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Agrément Certificate
22/6518
Product Sheet 1 Issue 1

AXTER SECOND GENERATION HOT MELT STRUCTURAL WATERPROOFING SYSTEMS

WILOTEKT-PLUS SECOND GENERATION MONOLITHIC HOT MELT STRUCTURAL WATERPROOFING SYSTEM

This Agrément Certificate Product Sheet(1) relates to the Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System(2), a modified bitumen-based waterproofing system, for use on protected flat and zero fall roofs in inverted roofs, green roofs, roof gardens, blue roof specifications in combination with a stormwater attenuation system(3) with limited access or pedestrian access and as a protected waterproofing system overlaid with a suitable wearing course on trafficked decks.

(1) Hereinafter referred to as 'Certificate'.
(2) Wilotekt-Plus is a registered Trademark.
(3) The stormwater attenuation system is outside the scope of this Certificate.

The assessment includes

Product factors:
- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:
- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:
- regular assessment of production
- formal 3-yearly review

KEY FACTORS ASSESSED

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

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 issue: 17 January 2023

Hardy Giesler
Chief Executive Officer

Certificate amended on 20 March 2023 to include NHBC Standards and reference to vehicular decks.

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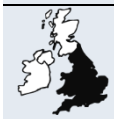
SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that the Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



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

Requirement:	**B4(2)**	**External fire spread**
Comment:		The product, when used with suitable surface protection, may enable a roof to be unrestricted by this Requirement. See section 2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The product will enable a structure to satisfy this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The product is acceptable. See section 8 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Fitness and durability of materials and workmanship**
Comment:		Use of the product satisfies the requirements of this Regulation. See sections 8 and 9 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	2.8	Spread from neighbouring buildings
Comment:		The product, when used with suitable surface protection may enable a roof to be unrestricted by clause 2.8.1(1)(2) of this Standard. See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product 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 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product 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:		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(1)(2) and Schedule 6(1)(2).

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

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

Regulation:	**23(1)(a) (i)(ii)(iii) (iv)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The product is acceptable. See section 8 and the *Installation* part of this Certificate.
Regulation:	**28(b)**	**Resistance to ground moisture and weather**
Comment:		The product will enable a structure to satisfy the requirements of this Regulation. See section 3 of this Certificate.
Regulation:	**36(b)**	**External fire spread**
Comment:		The product, when used with suitable surface protection, may enable a roof to be unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2023

In the opinion of the BBA, the Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing 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 7.1 *Flat roofs, terraces and balconies.*

In addition, in the opinion of the BBA, the product 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.

The NHBC Standards do not cover the refurbishment of existing roofs.

Fulfilment of Requirements

The BBA has judged the Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System to be satisfactory for use as a waterproofing system as described in this Certificate. The product is for use on protected flat and zero fall roofs in inverted roofs, green roofs, roof gardens, blue roof specifications in combination with a stormwater attenuation system with limited access or pedestrian access and as a protected waterproofing system overlaid with a suitable wearing course on trafficked decks subjected to vehicular and pedestrian traffic.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment.

The Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System is a hot-applied polymer-modified bitumen and a polymer-modified sheet membrane system, used to provide a waterproofing layer with a nominal coating thickness of 6 mm and consists of:

- Wilotekt Surface Conditioning Primer — a bitumen-based primer, for use on concrete substrates prior to the application of Wilotekt Compound
- Wilotekt Reinforcement Mesh — a glass reinforcement mesh that is embedded in Wilotekt-Elastomer Bitumen
- Wilotekt Compound — a polymer-modified, hot-applied bitumen compound
- Wilotekt Protection Membrane — a polymer modified bitumen sheet membrane.

The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics of the Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System

Characteristic (unit)	Value
Melting point (ring and ball) (EN 1427)	> 85°C
Penetration at 25°C (EN 1426)	>60 < 90 1/10°mm
Elongation at break	1500%

Ancillary Items

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

- Starcoat/Starcoat QC — a cold liquid applied single component polyurethane resin waterproofing system (the subject of BBA Certificate 13/5031, Product Sheet 1)
- Starcoat PMMA — a cold liquid applied polymethyl methacrylate resin waterproofing system (the subject of BBA Certificate 16/5322, Product Sheet 1)
- Starcoat R cold liquid applied bitumen waterproofing — for waterproofing complex details
- inverted roof insulation — vacuum insulation panels (VIP), extruded polystyrene (XPS) boards, expanded polystyrene (EPS) boards and Cellular Glass (CG) boards
- upstand insulation boards — EPS, XPS, mineral wool (MW) & CG upstand insulation boards
- water flow reducing layers (WFRL)
- Flame Free self-adhesive or heat activated, reinforced, elastomeric SBS modified bitumen underlay and capsheet membranes (the subject of BBA Certificate 15/5222 Product Sheet 1, 2 and 3)
- drainage, protection, filtration, moisture retention layers and related ancillaries — for use in living roof and podium deck hard landscaping applications
- extensive, intensive, biodiverse and modular living roof systems and related ancillaries
- blue roof attenuation systems and related ancillaries
- paviour supports and related ancillaries
- hard and soft landscaping finishes eg gravel ballast
- ceramic roof tiles and related ancillaries
- prefabricated roof accessories and ancillaries, such as pipe collars
- rainwater outlets and related ancillaries.

