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Agrément Certificate
19/5622
Product Sheet 1

OSMADRAIN UNDERGROUND DRAINAGE SYSTEM

OSMADRAIN UNIVERSAL GULLY SYSTEM

This Agrément Certificate Product Sheet⁽¹⁾ relates to the OsmaDrain Universal Gully System, for use with 110 mm PVC-U underground drain pipes and fittings to receive surface water from paved areas inaccessible to wheeled vehicles, surface water from roofs and/or waste water from ground floor domestic appliances.

(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

Strength — the components of the system have adequate strength to resist loads associated with installation and with subsequent use (see section 6).

Performance of joints — joints between components will remain watertight and will not be adversely affected by thermal expansion (see sections 7).

Flow characteristics — the system has adequate flow characteristics (see section 8).

Resistance to elevated temperatures — the system has adequate resistance to elevated temperatures likely to be found in domestic sewage (see section 10).

Durability — the system will have a service life in excess of 50 years (see section 13).



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 June 2021

Originally certificated under BBA Certificate 87/1835

Hardy Giesler
Chief Executive Officer

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 **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, the OsmaDrain Universal Gully 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 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:	H1(1)	Foul water drainage
Comment:		The system will convey the flow of foul water and minimise the risk of blockages or leaks. See sections 4.1, 6, 7, 8, 9, 10 and 11 of this Certificate.
Requirement:	H3(3)	Rainwater drainage
Comment:		The system will convey the flow of rainwater and minimise the risk of blockages or leaks. See sections 4.1, 6, 7, 8, 9, 10 and 11 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The system is acceptable. See section 13 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		The use of the system satisfies the requirements of this Regulation. See sections 12 and 13 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.6(a)	Surface water drainage
Comment:		The system will meet the relevant requirements of this Standard, with reference to clauses 3.6.1 ⁽¹⁾⁽²⁾ , 3.6.2 ⁽¹⁾⁽²⁾ and 3.6.3 ⁽¹⁾⁽²⁾ . See sections 4.1, 6, 7, 8, 9, 10 and 11 of this Certificate.
Standard:	3.7(b)	Wastewater drainage
Comment:		The system will meet the relevant requirements of this Standard, with reference to clauses 3.7.3 ⁽¹⁾⁽²⁾ and 3.7.4 ⁽¹⁾⁽²⁾ . See sections 4.1, 6, 7, 8, 9, 10 and 11 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The system 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 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(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)	The system is acceptable. See section 13 and the <i>Installation</i> part of this Certificate.
Regulation:	81	Underground foul drainage
Comment:		The system will convey the flow of foul water and minimise the risk of blockages or leaks. See sections 4.1, 6, 7, 8, 9, 10 and 11 of this Certificate.

Regulation: 82	Rainwater drainage
Comment:	The system will convey the flow of rainwater and minimise the risk of blockages or leaks. See sections 4.1, 6, 7, 8, 9, 10 and 11 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: 15 *Procedure* (15.1) of the *Installation* part of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, OsmaDrain Universal Gully 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*, Chapter 5.3 *Drainage below ground*.

Technical Specification

1 Description

1.1 The OsmaDrain Universal Gully System is assembled from a range of components to allow various inlet and outlet arrangements to be assembled on site. The basic components are; the gully trap, hopper and outlet bend (see Table 1 and Figures 1, 2 and 3).

Table 1 Universal gully system components

Product code	Product
4D 161 ⁽¹⁾	Single socket short radius 87½° bend
4D 169 ⁽²⁾	Single socket short radius 87½° access bend
4D 500	Single socket gully trap
4D 503	Solvent weld socket hopper (plain)
4D 504	Solvent weld socket hopper (vertical inlet)
4D 507	Plain ended hopper (plain)
4D 508	Plain ended hopper (vertical inlet)
4D 526	Sealed access plate
4D 527	Plain ended sealed access hopper
4D 561 ⁽¹⁾	Double socket short radius 87½° bend
4D 563 ⁽¹⁾	Double socket short radius 45° bend
4D 569 ⁽²⁾	Double socket short radius 87½° access bend
4D 589 ⁽¹⁾	Single socket bossed pipe

(1) Component is kitemarked to BS EN 1401-1 : 2009.

