insulation).

8 Air and water penetration



8.1 The cladding is not airtight, watertight or water-vapour-tight. When used on exposed substrates, such as timber stud walls, the system must be backed by a breather membrane (incorporated behind the cladding under the supporting battens) acting as a vapour-permeable water barrier. This barrier must satisfy the requirements of BS 5250 : 2011 and have a vapour resistance of less than $0.6 \text{ MN}\cdot\text{s}\cdot\text{g}^{-1}$.

8.2 Where cladding is used as a decorative facing attached to weathertight masonry walls, a vapour-permeable water barrier is not necessary as the amount of water that will penetrate the cladding will be small and will not have an adverse effect on the wall.

8.3 If the cladding is used in the renovation of a masonry wall which is structurally sound but not fully weathertight, the use of a vapour-permeable water barrier is advisable.

8.4 Provision must always be made to allow water that has penetrated behind the cladding to drain away.

9 Thermal insulation

For the purpose of U value calculations in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2006, the cavity between the system and the wall should be treated as a 'well ventilated' air-layered cavity; and the thermal insulating value of the cavity, and everything between it and the external environment, should be taken as equivalent to an internal boundary layer (ie a total of $0.13 \text{ m}^2\cdot\text{K}^{-1}\cdot\text{W}^{-1}$).

10 Maintenance



10.1 The cladding can be washed with water and detergent. Abrasive or solvent-based cleaners must not be used. For the removal of more resistant stains, the Certificate holder's advice must be sought. If repairs are required, the material can be cut and drilled, using normal woodworking tools.

10.2 Replacement of a damaged section can be carried out but may require the temporary removal of undamaged planks above the damaged area.

10.3 Paint must not be applied as it can cause premature embrittlement of PVC-U products and the application of dark colours to PVC-U cladding could lead to a risk of thermal distortion.

11 Durability



11.1 The system will remain effective as cladding for a period in excess of 35 years.

11.2 The cladding will retain its decorative function with only minor changes in surface appearance. However, staining will result from contact with certain materials or substrates (eg creosote or bitumen).

12 Reuse and recyclability

The PVC-U and PVC-UE profile material can be recycled.

Installation

13 General

13.1 Flat-headed, stainless steel A4 cladding pins (30 mm long by 2.2 mm shank diameter) are used to fix cladding planks to timber battens (secret fixing). Stainless steel nails (25 mm long) are used for fixing trims.

13.2 The substrate for the system should be checked to ensure that it is as prescribed in section 4.3.

13.3 On non-weatherproof substrates (eg timber-frame walls), a vapour-permeable water barrier must be installed behind the battens and cladding (see sections 8.1 and 8.3).

13.4 Installation should not be carried out in extremes of temperature; a temperature range of between 5 and 25°C is recommended by the Certificate holder.

13.5 The components can be worked using normal woodworking tools for cutting, drilling and shaping. Handsaws should have a fine-toothed blade. Hand-held and bench-mounted power tools with a carbide-tipped blade should be run at speeds similar to, or higher than, those normally used with timber.

13.6 When using power tools to cut or shape the components, eye protection and a coarse-particle dust mask should be used.

