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## Agrément Certificate

18/5595

Product Sheet 6

### WYKAMOL WATERPROOFING SYSTEM

### WYKAMOL CM20 GEOTEXTILE MEMBRANE

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to Wykamol CM20 Geotextile Membrane, a high-density polyethylene (HDPE) membrane with geotextile backing, for damp-proofing walls below ground level and floors in new construction or in existing buildings. It is also used in new build as a protection and drainage board membrane in conjunction with horizontal and vertical external waterproofing systems. It forms part of the Wykamol Waterproofing System.

(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

**Resistance to water and water vapour** — the product is water resistant and has a high resistance to water vapour transmission (see section 6).

**Properties in relation to fire** — the product has not been classified in accordance with BS EN 13501-1 : 2018 (see section 7).

**Resistance to puncture, impact and loading** — the product has a high resistance to puncture and will not be damaged by normal foot traffic during installation, or while laying concrete or screeding. It can support the long-term loadings likely to be experienced in service without undue deformation (see section 8).

**Durability** — under normal conditions of use, the product will provide an effective barrier to the transmission of liquid water and water vapour for the life of the structure in which it is incorporated (see section 10).



The BBA has awarded this Certificate to the company named above for the product described herein. This product 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 First issue: 17 May 2022

Hardy Giesler  
Chief Executive Officer

*Certificate amended on 5 August 2022 to update section 4.3 and remove references to Radon.*

*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](http://www.bbacerts.co.uk)*

*Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.*

*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, Wykamol CM20 Geotextile Membrane, 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)

<b>Requirement:</b>	<b>C2(a)</b>	<b>Resistance to moisture</b>
<b>Comment:</b>		The product adequately resists the passage of moisture. See section 6.1 of this Certificate.
<b>Regulation:</b>	<b>7(1)</b>	<b>Materials and workmanship</b>
<b>Comment:</b>		The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.



### The Building (Scotland) Regulations 2004 (as amended)

<b>Regulation:</b>	<b>8(1)</b>	<b>Durability, workmanship and fitness of materials</b>
<b>Comment:</b>		The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
<b>Standard:</b>	<b>3.3</b>	<b>Flooding and ground water</b>
<b>Comment:</b>		The product can contribute to minimising or eliminating the effects of flooding on the building fabric and/or the building element, with reference to clause 3.3.1 <sup>(1)(2)</sup> of this Standard. See section 6.1 of this Certificate.
<b>Standard:</b>	<b>3.4</b>	<b>Moisture from the ground</b>
<b>Comment:</b>		The product adequately resists the passage of moisture with reference to clauses 3.4.1 <sup>(1)(2)</sup> , 3.4.2 <sup>(1)(2)</sup> , 3.4.5 <sup>(1)(2)</sup> , 3.4.6 <sup>(1)(2)</sup> and 3.4.7 <sup>(1)(2)</sup> of this Standard. See section 6.1 of this Certificate.
<b>Standard:</b>	<b>3.6(a)</b>	<b>Surface water drainage</b>
<b>Comment:</b>		The product can contribute to satisfying this Standard, with reference to clause 3.6.3 <sup>(1)(2)</sup> . See section 6.1 of this Certificate.
<b>Standard:</b>	<b>7.1(a)</b>	<b>Statement of sustainability</b>
<b>Comment:</b>		The product 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.
<b>Regulation:</b>	<b>12</b>	<b>Building standards applicable to conversions</b>
<b>Comment:</b>		Comments in relation to the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> .

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).



### The Building Regulations (Northern Ireland) 2012 (as amended)

<b>Regulation:</b>	<b>23(a)(i)</b>	<b>Fitness of materials and workmanship</b>
<b>Comment:</b>	<b>(iii)(b)(i)</b>	The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
<b>Regulation:</b>	<b>28(a)</b>	<b>Resistance to moisture and weather</b>
<b>Comment:</b>		The product adequately resists the passage of moisture. See section 6.1 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: 1 *Description* (1.2) of this Certificate.

### **Additional Information**

#### **NHBC Standards 2022**

In the opinion of the BBA, Wykamol CM20 Geotextile Membrane, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 5.1 *Substructure and ground bearing floors*, 5.2 *Suspended ground floors* and 5.4 *Waterproofing of basements and other below ground structures*.