(2) Component is kitemarked to BS 4660 : 2000.

Figure 1 Typical combinations for use with universal gully

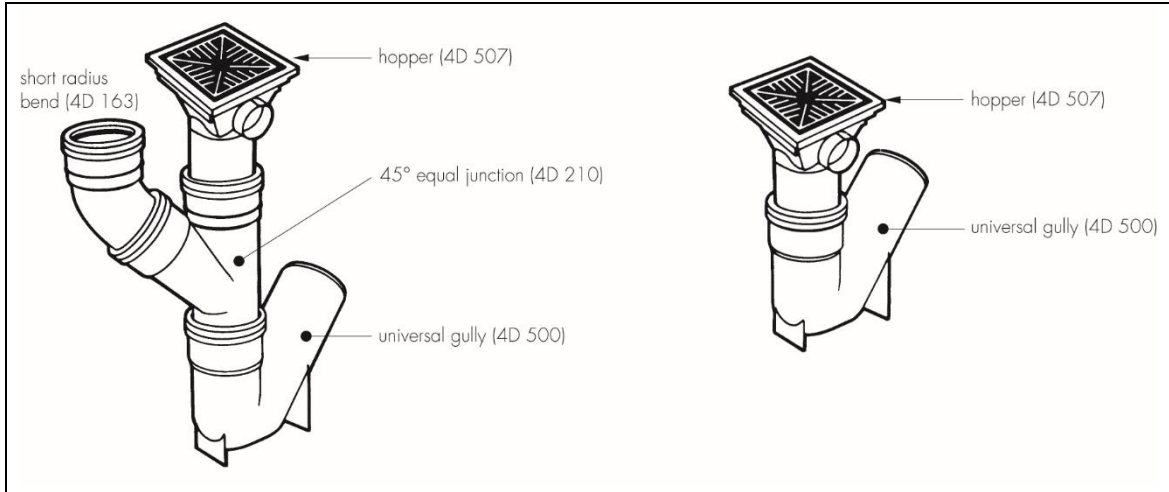


Figure 2 Alternative outlet assemblies

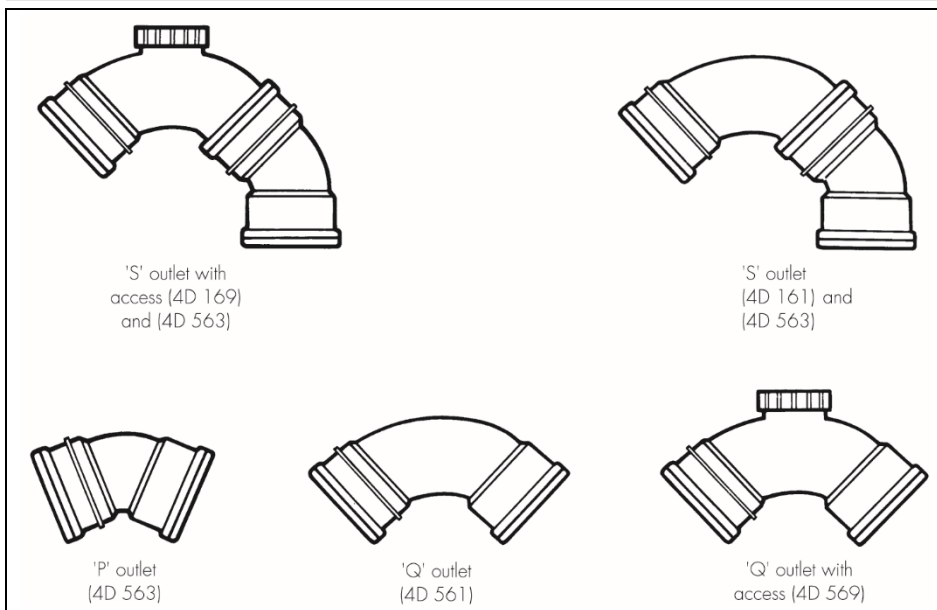
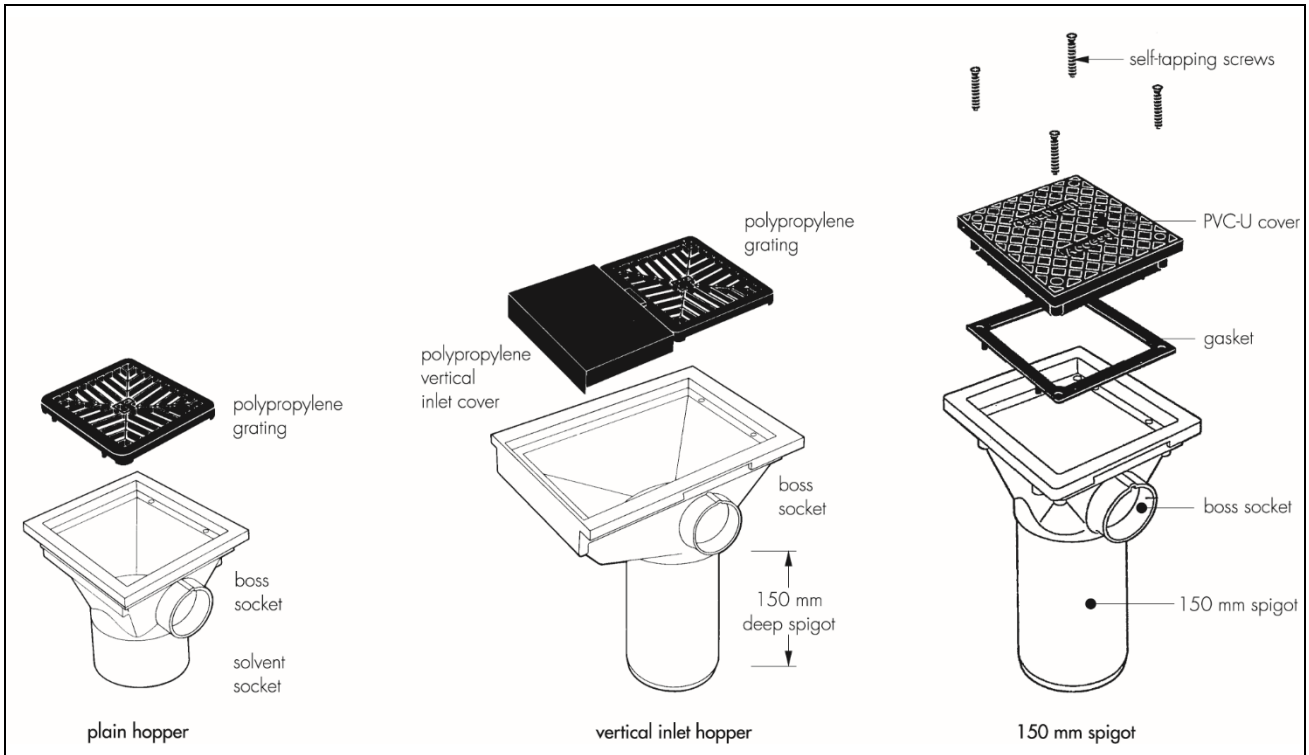


Figure 3 Detail of hoppers



1.2 The gully trap and hoppers and the sealed access cover are injection moulded in PVC-U. Inlet covers and gratings are injection moulded in polypropylene as shown in Figure 3. These components comply with the quality and colour requirements of BS EN 1401-1 : 2019 and BS 4660 : 2000.

1.3 Outlet bends and outlet access bends are injection moulded in PVC-U and kitemarked to BS EN 1401-1 : 2009 and BS 4660 : 2000 respectively.

1.4 The 110 mm diameter ring seals used in conjunction with the system components are either Ethylene Propylene Diene Monomer rubber (EPDM) (4D529) or Thermoplastic Elastomer (TPE) (4D130) to BS EN 681-1 : 1996 or BS EN 681-2 : 2000 respectively.

2 Manufacture

2.1 All components are manufactured by injection moulding process.

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 systems of Wavin Ltd have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by BSI (Certificate FM00217) and BS EN ISO 14001 : 2015 by Intertek (Certificate 042231).

2.4 BSI Kitemark licence No. KM 07091 has been issued to Wavin, Parsonage Way, Chippenham, Wiltshire, SN15 5PN, for the manufacture of fittings certified to BS EN 1401-1 : 2009 and BS 4660 : 2000.