13.7 Expansion gaps of 5 mm should be provided at the ends of each five-metre plank.

13.8 Adequate provision should be made for drainage and ventilation behind the cladding (see sections 4.8, 4.9 and 8.4).

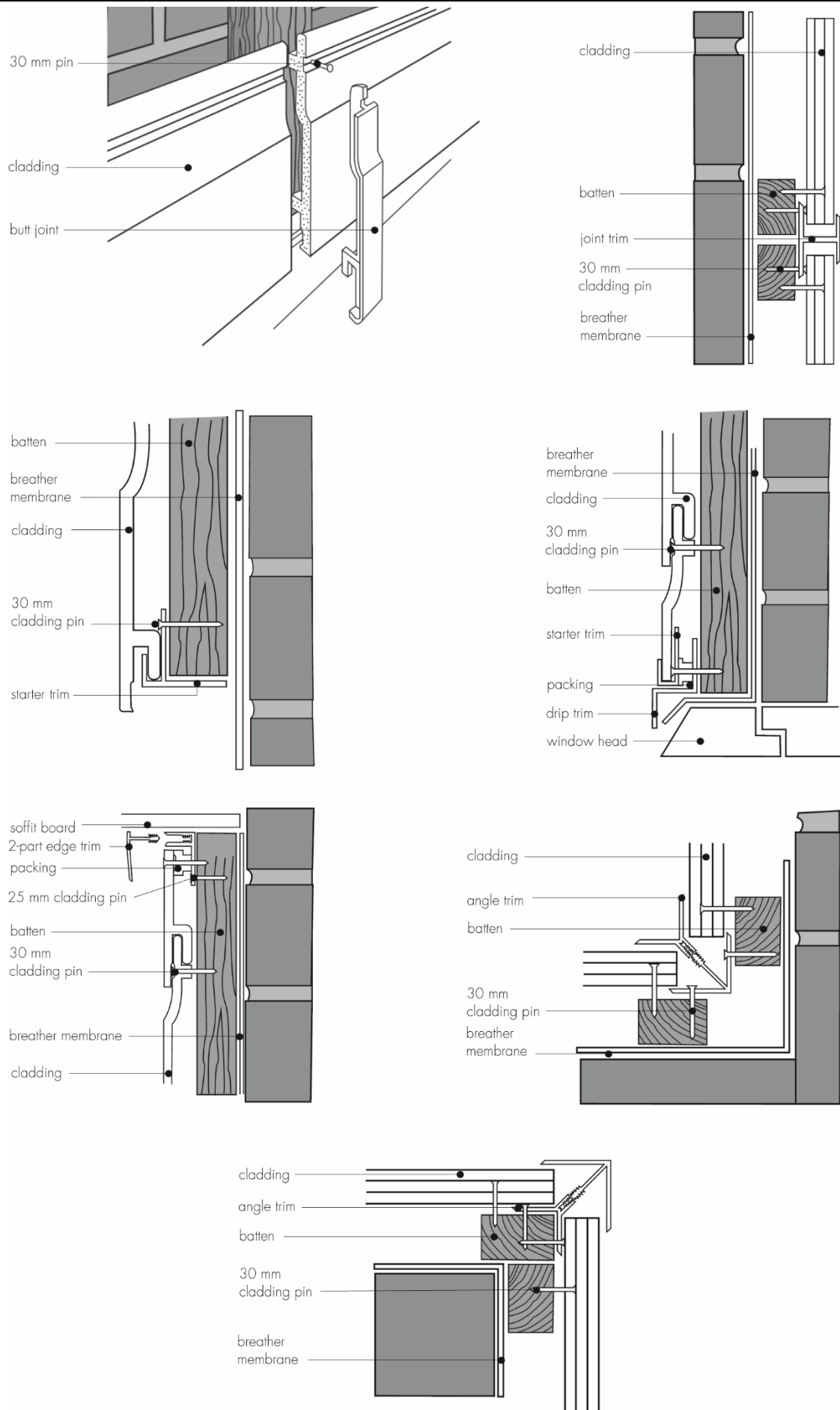
13.9 Where butt joints are made between planks, the ends of both planks should be fixed to battens.

13.10 Window head and other protrusions should be protected by a suitable weatherproof membrane or flashing.

14 Procedure

The cladding must be installed in accordance with the instructions given in the Certificate holder's literature. Typical installation details are shown in Figure 3.

Figure 3 Installation details



15 Tests

Tests were carried out on the planks to determine:

- voidage
- thickness of layers
- density
- overall thickness
- impact resistance of unaged and UV aged material
- appearance after UV ageing
- simulated wind-load bending
- impact resistance (cladding panel)
- flexural strength and modulus of elasticity
- hard body impact.

16 Investigations

16.1 Permissible dynamic wind pressures were calculated from the simulated wind-load bending test and nail withdrawal data.

16.2 An examination was made of data relating to:

- reaction to fire performance
- colour stability.

16.3 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

16.4 The practicability of installation was assessed.

Bibliography

BRE Report 443 BR 443 : 2006 *Conventions for U value calculations*

BS 5250 : 2011 + A1 : 2016 *Code of practice for control of condensation in buildings*

BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1 — Actions on structures — General actions — Wind actions*

NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Wind actions*

BS EN 1995-1-1 : 2004 + A2 : 2014 *Eurocode 5 — Design of timber structures — General — Common rules and rules for buildings*

NA to BS EN 1995-1-1 : 2004 + A2 : 2014 UK National Annex to *Eurocode 5 — Design of timber structures — General — Common rules and rules for buildings*

BS EN 1996-1-1 : 2005 + A1 : 2012 *Eurocode 6 — Design of masonry structures — General rules for reinforced and unreinforced masonry structures*

NA to BS EN 1996-1-1 : 2005 + A1 : 2012 UK National Annex to *Eurocode 6 — Design of masonry structures — General rules for reinforced and unreinforced masonry structures*

BS EN 1996-3 : 2006 *Eurocode 6 — Design of masonry structures — Simplified calculation methods for unreinforced masonry structures*

NA + A1 : 2014 to BS EN 1996-3 : 2006 UK National Annex to *Eurocode 6 — Design of masonry structures — Simplified calculation methods for unreinforced masonry structures*

BS EN 13245-2 : 2008 *Plastics — Unplasticized poly(vinyl chloride) (PVC-U) profiles for building applications — PVC-U profiles and PVC-UE profiles for internal and external wall and ceiling finishes*

BS EN 13501-1 : 2007 + A1 : 2009 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*

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

Conditions of Certificate

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
- is valid only within the UK
- 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
- is subject to English Law.

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, UKNI or 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.

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