Where Grade 3 waterproofing protection is required and the below-ground wall retains more than 600 mm (measured from the top of the retained ground to the lowest finished floor level), the product should be used in combination with either a Type A or B waterproofing protection.

In the opinion of the BBA, the use of the product on existing structures, when installed and used in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards for Conversions and Renovations*, taking account of other relevant guidance within the Chapter and the suitability of the substrate to receive the product.

#### **CE marking**

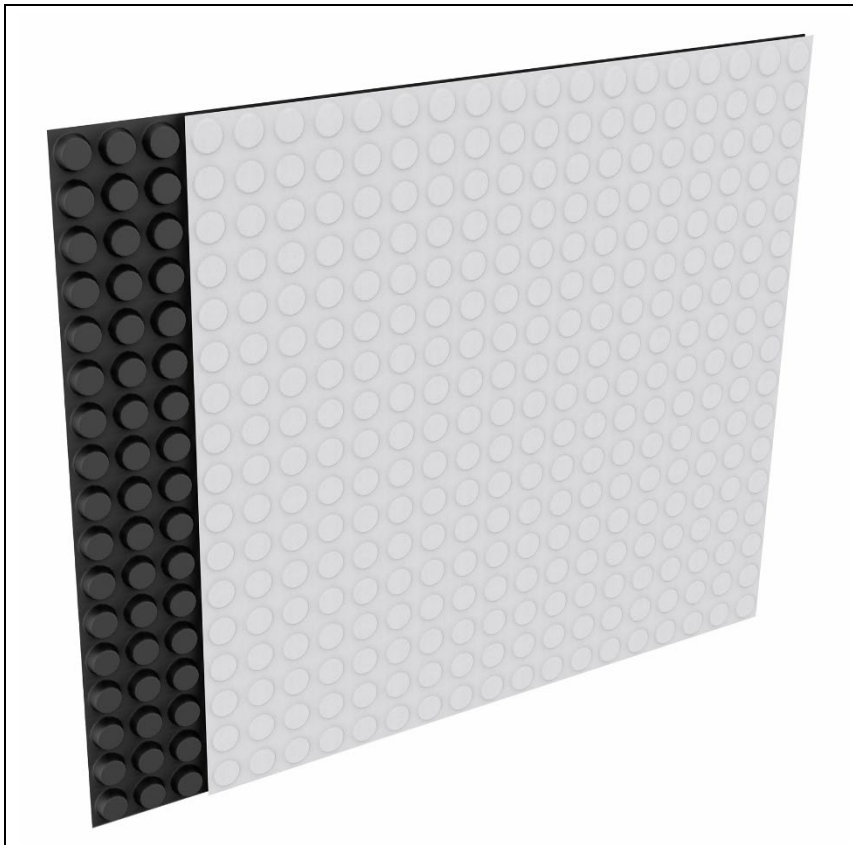
The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13967 : 2012.

### **Technical Specification**

#### **1 Description**

1.1 Wykamol CM20 Geotextile Membrane is an HDPE membrane, backed by a thermally bonded geotextile fabric, moulded to form raised studs at 50 mm centres incorporating a flanged edge (see Figure 1).