3 Delivery and site handling

- 3.1 The components are delivered to site in plastic bags containing similar items, and should remain in their packaging during storage to minimise the risk of loss or damage.
- 3.2 If long term storage in the open is likely then the components should be shaded from direct sunlight.
- 3.3 Components are engraved with the number of this Certificate except those shown as kitemarked in Table 1.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the OsmaDrain Universal Gully System.

Design Considerations

4 Use



4.1 The OsmaDrain Universal Gully System is suitable for use in domestic drains designed in accordance with BS EN 752 : 2017 for the conveyance, by combined or separate systems, of surface water and domestic sewage as is permitted to be discharged into public sewers by the Water Industry Act 1991, Chapter 56, and surface water and sewage as is permitted and defined by the Sewerage (Scotland) Act 1968 and the Water and Sewerage Services (Northern Ireland) Order 2006.

4.2 The system has not been assessed for use with untreated trade effluents and such use is outside the scope of this Certificate.

4.3 The gully system is for external use with 110 mm diameter pipes and fittings to BS 4660 : 2000, BS EN 1401-1 : 2019. The system must be installed adjacent to buildings where they cannot be subjected to vertical loading.

5 Practicability of installation

The system is designed to be installed by a general builder or a competent contractor experienced in below-ground drainage work.

6 Strength



The components of the universal gully system have adequate strength to resist loads associated with installation and subsequent use in locations inaccessible to wheeled vehicles. They are not suitable for use in areas subject to vertical loading.

7 Performance of joints



7.1 Joints between the components of the gully system, and between the gully system and drainage systems complying with BS EN 1401-1 : 2019 and BS 4660 : 2000, will remain watertight under conditions of deformation and pipeline deflection in excess of those expected to occur in normal good drainage practice.

7.2 The dimensions of sockets and sealing rings are such as to give satisfactory joints. The performance of the joints will not be affected by thermal movement when the system is correctly installed and limited to the conditions of use set out in this Product Sheet.

8 Flow characteristics



8.1 The gully system has adequate flow characteristics and will retain an effective water seal in conditions of induced or self-siphonage in excess of those associated with good drainage practice.

8.2 The sealed access hopper remains airtight under normal service conditions.

9 Resistance to chemicals



The universal gully system will be unaffected by those types and quantities of chemicals associated with waste water and surface water.

10 Resistance to elevated temperatures



The gully system has adequate resistance to the temperatures likely to be found in waste and surface water.

11 Rodding



If access is required for rodding the drain from a position near the gully, an access bend (4D 569) and a cast iron cover and frame assembly must be used (see Figure 4a). The drain cannot be rodded through the universal gully.

12 Maintenance



Removal of the grating or sealed access plate will allow access to the gully trap for the removal of debris provided the recommended installation depths are not exceeded. Damaged gratings and covers can be easily replaced.

13 Durability



In the opinion of the BBA, when used in the context of this Certificate, the materials from which the components are manufactured will not significantly deteriorate, and the system will have a service life in excess of 50 years.

14 Reuse and recyclability

The system components contain PVC-U and polypropylene, which can be recycled.

Installation

15 Procedure

15.1 Installation of the OsmaDrain Universal Gully System must be in accordance with BS 8000-14 : 1989, BS 8000-0 : 2014, BS EN 1610 : 2015, BS EN 752 : 2017 and the current version of the Certificate holder's *OsmaDrain Installation Guide*. Pipes connected to this system should be installed in accordance with section 17 of Product Sheet 2 of this Certificate.

