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Agrément Certificate

19/5650

Product Sheet 1

ACS AZURE BRICK SLIP MASONRY SUPPORT SYSTEMS

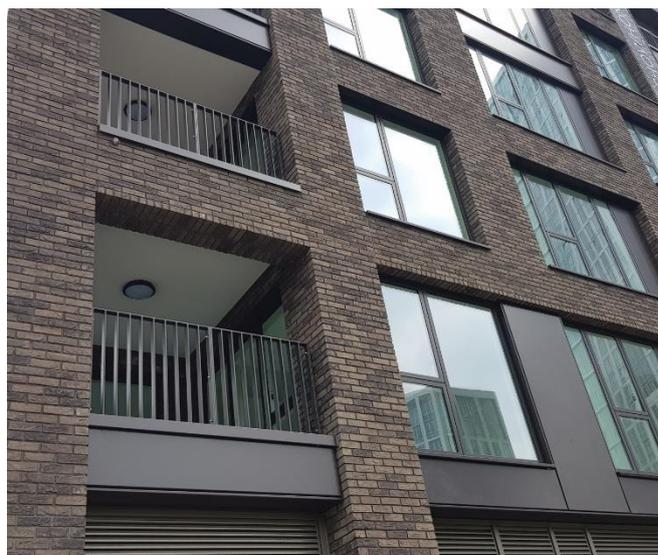
ACS AZURE BRICK FACED LINTELS

This Agrément Certificate Product Sheet⁽¹⁾ relates to ACS Azure Brick Faced Lintels, comprising a stainless steel profile with a factory bonded brick slip façade using a specific adhesive, for use in the external leaf of masonry cavity walls of brickwork and/or blockwork masonry construction to provide support to walls above window or door openings.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

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



KEY FACTORS ASSESSED

Structural performance — the systems are suitable for use in the external leaf of masonry cavity walls with clear openings of up to 4300 mm (see Tables 1 and 2, and section 6).

Behaviour in relation to fire — stainless steel profiles and brick slips are 'non-combustible' in accordance with the national Building Regulations; the adhesive is not classified as 'non-combustible', and the systems' use is restricted in some cases (see section 7).

Hygrothermal properties — suitably designed junctions incorporating the product can adequately limit heat loss and the risk of condensation (see sections 8 and 9).

Durability — provided that the systems are designed, installed and used in accordance with the Certificate, they will have a service life of at least 50 years, when used in the normal climatic conditions found in the UK (see section 11).



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

On behalf of the British Board of Agrément

Date of First issue: 4 June 2019

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

Paul Valentine
Technical Excellence Director

A handwritten signature in black ink, appearing to read 'Claire Curtis-Thomas'.

Claire Curtis-Thomas
Chief Executive

The BBA is a UKAS accredited certification body – Number 113.

*The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.*

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Regulations

In the opinion of the BBA, ACS Azure Brick Faced Lintels, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



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

Requirement:	A1	Loading
Comment:		The systems can contribute to satisfying this Requirement as set out in sections 6.2 to 6.6 of this Certificate.
Requirement:	B3(1)	Internal fire spread (structure)
Comment:		The systems can be incorporated in a construction satisfying this Requirement. See section 7 of this Certificate.
Requirement:	B4(1)	External fire spread
Comment:		In England, the systems can be incorporated in a construction satisfying this Requirement. See section 7 of this Certificate.
Regulation:	7	Materials and workmanship (applicable to Wales only)
Regulation:	7(1)	Materials and workmanship (applicable to England only)
Comment:		The systems are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	7(2)	Materials and workmanship (applicable to England only)
Comment:		The systems are restricted by this Regulation. See sections 7.1, 7.2 and 7.5 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		The systems are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	1.1(a)(b)	Structure
Comment:		The systems are acceptable, with reference to clauses 1.1.1 ⁽¹⁾⁽²⁾ and 1.1.2 ⁽¹⁾⁽²⁾ of this Standard. See sections 6.2 to 6.6 of this Certificate.
Standard:	2.7	Spread on external walls
Comment:		The systems can satisfy the requirements of this Standard, with reference to clauses 2.7.1 ⁽¹⁾⁽²⁾ and 2.7.2 ⁽²⁾ . See sections 7.1 to 7.4 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The systems can contribute to satisfying the relevant Requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		All comments given in relation to the systems 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(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The systems are acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation:	30	Stability
Comment:		The systems are acceptable as set out in sections 6.2 to 6.6 of this Certificate.
Regulation:	35(1)	Internal fire spread — structure
Comment:		The systems can be incorporated in a construction satisfying this Regulation. See sections 7.1 to 7.4 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The systems can be incorporated in a construction satisfying this Regulation. See sections 7.1 to 7.4 of this 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.

See section: **3 Delivery and site handling (3.3)** of this Certificate.

Additional Information

NHBC Standards 2019

In the opinion of the BBA, ACS Azure Brick Faced Lintels, 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), 6.1 External masonry walls*.

Technical Specification

1 Description

1.1 ACS Azure Brick Faced Lintels are one-piece external wall lintels, prefabricated from stainless steel profile with a factory bonded brick slip façade (using a specific adhesive) – see Figures 1 to 8. The systems are used in the external loadbearing leaf of cavity walls of brickwork and/or blockwork masonry construction to provide support to walls (external leaf loads only) above window or door openings and also to provide a brick finish to the face of openings. The internal leaf of the cavity wall will be supported by a separate lintel, which is outside the scope of the Certificate.

1.2 The systems comprise:

Lightweight stainless steel profiles

- The lintels are prefabricated lightweight profiles manufactured using high grade 1.4301 or grade 1.4404 austenitic stainless steel to BS EN 10028-7 : 2016. The steel sections of the lintels are CE marked in accordance with BS EN 845-2: 2013 and manufactured in accordance with BS EN 1090-1 : 2009.

Adhesive

- Brick-Fix 3-1 adhesive is a solvent-free, two-component epoxy adhesive (covered by BBA Certificate 16/5328). A 3 mm thickness is used to bond the brick slips to the profiles under factory controlled conditions covered by BBA Certificate 17/5475.

