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Agrément Certificate

04/4146

Product Sheet 1

BAILEY ATLANTIC ROOF WATERPROOFING SYSTEMS

BAILEY ATLANTIC 300 AND 400 ROOF WATERPROOFING MEMBRANES

This Agrément Certificate Product Sheet⁽¹⁾ relates to Bailey Atlantic Roof Waterproofing Membranes, comprising extruded thermoplastic polyolefin, incorporating a glass restraining matrix, for use in waterproofing flat and pitch roofing.

(1) Hereafter 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

Weathertightness — the membranes will resist the passage of moisture into the building (see section 6).

Properties in relation to fire — the membranes will enable a roof to be unrestricted under the Building Regulations (see section 7).

Resistance to wind uplift — the membranes will resist the effects of any likely wind suction acting on the roof (see section 8).

Resistance to foot traffic — the membranes will accept the limited foot traffic and loads associated with installation and maintenance (see section 9).

Resistance to penetration of roots — the membranes will resist the penetration of roots (see section 10).

Durability — under normal service conditions the membranes will provide a durable roof waterproofing with a service life in excess of 25 years (see section 12).

The BBA has awarded this Certificate to the company named above for the products described herein. These products 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

A handwritten signature in black ink, appearing to read 'Simon Wroe'.

Simon Wroe
Head of Approvals — Materials

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

Claire Curtis-Thomas
Chief Executive

Date of Second issue: 14 January 2014

Originally certificated on 20 September 2004

Certificate amended on 20 February 2015 to reflect revision of harmonised Standard and Bibliography.

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.

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Regulations

In the opinion of the BBA, Bailey Atlantic 300 and 400 Roof Waterproofing Membranes, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting 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)

| | | |
|--------------|-------|---|
| Requirement: | B4(2) | External fire spread |
| Comment: | | On a suitable substructure, the use of the membranes will enable a roof to be unrestricted under this Requirement. See sections 7.1 to 7.3 and 7.5 of this Certificate. |
| Requirement: | C2(b) | Resistance to moisture |
| Comment: | | The membranes, including joints, will enable a roof to meet this Requirement. See section 6.1 of this Certificate. |
| Regulation: | 7 | Materials and workmanship |
| Comment: | | The membranes are acceptable. See section 12 and the <i>Installation</i> part of this Certificate. |



The Building (Scotland) Regulations 2004 (as amended)

| | | |
|-------------|---------|--|
| Regulation: | 8(1)(2) | Fitness and durability of materials and workmanship |
| Comment: | | The use of the membranes satisfies the requirements of this Regulation. See sections 11 and 12 and the <i>Installation</i> part of this Certificate. |
| Regulation: | 9 | Building standards applicable to construction |
| Standard: | 2.8 | Spread from neighbouring buildings |
| Comment: | | The membranes, when applied to a suitable substructure, are classified as having low vulnerability and will enable a roof to be unrestricted under this Standard with reference to clause 2.8.1 ⁽¹⁾⁽²⁾ . See sections 7.1 to 7.3 and 7.5 of this Certificate. |
| Standard: | 3.10 | Precipitation |
| Comment: | | The membranes, including joints will enable a roof to satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ . See section 6.1 of this Certificate. |
| Standard: | 7.1(a) | Statement of sustainability |
| Comment: | | The membranes can contribute to meeting 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 for the membranes under Regulation 9 also apply to this Regulation, with reference to clause 0.12 ⁽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)(iii)(b)(i) | Fitness of materials and workmanship |
| Comment: | | The membranes are acceptable. See section 12 and the <i>Installation</i> part of this Certificate. |
| Regulation: | 28(b) | Resistance to moisture and weather |
| Comment: | | The membranes, including joints, will enable a roof to meet the requirements of this Regulation. See section 6.1 of this Certificate. |
| Regulation: | 36(b) | External fire spread |
| Comment: | | On a suitable substructure, the use of the membranes will enable a roof to be unrestricted under the requirements of this Regulation. See sections 7.1 to 7.3 and 7.5 of this Certificate. |

Construction (Design and Management) Regulations 2007

Construction (Design and Management) Regulations (Northern Ireland) 2007

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

See sections: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.3) of this Certificate.

