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Agrément Certificate

19/5693

Product Sheet 1 Issue 2

WIENERBERGER CLADDING SYSTEMS

CORIUM BRICK TILE CLADDING SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the Corium Brick Tile Cladding System, comprising clay brick tiles clipped into steel backing rails and finished with pointing mortar, for use as protective/decorative cladding over external masonry, concrete, timber- or steel-frame substrate walls of new and existing domestic and non-domestic buildings, installed either horizontally or vertically, or used overhead to create soffits and ceilings.

(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†:

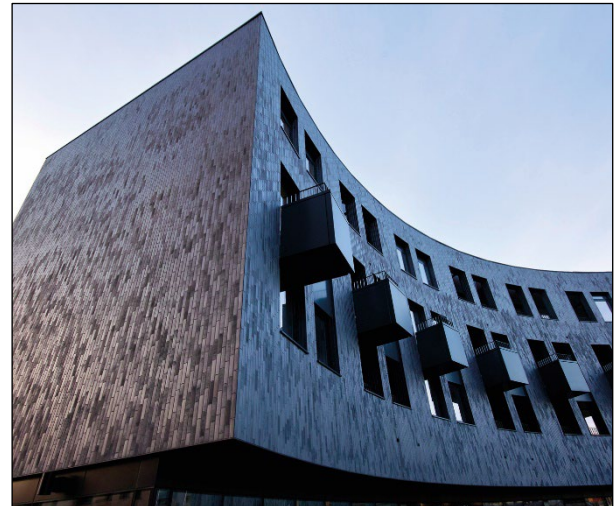
- regular assessment of production
- formal 3-yearly review

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 Second issue: 3 September 2024

Originally certified on 13 September 2019



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

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 Corium Brick Tile Cladding System, 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 system is acceptable for use. See section 1 of this Certificate.
Requirement:	B3(4)	Internal fire spread (structure)
Comment:		The system can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	B4(1)	External fire spread
Comment:		The system is unrestricted by this Requirement. See section 2 of this Certificate.
Requirement:	C2(b)	Resistance to moisture
Comment:		The system will contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	7(1)	Materials and workmanship
Comment:		The system is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	7(2)	Materials and workmanship
Comment:		The system is unrestricted by this Regulation. See section 2 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:		The system can contribute to a construction satisfying this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	8(3)	Fitness and durability of materials and workmanship
Comment:		The system is unrestricted by this Regulation. See section 2 of this Certificate.
Regulation:	9	Building standards - construction
Standard:	1.1(a)	Structure
Comment:	(b)	The system is acceptable, with reference to clause 1.1.1 ⁽¹⁾⁽²⁾ of this Standard. See section 1 of this Certificate.
Standard:	2.4	Cavities
Comment:		The system can contribute to satisfying this Standard, with reference to clause 2.4.2 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		The system is unrestricted by this Standard, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ , and 2.6.6 ⁽²⁾ . See section 2 of this Certificate.

Standard:	2.7	Spread on external walls
Comment:		The system is unrestricted by this Standard, with reference to clause 2.7.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The system will contribute to a construction satisfying this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ , 3.10.5 ⁽¹⁾⁽²⁾ , and 3.10.6 ⁽¹⁾⁽²⁾ . See section 3 of this Certificate.
Standard:	7.1(a)(b)	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 - conversions
Comment:		All comments given for 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(1)(a)	Fitness of materials and workmanship
Comment:	(i)(iii)(b)	The system is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	23(2)	Fitness of materials and workmanship
Comment:		The system is unrestricted by this Regulation. See section 2 of this Certificate.
Regulation:	28(b)	Resistance to ground moisture and weather
Comment:		The system can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	30	Stability
Comment:		The system is acceptable. See section 1 of this Certificate.
Regulation:	35(4)	Internal fire spread - structure
Comment:		The system can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The system is unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2024

In the opinion of the BBA, Corium Brick Tile Cladding System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards, Part 6 Superstructure (excluding roofs)*, Chapter 6.9 *Curtain walling and cladding*.

Fulfilment of Requirements

The BBA has judged Corium Brick Tile Cladding System to be satisfactory for use as described in this Certificate. The system has been assessed as a protective/decorative cladding over external masonry, concrete, timber- or steel-frame substrate walls of new and existing domestic and non-domestic buildings, above the damp-proof course (DPC) level, installed either horizontally or vertically, or used overhead to create soffits and ceilings.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the system under assessment. The Corium Brick Tile Cladding System consists of:

- Corium Tiles — fired clay extruded brick tiles manufactured to the dimensions in Table 1, and Figures 1 and 2.

