



G.A.P. Limited

Partnership Way
Shadsworth Business Park
Blackburn
Lancashire BB1 2QP

Tel: 01254 682888 Fax: 01254 688000
e-mail: office@gap.uk.com
website: www.gap.uk.com

(47)	Nn7
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**Agrément
Certificate
No 05/4197**

Designated by Government
to issue
European Technical
Approvals

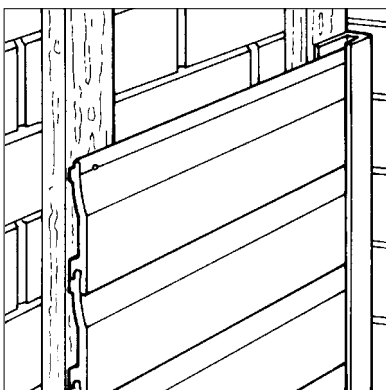
HOMELINE CELLULAR PVC-U CLADDING SYSTEM

Façade légère en PVC
Verkleidung

System


• THIS CERTIFICATE RELATES TO THE HOMELINE CELLULAR PVC-U CLADDING SYSTEM.

- The cladding is supplied in white planks with shiplap or, open 'V' joints.
- The system has been assessed for use externally on buildings as a decorative and protective facing fixed horizontally, vertically (open 'V' only) or diagonally (open 'V' only) on the following substrates:
 - timber stud walls with or without sheathing
 - brick or block masonry walls.
- It is essential that the system is installed in accordance with the manufacturer's instructions and the Design Data and Installation sections of this Certificate.




Regulations

1 The Building Regulations 2000 (as amended) (England and Wales)

 The Secretary of State has agreed with the British Board of Agrément the requirements of the Building Regulations to which cladding systems can contribute in achieving compliance. In the opinion of the BBA, the Homeline Cellular PVC-U Cladding System, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement: A1	Loading
Comment:	The system is acceptable for use as set out in sections 7.2 to 7.4 and 9.1 to 9.5 of this Certificate.
Requirement: B4(1)	External fire spread
Comment:	The system has a fire propagation index (I) of 14.3 and its acceptability for use is as set out in sections 10.1 to 10.5 of this Certificate.
Requirement: C2(b) and (c)	Resistance to moisture
Comment:	The system does not form a watertight or airtight facing. To achieve a waterproof barrier a breather membrane must be provided. See sections 11.1 to 11.4 of this Certificate.
Requirement: L1(a)(i)	Dwellings
Comment:	The insulation values of the planks and the cavity formed between the planks and the backing wall reduce the overall U value with reference to Tables 1 and 5 of Approved Document L1. See section 12 of this Certificate.
Requirement: Regulation 7	Materials and workmanship
Comment:	The system is acceptable. See section 14.1 of this Certificate.

2 The Building Standards (Scotland) Regulations 1990 (as amended)

 In the opinion of the BBA, the Homeline Cellular PVC-U Cladding System, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation: 10	Fitness of materials and workmanship
Standard: B2.1	Selection and use of materials, fittings, and components, and workmanship
Comment:	The system can contribute to a construction meeting this Standard. See the <i>Installation</i> part of this Certificate.
Standard: B2.2	Selection and use of materials, fittings, and components, and workmanship
Comment:	The system is an acceptable material. See section 14.1 of this Certificate.
Regulation: 11	Structure
Standard: C2.1	Structure – Stability
Comment:	The system is acceptable for use as set out in sections 7.2 to 7.4 and 9.1 to 9.5 of this Certificate.
Regulation: 12	Structural fire precautions
Standard: D4.1	Sub-compartmentation – Buildings of purpose sub-group 2A
Standards: D6.3 and D6.4	Concealed spaces – Principles
Standard: D6.5	Concealed spaces – Rainscreen cladding
Comment:	The system has a fire propagation index (I) of 14.3 and its acceptability for use is as set out in sections 10.1 to 10.5 of this Certificate.
Regulation: 17	Resistance to moisture
Standard: G3.1	Resistance to precipitation – Resistance to precipitation
Comment:	The system does not form a watertight or airtight facing. To achieve a weatherproof barrier a breather membrane must be provided. See sections 11.1 to 11.4 of this Certificate.