Additional Information

NHBC Standards 2014

NHBC accepts the use of Bailey Atlantic 300 and 400 Roof Waterproofing Membranes, when installed and used in accordance with this Certificate, in relation to *NHBC Standards Chapter 7.1 Flat roofs and balconies*.

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard EN 13956 : 2012. An asterisk (*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

Technical Specification

1 Description

1.1 Bailey Atlantic 300 and 400 Roof Waterproofing Membranes comprise a single ply of thermoplastic polyolefin incorporating a glass restraining matrix. The Bailey Atlantic 400 membrane is backed with a polyester fleece for use in partially or fully bonded specifications.

1.2 The membranes are manufactured to the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

| Characteristic (units) | Bailey Atlantic 300 | Bailey Atlantic 400 |
|--|--|--|
| Thickness (mm) | 2 | 2 ⁽¹⁾ |
| Width (m) | 0.25, 0.35, 0.52, 0.75 1.05, 1.50, 2.10 | 0.52, 1.05, 2.10 |
| Length (m) | 20 | 20 |
| Mass per unit area (kg·m ⁻²) | 1.90 | 2.15 |
| Colour | grey (301), green (302), red (303), black (304) | grey (401), green (402), red (403), black (404) |
| Standard roll weight (kg) | 40 | 44 |
| Tensile strength* | ≥ 7 N·mm ⁻² | ≥ 1000 N·50 mm |
| Elongation at break* (%) | ≥ 500 | ≥ 50 |
| Low temperature foldability* (°C) | ≤ 50 | ≤ 50 |
| Dimensional stability* (%) | ≤ 0.3 | ≤ 0.3 |
| Resistance to root penetration* | Pass | Pass |
| Resistance to impact* (mm) | | |
| rigid substrate | ≥ 750 | ≥ 1000 |
| flexible substrate | ≥ 1500 | ≥ 1500 |
| Static loading* (kg) | ≥ 20 | ≥ 20 |

(1) Excluding backing fleece

1.3 Ancillary items for use with the membranes include:

- Bailey Atlantic Polyurethane Adhesive — a one-component adhesive for use in partially- and fully-bonded applications
- fasteners and fixing plates — 40 mm by 80 mm galvanized steel plates and self drill/tap galvanized steel fasteners used in mechanically fastened specifications
- external and internal angles — preformed corners manufactured from the Bailey Atlantic polyolefin compound.

1.4 Ancillary items outside the scope of the Certificate include:

- Bailey Atlantic metal — galvanized steel, laminated with the Bailey Atlantic polyolefin compound, for use in forming edges and other details
- vapour control layer — a nominally 0.32 mm thick, polyethylene membrane or, alternatively, a bituminous vapour control layer with an aluminium core
- adhesive tape — a double-sided tape used for sealing laps in the vapour control layer.

1.5 Quality control checks are carried out on the raw materials, during production and on the final product.

2 Manufacture

2.1 The membranes are manufactured by extruding thermoplastic polyolefin incorporating a glass restraining matrix. Bailey Atlantic 400 membrane is manufactured with a 250 g·m⁻² polyester fleece

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.

3 Delivery and site handling

3.1 The membranes are delivered to site as rolls secured with self-adhesive tape, on pallets shrink-wrapped in plastic film (Bailey Atlantic 300, 20 rolls per pallet; Bailey Atlantic 400, 16 rolls per pallet). The roll and pallet labels bear the product name, colour, dimensions, roll number, date of production, bar code and manufacturer's address. The BBA logo incorporating the number of this Certificate is displayed on both the roll and pallet labels.

3.2 Rolls should be stored vertically on a clean, dry, level surface and kept under cover.

3.3 Bailey Atlantic Polyurethane Adhesive is classified as 'harmful' under *The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (CHIP4)/Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) 2009*. These products bear the appropriate hazard warning. Reference should be made to the manufacturer's material safety data sheet.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Bailey Atlantic 300 and 400 Roof Waterproofing Membranes.

