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BAW-23-270-P-A-UK
BDA Agrément®
Dry Shield A1 Cavity Tray

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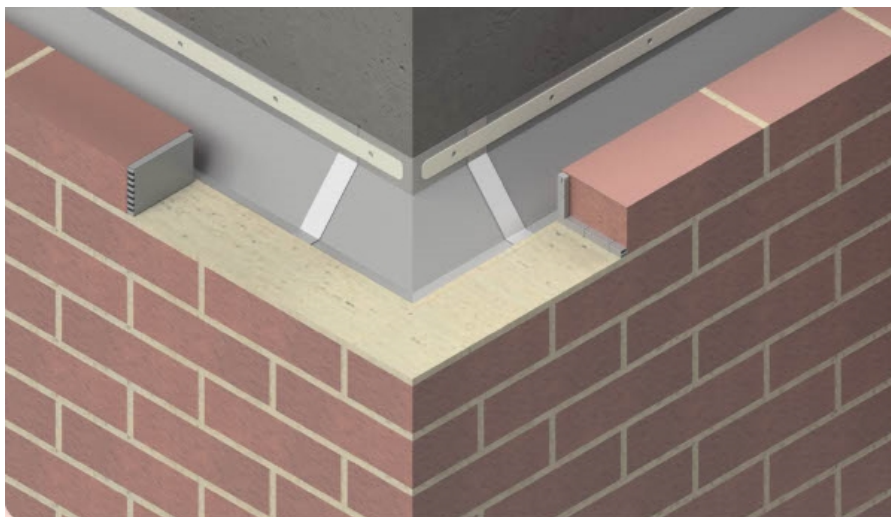
SCOPE OF AGRÉMENT

This BDA Agrément® (hereinafter 'Agrément') relates to Dry Shield A1 Cavity Tray (hereinafter the 'Product'). The Product is a composite, flexible cavity tray, used to direct water away from the inside of the cavity. The Product is for installation in external cavity walls with masonry outer leaf, including walls with a light gauge steel frame (hereinafter 'LGSF') or structural timber frame (hereinafter 'STF') inner leaf. The Product is for existing and new dwellings, and buildings other than dwellings.

DESCRIPTION

The Product is a flexible strip of woven glass fibre, combined with a layer of aluminium foil and polymer coating on both faces. The joints of the Product are bonded and sealed using Dry Shield Silver Foil Sealing Tape.

ILLUSTRATION



THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

STATEMENT

It is the opinion of Kiwa Ltd. that the Product is safe and fit for its intended use, provided it is specified, installed and used in accordance with this Agrément.

Craig Devine
 Operations Manager, Building Products

Alpheo Mlotha CEng FIMMM MBA
 Head of Operations, Building Products

SUMMARY OF AGRÉMENT

This document provides independent information to specifiers, specialists, engineers, building control personnel, contractors, installers and other construction industry professionals who are considering the safety and fitness for purpose of the Product. This Agrément covers the following:

- Conditions of use;
- Production Control, Quality Management System and the Annual Verification Procedure;
- Product components and ancillary items, points of attention for the Specifier and examples of details;
- Installation;
- Independently assessed Product characteristics and other information;
- Compliance with national Building Regulations, other regulatory requirements and Third-Party Acceptance, as appropriate;
- Sources.

MAJOR POINTS OF ASSESSMENT

Moisture control - see Section 2.2.7 - the Product, including lap joints, provides an effective barrier to the passage of water in the form of precipitation.

Strength - see Section 2.2.8 - the Product has adequate strength to resist:

- damage during the construction of the wall;
- shear and tensile movement of the wall.

Fire performance - see Section 2.2.9 - the Product is classified as European Classification A1, in accordance with BS EN 13501-1.

Durability - see Section 2.2.10 - the Product shall have a service life durability equivalent to that of the building into which it is incorporated.

UKCA, UKNI and CE marking - see Section 2.2.11 - the Agrément holder has responsibility for conformity marking, in accordance with all relevant British and European Product Standards.