Brick slips

- Brick slips are 25 mm thick and cut from bricks manufactured in accordance with BS EN 771-1 : 2011 and BS 4729 : 2005.

1.3 The systems are available in four standard profiles (L1, C1, C2 and CS section) with three different brick slip bonds (stretcher, header and soldier). Further details are given in Table 1.

Lintel ACS L1 – standard duty (65 x 215 mm) with stretcher bond (see Figure 1)

Lintel ACS C1 HD – heavy duty (65 x 215 mm) with stretcher bond (see Figure 2)

Lintel ACS C2 XHD – extra heavy duty (65 x 215 mm) with stretcher bond (see Figure 3)

Lintel ACS L1 – standard duty (65 x 215 mm) with header bond (see Figure 4)

Lintel ACS C1 HD – heavy duty (65 x 215 mm) with header bond (see Figure 5)

Lintel ACS C2 XHD – extra heavy duty (65 x 215 mm) with header bond (see Figure 6)

Lintel ACS CS Section (215 x 215 mm) with soldier bond – maximum length 1800 mm (see Figure 7)

Lintel ACS CS Section (215 x 215 mm) with soldier bond – maximum length 2700 mm (see Figure 8).

Figure 1 L1 Standard duty lintel with stretcher bond

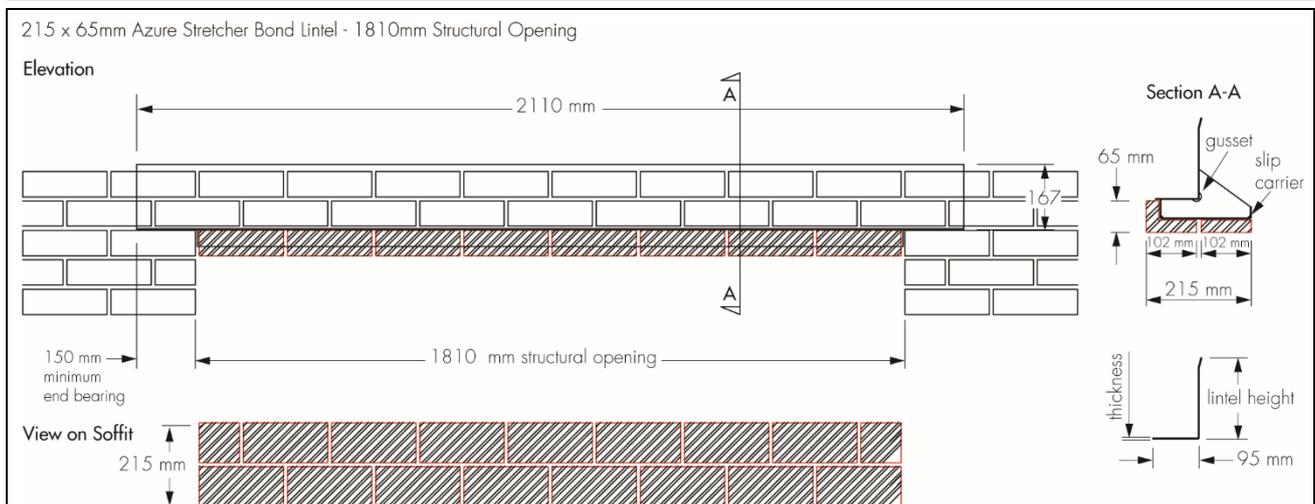


Figure 2 C1 heavy duty lintel with stretcher bond

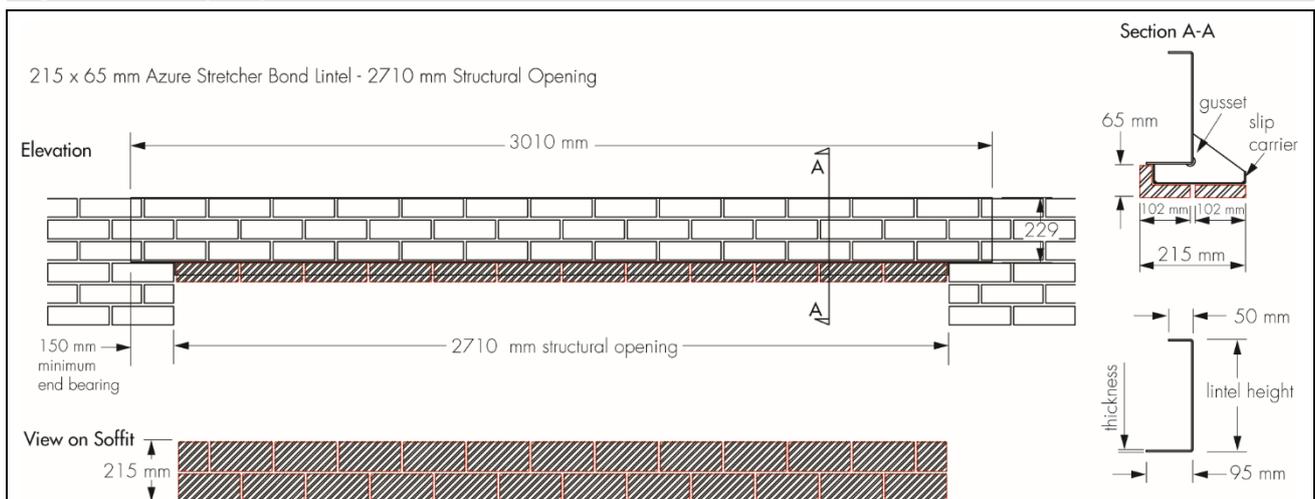


Figure 3 C2 XHD lintel with stretcher bond

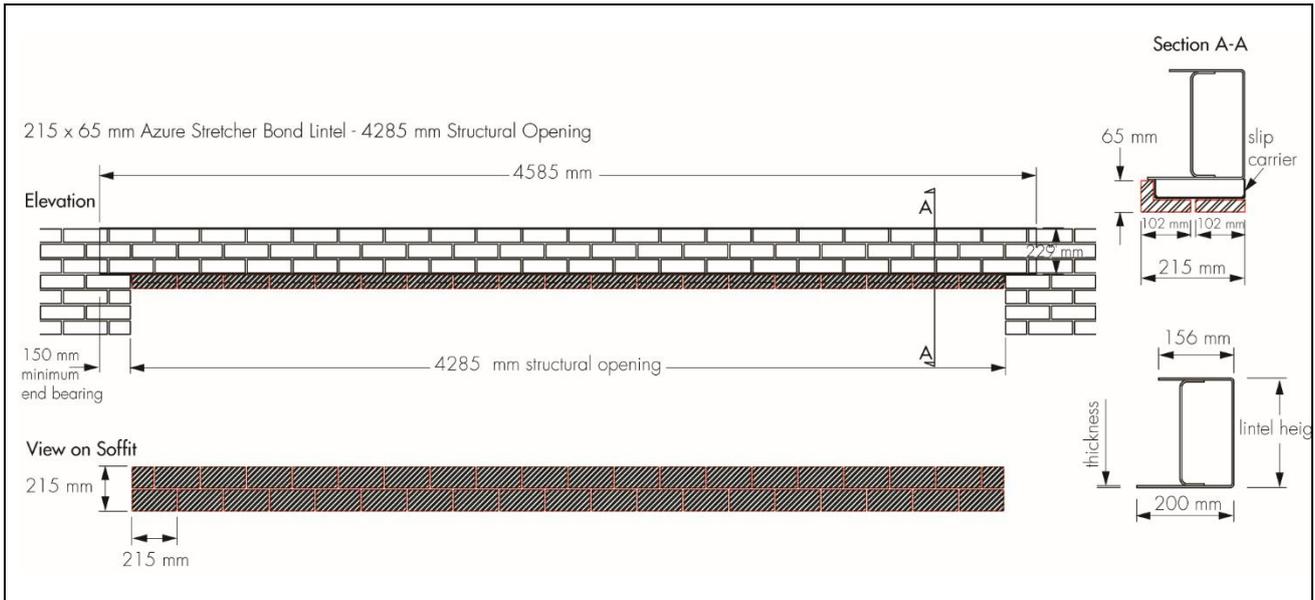


Figure 4 L1 standard duty lintel with header bond

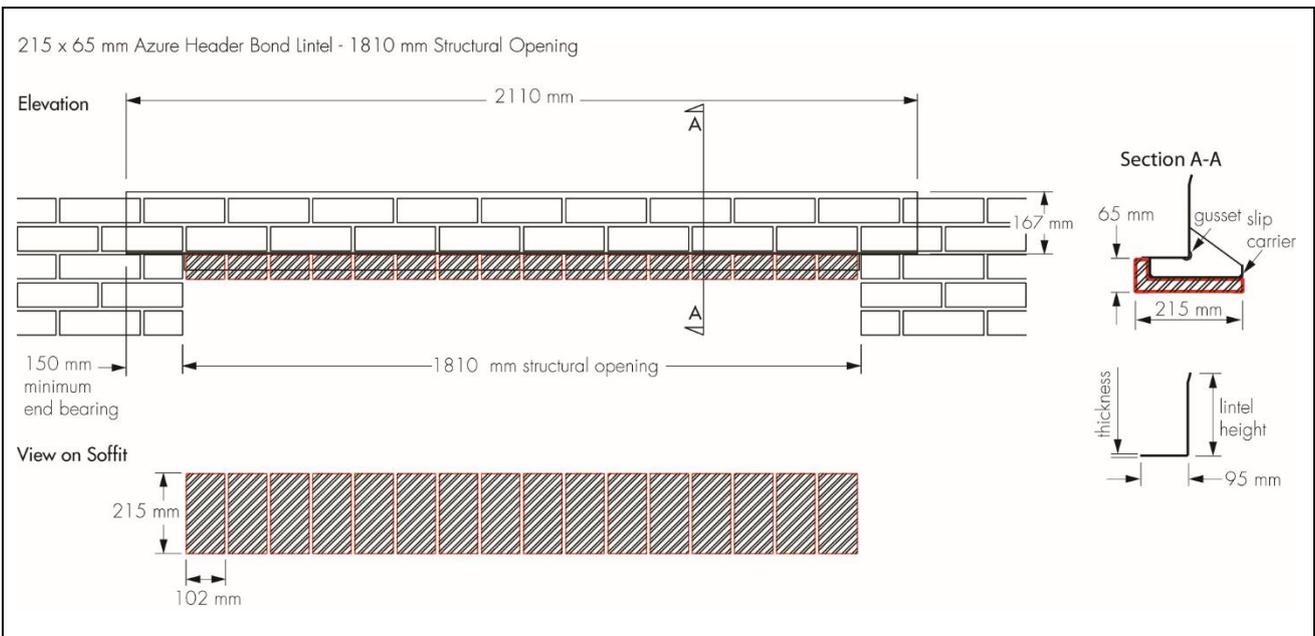


Figure 5 C1 heavy duty lintel with header bond

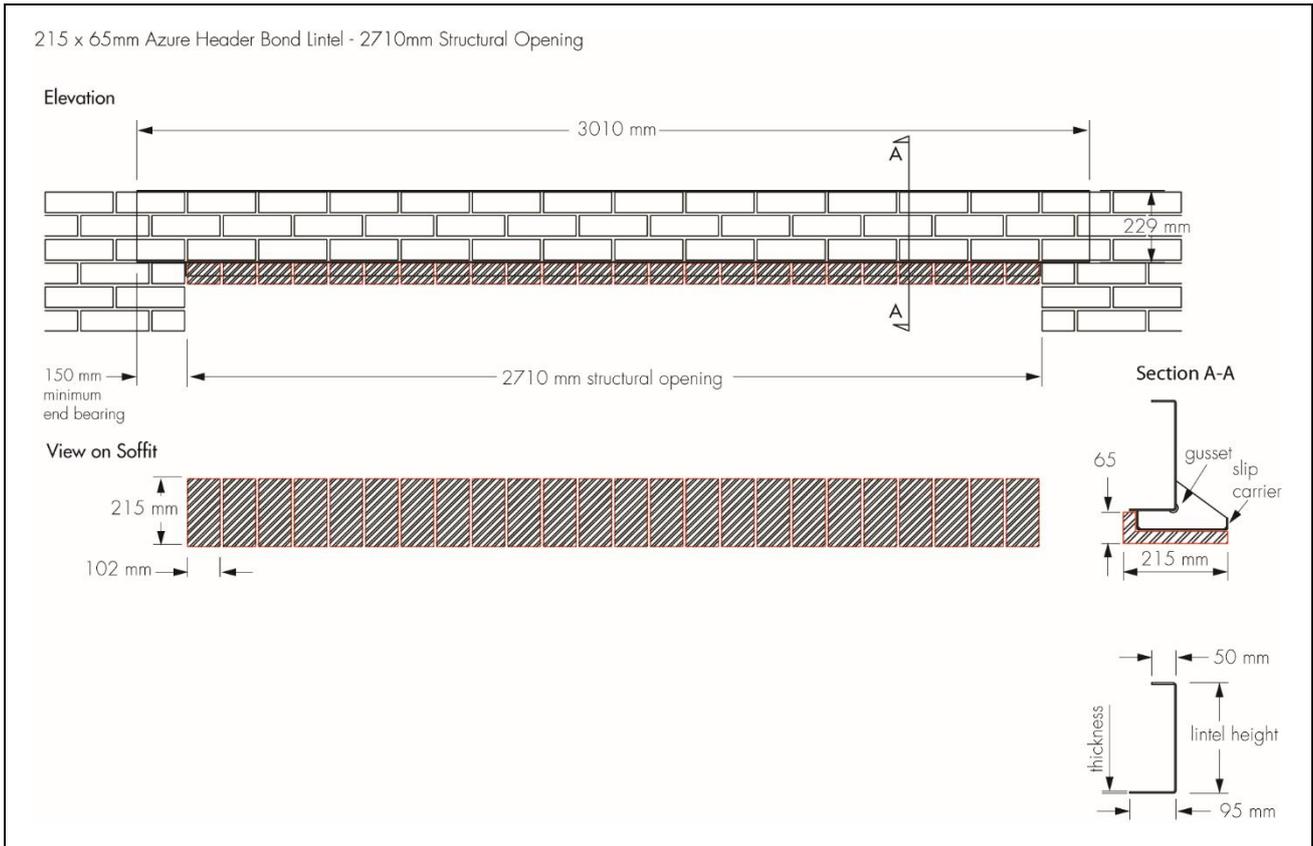


Figure 6 C2 XHD lintel with header bond

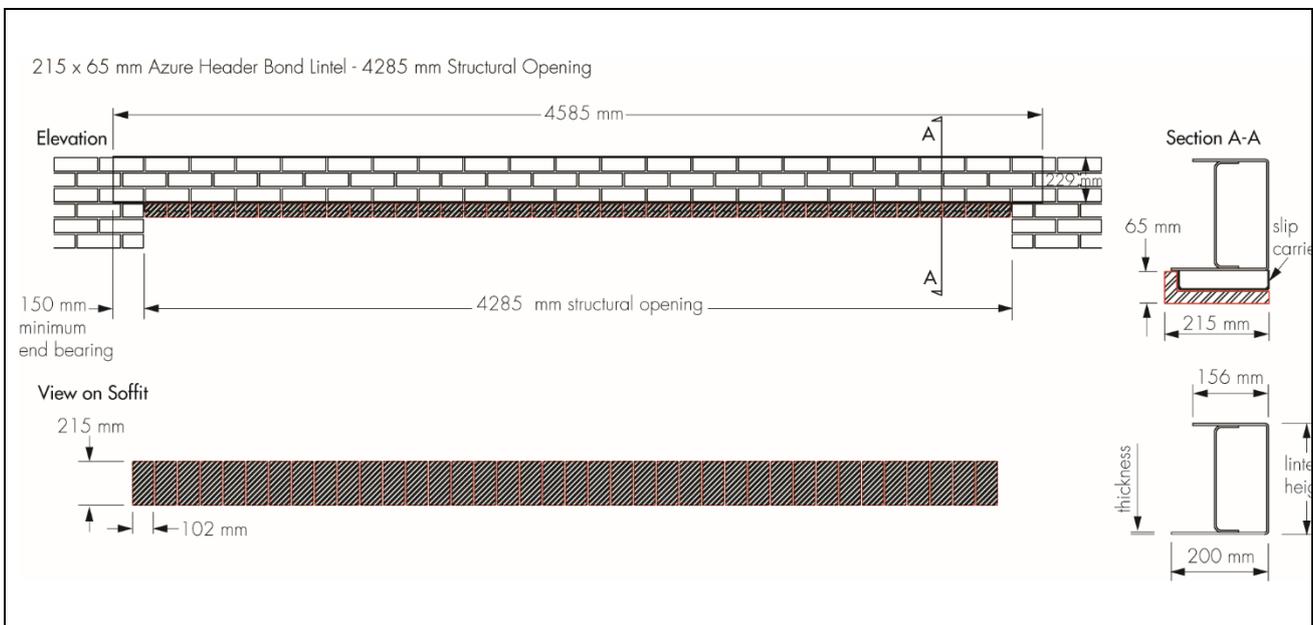


Figure 7 CS Section lintel with soldier bond

215 x 215 mm Azure Soldier Bond Lintel - 1810 mm Structural Opening

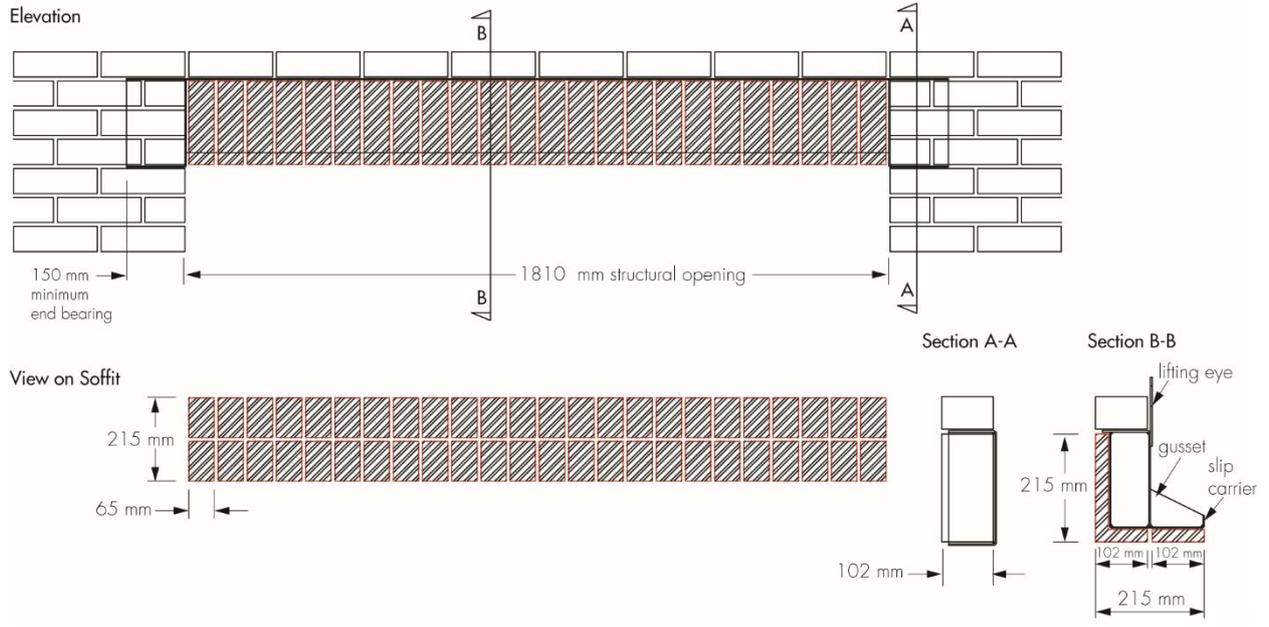