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Regulation:	18	Resistance to condensation
Standard:	G4.1	Condensation — Interstitial condensation
Standard:	G4.2	Condensation — Surface condensation
Comment:		Providing there is provision for adequate drainage and ventilation behind the cladding, and a breather membrane is incorporated, as required, the system will comply with these Standards. See sections 7.7 and 11.1 to 11.4 of this Certificate.
Regulation:	22	Conservation of fuel and power
Standard:	J3.1	Buildings in purpose group 1 — Building fabric
Standard:	J8.1	Buildings in purpose groups 2 to 7
Comment:		The thermal resistance of the planks and the cavity formed between the planks and the backing wall will contribute to achieving the required U value. See section 12 of this Certificate.

3 The Building Regulations (Northern Ireland) 2000



In the opinion of the BBA, the Homeline Cellular PVC-U Cladding System, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The system is acceptable. See section 14.1 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		The system does not form a watertight or airtight facing. To achieve a weatherproof barrier a breather membrane must be provided. See sections 11.1 to 11.4 of this Certificate.
Regulation:	D1	Stability
Comment:		The system is acceptable for use as set out in sections 7.2 to 7.4 and 9.1 to 9.5 of this Certificate.
Regulation:	E5	External fire spread
Comment:		The system has a fire propagation index (I) of 14.3 and its acceptability for use is as set out in sections 10.1 to 10.5 of this Certificate.
Regulation:	F2	Building fabric
Comment:		The insulation values of the planks and the cavity formed between the planks and the backing wall reduce the overall U value. See section 12 of this Certificate.

4 Construction (Design and Management) Regulations 1994 (as amended)

Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: 8 *Practicability of installation* (8.1 and 8.2).

Technical Specification

5 Description

5.1 The Homeline Cellular PVC-U Cladding System is a protective and decorative facing for external use.

5.2 The system comprises white cladding planks and matching trims (see Figure 1).

5.3 The planks are composed of a cellular PVC-U core beneath an impact-modified, outer weathering PVC-U skin. Both core and skin formulations include a tin-based stabiliser. The trims consist of extrusions in impact-modified PVC-U or injection mouldings in acrylate styrene acrylonitrile.

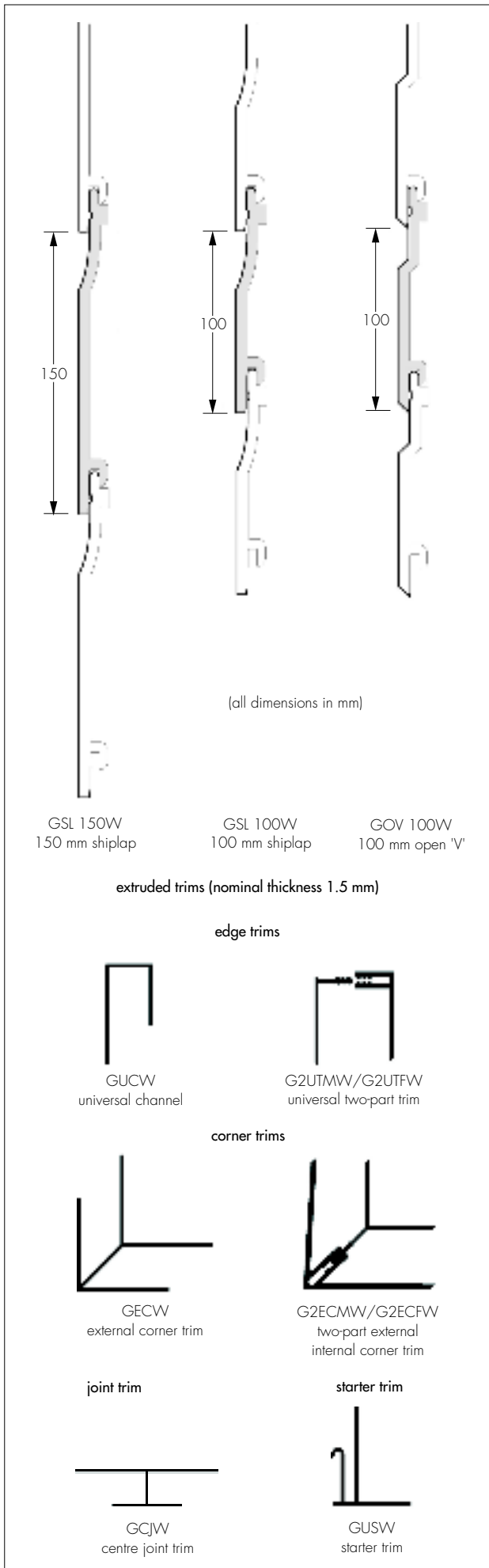
5.4 The planks are available in two designs, shiplap and open 'V', with the characteristics given in Table 1.