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- 1.2 - Production Control and Quality Management System
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- 3.1 - The Construction (Design and Management) Regulations 2015 and The Construction (Design and Management) Regulations (Northern Ireland) 2016
- 3.2 - The national Building Regulations
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1 GENERAL CONSIDERATIONS

1.1 CONDITIONS OF USE

1.1.1 Limitations

This Agrément has been prepared in accordance with the mandatory requirements defined in the relevant Kiwa Technical Requirement. Some information in this Agrément is provided for guidance or reference purposes only; this information falls outside the scope of the Technical Requirement.

1.1.2 Application

The assessment of the Product relates to its use in accordance with this Agrément and the Agrément holder's requirements.

1.1.3 Assessment

Kiwa Ltd. has assessed the Product in combination with relevant test reports, technical literature, the Agrément holder's quality plan, DoPs and site visit, as appropriate.

1.1.4 Installation supervision

The quality of installation and workmanship shall be controlled by a competent person who shall be an employee of the installation company (hereinafter 'Installer').

The Product shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

1.1.5 Geographical scope

The validity of this document is limited to England, Wales, Scotland, Northern Ireland and Ireland, with due regard to Section 3 of this Agrément (CDM, national Building Regulations and Third-Party Acceptance).

1.1.6 Validity

The purpose of this Agrément is to provide well-founded confidence to apply the Product within the scope described. The validity of this Agrément is as published on www.kiwa.co.uk/bda.

1.2 PRODUCTION CONTROL AND QUALITY MANAGEMENT SYSTEM

Kiwa Ltd. has conducted an audit of the Agrément holder and determined that they fulfil all their obligations in relation to this Agrément in respect of the Product.

The initial audit demonstrated that the Agrément holder has a satisfactory Quality Management System (QMS) and is committed to continuously improving their quality plan. Document control and record-keeping procedures were deemed satisfactory. A detailed Production Quality Specification (PQS) has been compiled to ensure traceability and compliance under the terms of this Agrément.

1.3 ANNUAL VERIFICATION PROCEDURE - CONTINUOUS SURVEILLANCE

To demonstrate that the Product conforms with the requirements of the technical specification described in this Agrément, an Annual Verification Procedure has been agreed with the Agrément holder in respect of continuous surveillance and assessment, and auditing of the Agrément holder's QMS.

2 TECHNICAL ASSESSMENT

This Agrément does not constitute a design guide for the Product. It is intended only as an assessment of safety and fitness for purpose.

2.1 PRODUCT COMPONENTS AND ANCILLARY ITEMS

2.1.1 Components included within the scope of this Agrément

The components listed in Table 1 below are integral to the use of the Product.

Table 1 - Integral components

Product	Description	Dimensions
Dry Shield A1 Cavity Tray	a laminated strip comprising a layer of woven roving glass fibre fabric bonded to a layer of aluminium foil with a PUR hotmelt adhesive and 25 g/m ² polymer coating on one side and 10 g/m ² on reverse side	0.3 mm thick by 450 mm, 600 mm or 900 mm wide by 5 m, 10 m or 20 m long Weight of coating: 10 g/m ²
Dry Shield Silver Foil Sealing Tape	acrylic tape with silicone release liner for sealing joints	0.04 mm thick by 150 mm wide by 50 m long

2.1.2 Ancillary items

The following ancillary items detailed in this Section are used in conjunction with the Product:

- Dry Shield joint support;
- Dry Shield weep holes;
- Dry Shield weep vent;
- Dry Shield fixing strip;
- Dry Shield prefabricated rigid corner - Interior or Exterior;
- tape applicator tool.

2.2 POINTS OF ATTENTION TO THE SPECIFIER

2.2.1 Design

2.2.1.1 Design responsibility

A Specifier may undertake a project-specific design, in which case it is recommended that the Specifier co-operates closely with the Agrément holder. The Specifier or Installer is responsible for the final as-built design.

2.2.1.2 Basis of design

The characteristics detailed in the section titled 'Major Points of Assessment' shall be considered during the use of the Product.

2.2.1.3 General design considerations

The Product is not a barrier to water vapour and will not have an adverse effect on interstitial condensation; a vapour barrier is required on the inner leaf of a wall to adequately limit water vapour transmission.

Installation of the Product shall be in accordance with the principles and guidance detailed in PD 6697 and BS 8215.