Figure 8 CS Section lintel with soldier bond

215 x 215mm Azure Soldier Bond Lintel - 2710mm Structural Opening

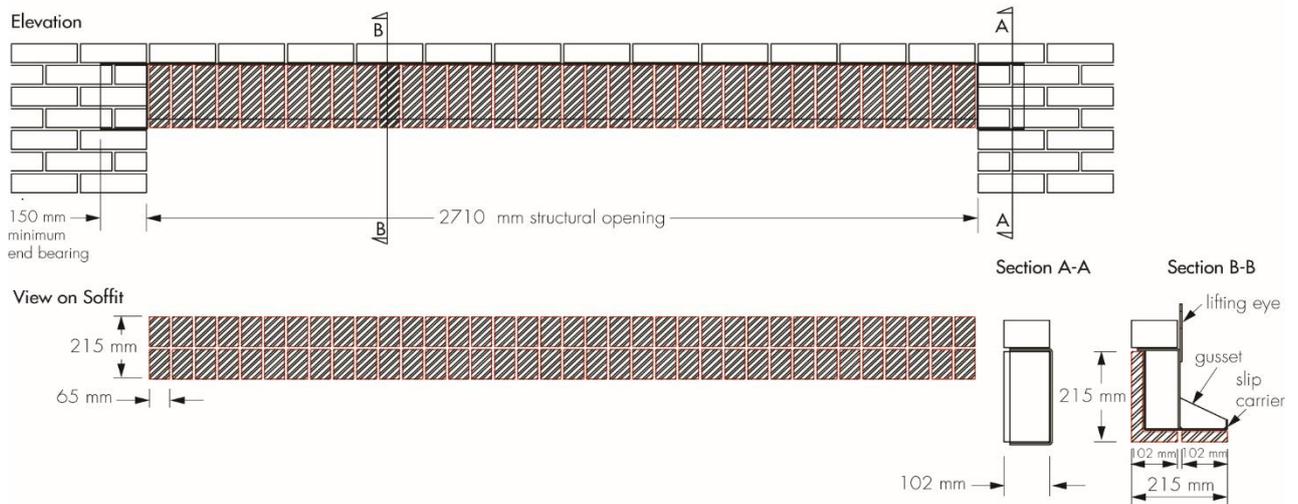


Table 1 L1, C1, C2 and C Lintels range — characteristics and safe working loads (SWLs)

Lintel types	Overall length of lintel (mm)	Clear span (mm)	Length of brick slip zone (mm)	Height of lintel profile (mm)	Width of lintel (mm)	Thickness of steel profile (mm)	Mass (kg.m ⁻¹)	Mass with brick slip (kg.m ⁻¹)	Total uniformly distributed SWL (kN)
L1 – Standard Duty (SD) (65 x 215 mm) Figures 1, 4	600 - 2100	300 - 1800	up to 1800	167	95	2	10.63	20.54	6.20
C1 – Heavy Duty (HD) (65 x 215 mm) Figures 2, 5	600 - 3000	300 - 2700	Up to 2700	229	95	3	15.93	26.35	16.00
C2 – Extra Heavy Duty (XHD) (65 x 215 mm) (XHD / 170) Figures 3, 6	3001 - 4600	2701 - 4300	Up to 4300	229	170	4	31.14	41.79	64.97
C2 – Extra Heavy Duty (XHD) (65 x 215 mm) (XHD / 200) Figures 3, 6	3001 - 4600	2701 - 4300	Up to 4300	229	200	4	32.10	42.90	74.33
CS Section Figures 7, 8	600 - 2100	300 - 1800	Up to 1800	229	95	3	14.40	32.46	12.00
CS Section Figures 7, 8	600 - 3000	300 - 2700	Up to 2700	229	95	4	16.25	47.36	9.00

Notes:

- All standard lengths are in 150 mm increments
- For L1, C1 and C2, stretcher and header bonds are available
- For CS Section brick slip lintels, only soldier bond is available
- For ranges, please refer to Figures 1 to 8.

2 Manufacture

2.1 The brick faced lintels comprise stainless steel profiles and fixed brick-faced units. The steel profiles are manufactured from sheet material which is folded and formed in the factory. The profiles are fabricated by welding. The brick slips are cut from bricks and adhered with the specific adhesive to the steel lintel profile at the factory.