Table 1 Characteristics of planks

	Shiplap		Open 'V'
	100 mm	150 mm	100 mm
Standard length (m)	5	5	5
Cover width (mm)	100	150	100
Nominal thickness (mm)	6	7	7
Nominal thickness of rigid outer surface (mm)	0.6	0.6	0.6
Nominal weight (kgm ⁻¹)	0.45	0.63	0.53
Average density (kgm ⁻³)	550	550	550

5.5 The planks are manufactured by co-extruding a high-impact PVC-U compound onto a foamable PVC-U compound, cooling and forming to section and finally cutting to length. Cellular PVC-U (PVC-UE) is formed during the process by the evolution of gas from sodium bicarbonate.

Figure 1 Cellular cladding planks and trims



5.6 The trims are manufactured using conventional extrusion and injection-moulding techniques.

5.7 Continuous quality control is exercised during manufacture. Checks include appearance, dimensions, weight per metre, heat reversion, heat ageing, and impact strength.

5.8 A4 (steel No 1.4401, BS EN 10088-2 : 1995) stainless steel, annular ring-shank nails are used to fix cladding planks and extruded trims to timber battens (secret fixing). Nails 25 mm long by 2 mm shank diameter, 33 mm by 2 mm and 50 mm by 3 mm are available for fixing planks and 25 mm by 2 mm for trims.

6 Delivery and site handling

6.1 Components are supplied in protective polyethylene sleeve wrapping, quantities per pack being commensurate with component size.

6.2 All cladding packs bear the system marking, description, quantity, and the BBA identification mark incorporating the number of this Certificate.

6.3 Unloading should be carried out by hand to avoid damage to the components, which should be stored flat, in their protective wrapping, on a clean, level surface. Stacks must not exceed one metre in height and should be restrained to prevent collapse. To avoid damage it is recommended that additional protection is provided when the planks are stored in the open.

Design Data

7 General

7.1 The Homeline Cellular PVC-U Cladding System is suitable for horizontal, vertical (open 'V' only) and diagonal (open 'V' only) fixing, as a decorative and protective external facing over a timber stud or masonry wall.

7.2 The designer should ensure that the strength and integrity of the intended substrate is commensurate with that required of the cladding system (see sections 7.3 and 7.4).

7.3 Brickwork or blockwork walls should be constructed in the conventional manner in accordance with one of the following technical specifications:

- BS 5628-1 : 1992 and BS 5628-3 : 2001
- The Building Regulations 2000 (as amended) (England and Wales), Approved Document A1/2, Part C, Section 1
- The Building Standards (Scotland) Regulations 1990 (as amended), Technical Standards, Part C *Small Buildings Guide*
- The Building Regulations (Northern Ireland) 2000, Technical Booklet D *Structure*.

7.4 Timber stud walls should be constructed in accordance with BS 5268-2 : 2002 and BS 5268-6.1 : 1996 and preservative treated in accordance with BS 5268-5 : 1989. Studding and framing should be adequately supported by noggings to ensure rigidity.

7.5 When used over a sheathed timber stud frame or over a masonry substrate, the cladding should be fixed to preservative-treated, good quality timber battens (measuring not less than 19 mm by 38 mm, 25 mm by 38 mm recommended by the manufacturer) rigidly fixed to the studding (not unsupported sheathing) or masonry

substrate at 600 mm centres or closer. Where a CCA (copper/chrome/arsenic) preservative is used, care should be taken to ensure that sufficient time is allowed for the complete fixation of the CCA preservative (approximately seven days) before the cladding is fixed.