Figure 1 Wykamol CM20 Geotextile Membrane



1.2 The membrane is supplied in roll form, and has the following nominal characteristics:

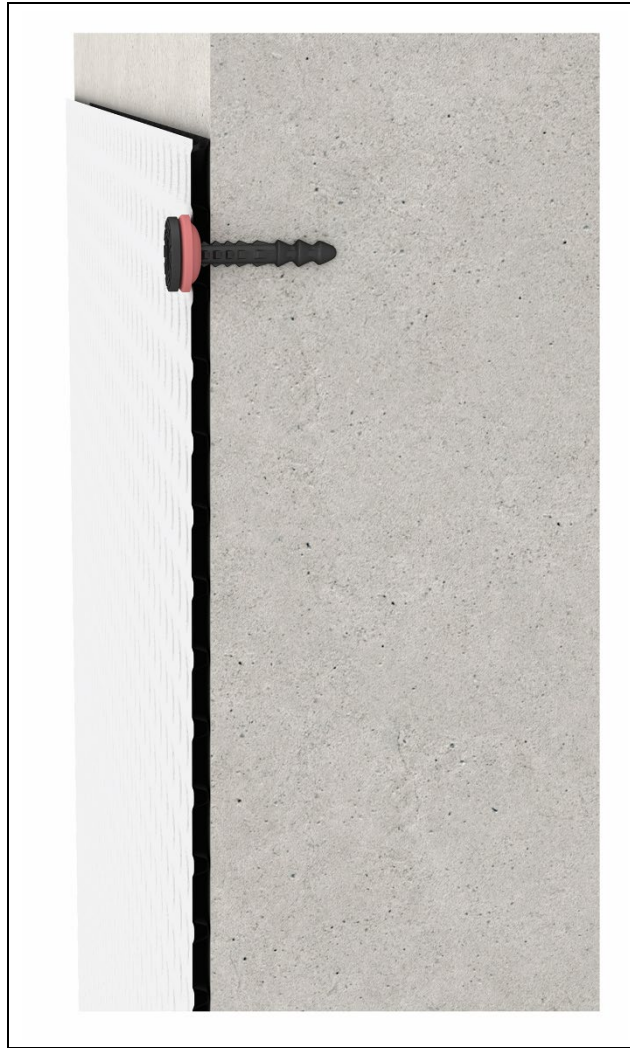
thickness (mm)	1.0
stud height (mm)	20
total depth (mm)	21.5
weight per unit area ( $\text{g}\cdot\text{m}^{-2}$ )	1000
roll size (m) <sup>(1)</sup>	2.0 x 10, 2.0 x 20
weight of roll (kg)	20, 40
air gap volume ( $\ell\cdot\text{m}^{-2}$ )	14.61.

(1) Includes a 100 mm stud-free area for overlapping sheets.

1.3 Ancillary items for use with the membrane include:

- CM Brick Plug — a 60 by 35 mm plastic plug with or without thermoplastic elastomer seal or Butyl Rope for fixing the membrane to brick, stone and concrete into a 10 mm diameter hole on above- and below-ground structures (see Figure 2)
- Butyl Tape — butyl rubber tape for sealing joints in the membrane
- Butyl Rope — butyl rubber beading for sealing joints in the membrane and sealing around plugs
- Corner Detail Tape — butyl rubber tape for sealing between vertical and horizontal membranes
- Butyl Overseal Tape — butyl 75 mm rubber tape for sealing butt joints between membranes, and detailing
- pre-formed thermoplastic elastomer seal washers — to fit around the plugs as an alternative to Butyl Rope
- Butyl Fibre Tape — butyl rubber tape with a fleece for sealing between vertical and horizontal membrane.

Figure 2 CM Brick Plug



## 2 Manufacture

2.1 The membrane is formed in a continuous process in which HDPE is extruded into sheets into which the stud impressions are formed. While still hot from forming, the fabric layer is applied and, after cooling, the product is trimmed.

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 being operated by the manufacturer are being maintained.

2.3 The management systems of Wykamol Group Ltd have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Garek Assured (Certificate 0611/1104/116G).

## 3 Delivery and site handling

3.1 The product is delivered to site in wrapped rolls bearing the product and Certificate holder's name and the BBA logo incorporating the number of this Certificate.

3.2 Rolls should be stored on end, under cover and protected from sharp objects, sunlight and high temperatures.

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Wykamol CM20 Geotextile Membrane.

### Design Considerations

#### 4 Use

4.1 Wykamol CM20 Geotextile Membrane is satisfactory for use as a damp-proof membrane on walls below ground and floors, in new construction or in existing buildings for:

- isolating and protecting external structure from surrounding soil
- relieving hydrostatic pressure from the face of the structure.

4.2 The product has not been assessed for use in chemically contaminated areas, such as brownfield sites.

4.3 The product is satisfactory for use in Type C (drained protection) constructions in accordance with BS 8102 : 2022.

4.4 Under normal operating conditions, the product is not affected by underfloor heating.

#### 5 Practicability of installation

The product is designed to be installed by competent specialist contractors experienced with damp-proofing and waterproofing work and having undergone training by the Certificate holder.

#### 6 Resistance to water and water vapour



6.1 The product is water resistant and has a high resistance to water vapour transmission.

6.2 All joints and fixings must be sealed with Butyl Tape , Butyl Rope or thermoplastic elastomer seal, and drainage channels and gullies, or sumps and pumps should be installed as necessary to disperse excess or standing water. The CM20 geotextile membrane can be simply overlapped and left unsealed if used as a protection and drainage board membrane layer.