Table 1 Nominal characteristics of Corium Tiles

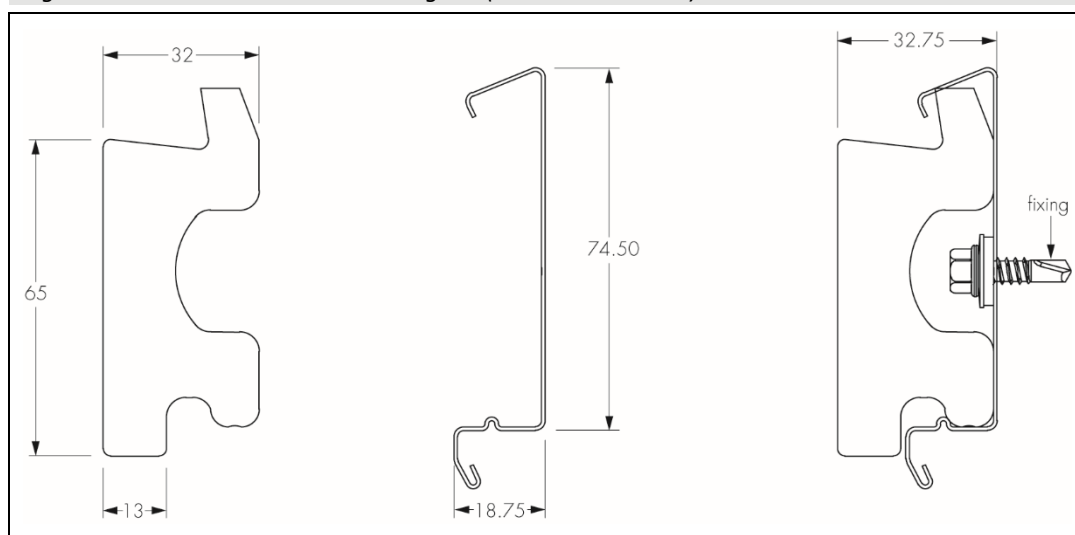
Dimensions (mm)	Corium Tiles
Height ⁽¹⁾	50, 57.7, 65, 92, 140, 215
Length ⁽¹⁾	65, 92, 102, 194, 215 ⁽²⁾
Thickness	32
Tile lip thickness	13
Thickness tolerance	± 2
Colours	Various

(1) Refer to Figure 2 for height × length combinations

(2) Longer lengths are available on request but are outside the scope of this Certificate.

- corner and soldier tiles — made to the required specifications (see Figure 2)
- steel backing rails - profiled to suit the brickwork coursing height (see Figures 1 and 2), mounted horizontally or vertically and mechanically fixed to the supporting subframe. 0.55 mm thick stainless steel (grades 304 and 316) or 0.7 mm thick Magnelis metallic coated steel (ZM 310 and ZM 430), coated with a zinc-aluminium-magnesium alloy, manufactured to BS EN 10346 : 2015. The coating for Magnelis ZM 310 and ZM 430 steel is applied on both sides and is composed of zinc, 3.5% aluminium, 3% magnesium, with a coating weight of 310 or 430 g·m⁻² and a coating thickness of 25 or 35 µm respectively
- Parex Historic Mortar KL – hydrated lime/sand and ground granulated blast furnace slag (GGBS) mortar manufactured to BS EN 998-2 : 2016. Used to point the vertical and horizontal joints between the tiles.
- The nominal weight of the system including mortar is approximately 68 kg·m⁻².
- Corium tiles are available in a range of colours and textures: sanded, slated, smooth, dragfaced, flaked, hand moulded, rustic edges, softly creased, spocks, deep creased and glazed.

Figure 1 Corium Tile and steel backing rail (dimensions in mm)








Ancillary items

The Certificate holder recommends the following ancillary items for use with the system, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- cavity insulation
- cavity barriers

- cellular polyethylene or polyurethane material with a two-part polysulphide sealant
- compressible joint filler for use in the expansion joints
- cavity protection mesh eg insect mesh
- mechanical fixings to subframe
- subframe – aluminium rails or timber battens
- substrate backing walls
- vapour permeable membrane – in line with BS 5250 : 2021.

Figure 2 The Corium Brick Tile Cladding System – tile size options

		Tile	Header	Soldier
H (mm) 50		50 x 215	50 x 102	
57.7 US Modular or Norman format		57.7 x 194	57.7 x 92	
65 Standard brick format		65 x 215	65 x 102	
140 Spans 2 rails		140 x 215		140 x 65
215 Spans 3 rails		215 x 215		215 x 65

Note: Tiles longer than 215 mm are outside the scope of this Certificate.

Product assessment – key factors

The system was assessed for the following key factors, and the outcome of the assessments 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 Wind loading

1.1.1 The system was tested for wind resistance against the requirements of ETAG 034 Part 1 : 2012, and the results are given in Table 2.

Table 2 Ultimate Wind resistance

System assessed ⁽¹⁾⁽²⁾	Assessment method	Requirement	Result ⁽³⁾⁽⁴⁾
System with stainless steel 304 backing rails	Large scale wind action resistance test to	Value achieved ⁽⁵⁾	- 2.4 / + 2.2 kPa ⁽⁶⁾
System with Magnelis ZM310 steel backing rails	ETAG 034 Part 1 : 2012		- 2.6 / + 2.0 kPa ⁽⁷⁾

(1) Steel backing rails fixed using 5.5 x 25 mm stainless steel 304 screws with 8 mm hexagonal heads and S16 washers to vertical aluminium L rails at 600 mm centres generally, 400 mm centres at vertical edges. Rails fixed to aluminium brackets, fixed through 12 mm cement particle boards to lightweight steel frame.