7.6 Cellular PVC-U 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 sections 16.13, 16.17, 16.22 and 16.31).



7.7 In accordance with BS 8200 : 1985, a continuous 10 mm ventilation pathway (25 mm recommended by the manufacturer) must be maintained behind the cladding, with minimum 5000 mm² ventilation slots per metre run at the top and bottom of the installation. This will also satisfy the NHBC requirement (see NHBC Standards, Chapter 6.2 : 1999) for a minimum 10 mm cavity behind cladding installed over timber sheathing. To comply with the requirement of Zurich Building Guarantees Technical Standards [Volume 2 *Superstructure* (page 60)] for cladding installed over timber sheathing, however, a minimum 19 mm cavity is required.

8 Practicability of installation

8.1 The cladding can be installed easily under normal site conditions provided the work is carried out according to the guidance given in sections 15 and 16. Care should be taken when installing long lengths of cladding above ground-floor level.

8.2 The components of the system are easy to work 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 for timber. When using power tools to cut or shape the system it is recommended that eye protection and a coarse-particle dust mask are used.

9 Strength and stability

Wind loading



9.1 Under wind loading the most likely mode of failure of the cladding will be by nail withdrawal under wind suction.

9.2 When installed in accordance with the requirements of this Certificate, onto battens at maximum 600 mm centres, the cladding can withstand the dynamic wind pressures shown in Table 2.

Table 2 Permissible dynamic wind pressures (Pa)

Length of fixing nail (mm)	Plank cover width (mm)	
	100	150
25	1750	1150
33	2650	1750

9.3 The permissible dynamic wind pressure may be increased by reducing batten spacing, and/or using 50 mm fixing nails onto double battens. A reduction in batten spacing is particularly recommended at the corners of a building and in exposed locations. In common with all cladding, the adequacy of a proposed installation should always be checked by a qualified engineer, who should include in the check the adequacy

of the fixing of battens to the substrate (outside the scope of this Certificate).

9.4 The cladding should not be taken into account when designing a timber stud wall to resist racking forces.

Resistance to impact

9.5 The cladding is not recommended for use at ground-floor level where severe impacts may occur. It is for use in locations above the zones of impact from people as described in categories E and F of Table 2 of BS 8200 : 1985.

10 Performance in relation to fire



10.1 When tested to BS 476-6 : 1989 the cladding material achieved a fire propagation index (I) of 14.3 with sub-indices (i_1), (i_2) and (i_3) of 6.5, 6.9 and 0.9, respectively.

10.2 When tested in accordance with BS 476-7 : 1997, the co-extruded material has achieved a Class 1Y surface spread of flame rating.

10.3 Although the spread of flame across the surface of PVC is limited, the material does tend to char and may fall away when exposed to fire. Due consideration should always be given to any combustible materials behind the cladding, which may become exposed in the event of fire. Where necessary, cavity barriers should be incorporated behind the cladding, as required by the relevant building regulations.

10.4 When determining the minimum distance between the sides of a building and the relevant boundary, any area of wall (with the appropriate fire resistance) covered by cellular PVC-U cladding is counted as an unprotected area amounting to half the actual area of the cladding.

10.5 Subject to the provisions given in section 10.4, the cladding is suitable for use on external walls other than those requiring a Class 0 external surface (eg external walls less than one metre from a relevant boundary).

11 Air and water penetration



11.1 The cladding is not air, water or water-vapour tight. When used on timber stud walls the system must be backed by a breather membrane acting as a vapour-permeable water barrier, incorporated behind the cladding under the supporting battens. This barrier must meet the requirements of BS 4016 : 1997 and have a vapour resistance less than 0.6 MNsg⁻¹ when calculated from the results of tests carried out at 25°C and a relative humidity of 75%, in accordance with BS 3177 : 1959.

11.2 Where the system is used as a decorative facing attached to weathertight masonry walls, a 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.