Masonry supporting walls shall be designed in accordance with BS EN 1996-1-1, BS EN 1996-2 and PD 6697.

LGSF supporting walls shall be designed in accordance with BS EN 1993-1-1, BS EN 1993-1-3; the steel structure shall be not less than 1.2 mm thick with a minimum of 50 mm flanges.

STF supporting walls shall be designed in accordance with BS EN 1995-1-1, BS EN 14081-1 and PD 6693-1; the timber structure shall not be less than 37 mm thick with a minimum width of 72 mm.

The Product shall be installed with 100 mm minimum lapped joints in accordance with PD 6697.

2.2.1.4 Project-specific design considerations

The project-specific design shall:

- be determined by the Specifier;
- take into account the requirements of the relevant national Building Regulations - see Section 3.2;
- take into account the service life durability required - see Section 2.2.10.

No pre-installation survey is required.

2.2.2 Applied building physics (heat, air, moisture)

A Specialist shall check the hygrothermal behaviour of a project-specific design incorporating the Product and, if necessary, offer advice on improvements to achieve the final specification. The Specialist can be either a qualified employee of the Agrément holder or a suitably qualified consultant (in which case it is recommended that the Specialist co-operates closely with the Agrément holder).

2.2.3 Permitted applications

Only applications designed according to the specifications given in this Agrément are permitted. In each case, the Specifier and Installer shall co-operate closely with the Agrément holder.

2.2.4 Installer competence level

The Product shall be installed strictly in accordance with the instructions of the Agrément holder and the requirements of this Agrément.

Installation can be undertaken by competent persons experienced in this type of work.

2.2.5 Delivery, storage and site handling

The Product is delivered in suitable packaging bearing relevant identification information (such as the Product name, production identification date or batch number, the Agrément holder's name, etc.) and, where applicable, the BDA Agrément® logo incorporating the number of this Agrément.

Prior to installation, the Product shall be stored in accordance with the Agrément holder's requirements, kept dry with boxes or pallets protected from weather by plastic sheeting or similar. Good housekeeping protocols shall be followed to avoid damage.

2.2.6 Maintenance and repair

Once installed, the Product does not require regular maintenance. For advice in respect of repair, consult the Agrément holder.

Performance factors in relation to the Major Points of Assessment

2.2.7 Moisture control

The Product, including sealed joints and associated ancillaries such as corner units and joint supports, acts as a barrier to the passage of water in the form of precipitation. Water is typically discharged from the cavity through weepholes or evaporates from the outer skin.

2.2.8 Strength

The Product has adequate:

- resistance to:
 - impact, in accordance with BS EN 12691;
 - static loading, in accordance with BS EN 12730;
 - tearing (nail shank), in accordance with BS EN 12310-2;
 - shear of joints, in accordance with BS EN 12317-2;
- tensile stress and elongation properties, in accordance with BS EN 12311-1.

The Product is unlikely to be impaired by normally occurring movements of the wall, up to the point where the wall itself is deemed to have failed.

The Product remains flexible at low temperatures, in accordance with BS EN 495-5.

A masonry wall incorporating the Product has adequate characteristic:

- shear strength, in accordance with BS EN 1052-4 (see Section 2.5.2);
- flexural strength, in accordance with DD 86-1 (see Section 2.5.2).

2.2.9 Fire performance

The Product is classified as European Classification A1, in accordance with BS EN 13501-1.

For detailed conditions of use regarding requirements for supporting wall fire performance, cavity closers and barriers, fire stopping of service penetrations and combustibility limitations for other materials (including thermal insulation and cladding) used in the overall wall construction, Specifiers shall refer to the relevant national Building Regulations.

2.2.10 Durability

The Product shall have a service life durability equivalent to that of the building into which it is incorporated. The expected lifespan of the building itself shall be at least 60 years.

Once installed, the Product is not susceptible to damage from environmental conditions normally encountered in the UK and Ireland.

2.2.11 UKCA, UKNI and CE marking

There is no relevant Product standard for the Product.