(2) Joint gaps between the tiles pointed with Parex Historic Mortar KL.

(3) Failure mode at lower negative pressures due to residual deflection limited to 5 % of maximum deflection or 1 mm, whichever was greater.

(4) Failure mode at higher positive pressures due to cracks in bed and perpendicular joints meaning the pressure could not be increased further.

(5) Peak pressures for completed wind cycles without damage or excessive deflection. An experienced and competent individual must find the design wind resistances based on these failure wind resistances by applying the appropriate partial material safety factors.

(6) Maximum deflection of 4.03 mm under positive pressure and 8.6 mm under negative pressure.

(7) Maximum deflection of 4.32 mm under positive pressure and 8.02 mm under negative pressure.

1.1.2 The Magnelis ZM310 backing rail wind resistance in Table 2 can be taken to apply to stainless steel 316 and Magnelis ZM430 steel backing rails.

1.1.3 The ultimate wind resistance achieved with the steel backing rails in Table 2 can be taken to apply to the steel backing rails when mounted onto timber battens for use on timber frame structures.

1.1.4 On the basis of the data assessed, the designer should apply the appropriate partial factor to design for wind loading on site.

1.2 Structural and mechanical properties

1.2.1 The system was tested for pull-off strength against the requirements of ETAG 004 : 2013 following the hygrothermal and freeze/thaw tests in Table 9, and the results are given in Table 3.

Table 3 Mean pull-off strength

System assessed ⁽¹⁾⁽²⁾	Assessment method	Requirement	Result ⁽³⁾⁽⁴⁾
System with stainless steel 304 or Magnelis ZM310 steel backing rails	Pull-off strength to ETAG 004 : 2013	$\geq 80 \text{ kN}\cdot\text{m}^{-2}$	Pass

1.2.2 The mean pull-off strength in Table 3 can be taken to apply to stainless steel 316 and Magnelis ZM430 steel backing rails.

1.3 Resistance to impact

1.3.1 The system was tested for impact resistance with steel backing rails supported at 600 mm centres against the requirements of ISO 7892 : 1988, and the results are given in Tables 4 and 5.

Table 4 Hard body impact resistance

System assessed	Assessment method ⁽¹⁾	Requirement	Result
System with stainless steel 304 or Magnelis ZM310 steel backing rails	Hard body impact resistance to ISO 7892: 1988	No damage	
	3 J ⁽²⁾		Pass
	10 J ⁽³⁾		Pass

(1) Impact positions chosen to take into account various modes of response.

(2) 0.5 kg steel ball.

(3) 1 kg steel ball.

Table 5 Soft body impact resistance

System assessed ⁽¹⁾⁽²⁾	Assessment method ⁽¹⁾⁽²⁾	Requirement	Result
System with Stainless steel 304 or Magnelis ZM310 steel backing rails	Soft body impact resistance to ISO 7892 : 1988	No damage	
	10 J		Pass
	60 J		Pass
	300 J		Pass ⁽³⁾
	400 J		Pass ⁽³⁾

(1) Impact positions chosen to take into account various modes of response.

(2) 50 kg ball.

(3) Localised cracking at the mortar joints. Aesthetic damage only.

1.3.2 The impact resistance in Tables 4 and 5 can be taken to apply to stainless steel 316 and Magnelis ZM430 steel backing rails.

1.3.3 The system is satisfactory for use in the Impact Use Categories II, III and IV, as shown in Table 6.

Table 6 Definition of the impact use categories (reproduced from EAD 090062-00-0404 : 2018 Table G.2)

Use Category	Description
I	A zone readily accessible at ground level to the public and vulnerable to hard body impacts but not subjected to abnormally rough use.
II	A zone liable to impacts from thrown or kicked objects, but in public locations where the height of the kit will limit the size of the impact; or at lower levels where access to the building is primarily to those with some incentive to exercise care.
III	A zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects.
IV	A zone out of reach from ground level.

Note: Use Category I shown for information only and is not suitable for the system.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The reaction to fire classifications for the system components are shown in Table 7.

Table 7 Reaction to fire

Product assessed	Assessment method	Requirement	Result
Corium Tiles ⁽¹⁾			A1
Steel backing rails	EN 13501-1 : 2018	Value achieved	A1
Parex Historic Mortar KL			A1

(1) Refer to BRE Report P110028-1001 20 December 2018, copies available from the certificate holder on request

2.1.2 On the basis of data assessed, the system is unrestricted in terms of building height and proximity to a boundary.

2.1.3 Cavity barriers should be placed in accordance with the documents supporting the national Building Regulations and should not impede drainage and ventilation pathways.

2.1.4 Designers should refer to the relevant national Building Regulation guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, service penetrations and combustibility limitations for other materials and components used in the overall wall, for example, thermal insulation and timber battens.