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

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of ACS Stainless Steel Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by the Steel Certification Scheme (Certificate Registration 2370407)

3 Delivery and site handling

3.1 The lintels are delivered to site or to builders' merchants at specified lengths, each carrying a label bearing the Certificate holder's name. The BBA logo incorporating the number of this Certificate is marked on each lintel.

3.2 Reasonable care must be taken during unloading and storage of lintels, to avoid impact and abrasion or damage to their surface or integrity.

3.3 The lintels can generally be handled manually, except for the longer span lintels which incorporate lifting lugs for mechanical handling equipment. Protective gloves should be worn when handling the systems.

3.4 The lintels must be stored off the ground on well-drained, puddle-free hardstanding. The lintels are delivered on pallets and must not be stacked.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on ACS Azure Brick Faced Lintels.

Design Considerations

4 Use

4.1 ACS Azure Brick Faced Lintels are satisfactory for use in the external loadbearing leaf of cavity walls of brickwork and/or blockwork masonry construction to provide support to walls (external leaf loads only) above window or door openings and also to provide a brick finish to the face of openings.

4.2 Designers, planners, contractors and/or installers must ensure that the installation of the lintels is in accordance with the Certificate holder's instructions and the information given in this Certificate.

4.3 As with any form of cavity wall construction where buildings need to comply with *NHBC Standards 2019*, specifiers should observe the requirements of these Standards and include cavity trays.

4.4 In Scotland and Northern Ireland, a separate cavity tray must be used. In Exposure Category 'very severe' the following applies:

- in Scotland, all lintels should have a damp-proof course (dpc) built into the inner leaf
- in Scotland, Northern Ireland and areas of 'very severe' exposure to driving-rain, the upstand part of the dpc should be returned into the inner leaf of masonry.

5 Practicability of installation

The systems are designed to be installed by a competent general builder, or a contractor, experienced with these types of systems.

6 Structural performance

6.1 ACS Azure Brick Faced Lintels have adequate strength and stiffness to sustain the maximum SWL⁽¹⁾ loads as shown in Table 1, subject to the following conditions:

- the size of standard masonry units and clear span must not be exceeded
- No requirements for composite action with, or restraint by, adjacent elements of construction including the supported masonry should be considered. The specified loads⁽¹⁾ given in Table 1 of this Certificate are related to simply supported lintels, laterally and torsionally unrestrained.
- where part of the loading is applied as concentrated loads, each concentrated load must be spread over a length of lintel of not less than 200 mm. In such cases, a case-specific design by an appropriately qualified individual must be done.

(1) For definition of SWL, refer to BS EN 845-2 : 2013



6.2 The total uniformly distributed SWL for different spans (clear opening) are shown in Table 1. The loads have been derived from tests (carried out in accordance with BS EN 846-9 : 2016) supported by guidance in accordance with BS EN 845-2 : 2013 and with calculations in accordance with BS EN 1993-1-1 : 2005, BS EN 1993-1-3 : 2006, BS EN 1993-1-4 : 2006 and BS EN 1993-1-5 : 2006 and their UK National Annexes.

In order to obtain the SWL values given in Table 1, the following modes of failure have been considered:

- flexural resistance
- shear resistance
- maximum deflection limited to span/360
- lateral-torsional buckling resistance
- local buckling resistance
- shear buckling resistance
- bearing resistance.

6.3 The following limitations apply:

- the load is from the external leaf only; a separate lintel is used to support inner leaf loads
- the end support bearing length should be a minimum of 150 mm.

6.4 The supporting masonry must be checked for bearing stresses. In addition to the requirements specifically referred to in this Certificate, structures of brickwork or blockwork in which the lintels are incorporated must be designed and constructed in accordance with BS EN 1996-1-1 : 2005 and BS EN 1996-1-2 : 2005 and their UK National Annexes. Reference should also be made to PD 6697 : 2010, and the following technical specifications of the Approved Documents to the national Building Regulations as appropriate:

England and Wales — Approved Document A1/2, Part C, Section 1

Scotland — Section 1, Small Building Guide

Northern Ireland — Technical Booklet D *Structure*, Section 3.

6.5 The load-span data shown in Table 1 is valid up to the maximum SWLs and corresponding clear spans given. For other loading conditions, or spans outside this range, the Certificate holder should be consulted for further advice.

6.6 To avoid excessive eccentricities of loading, the lintels must only be used with standard masonry units, ie bricks or blocks with 100 to 102.5 mm widths.

6.7 Guidance for the assessment of loads on lintels in masonry is given in BS EN 845-2 : 2013 and PD 6697 : 2010. If arch action introduced in BS EN 845-2 : 2013 and PD 6697 : 2010 is considered, the lintels must be designed by an appropriately qualified design engineer, and the SWLs in Table 1 will not be applicable. This is, however, outside the scope of this Certificate.

7 Behaviour in relation to fire



7.1 The stainless steel profiles and brick slips are non-combustible and classified as Class A1 in accordance with the national Building Regulations.