The product is intended for use as a waterproofing layer for limited or pedestrian access roofs in:

- inverted roof specifications using aggregate ballast and paving on flat roofs, including zero fall roofs with limited access
- protected roof specifications, eg covered by pavers or other suitable protection on flat roofs, including zero fall roofs
- green roof (extensive), biodiverse roof and brown roof specifications on flat roofs, including zero fall roofs with limited access, and roof garden (intensive)
- blue roof specifications in combination with a stormwater attenuation system(1), on flat roofs, including zero fall roofs.

(1) The stormwater attenuation system is outside the scope of this Certificate.

Applications

The product is intended for use on the following substrates:

- in-situ precast concrete or concrete block
- lightweight structural concrete
- timber (exterior grade plywood, OSB3, composite timber or sawn timber)
- steel (free of rust, scale, oil and other contaminants)
- other metals (including upstands).

For use on parking decks, the product must be overlaid with a suitable wearing course. Suitable materials include asphalt, concrete, paving slabs and block pavers.

Definitions for product and applications inspected

The following terms are defined for the purpose of this Certificate as:

- limited access roofs — a roof subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc. Where traffic in excess of this is envisaged, additional protection to the membrane must be provided
- pedestrian access roofs — a roof not subjected to vehicular traffic
- flat roofs - a roof having a minimum finished fall of 1:80
- pitched roofs — a roof having a fall greater than 1:6
- zero fall roofs — a roof having a finished fall which can vary between 0 and 1:80
- roof garden (intensive) — a roof with a substantial layer of growing medium with planting that can include shrubs and trees, generally accessible to pedestrians
- green roof (extensive) — a roof with a shallow layer of growing medium planted with low-maintenance plants such as mosses, sedums, grasses and some wild flower species
- biodiverse living roof — a roof with a growing medium selected to allow indigenous plant species to inhabit the roof over time
- blue roof — a flat roof designed to allow controlled attenuation of rain fall during heavy and storm events, as part of sustainable urban drainage systems (SUDS)
- trafficked deck – a roof protected with a wearing course suitable for pedestrian and vehicular use such as parking decks and podium decks.

Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessments are shown below. Conclusions apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 When tested to CEN/TS 1187 : 2012, Test 4 and classified to EN 13501-5 : 2016, the products given below in Table 2 achieved B_{ROOF}(t4) for slopes below 10°.

Table 2 Tested systems

Support	Orientated Strand Board Type 3 (OSB3) (not FR Grade) (18 mm ; 600 kg·m^{-3})	
Fixing method	Fully bonded. Hot roll-and-pour	
Waterproofing system	Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System	
Fixing method	Loose laid	
Insulation	HYTHERM ECO XPS, HYTHERM ULTRA XPS, HYTHERM XPS, HYTHERM EPS, HYTHERM HP EPS (50 MM UP TO ANY THICKNESS)	
Fixing method	Loose laid	
Top layer	Axter Water Flow Reducing Layer (WFRL)	
Fixing method	Adjustable pedestal (8 mm up to any thickness)	Loose laid/positioned in-situ and ballasted by selected slab/tile/decking roof finish
Roof finish	Paving slabs/non-combustible (A1) top layer (38 mm up to any thickness) with pedestals (8 mm up to any thickness)	Gravel ballast with optional polyethylene netting and optional polypropylene pegs. Optional Pedestals (8 mm up to any thickness)

(1) Fire test/Classification reports, reference 21070D, conducted by Warrington Fire, Gent. Report available from the Certificate holder.

2.1.2 A roof incorporating the systems given in Table 2 will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a boundary (restrictions may apply at junctions with compartment walls).

2.1.3 A roof incorporating the system will be similarly unrestricted in the following circumstances:

- protected or inverted roof specifications, including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC, can be considered to be unrestricted under the national Requirements
- a roof garden covered with a drainage layer of gravel 100 mm thick and a soil layer 300 mm thick
- irrigated roof gardens and green roofs.

2.1.4 The classification and permissible areas of use of other specifications should be confirmed by reference to the requirements of the documents supporting the national Building Regulations.

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

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 3.

Table 3 Weathertightness performance

Product assessed	Assessment method	Requirement	Result
Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System	Watertightness TR 003	After testing, product must still be watertight	Watertight
	Water vapour permeability EN 1931 : 2000	The value of the water vapour resistance must be stated	$\mu \leq 30000$

3.1.2 On the basis of data assessed, the product will adequately resist the passage of moisture to the inside of a building and so satisfy the relevant requirements of the national Building Regulations.

3.2 Resistance to wind uplift

3.2.1 The product is always used under inverted roofs, heavy protection, roof garden or green roofs and therefore may be treated as loose laid and ballasted assembled systems in respect of the resistance to wind uplift. The resistance to wind uplift may be determined by calculation of the weight of the protection.