2.2 Resistance to fire

2.2.1 Where a wall incorporating the system is required to achieve a period of fire resistance, it's performance should be confirmed by a suitably competent and experienced individual or by a test from a suitably accredited laboratory.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 The system was tested for weathertightness to ETAG 034 Part 1 : 2012 and BS EN 12865 : 2001 procedure A, and the results are given in Table 8.

Table 8 Weathertightness

System assessed ⁽¹⁾⁽²⁾	Assessment method	Requirement	Result ⁽⁵⁾
System with stainless steel 304 backing rails	ETAG 034 Part 1 : 2012 and	No water penetration at	Pass
System with Magnelis ZM310 backing rails	BS EN 12865 : 2001 – Procedure A	0.6 kPa	Pass

(1) Backing rails fixed using 5.5 x 25 mm stainless steel 304 screws with S16 washers to vertical aluminium L rails at 600 mm centres generally, 400 mm centres at vertical edges. Rails fixed to aluminium brackets, fixed through 12 mm cement particle boards to lightweight steel frame.

(2) Joint gaps between the tiles pointed with Parex Historic Mortar KL.

(3) Test continued to higher positive pressures at 0.15 kPa steps. Maximum pass at 2.25 kPa, failure at 2.4 kPa.

3.1.2 The system is not airtight or watertight but will minimise water penetration and the risk of damage to the inner wall. Any water collecting in the cavity owing to rain or condensation will be removed by drainage and ventilation.

3.1.3 The minimum cavity width between the back face of the steel backing sections and the substrate wall (or insulation if installed within the cavity) must be 15 mm⁽¹⁾.

(1) Guidance on recommended cavity widths is given in *NHBC Standards 2024*, Chapter 6.9.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

7.1 Reuse and recyclability

7.1.1 The steel backing rails can be recycled.

8 Durability

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

8.2 Specific test data were assessed for the following.

8.2.1 The system was tested for hygrothermal behaviour to ETAG 034 Part 1 : 2012, then freeze/thaw to ETAG 017 : 2005, and the results are given in Table 9.

Table 9 Durability resistance to hygrothermal and freeze/thaw

System assessed	Assessment method	Requirement	Result
System with stainless steel 304 or Magnelis ZM310 steel backing rails ⁽¹⁾	80 heat rain cycles followed by 5 heat cold cycles to ETAG 034 Part 1 : 2012	No cracking or delamination that allows water penetration	Pass
	Followed by 30 freeze-thaw cycles to ETAG 017 : 2005	No detachment of the cladding	
		No irreversible deformation	

(1) Including 600 mm high by 400 mm wide window opening to centre of cladding, with corner tiles to jambs.

8.2.2 The durability in Table 8 can be taken to apply to stainless steel 316 and Magnelis ZM430 steel backing rails.

8.2.3 Following the hygrothermal and freeze/thaw tests in Table 8, the system was tested for bond strength against the requirements of ETAG 004 : 2013, and the results are given in Table 2.

8.3 Service life

8.3.1 Under normal service conditions, the system will have a life of at least 35 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 For aggressive environments the steel backing rail must be stainless steel grade 316 to obtain a design life in excess of 35 years.

8.3.3 After natural weathering, a slight change in colour of the tiles may occur. However, this is not likely to be progressive.

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 by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Design wind actions must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex. Due consideration must be given to the higher-pressure coefficients applicable to corners of the building as recommended in this Standard (see section A.1 of this Certificate).

9.1.3 The adequacy of the substrate wall to which the system is fixed is outside the scope of this Certificate and must be verified by a suitably qualified and experienced individual. It must have sufficient strength to resist independently the loads imparted directly by the system and wind actions normally experienced in the UK, as well as any in-plane force effects. It must be weathertight and reasonably airtight and designed and constructed in accordance with the requirements of the national Building Regulations and Standards given below. The contribution of the system to the stability of the substrate wall is assumed to be negligible:

- masonry walls must be designed and constructed in accordance with the relevant recommendations of BS EN 1996-1-1 : 2005, BS EN 1996-1-2 : 2005, BS EN 1996-2 : 2006 and BS EN 1996-3 : 2006, and their UK National Annexes, PD 6697 : 2019, and BS 8000-0 : 2014 and BS 8000-3 : 2020
- concrete walls must be designed and constructed in accordance with BS EN 1992-1-1 : 2004 and BS EN 1992-1-2 : 2004, and their UK National Annexes
- steel-frame walls must be structurally sound, and designed and constructed in accordance with BS EN 1993-1-1 : 2005, BS EN 1993-1-2 : 2005 and BS EN 1993-1-3 : 2006, and their UK National Annexes
- timber-frame walls must be designed and constructed in accordance with PD 6693-1 : 2019, BS EN 1995-1-1 : 2004 and BS EN 1995-1-2 : 2004 and their UK National Annexes, with workmanship in accordance with BS 8000-5 : 1990, and preservative-treated in accordance with BS EN 351-1 : 2007 and BS 8417 : 2011.