2.3 EXAMPLES OF TYPICAL DETAILS

Diagram 1 - typical end detail

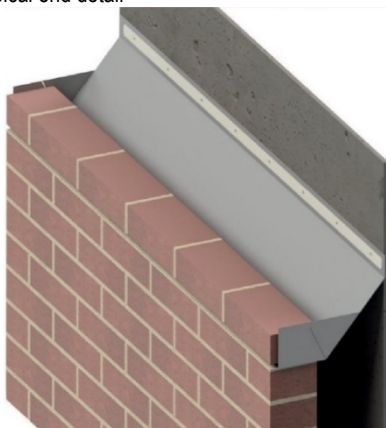
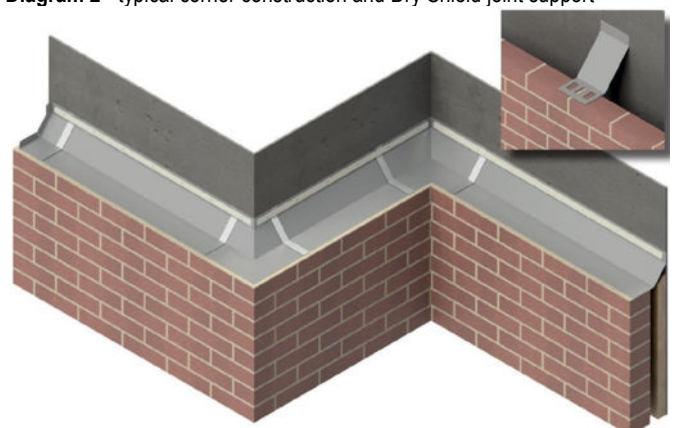


Diagram 2 - typical corner construction and Dry Shield joint support



2.4 INSTALLATION

The Product shall be installed strictly in accordance with the instructions (hereinafter 'Installation Manual') of the Agrément holder, the requirements of this Agrément and the requirements of BS 8000-0.

2.4.1 Project-specific installation considerations

No pre-installation survey is required.

2.4.2 Preparation

The following considerations apply before starting the work:

- the Product shall be installed with the coated aluminium foil surface facing upwards;
- all relevant surfaces shall be clean and dry prior to installing the Product.

No specific works need to be undertaken before the installation of the Product.

2.4.3 Outline installation procedure

Detailed installation procedures can be found in the Agrément holder's Installation Manual.

The outline procedure is as follows:

- apply an even bed of fresh mortar and completely fill any perforations in adjacent courses of masonry;
- install a rigid corner onto the mortar and lay the Product flush from one corner of the wall to the other corner, and through the full thickness of the wall;
- when a joint in the Product is required, install the Dry Shield joint support directly underneath the area that is being lapped;
- allow a minimum of 100 mm overlap on all joints and apply the Dry Shield Silver Foil sealing tape centrally to the joints, using the applicator tool provided;
- once the Product has been fitted, lay a fresh bed of mortar over the Product and lay the next course of masonry as soon as possible;
- install weep vents or weep holes as appropriate; weep holes shall be installed at 900 mm centres on a cavity tray run or at 450 mm centres over windows and doors;
- install the fixing strip horizontally to the inner leaf of the wall and through the top edge of the Product, using appropriate mechanical fixings, holding it tightly in place;
- where required, create a stop end by turning the end of the Product upwards.

2.4.4 Finishing

The following finishing is required on completion of the installation:

- care shall be taken when installing the fixing strip, ensuring it is installed appropriately to eliminate any possibility of leaving pathways for water ingress.

2.5 INDEPENDENTLY ASSESSED PRODUCT CHARACTERISTICS

2.5.1 Moisture control

Test		Standard	Result
Watertightness at 2 kPa	Plain membrane	BS EN 1928 Method A	Pass
	Jointed membrane		
Water vapour transmission (wet cup method with Test Condition C)		BS EN ISO 12572	118.73 MNs/g

2.5.2 Strength

Test		Standard	Result
Tensile strength	Transverse	BS EN 12311-1 Method B	140.1 N/mm ²
	Longitudinal		180.7 N/mm ²
Elongation at break	Transverse		7.36 mm
	Longitudinal		5.57 mm
Resistance to tearing (nail shank)	Transverse	BS EN 12310-2	262 N
	Longitudinal		842 N
Shear strength of joints		BS EN 12317-2	1152 N
Shear strength of masonry outer leaf wall incorporating the Product		BS EN 1052-4	0.19 N/mm ²
Flexural strength of masonry outer leaf wall incorporating the Product		DD 86-1	0.21 N/mm ²
Impact resistance		BS EN 12691 Method B	1000 mm drop height
Static load resistance		BS EN 12730 Method B	20 kg
Foldability at low temperature		BS EN 495-5	-20 °C to +20 °C