7.2 Brick-Fix 3-1 adhesive is not classified as non-combustible or of limited combustibility.

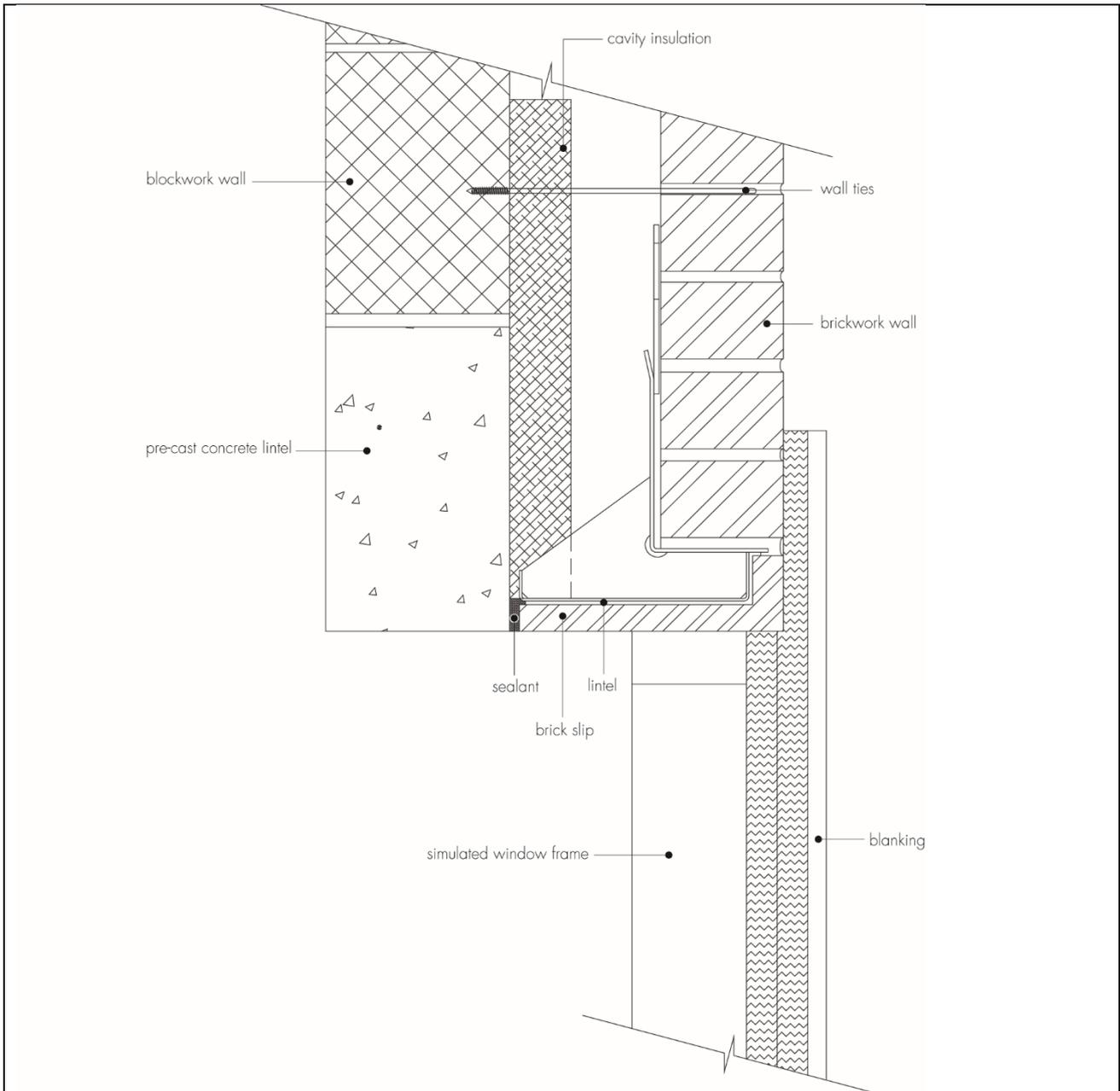
7.3 Lintels, when tested utilising heating conditions in accordance with BS EN 1363-1 : 2012 in a construction that satisfies the requirements of BS EN 1996-1-2 and the national Building Regulations, showed no debonding for 104 minutes. Designers should refer to the EXOVA Warrington fire Test Report No. 388403, Issue 3 (available from the Certificate holder). See Figure 9 of this Certificate for details.

7.4 The construction described in section 7.3 (shown in Figure 9) is not subject to any restriction on proximity to boundaries and height, when incorporated in a construction that satisfies the requirements of BS EN 1996-1-2 and the national Building Regulations, except those described in section 7.5 of this Certificate.



7.5 The systems should not be used on buildings in England that have a storey at least 18 m above ground level and contain: one or more dwellings, an institution, a room for residential purposes (excluding any room in a hostel, hotel or boarding house), student accommodation, care homes, sheltered housing, hospitals or dormitories in boarding schools.

Figure 9 Fire resistance test construction



8 Thermal performance

8.1 Typical example details containing the systems, based on the construction details shown in Figures 1 to 4, were analysed numerically to determine their likely hygrothermal performance.

8.2 If designed appropriately, head details incorporating the lintels (eg exposed floor junctions with insulated lintels) will adequately limit excessive heat loss and allow use of the following ψ (ψ) values in carbon emission rate calculations (see Table 2 below). Detailed guidance in this respect and on limiting heat loss by air infiltration can be found in the documents referred to in section 9.2.

Table 2 Linear thermal transmittance, ψ -values, for lintel junctions

Lintel	Example ψ -value ⁽¹⁾⁽²⁾⁽³⁾	Approved ψ -value ⁽⁴⁾	Default ψ -value ⁽⁵⁾ ($W \cdot m^{-1} \cdot K^{-1}$)
	$W \cdot m^{-1} \cdot K^{-1}$		
See Figure 1	0.043	0.3	1.0
See Figure 2	0.043		
See Figure 3	0.11		
See Figure 7	0.043		
See Figure 8	0.043		

- (1) Assumes 50 mm window frame which overlaps the cavity by 37.5 mm. Wall construction: 102.5 mm brickwork ($\lambda = 0.77 W \cdot m^{-1} \cdot K^{-1}$), 50 mm low-E vented cavity – see note (2), PIR – see notes (2) and (3), insulation ($\lambda = 0.021 W \cdot m^{-1} \cdot K^{-1}$), 100 mm blockwork ($\lambda = 0.162 W \cdot m^{-1} \cdot K^{-1}$), 15 mm plaster ($\lambda = 0.57 W \cdot m^{-1} \cdot K^{-1}$)
- (2) 150 mm cavity width, comprising 50 mm vented cavity adjacent ($R = 0.66 m^2 \cdot K \cdot W$), 100 mm PIR insulation
- (3) (Internal lintel assumed to be 100 x 220 mm dense concrete with 2% reinforcement, $\lambda = 2.5 W \cdot m^{-1} \cdot K^{-1}$)
- (4) Approved value may be claimed when the gauge of the steel lintel is less than, or equal to, 3 mm and there is a 30 mm overlap of the window frame over the cavity
- (5) Where a junction detail has not been calculated in accordance with BS EN ISO 10211 and BR 497 : 2007 and the construction deviates from the case described in note (4), the default value from column 4 must be used.