9.1.4 The subframe profiles and distances between the supports are determined with regard to the maximum deflection, acceptable tensions, wind zone, terrain category and exposure of the façade surface (location, façade height and form parameters). The subframe must be able to transmit the loads (self-weight of the cladding and rails, and wind actions) to the substrate wall. The supporting subframe must have sufficient stiffness, such that its deformation does not affect the performance of the cladding. The maximum spacing between vertical subframe supports must not exceed 600mm centres (horizontally). The system does not enhance the structural performance of the wall. The adequacy of the subframe and its fixings to the substrate wall are outside the scope of this Certificate and must be verified by a suitably qualified and experienced individual.

9.1.5 The designer must ensure that:

- the sub-frame is designed in accordance with the relevant codes and Standards, has adequate resistance to the applied actions and is such as to limit mid-span deflections to span/200 and cantilever deflections to span /150 for the metal support sub-frame
- the cladding is fixed to the subframe using the specified fixing mechanism
- the specified fixings of the cladding to the sub-frame, and between subframe members must have adequate resistance to the applied actions
- the fixing of the subframe support to the supporting wall has adequate tensile pull-out strength and corrosion resistance (outside the scope of this Certificate). An appropriate number of site-specific pull-out tests must be conducted on the wall as appropriate to determine the minimum pull-out resistance to failure of the fixings, as well as their characteristic pull-out resistance in accordance with the guidance given in BS EN 1990 : 2002:
 - The steel backing rails must be fixed with the specified mechanical fixings at not less than 18 fixings per square metre.
 - The steel backing rails are fixed onto aluminium subframes using a minimum of 5.5 x 25 mm (diameter x length) stainless steel self-drilling screws with an 8 mm hexagonal head and integral sealing washer (see Figure 1).

9.1.6 Vertical expansion joints to allow for horizontal movement must be provided through tile, mortar and steel backing sections at a maximum of 12 m centres in the brick tile cladding. The actual spacing and position of the joints must coincide with movement joints in the substrate wall and allow for the same degree of movement. They must extend throughout the full height of the building including parapets etc. Movement joints in the structure of the building must be carried through to the face of the cladding.

9.1.7 Horizontal expansion joints, to allow for vertical movement, must be provided at a maximum of 9 m centres coincident with a floor and more frequently in timber-frame structures.

9.1.8 Ventilation and drainage must be provided behind the cladding. The clear cavity between the back of the tile and substrate wall (or insulation if installed within the cavity) must be at least 15 mm wide, to ensure that a minimum ventilation area of 1000 mm² per metre run is provided at the building base point and at the roof edge. Joint gaps between the tiles are filled in with pointing mortar. All ventilation openings around the periphery of a cladding system must be suitably protected with a mesh or a perforated metal sheet or similar, to prevent the ingress of birds, vermin and insects.

9.1.9 The designer must ensure the cladding system is designed with appropriate compartmentation of the cavity, and in accordance with the requirements of the *NHBC Standards 2024*, Chapter 6.9.

9.1.10 Joint gaps between the tiles are pointed with Parex Historic Mortar KL.

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.

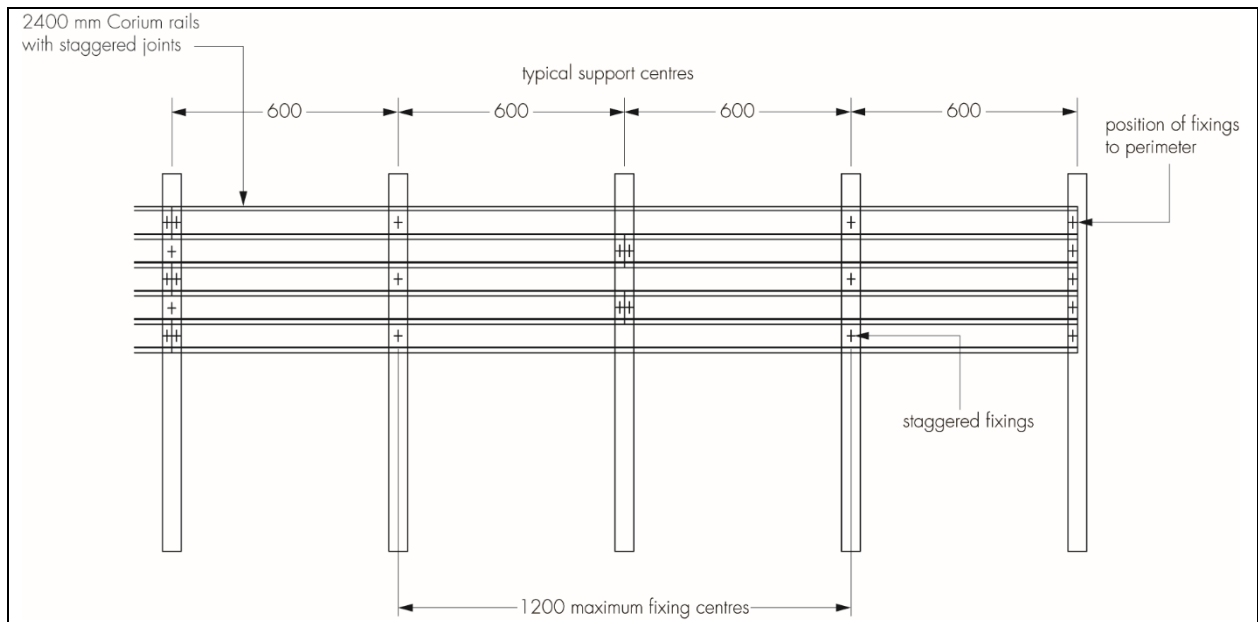
9.2.3 It is important for designers, planners, contractors and/or installers to ensure that the installation of the system is in accordance with the specification laid down by the consulting engineer.