2.5.3 Fire performance

Test	Standard	Result
Reaction to fire	BS EN 13501-1	A1

3.1 THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015 AND THE CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS (NORTHERN IRELAND) 2016

Information in this Agrément may assist the client, principal designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

3.2 THE NATIONAL BUILDING REGULATIONS

In the opinion of Kiwa Ltd., the Product, if installed and used in accordance with Section 2 of this Agrément, can satisfy or contribute to satisfying the relevant requirements of the following national Building Regulations.

This Agrément shall not be construed to confer the compliance of any project-specific design with the national Building Regulations.

3.2.1 England

The Building Regulations 2010 and subsequent amendments

- B4(1) External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another
- C2(b) Resistance to moisture - a wall incorporating the Product can resist precipitation and satisfy this Requirement
- C2(c) Resistance to moisture - the Product is not a barrier to water vapour and will not adversely affect interstitial condensation
- Regulation 7(1) Materials and workmanship - the Product is manufactured from suitably safe and durable materials for the application and can be installed to give a satisfactory performance
- Regulation 7(2) Materials and workmanship - the Product is adequate for use in the external wall of a relevant building

3.2.2 Wales

The Building Regulations 2010 and subsequent amendments

- B4(1) External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another
- C2(b) Resistance to moisture - a wall incorporating the Product can resist precipitation and satisfy this Requirement
- C2(c) Resistance to moisture - the Product is not a barrier to water vapour and will not adversely affect interstitial condensation
- Regulation 7(1) Materials and workmanship - the Product is manufactured from suitably safe and durable materials for the application and can be installed to give a satisfactory performance
- Regulation 7(2) Materials and workmanship - the Product is adequate for use in the external wall of a relevant building

3.2.3 Scotland

The Building (Scotland) Regulations 2004 and subsequent amendments

3.2.3.1 Regulation 8(1) Durability, workmanship and fitness of materials

- The Product is manufactured from acceptable materials and is adequately resistant to deterioration and wear under normal service conditions

3.2.3.2 Regulation 8(3) Durability, workmanship and fitness of materials

- The Product is adequate for use in the external wall of a relevant building

3.2.3.3 Regulation 9 Building Standards - Construction

- 2.7 Spread on external walls - the Product can adequately resist the spread of fire
- 3.10 Precipitation - the Product will adequately resist moisture from precipitation penetrating to the inner face of a building
- 3.15 Condensation - the Product is not a barrier to water vapour and will not adversely affect interstitial condensation

3.2.3.4 Regulation 12 Building standards - Conversions

- All comments given under Regulation 9 also apply to this Regulation, with reference to Schedule 6 of The Building (Scotland) Regulations 2004 and subsequent amendments, and clause 0.12 of the Technical Handbook (Domestic) and clause 0.12 of the Technical Handbook (Non-Domestic)

3.2.4 Northern Ireland

The Building Regulations (Northern Ireland) 2012 and subsequent amendments

- 23(1) Fitness of materials and workmanship - the Product is manufactured from materials which are suitably safe and acceptable, as described in this Agrément
- 23(2) Fitness of materials and workmanship - the Product is adequate for use in the external wall of a relevant building
- 28(b) Resistance to moisture and weather - a wall incorporating the Product can contribute to adequately protecting a building from the passage of moisture from the weather
- 29 Condensation - the Product is not a barrier to water vapour and will not adversely affect interstitial condensation
- 36(a) External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another

3.2.5 Ireland

Building Regulations 1997 and subsequent amendments

In order to demonstrate compliance with Irish Building Regulations, this BDA Agrément® certifies that the System complies with the requirements of a recognised document and indicates it is suitable for its intended purpose and use.