11.3 If the system 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.

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

12 Thermal insulation



An improvement in U value (thermal transmittance) of the external wall will be obtained by the use of the system, due in part to the cellular structure of the foam and in part to the air space between the cladding and the backing wall. It is not possible however to provide values for the improvement achievable due to the number of factors involved in any particular installation.

13 Maintenance

13.1 The cladding can be washed with water and detergent. Solvent-based cleaners should not be used.

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

13.3 Paints can cause premature embrittlement of PVC-U systems and the application of dark colours to PVC-U cladding could lead to risk of thermal distortion. Therefore, painting of the system is not recommended.

14 Durability



14.1 Accelerated weathering tests and limited natural exposure trials indicate that cladding is as durable as conventional rigid PVC, and will retain adequate impact resistance over a period in excess of 20 years.

14.2 The system will retain its decorative function for a period of 20 years with only minor changes in surface appearance. However, staining will result from contact with creosote or bitumen.

Installation

15 General

15.1 Installation must be carried out in accordance with the manufacturer's instructions and the requirements of this Certificate.

15.2 Provision should be made for adequate drainage and ventilation behind the cladding.

15.3 The system should be installed using the fixings recommended by the manufacturers (see section 5.8).

16 Procedure

Preparation

16.1 Before installation commences the cladding operation should be thoroughly planned and prepared.

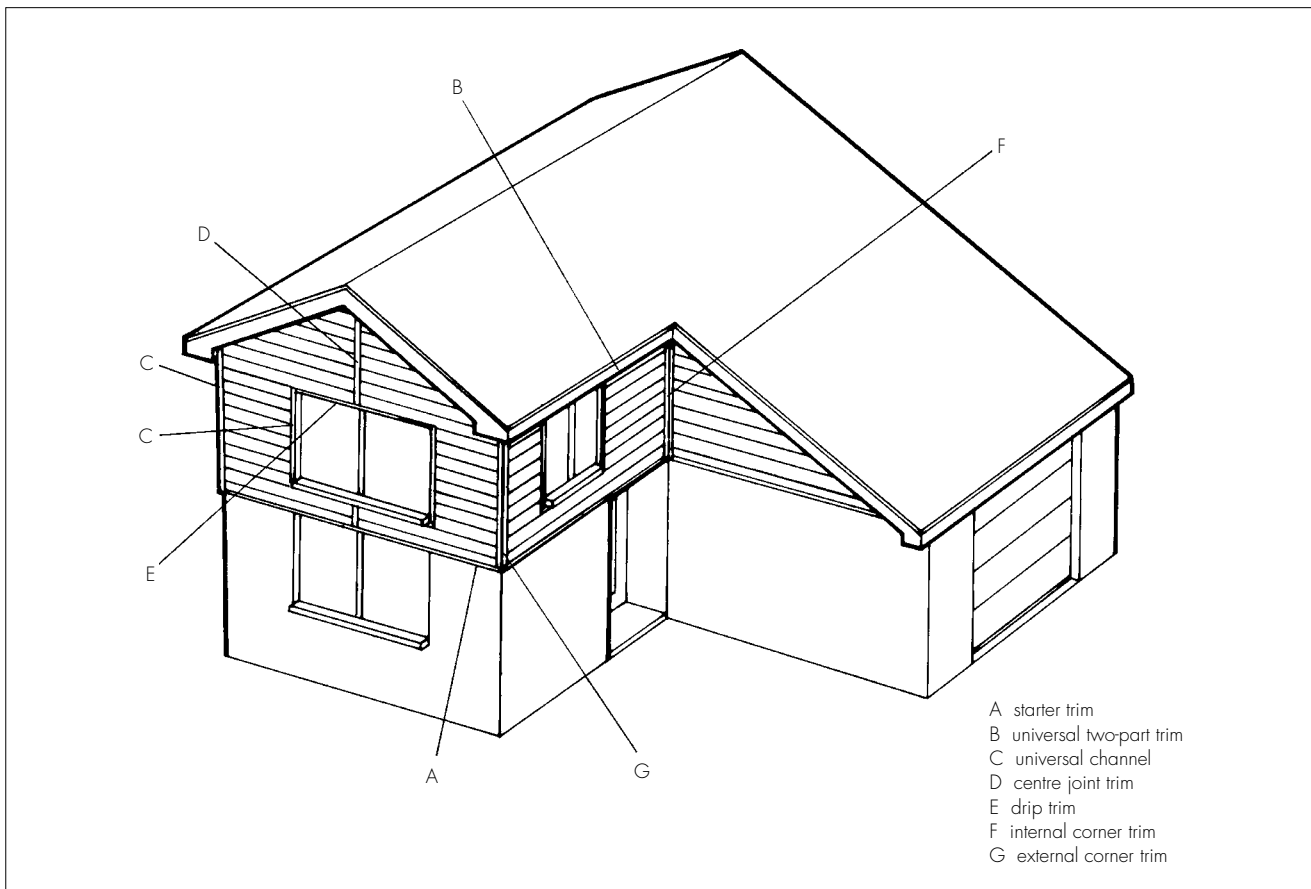
16.2 A final inspection of the substrate should be made to confirm that it is as prescribed in section 7.2.