#### 7 Properties in relation to fire

The Certificate holder has not declared a reaction to fire classification in accordance with BS EN 13501-1 : 2018.

#### 8 Resistance to puncture, impact and loading

8.1 The product has a high resistance to puncture and will not be damaged by normal foot traffic during installation or while laying concrete or screeding to BS 8204-1 : 2003.

8.2 The product can support the long-term imposed loadings defined in the UK National Annex to BS EN 1991-1-1 : 2002, Table NA.2, Categories A to D, without undue deformation.

#### 9 Maintenance

As the membrane is confined within a wall or floor space and has suitable durability (see section 10), maintenance is not required.

## 10 Durability



Under normal service conditions, the product will provide an effective barrier to the transmission of liquid water and water vapour for the life of the structure in which it is incorporated.

## 11 Reuse and recyclability

The product is made of HDPE, which can be recycled.

## Installation

## 12 Surface preparation

12.1 Prior to application of Wykamol CM20 Geotextile Membrane, consideration needs to be given to soil composition and the depth of the water table. An investigation must be carried out by a Geotechnical Engineer to determine the potential risks.

12.2 All surfaces must be free from any sharp protrusions and in reasonably sound condition. A triangular mortar fillet must be provided, using a suitable levelling material, at any point of the wall where it is necessary to smooth out angles between the vertical and horizontal elements of the structure.

## 13 Procedure

### General

13.1 Wykamol CM20 Geotextile Membrane can be installed horizontally or vertically in combination with any of the appropriate Wykamol Waterproofing Systems membranes which are the subject of other Product Sheets of this Certificate. It must be installed in accordance with the Certificate holder's instructions and this Certificate.

13.2 The membrane can be butt jointed or overlap the previously installed membrane sheet, with the geotextile fabric facing outwards (see Figure 3). Overlapped Joints can be left unsealed or sealed with Corner Detail Tape at the overlap.

13.3 Care must be taken when running Wykamol CM20 Geotextile Membrane around internal and external corners, to ensure the sheet is fixed tight to the angle.

### Walls

13.4 When installed vertically, the membrane is curtain hung from the top of the construction, with CM Brick Plugs fixed along the upper edge of the wall/construction.

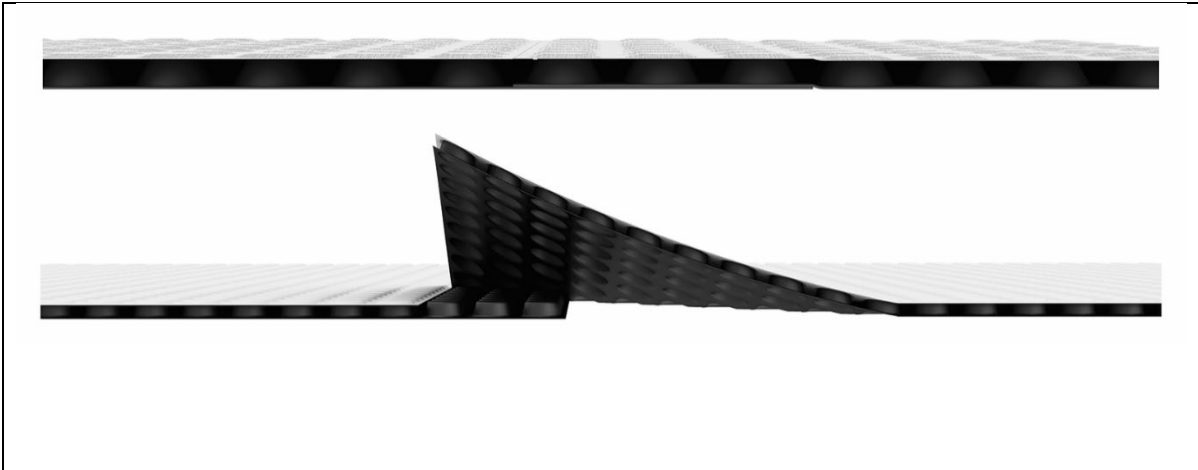
13.5 For horizontal installation, the higher membrane sheet should always overlap the lower membrane sheet.