- B4 External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another
- B9 External fire spread - the Product can adequately resist the spread of fire over walls and from one building to another
- C4 Resistance to weather and ground moisture - a wall incorporating the Product can contribute to adequately protecting a building from the passage of moisture from precipitation
- D1 Materials and Workmanship - the Product is manufactured from acceptable materials and is considered to be adequately resistant to deterioration and wear under normal service conditions

3.3 THIRD-PARTY ACCEPTANCE

None requested by the Agrément holder.

4 SOURCES

- BS EN ISO 9001:2015 Quality management systems. Requirements
- BS EN ISO 12572:2016 Hygrothermal performance of a building materials and products. Determination of water vapour transmission properties. Cup method
- BS EN 495-5:2013 Flexible sheets for waterproofing. Determination of foldability at low temperature. Plastic and rubber sheets for waterproofing
- BS EN 1052-4:2000 Methods of tests for masonry. Determination of shear strength
- BS EN 1928:2000 Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for waterproofing. Determination of watertightness
- BS EN 1993-1-1:2005+A1:2014 Eurocode 3. Design of steel structures - General rules and rules for buildings
- NA+A1:2014 to BS EN 1993-1-1:2005+A1:2014 UK National Annex to Eurocode 3. Design of steel structures - General rules and rules for buildings
- BS EN 1993-1-3:2006 Eurocode 3. Design of steel structures - General rules - Supplementary rules for cold-formed members and sheeting
- NA to BS EN 1993-1-3:2006 UK National Annex to Eurocode 3. Design of steel structures - General rules - Supplementary rules for cold-formed members and sheeting
- 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 1996-2:2006 Eurocode 6. Design of masonry structures - Design considerations, selection of materials and execution of masonry
- NA to BS EN 1996-2:2006 UK National Annex to Eurocode 6. Design of masonry structures - Design considerations, selection of materials and execution of masonry
- BS EN 12310-2:2000 Flexible sheets for waterproofing. Determination of resistance to tearing (nail shank) - Plastic and rubber sheets for roof waterproofing
- BS EN 12311-1:2000 Flexible sheets for waterproofing. Determination of tensile properties - Bitumen sheets for roof waterproofing
- BS EN 12317-2:2010 Flexible sheets for waterproofing. Determination of shear resistance of joints - Plastic and rubber sheets for roof waterproofing
- BS EN 12691:2018 Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roof waterproofing. Determination of resistance to impact
- BS EN 12730:2015 Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roof waterproofing. Determination of resistance to static loading
- BS EN 13501-1:2018 Fire classification of construction products and building elements. Classification using data from reaction to fire tests
- BS EN 14081-1:2016+A1:2019 Timber structures. Strength graded structural timber with rectangular cross section. General requirements
- BS 8000-0:2014 Workmanship on construction sites. Introduction and general principles
- BS 8215:1991 Code of practice for design and installation of damp-proof courses in masonry construction
- DD 86-1:1983 Damp-proof courses. Methods of tests for flexural bond strength and short term shear strength
- PD 6693-1:2019 Recommendations for the design of timber structures to Eurocode 5: Design of timber structures - General. Common rules and rules for building
- PD 6697:2019 Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2

Remark - Apart from these sources, technical information and confidential reports have been assessed; any relevant documents are in the possession of Kiwa Ltd. and are kept in the Technical Assessment File of this Agrément. The Installation Manual for the Product may be subject to change; contact the Agrément holder for the clarification of revisions.

5 AMENDMENT HISTORY

Revision	Amendment description	Author	Approver	Date
-	First issue	A Chapman	C Devine	March 2023
A	Updates to Product description	A Chapman	C Devine	November 2023

6 CONDITIONS OF USE

This Agrément may only be reproduced and distributed in its entirety.

Where a National Annex exists in respect of a BS EN (or other) standard, its use is deemed mandatory wherever the original standard is referenced.

Kiwa Ltd. has used due skill, care and attention in the preparation of this BDA Agrément®.

Whilst all due diligence has been used, no liability or warranty is extended by Kiwa Ltd.

The Agrément holder is responsible for advising Kiwa Ltd. immediately if there is a variation to the Product specification or constituent elements/components after initial publication of this BDA Agrément®.

For full terms and conditions, refer to Kiwa Ltd.