9.2.4 The substrate wall face to which the system is fixed must be flat, vertical and capable of supporting appropriate loads.

9.2.5 In the event of over-cladding an existing wall, external plumbing must be removed before installation, and alterations made to underground drainage, where appropriate, to accommodate repositioning of the finished face of the system.

9.2.5 Vertical subframe supports are required at maximum 600 mm centres. See Figure 3 for a typical fixing pattern.

Figure 3 Typical fixing pattern of the Corium Brick Tile Cladding System



9.2.6 All steel backing rails must be cleaned carefully to remove all traces of cutting swarf etc, immediately after cutting, and must be checked for cleanliness before tile installation.

9.2.7 The steel backing rails must not be exposed to any organic solvents.

9.2.8 Accurate setting out of the system must be achieved. The first steel backing rail must be positioned level and fixed to the supporting structure. The next steel backing rail must be aligned alongside to provide a continuous run or engaged to lie parallel to the adjacent profile.

9.2.9 Typical system installations onto steel-, timber-, and concrete-frames are shown in Figure 4.

Figure 4 Typical installation details of the Corium Brick Tile Cladding System

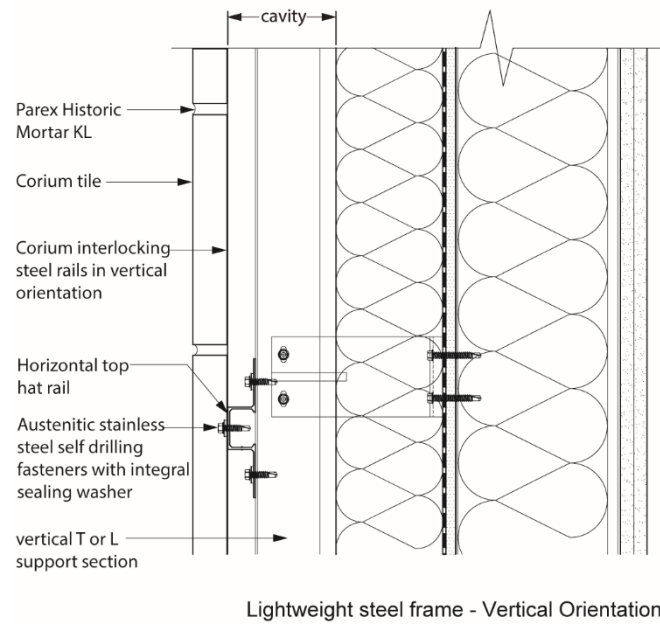
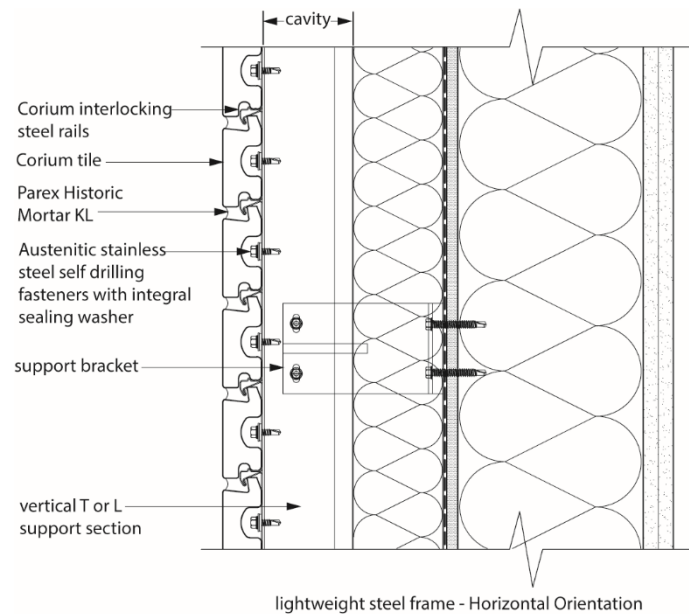
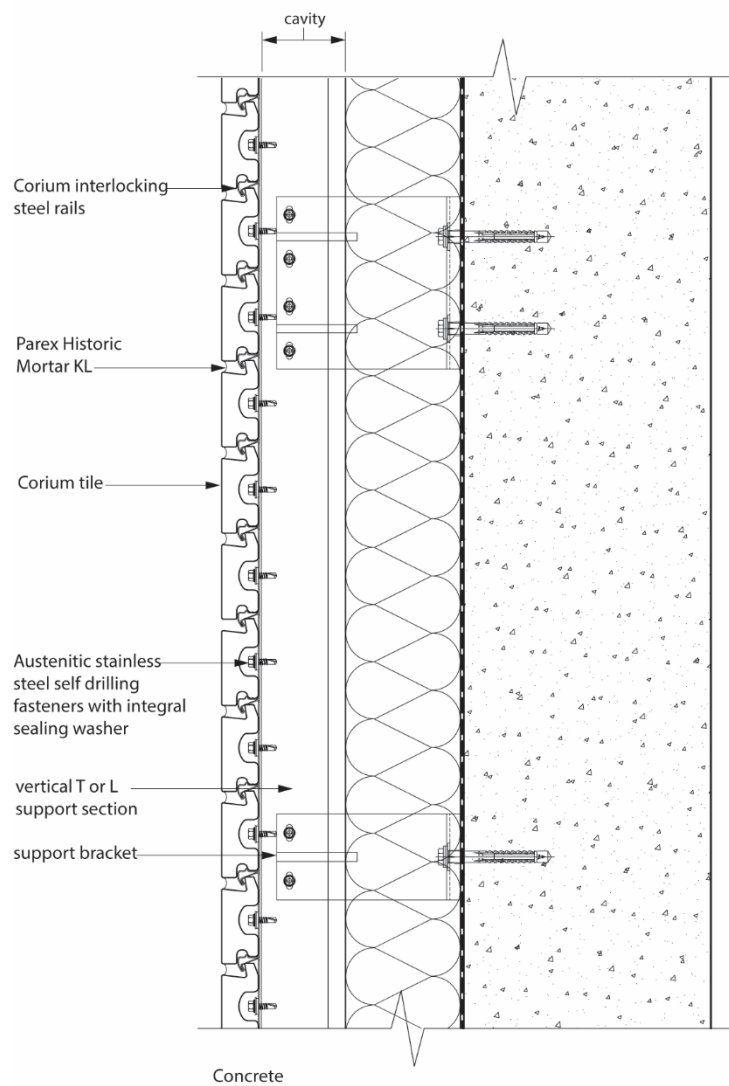
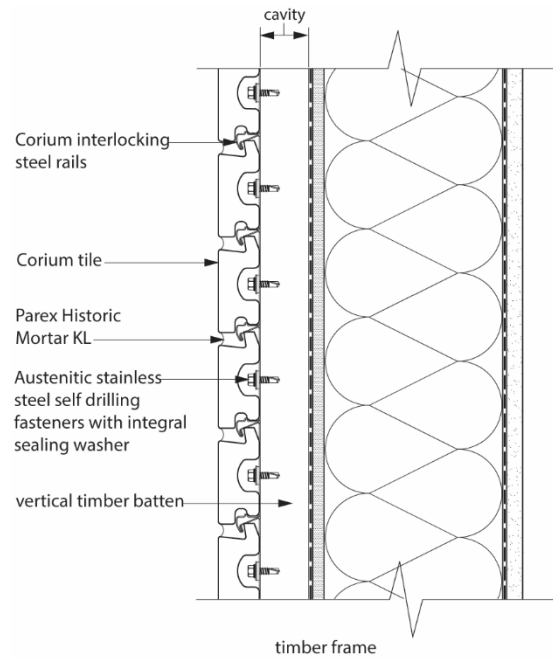


Figure 4 Typical installation details of the Corium Brick Tile Cladding System (continued)



9.2.10 The top steel backing section is levelled and fixed at two points, whilst allowing those below to hang freely. Intermediate sections are re-positioned horizontally to form staggered joints as required, and the bottom section is aligned vertically with the measuring tool supplied and secured.