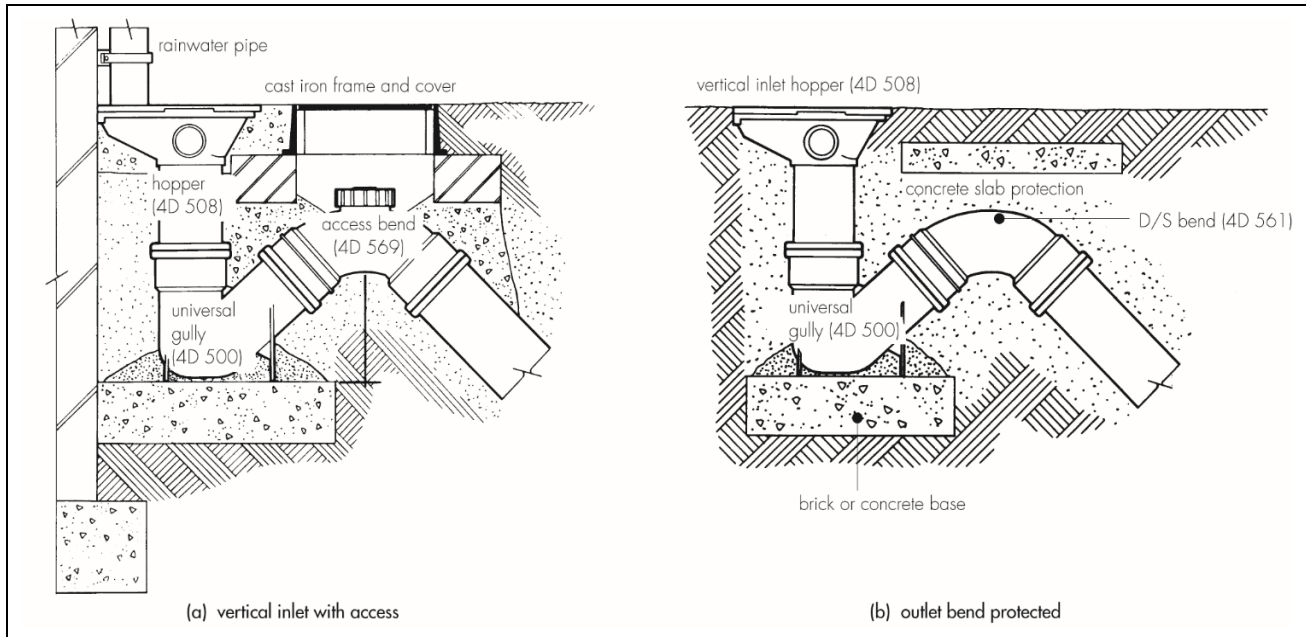
15.2 Precautions must be taken during and after installation to protect the gully arrangements from damage due to site traffic.

15.3 The universal gully system is assembled above ground and positioned on levelled bricks or a prepared concrete slab. The trap is bedded and surrounded in concrete to give full support to the base. Connections are then made and the assembly backfilled (as shown in Figure 4) with suitable granular material.

15.4 The crown of the outlet bend from the gully must be below the level to which garden implements can penetrate when it is not protected by paving or concrete at ground level. When this is not practicable a concrete slab should be bedded above the bend (see Figure 4b).

15.5 The depth from ground level to the base of the trap should not exceed 600 mm to facilitate the removal of debris.

Figure 4 Typical installation details



Technical Investigations

16 Tests

Tests were carried out and the results assessed to determine:

- dimensional accuracy
- effect of thermal cycling
- Vicat softening point
- impact resistance
- watertightness
- airtightness.

17 Investigations

17.1 An evaluation of existing data was made to assess:

- flow characteristics
- resistance to chemicals
- suitability of materials
- durability
- effect of siphonage on trap seal loss.

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

17.3 A site visit was undertaken to assess the practicability of the installation instructions.

Bibliography

BS 4660 : 2000 *Thermoplastics ancillary fittings of nominal sizes 110 and 160 for below ground gravity drainage and sewerage*

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

BS 8000-14 : 1989 *Workmanship on building sites — Code of practice for below ground drainage*

BS EN 681-1 : 1996 *Elastomeric seals — Material requirements for pipe joint seals used in water and drainage applications — Vulcanized rubber*

BS EN 681-2 : 2000 *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Thermoplastic elastomers*

BS EN 752 : 2017 *Drain and sewer systems outside buildings — Sewer system management*

BS EN 1401-1 : 2009 *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinylchloride) (PVC-U) — Specifications for pipes, fittings and the system*

BS EN 1401-1 : 2019 *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinylchloride) (PVC-U) — Specifications for pipes, fittings and the system*

BS EN 1610 : 2015 *Construction and testing of drains and sewers*

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

BS EN ISO 14001 : 2015 *Environmental management systems — Requirements with guidance for use*

18 Conditions

18.1 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.

18.2 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.

18.3 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.

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

18.5 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.

18.6 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.