16.3 Appropriate cladding planks and trims should be selected and assembled (see Figures 1 and 2). For vertical and diagonal cladding only open 'V' should be used.

16.4 The appropriate battens (selected and treated in accordance with section 7.5) should be fixed at centres not exceeding 600 mm.

16.5 For horizontal cladding, vertical battens are required at the ends of each section, at the sides of windows and at joins between planks. Horizontal battens are not recommended at the top/bottom of either the installation or window/door openings, where they may restrict ventilation and drainage. Similarly, the use of horizontal trims at the base of the cladding must not reduce the ventilation opening below 5000 m² per metre run (see section 7.7).

Figure 2 Use of trims



Horizontal installation (see Figure 3)

16.6 For vertical cladding, horizontal battens are required at the top and bottom of each section, at the top and bottom of each window, and at any joins between planks. In this application, ventilation and drainage is provided for by ensuring a 5 mm clearance between plank and trims at each end (see section 16.22).

16.7 For diagonal cladding, battens are required around the whole area to be clad and around openings. Adequate drainage holes must be provided as described in section 16.6.

16.8 On non-weatherproof substrates a vapour-permeable water barrier must be installed behind battens.

16.9 Windowheads and other protrusions should be protected by a suitable weatherproof membrane or flasing.

16.10 Working from a level line, a starter trim is fixed to timber battens. Care should be taken to ensure that the starter trim does not obstruct the opening required for drainage and ventilation at the base of the cladding.

16.11 All vertical trims, followed by top trims, are then fixed to perimeter battens (including battens around windows).

16.12 Where two-part trims are required, only the back half is fixed at this stage.

16.13 The bottom cladding plank is then located firmly in the starter trim and vertical trims, and fixed into place using the specified stainless steel nails, starting at one end or working from the centre outward, nailing into each batten in turn. Nails should be inserted only along the marked line in each plank. At the end of each plank a 5 mm gap should be allowed for expansion (ie 10 mm between boards).

16.14 Where necessary, trims and planks are cut to size and shape with a fine-toothed saw.

16.15 Subsequent planks are fitted into the preceding planks, ensuring that the tongue-and-groove joint is firmly closed, and nail heads are concealed by the overlap.

16.16 If necessary, the top plank is cut to fit the remaining space. Where this occurs, packing pieces taken from cladding offcuts should be placed behind the cut plank at each fixing centre.

16.17 Where sections longer than 5 metres are to be clad, butt joints of adjacent cladding planks should be concealed by either a butt joint cover or centre joint trim; a 10 mm expansion gap should be allowed between the planks, both ends of which should be securely fixed to battens. Butt joint trims should be fitted at least two fixing centres away from a panel edge and with continuous boards immediately above and below the joint.

16.18 Where two-part trims have been used the installation is completed by fastening the front part of the trim.

Vertical installation (see Figure 3)

16.19 Vertical cladding is installed using the principles outlined for horizontal installation.

16.20 The appropriate trims are fitted to the perimeter of the elevation to be clad, and around window and

door openings. A drip trim is used at the base of the cladding.