9.2.11 It must be ensured that all steel backing rails are clipped together using the interlock action of the formed sections (see Figures 1, 2 and 4).

9.2.12 The steel backing rails must be fixed at a maximum of 1200 mm centres along their length. Fixings must be staggered between adjacent vertical steel backing sections as shown in Figure 3. Tiles will not interfere with the head of the fixings as it has a continuous horizontal recess in its back face.

9.2.13 Tiles are inserted into the steel backing section, with the top of the tile first. Applying a slight cushioned blow with a rubber mallet to the bottom of the tile forces it into its desired location. Care must be taken to minimise the risk of abrasion to the steel backing sections.

9.2.14 The position of the tile must be set out from the corners inwards on each elevation adjusting the vertical joint width to suit variations in the tile lengths. It must always be checked that the tiles are fitted fully into the steel backing section.

9.2.15 Parex Historic Mortar KL is applied as the pointing mortar using manual, mechanical or compressed-air based pumps with controlled nozzle applicators.

9.3 Workmanship

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

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the system in use requires that it is suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA, and found to be appropriate and adequate.

9.4.2 The following requirements apply in order to satisfy the performance assessed in this Certificate:

9.4.2.1 A maintenance schedule for the installed system must include regular visual inspections of the tiles for signs of damage, of architectural details designed to shed water to confirm that they are performing properly, and to ensure that water is not leaking from external downpipes or gutters (such leakage could penetrate the system).