13.6 Joints can be sealed using Corner Detail Tape.

13.7 When using the Wykamol sealed fixings, a 10 mm diameter hole is drilled through the membrane into the substrate. CM Brick Plugs with a pre-formed seal, or CM Brick Plugs to which Butyl Rope has been applied around the rim, are inserted into the holes and tapped/driven flush with the membrane using a rubber mallet. The pre-formed seal or Butyl Rope forms a sealing gasket between the plug and membrane. The seal must be compressed to function as a barrier against water ingress, and this should be visually checked as each plug is fixed.

13.8 It is essential that Wykamol CM20 Geotextile Membrane extends to, or just below, the level of the drainage channel, and the drainage channel is fully encapsulated in a granular infill and placed below internal floor level.

Figure 3 Edge overlap of Wykamol CM20 Geotextile Membrane



## Flooring

13.9 The membrane is installed by either butt jointing or overlapping the sheets of membrane; joints can be sealed using Corner Detail Tape. Fixings must not be applied through the floor membrane.

13.10 Floors should have a drainage outlet point and there should be a fall towards the outlet point, or a drainage channel made around the perimeter of the floor, to ensure that water can flow to the outlet.

13.11 The membrane is rolled out 'studs down' over the floor, and consecutive sheet widths are laid so the flanged edge overlaps the first sheet by four studs. Joints are sealed using Butyl Tape applied over the second row of studs. Joints without the flanged edge are overlapped by four rows of studs and sealed with Butyl Rope applied between the last two rows and over sealed using Corner Detail Tape, Butyl Fibre Tape or Butyl Overseal Tape.

13.12 The membrane is cut to within 5 to 10 mm of any pipes and services in the floor, and the gap filled with Butyl Rope. If necessary, a patch of the membrane is overlaid and sealed to the service with Butyl Rope, and its circumference sealed with Butyl Tape, Corner Detail Tape, Butyl Fibre Tape or Butyl Overseal Tape.

13.13 At wall/floor junctions, the membrane is turned up at the wall and sealed using Corner Detail Tape. The floor membrane can also be sealed to the upstand of the perimeter channel using Corner Detail Tape.

## 14 Floor membrane coverings<sup>(1)</sup>

14.1 If required, extruded, closed-cell polystyrene insulation boards (minimum density 30 kg·m<sup>-3</sup>) are laid over the membrane.

14.2 Suitable tongue-and-groove flooring board panels should be selected in accordance with BS EN 12871 : 2013, and loose-laid over the membrane to within 10 mm of the walls. The panels are staggered and the joints sealed with a thermoplastic wood adhesive to BS EN 204 : 2016.

14.3 Alternatively, the membrane is covered by concrete or screed of minimum thickness 50 mm (or of minimum thickness 65 mm if laid over insulation boards) in accordance with BS 8204-1 : 2003. Care should be taken to ensure that the membrane is not displaced when placing the concrete or screed. The concrete screed should be reinforced to inhibit shrinkage cracks.

14.4 Proprietary screeds which can generally be laid at thicknesses less than 50 mm, may also be used with the product; the Certificate holder can advise on suitable materials..

(1) The performance of these products has not been assessed by the BBA and is outside of the scope this Certificate.



### 15 Tests

Tests were carried out on Wykamol CM20 Geotextile Membrane and the results assessed to determine:

- thickness and weight per unit area
- resistance to short-term compression
- resistance to long-term compression
- strength of joint
- nail-tear resistance only
- water tightness of joints
- effectiveness of sealing plugs.

### 16 Investigations

16.1 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.

16.2 An assessment was made of the scope of use and durability of the product in relation to the generic properties of the membrane.

## Bibliography

BS 8102 : 2022 *Code of practice for protection of below ground structures against water ingress*

BS 8204-1 : 2003 + A1 : 2009 *Screeds, bases and in-situ floorings — Concrete bases and cementitious levelling screeds to receive floorings — Code of practice*

BS EN 204 : 2016 *Classification of thermoplastic wood adhesives for non-structural applications*

NA to BS EN 1991-1-1 : 2002 UK National Annex to *Eurocode 1 : Actions on structures — General actions— Densities, self-weight, imposed loads for buildings*

BS EN 12871 : 2013 *Wood-based panels — Determination of performance characteristics for load bearing boards for use in floors, walls and roofs*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements.*

BS EN 13967 : 2012 + A1 : 2017 *Flexible sheets for waterproofing — Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet — Definitions and characteristics*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

### 17 Conditions

#### 17.1 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.

17.2 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.

17.3 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.

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

17.5 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.

17.6 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.