16.21 Starting from one edge the plank is positioned, using a plumb line, and nailed at the fixing centres.

16.22 To ensure that cladding remains flat, all nailing should be undertaken progressively from the centre working outward on each plank. All plank ends must be secret-nailed into the trims, allowing 5 mm clearance for ventilation, drainage and expansion at each end.

16.23 Subsequent planks are fitted over the preceding planks, ensuring that the tongue-and-groove joint is firmly closed so that the nail heads are concealed by the overlap.

16.24 The finishing plank should be cut to include the groove and fitted onto the tongue of the penultimate plank. It should be nailed through packing at every fixing centre along the cut edge. (For aesthetic reasons it is recommended that the installation is planned so that the width of the starting and finishing planks is the same. That is, that both are either full planks or cut planks of the same width).

16.25 Care must be taken to ensure that the nails through the cut planks are positioned so that the trim sections cover the nail heads.

16.26 Where two-part trims have been used, the installation is completed by fastening the front part of the trim to the rear part.

Diagonal installation (see Figure 3)

16.27 Diagonal cladding is installed using the principles outlined for *Vertical installation*.

16.28 Horizontal battens are fixed to the substrate at spacings to give a 600 mm distance between fixing centres on the diagonal cladding.

16.29 The appropriate trims are fixed to battens; use of two-part trims facilitates the installation. Only the back half of these trims is fixed at this stage.

16.30 The cladding planks are cut to size and fixed across the section at the required angle, starting with the smallest plank at the bottom corner.

16.31 To ensure that cladding remains flat, all nailing should be undertaken progressively from the centre working outward on each plank. All plank ends must be secret-nailed into the trims, allowing 5 mm clearance for expansion at each end.

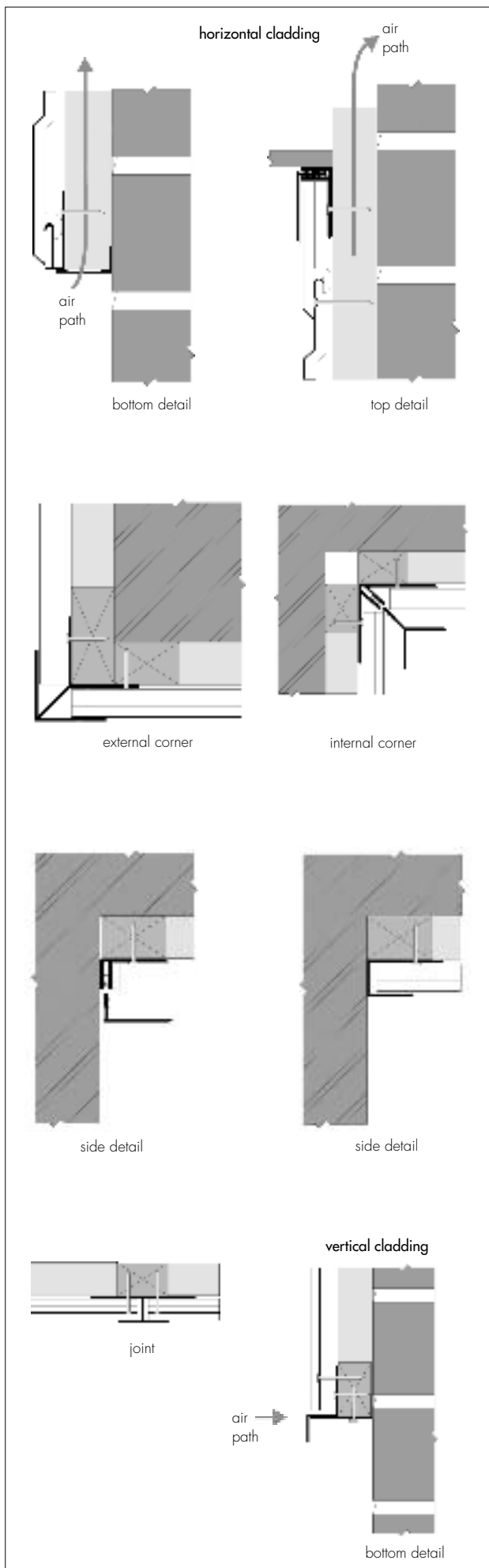
16.32 Subsequent planks are fitted into the preceding planks, ensuring that the tongue-and-groove joint is firmly closed so that the nail heads are concealed by the overlap.