9.4.2.2 Maintenance should include the replacement or resealing of joints, for example between the cladding and window and/or door frames. Materials with signs of corrosion must be replaced.

9.4.2.3 Damaged tiles must be removed and replaced as soon as practicable.

10 **Manufacture**

10.1 The production processes for the system 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 system 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 Corium Tiles are delivered on timber pallets with paper interleaving and polythene shrink wrapping, containing 960 units and weighting approximately 800 kg. Pack labels identify the order number, colour reference and quantity and a date code identifying the production date/batch. Other packaging formats are available on request.

11.2 The steel backing rails are delivered to site in 2.4 m lengths, banded in packs, stacked horizontally on sufficient bearers to prevent distortion. Each pack contains 90 rails (approximately 16.2 m²) and weighs approximately 156 kg (Magnelis steel) or 135 kg (stainless steel).

11.3 The Parex Historic Mortar KL is packed in paper sacks of 25 kg bearing the batch number, date of production and application instructions.

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

11.4.1 The pallets of tiles must be stored on a flat surface and in dry conditions.

11.4.2 The steel backing rails must be stored dry and supported on timber battens on level ground.

11.4.3 The mortar must be stored in dry conditions, protected from frost and excessive heat, and used as stated on the material packaging.

11.4.4 Care should be exercised when handling steel backing rails to avoid injury from sharp edges. Protective clothing must be worn, and all health and safety rules must be observed.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the system 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 ISO 9001 : 2015 by Lucideon (Certificate 23461).

Additional Guidance

A.1 In accordance with BS EN 1990 : 2002 and its UK National Annex, it is recommended that a partial action factor of 1.5 is applied to the calculated wind actions to determine the design wind actions to be resisted by the system.

Bibliography

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

BS 8000-0 : 2014 + A1 : 2023 *Workmanship on construction sites — Introduction and general principles*

BS 8000-3 : 2020 *Workmanship on building sites — Code of practice for masonry*

BS 8417 : 2011 + A1 : 2014 *Preservation of wood — Code of practice*

BS EN 351-1 : 2023 *Durability of wood-based products — Preservative-treated solid wood — Classification of preservative penetration and retention*

BS EN 998-2 : 2016 *Specification for masonry — Masonry mortar*

BS EN 1990 : 2002 + A1 : 2005 *Eurocode Basis of structural design*

NA to BS EN 1990 : 2002 + A1 : 2005 UK National Annex for Eurocode *Basis of structural design*

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 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 UK National Annex to Eurocode 2 *Design of concrete structures — General rules and rules for buildings*

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

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

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 : 14 National Annex to Eurocode 3 *Design of steel structures — General rules and rules for buildings*

BS EN 1993-1-2 : 2005 *Eurocode 3 Design of steel structures — General rules — Structural fire design*

NA to BS EN 1993-1-2 : 2005 UK National Annex to Eurocode 3 *Design of steel structures — General rules — Structural fire design*

BS EN 1993-1-3 : 2006 *Eurocode 3 Design of steel structures — General rules*

NA to BS EN 1993-1-3 : 2006 National Annex to Eurocode 3 *Design of steel structures — General rules*

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 National Annex to Eurocode 5 *Design of timber structures — General — Common rules and rules for buildings*

BS EN 1995-1-2 : 2004 *Eurocode 5 Design of timber structures — General — Structural fire design*

NA to BS EN 1995-1-2 : 2004 National Annex to Eurocode 5 *Design of timber structures — General — Structural fire design*

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 National Annex to Eurocode 6 *Design of masonry structures — General rules for reinforced and unreinforced masonry structures*

BS EN 1996-1-2 : 2005 *Eurocode 6 Design of masonry structures — General rules — Structural fire design*

NA to BS EN 1996-1-2 : 2005 National Annex to Eurocode 6 *Design of masonry structures — General rules — Structural fire design*

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 National Annex to Eurocode 6 *Design of masonry structures — Design considerations, selection of materials and execution of masonry*

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

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

BS EN 10346 : 2015 *Continuously hot-dip coated steel flat products — Technical delivery conditions*

BS EN 12865 : 2001 *Hygrothermal performance of building components and building elements — Determination of the resistance of external wall systems to driving rain under pulsating air pressure*

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

BS EN ISO 12572 : 2001 *Hygrothermal performance of building materials and products — Determination of water vapour transmission properties*

EAD 090062-00-0404 : 2018 *Kits for external wall claddings mechanically fixed*

ETAG 004 : 2013 *External Thermal Insulation Composite Systems with Rendering*

ETAG 017 : 2005 *Veture Kits*

ETAG 034 Part 1 : 2012 *Ventilated Cladding Kits comprising Cladding components and associated fixings*

ISO 7892 : 1988 *Vertical building elements — Impact resistance tests — Impact bodies and general test procedures*

ISO 9001 : 2015 *Quality management systems — Requirements*

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*

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:

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- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
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- 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.

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