8.3 For other junction details, the linear thermal transmittance and temperature factor should be calculated in accordance with BS EN ISO 10211 : 2017, following the guidance in BRE Report BR 497 : 2007.

9 Condensation risk

9.1 The construction described in section 8.1 will achieve a surface temperature factor, f_{Rsi} , in excess of 0.90, which can be compared to the critical temperature factors, f_{CRsi} , in BRE Information Paper IP 1/06 for the relevant building type. The risk of surface condensation is low when the f_{Rsi} is equal to or greater than the f_{CRsi} . For other constructions, the f_{Rsi} must be established by numerical modelling (see section 8.3).

9.2 Further guidance on limiting the risk of surface condensation can be found in:

England and Wales — *Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings* or Accredited Construction Details (version 1.0)

Scotland — Accredited Construction Details (Scotland)

Northern Ireland — Accredited Construction Details (version 1.0).

9.3 Under normal domestic conditions, the level of interstitial condensation associated with the systems will be low and the risk of any resultant damage minimal.

10 Maintenance

The lintels do not require maintenance. If the brick finish becomes damaged or stained, the advice of the Certificate holder should be sought.

11 Durability



11.1 Provided that ACS Azure Brick Faced Lintels are designed, installed and used in accordance with this Certificate, they will have a service life of at least 50 years.

11.2 The brick slips will have an equivalent durability to the bricks from which they were cut (see section 1.1).

11.3 The stainless steel lintel profiles will have adequate durability for a service life of at least 50 years (see section 1.2 and Table 2 of PD 6697 : 2010).

12 Reuse and recyclability

The stainless steel profiles and the brick slips (which contain fired clay) can be recycled.

Installation

13 General

13.1 Masonry should be laid on a full mortar bed and all perpendicular joints fully filled. The mortar must be allowed to cure before applying floor or roof loads.

13.2 In accordance with the Certificate holder's recommendations, lintels over 1000 mm of clear span must be suitably propped during construction using a central prop. A board should be used between the lintel and prop to protect the finished surface and spread the load evenly.

13.3 Lintels must be installed with at least 150 mm end bearing, and be fully bedded on mortar. Lintels must be level along length and width and should be positioned centrally over the opening such that the minimum bearing is achieved on both sides.

13.4 A dpc or cavity tray must be installed above the lintel over all openings in external cavity walls.

13.5 Weep-holes must be provided in the outer leaf above the lintels to drain moisture from the cavity. A minimum of two weep-holes should be provided per lintel. For fair-faced masonry, weep-holes should be provided at centres not greater than 450 mm.

13.6 Precautions must be taken to prevent mortar dropping through the cavity onto the lintels and obstructing the weep-holes.

13.7 Brick slips should be pointed using the same mortar as the rest of the brickwork, but only after removal of the temporary propping and after the full load has been applied to the lintel. Pointing lintel soffits should be conducted using a pointing gun. Pointing should not take place in wet weather or in temperatures below 3°C.

Technical Investigations

14 Tests

Tests were carried out on the systems, and the results assessed to determine:

- load-deflection characteristic to BS EN 845-2 : 2013
- bond strength after accelerated ageing
- integrity of the bond at maximum design deflection
- Fire performance based on the fire resistance ad-hoc test utilising the heating conditions of BS EN 1363-1: 2012.

15 Investigations

15.1 An assessment was made of data relating to:

- calculations to establish the load-span table for lintels
- calculations to establish minimum temperature factors and the Ψ values of typical constructions incorporating the systems, undertaken to IP 1/06
- durability
- practicability of installation.

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

Bibliography

- BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*
- BRE Report BR 497 : 2007 *Conventions for calculating linear thermal transmittance and temperature factors*
- BS 4729 : 2005 + A1 : 2016 *Clay bricks of special shapes and sizes — Recommendations*
- BS EN 771-1 : 2011 + A1 : 2015 *Specification for masonry units — Clay masonry units*
- BS EN 845-2 : 2013 + A1 : 2016 *Specification for ancillary components for masonry — Lintels*
- BS EN 846-9 : 2016 *Methods of test for ancillary components for masonry — Determination of flexural resistance and shear resistance of lintels*
- BS EN 1090-1 : 2009 + A1 : 2011 *Execution of steel structures and aluminium structures — Requirements for conformity assessment of structural components*
- BS EN 1363-1 : 2012 *Fire resistance tests — General requirements*
- BS EN 1990 : 2002 *Basis of Structural Design*
- NA to BS EN 1990 : 2002 + A1 : 2005 *UK National Annex for Eurocode — Basis of structural 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 : 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 1993-1-4 : 2006 + A1 : 2015 *Eurocode 3 Design of steel structures — General rules — Supplementary rules for stainless steels*
- NA + A1 : 2015 to BS EN 1993-1-4 : 2006 + A1 : 2015 *UK National Annex to Eurocode 3: Design of steel structures — General rules — Supplementary rules for stainless steels*
- BS EN 1993-1-5 : 2006 *Eurocode 3: Design of steel structures — Plated structural elements*
- NA + A1 : 2016 to BS EN 1993-1-5 : 2006 *UK National Annex to Eurocode 3: Design of steel structures — Plated structural elements*
- 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 1996-1-2 : 2005 *Eurocode 6: Design of masonry structures — General rules — Structural fire design*
- NA to BS EN 1996-1-2 : 2005 *UK National Annex to Eurocode 6: Design of masonry structures — General rules — Structural fire design*
- BS EN 10028-7 : 2016 *Flat products made of steels for pressure purposes — Stainless steels*
- BS EN ISO 9001 : 2015 *Quality management systems — Requirements*
- BS EN ISO 10211 : 2017 *Thermal bridges in building construction — Heat flows and surface temperatures — Detailed calculations*
- PD 6697 : 2010 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

16 Conditions

16.1 This Certificate:

- relates only to the product/system 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.

16.2 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.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system 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.

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

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

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

16.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system 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