16.33 The finishing plank should be cut to include the groove and fitted onto the tongue of the penultimate plank. It should be nailed through packing onto perimeter battens.

16.34 Care must be taken to ensure that the nails through the cut planks are positioned so that the trim sections cover the nail heads.

16.35 Where two-part trims have been used the installation is completed by fastening the front part of the trim.

Figure 3 Typical installation details



Technical Investigations

The following is a summary of the technical investigations carried out on the Homeline Cellular PVC-U Cladding System.

17 Tests

17.1 Tests were carried out on planks to determine impact resistance.

17.2 Tests were carried out on planks and trims to determine:

- Vicat softening temperature
- thickness of layers
- weight per linear metre
- ash content
- Izod impact strength (ISO 180 : 1982)
- impact resistance (cladding panel)
- dimensional stability
- tensile strength/elongation
- modulus of elasticity
- Izod impact strength and appearance after UV ageing
- Izod impact strength and appearance after heat ageing
- nail pull-through
- heat reversion
- acetone resistance
- stress relief.

17.3 Tests were carried out on extruded trims to determine:

- impact strength/DHC (dehydrochlorination)/appearance after UV ageing
- impact strength/DHC/appearance after heat ageing
- impact strength/DHC/appearance after water soak.

17.4 Performance tests were carried out on cladded panels to investigate weathertightness and air pressure leakage of the installation.

18 Investigations

18.1 The dimensions of cladding planks and trims were checked.

18.2 An examination was made of data relating to:

- behaviour of the cladding in fire
- colour stability
- impact resistance before and after UV ageing.

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

18.4 The practicability of installation was assessed.

18.5 Permissible dynamic wind pressures were calculated from nail pull-through and withdrawal data.

Bibliography

BS 476-6 : 1989 *Fire tests on building materials and structures — Method of test for fire propagation for products*

BS 476-7 : 1997 *Fire tests on building materials and structures — Method of test to determine the classification of the surface spread of flame of products*

BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials used for packaging*

BS 4016 : 1997 *Specification for flexible building membranes (breather type)*

BS 5268-2 : 2002 *Structural use of timber — Code of practice for permissible stress design, materials and workmanship*

BS 5268-5 : 1989 *Structural use of timber — Code of practice for the preservative treatment of structural timber*

BS 5268-6.1 : 1996 *Structural use of timber — Code of practice for timber frame walls — Dwellings not exceeding four storeys*

BS 5628-1 : 1992 *Code of practice for use of masonry — Structural use of unreinforced masonry*

BS 5628-3 : 2001 *Code of practice for use of masonry — Materials and components, design and workmanship*

BS 8200 : 1985 *Code of practice for design of non-loadbearing external vertical enclosures of buildings*

BS EN 10088-2 : 1995 *Stainless steels — Technical delivery conditions for sheet/plate and strip for general purposes*

ISO 180 : 1982 *Plastics — Determination of Izod impact strength of rigid materials*

Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

19.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabrication including all related and relevant processes thereof:

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

19.4 In granting this Certificate, the BBA is not responsible for:

- (a) the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the actual works in which the product is installed, used and maintained, including the nature, design, methods and workmanship of such works.

19.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.

Conditions of Certification

19 Conditions

19.1 This Certificate:

- (a) relates only to the product that is named, described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) is valid only within the UK;
- (d) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (e) is copyright of the BBA;
- (f) is subject to English law.

19.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or



In the opinion of the British Board of Agrément, the Homeline Cellular PVC-U Cladding System is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 05/4197 is accordingly awarded to G.A.P. Limited.

On behalf of the British Board of Agrément

A handwritten signature in black ink, appearing to read 'P. C. Hewitt'.

Date of issue: 25th January 2005

Chief Executive