Design Considerations

4 General

4.1 Bailey Atlantic 300 Roof Waterproofing Membrane is satisfactory for use in mechanically-fastened and ballasted installations on flat and pitched roofs with limited access. For ballasted installations where the roof slope is greater than 2°, the advice of the Certificate holder must be sought.

4.2 Bailey Atlantic 400 Roof Waterproofing Membrane is satisfactory for use in mechanically-fastened and fully- or partially adhered installations on flat and pitched roofs with limited access.

4.3 Limited access roofs are defined for the purpose of this Certificate as those subjected only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc. Where traffic in excess of this is envisaged, additional protection to the membrane must be provided (see section 9).

4.4 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80. Pitched roofs are defined for the purpose of this Certificate as those having falls greater than 1:6. When designing flat roofs, twice the minimum finished fall should be assumed, unless a detailed analysis of the roof is available including, for example, overall and local deflection and direction of falls.

4.5 For green roof and roof gardens, structural decks to which the system is to be applied must be suitable to transmit the dead and imposed loads experienced in service.

4.6 Imposed loads, dead loading and wind loads for green roof and roof garden specifications are calculated in accordance with BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003, BS EN 1991-1-4 : 2005 and their National Annexes.

4.7 The drainage system for the green roof or roof garden must be correctly designed, and provision made for access for maintenance purposes. Dead loads for green roofs and roof gardens can increase if the drains become partially or completely blocked causing waterlogging of the drainage layer.

4.8 Decks to which the membranes are to be applied must comply with the relevant requirements of either BS 6229 : 2003 or BS 8217 : 2005 and, where appropriate, *NHBC Standards 2014*, Chapter 7.1.

4.9 Insulation materials used in conjunction with the membranes must be in accordance with the manufacturer's instructions and be either:

- as described in the relevant Clauses of BS 8217 : 2005, or
- the subject of a current BBA Certificate and be used in accordance with, and within the scope of, that Certificate.

5 Practicability of installation

The membranes should be installed by installers trained and approved by the Certificate holder.

6 Weathertightness

6.1 The membranes, including joints, when completely sealed and consolidated will adequately resist the passage of moisture into the building and enable a roof to comply with the requirements of the national Building Regulation:

England and Wales — Approved Document C, Requirement C2(b), Section 6

Scotland — Mandatory Standard 3.10, clauses 3.10.1 and 3.10.7

Northern Ireland — Regulation 28(b).

6.2 The systems are impervious to water and will achieve a weathertight roof capable of accepting minor structural movement.

7 Properties in relation to fire



7.1 When tested, a system comprising a 19 mm external WBP plywood deck, a 50 mm thick foil-faced polyurethane insulation board, and a layer of Bailey Atlantic 300 mechanically fastened, will be unrestricted.

7.2 When used in protected specifications, including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC, the system can be considered unrestricted under the national Requirements.

7.3 In the opinion of the BBA, use of the system in irrigated roof gardens or green roofs will be unrestricted under the national Requirements:

England and Wales – Requirement B4(2)

Scotland – Mandatory Standard 2.8, Clause 2.8.1

Northern Ireland – Regulation 36(b)

7.4 If allowed to dry, plants used may allow flame spread across a roof. This should be taken into consideration when selecting suitable plants for the roof. Appropriate planting irrigation and/ or protection must be applied to ensure the overall fire rating of the roof is not compromised.



7.5 The designation of other specifications should be confirmed by:

England and Wales – Test or assessment in accordance with Approved Document B, Appendix A, Clause 1

Scotland – Test to conform to Mandatory Standard 2.8, Clause 2.8.1 and Annex 2.C

Northern Ireland – Test or assessment by a UKAS accredited laboratory, or an independent consultant with appropriate experience.

8 Resistance to wind uplift

8.1 The resistance to wind uplift of a mechanically-fixed waterproofing layer is provided by the fasteners passing through the membrane into the substrate. The number and position of fixings will depend on a number of factors including:

- wind uplift forces to be restrained
- pull-out strength of the fasteners
- tensile properties of the membrane
- appropriate calculation of safety factors.

8.2 The wind uplift forces are calculated in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex by the Certificate holder where necessary. On this basis, the number of fixings required should be established using a maximum permissible load of 0.4 kN per fixing.

8.3 A test for resistance to wind uplift for the partially bonded system gave a result of greater than 6 kPa. The adhesion of partially and fully bonded systems is sufficient to resist the effects of wind suction, thermal cycling or other minor structural movements likely to occur in service.

8.4 When the membranes are bonded to insulation boards the resistance to wind uplift will be dependent on the cohesive strength of the insulation and the method by which it is secured to the roof deck. This must be taken into account when selecting a suitable insulation material.

8.5 The ballast requirements for loose-laid systems should be calculated in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and its UK National Annex. The membrane should always be ballasted in accordance with BS 8217 : 2005 with a minimum depth of 50 mm of aggregate. In areas of high-wind exposure, the Certificate holder's advice should be sought. Alternatively, concrete slabs on suitable supports can be used.

8.6 The soil used in roof gardens must not be of a type that will be removed, or become delocalised, due to wind scour experienced on the roof.

8.7 It must be recognised that the type of plants used in roof gardens could significantly affect the expected wind loads experienced in service

9 Resistance to foot traffic

Results of test data indicate that the membranes can accept the limited foot traffic and light concentrated loads associated with installation and maintenance. Care must be taken to avoid puncture by sharp objects, or concentrated loads. On limited access roofs where excessive traffic is envisaged, such as for maintenance of lift equipment, a walkway must be provided, eg using concrete slabs supported on bearing pads.

10 Resistance to penetration of roots

10.1 Results of tests on Bailey Atlantic 300 and 400 waterproofing membranes indicate that they are suitable for use as root-resistant membranes and will provide adequate protection against penetration of roots.

10.2 Advice on suitable planting specifications can be sought from the Certificate holder.

11 Maintenance



11.1 Systems must be the subject of annual inspections and maintenance to ensure continued performance.

11.2 Green roofs and roof gardens must be the subject of regular inspections, particularly in autumn after leaf fall and in the spring, to ensure unwanted vegetation and other debris are cleared from the roof and drainage outlets (see section 4.7). Guidance is available in the latest editions of *The Green Roof Code – Green Roof Code of Best Practice for the UK* (2011).

11.3 Maintenance should include checks and operations to ensure the following where applicable:

- adequate ballast is in place and evenly distributed over the membrane
- protection layers are in good condition
- exposed membrane is free from the build-up of silt, and other debris and unwanted vegetation are cleared.

11.4 Where damage has occurred it should be repaired in accordance with section 17 and the Certificate holder's instructions.

12 Durability



Accelerated weathering tests and evidence from existing installations confirm that satisfactory retention of physical properties is achieved. Under normal service conditions the membranes will provide a durable roof waterproofing with a service life in excess of 25 years.

13 Reuse and recyclability

The products comprise polyolefin and glass matrix, which can be recycled.

Installation

14 General

14.1 Installation of Bailey Atlantic 300 and 400 Roof Waterproofing Membranes must be carried out by installers trained and approved by the Certificate holder in accordance with the relevant Clauses of the Certificate holder's instructions, BS 8000-4 : 1989 and this Certificate.

14.2 Substrates to which the membranes are applied must be sound, dry, clean and free from sharp projections such as nail heads and concrete nibs. When used over a rough substrate, a suitable protection layer must be placed over the substrate.

14.3 Installation should not be carried out during inclement weather (eg rain, fog, snow). When the temperature is below 5°C suitable precautions against surface condensation must be taken.

14.4 Detailing must be formed in accordance with the Certificate holder's instructions.

15 Procedure

Mechanically fastened

15.1 The membrane is laid out flat onto the substrate without folds or ripples, with 110 mm overlaps. Prior to installation of the fasteners the membrane must be secured against wind uplift using sandbags or other suitable means.

15.2 The membrane is fixed to the deck (through insulation boards, where appropriate) in the joint overlaps prior to welding of the joint. The fastener washers must be positioned a minimum of 10 mm from the edge of the membrane. The number of fixings should be calculated in accordance with section 8.2 with a maximum spacing of 300 mm centres.

15.3 The overlaps are sealed by hot-air welding (see section 16).

Partially and fully adhered

15.4 For partially-adhered specifications the Bailey Atlantic Polyurethane Adhesive is applied in strips to the substrate; the application rate varies depending upon the position on the roof to which it is being applied (see Table 2).

Table 2 Application rate of adhesive for partially adhered specifications

| Position | Application rate of adhesive (g·m ⁻²) | No of strips | Size of strips (mm) |
|-------------|---|--------------|---------------------|
| Field sheet | 160 | 8 | 7-8 |
| Field sheet | 160 | 4 | 15 |
| Perimeter | 240 | 10 | 7-8 |
| Corners | 320 | 12 | 7-8 |

15.5 For fully adhered specifications the adhesive is applied over the whole substrate at a coverage rate of 400 to 450 g·m⁻².

15.6 In dry conditions, to aid curing of the polyurethane adhesive, a fine spray of water should be applied to the adhesive, prior the installation of the membrane.

15.7 The selvedge must be kept clean of adhesive.

15.8 Once the adhesive has been applied, the membrane must be installed within 5 to 10 minutes by rolling it out onto the adhesive leaving minimum side laps of 50 mm. The ends of the membrane are butt jointed and a 200 mm wide flashing of Bailey Atlantic 300 membrane is welded over the joint. The position of the membrane can be adjusted for up to 20 minutes after being laid.

15.9 After application, the membrane is ballasted overnight to ensure a strong bond to the substrate is achieved.

Loose laid and ballasted

15.10 The membrane is laid out flat onto the substrate without folds or ripples, with 110 mm overlaps and temporarily secured against wind uplift using sandbags or other suitable means.

15.11 The membrane is mechanically fixed at perimeters and the laps welded together (see section 16).

15.12 The membrane must be covered with a 50 mm minimum thick layer of washed, well-rounded gravel (between 16 mm and 32 mm in diameter). In areas of high wind exposure, additional gravel may be required and/or the gravel may be bonded at the edges for a distance of one metre. Alternatively, concrete slabs on suitable supports can be used.

16 Jointing

16.1 The areas to be welded must be clean, dry and free from contamination. Where required, surfaces must be cleaned in accordance with the Certificate holder's instructions.

16.2 Welding is carried out by hand or using an automatic welding machine.

16.3 The welding gun temperature is set between 500°C to 600°C depending upon the ambient temperature and wind conditions.

16.4 The welded width of the joint must be a minimum of 50 mm. Care must be taken that overheating of the membrane does not occur as possible impairment of the membrane may result.

16.5 The seam should be tested with a suitable metal probe and any weakness repaired immediately.

17 Repair

In the event of accidental damage, repairs can be carried out by cleaning the area around the damage and applying a patch as described in the Certificate holder's instructions.

Technical Investigations

18 Tests

An assessment was made of data in relation to:

- thickness
- width
- mass per unit area
- straightness
- flatness
- ash content
- water vapour transmission
- water vapour resistance
- dynamic impact
 - EPS substrate
 - perlite substrate
- watertightness
- water absorption
- capillary
- resistance to peel (concrete)
 - control
 - heat aged
- resistance to slippage
- shear strength of joints
- peel strength of joints t-peel
- tensile strength

- elongation at maximal load
- nail tear
- low temperature foldability
 - heat aged
 - UV aged
- resistance to penetration of roots

19 Investigations

19.1 Existing data on fire performance were evaluated.

19.2 The manufacturing processes were evaluated and details were obtained of the quality and composition of the materials used.

19.3 Existing data on wind uplift testing for the mechanically fastened membrane were evaluated.

19.4 Data on mechanical fasteners and washers were evaluated.

Bibliography

BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*

BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

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

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

EN 13956 : 2012 *Flexible sheets for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics*

20 Conditions

20.1 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.

20.2 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.

20.3 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.

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

20.5 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.

20.6 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.