3.2.2 The ballast requirements for loose-laid specifications must be calculated by a suitably competent and experienced individual in accordance with the relevant parts of BS EN 1991-1-4 : 2005 and its UK National Annex. The product must always be ballasted with a minimum depth of 50 mm of aggregate (20 to 40 grade gravel). In areas of high wind exposure, the Certificate holder's advice should be sought, but such advice is outside of the scope of this Certificate. Alternatively, concrete slabs on suitable supports can be used.

3.2.3 The ballast on protected roofs must be of a type that will not be removed or become delocalised owing to wind scour experienced on the roof.

3.2.4 The soil used in intensive planting must not be of a type that will be removed, or become localised, owing to wind scour on the site.

3.2.5 It must be recognised that the type of plants used could significantly affect the expected wind loads experienced in service.

3.3 Resistance to mechanical damage

3.3.1 Results of resistance to mechanical damage tests are given in Table 4.

Table 4 Mechanical resistance results

Product assessed	Assessment method	Requirement	Result
Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System	Dynamic indentation to EOTA TR-006	After testing, system must still be watertight	
	Control		I4
	Tested at -10°C		I4
	Static indentation to EOTA TR-007	After testing, system must still be watertight	
	Control		L4
	Tested at +60°C		L4

3.3.2 The product with Wilotekt Protection Membrane can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance. Reasonable care should be taken to avoid puncture by sharp objects or concentrated loads. Where traffic in excess of this is envisaged, for example, for lift equipment maintenance, a walkway must be provided.

3.3.3 When used over construction or bridging joints, the product with Wilotekt Protection Membrane can accommodate, without damage, the minor structural movement likely to occur under normal service conditions. When used over expansion joints, the system should be correctly detailed in accordance with the Certificate holder's instructions.

3.3.4 The product with Wilotekt Protection Membrane is capable of accepting minor structural movement while remaining weathertight.

3.4 Resistance to root penetration

3.4.1 Results of resistance to root penetration tests are given in Table 5.

Table 5 Resistance to root penetration results

Product assessed	Assessment method	Requirement	Result
Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System	EAD 030065-00-0402 Resistance to plant root EAD 2.2.10	No root penetration	Pass

3.4.2 When used in green roofs, roof gardens and biodiverse roofs, the product will adequately resist penetration by plant roots.

3.4.3 Advice on suitable planting specifications can be obtained from the Certificate holder, but such advice is outside the scope of this Certificate.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

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

8.2 Specific test data were assessed as given in Table 6.

Table 6 Results of durability tests

Product assessed	Assessment method	Requirement	Result
Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System	Resistance to fatigue to EOTA TR-008	After testing, system must still be watertight. No visible debonding. Individual layers must remain bonded to each other	Pass
	Dynamic indentation to EOTA TR-006	After testing, system must still be watertight	
	Heat aged at 70°C for 200 days		I4
	Water exposure at 60°C for 180 days		I4
	Static indentation to EOTA TR-007	After testing, system must still be watertight	
	Heat aged at 70°C for 200 days		L_4
	Water exposure at 60°C for 180 days		L_4
	Needle penetration at 50°C to EN 1427 Flow at 60°C to Can/CG SB 37.50-M89 Polymer modified bitumen heated for 1h at 200°C	The properties measured must fall within the accepted limits stated by the Certificate holder and must not affect the performance of the system	Pass
Wilotekt-Plus Second Generation Monolithic Hot Melt Structural Waterproofing System (with Wilotekt Protection Membrane(1))	Section 3.3.2.5 Resistance to chisel impact at 23 and 40°C *HAPAS Guidelines document for the assessment and certification of waterproofing systems for use on concrete decks of highway bridges* August 2012	No penetration of the cap sheet	Pass
	Section 3.3.2.8 Resistance to aggregate indentation at 125°C *HAPAS Guidelines document for the assessment and certification of waterproofing systems for use on concrete decks of highway bridges* August 2012	The recovery period must not exceed 50% of the initial	Pass

(1) This was carried out with 3.39 $kg \cdot m^{-2}$ membrane.

8.3 Service life

8.3.1 Under normal service conditions, for use as a waterproofing layer for limited or pedestrian access roofs, the system will have a life equivalent to the structure in which it is incorporated, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.3.2 Under normal service conditions, for use as a protected waterproofing system overlaid with a suitable surface course on trafficked decks, the system will have a life equivalent to the system in which it is incorporated, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

The design process was assessed, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1 Design

9.1.1 Decks to which the product is to be applied must comply with the relevant requirements of BS 6229 : 2018, BS 8217 : 2005 and, where appropriate, NHBC Standards 2023, Chapter 7.1.

9.1.2 For design purposes of flat roofs, twice the minimum finished fall must be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls.

9.1.3 The product must not be installed directly to profiled metal sheet. Timber board, sheet metal or calcium silicate boards should be mechanically fixed to the profiled metal to carry the system. The Certificate holder's advice should be sought in this instance, but such advice is outside of the scope of this Certificate.

9.1.4 Structural decks to which the product is to be applied must be suitable to transmit the dead and imposed loads experienced in service. Allowance must be made for loading deflections to ensure that the free drainage of water is maintained.

9.1.5 Imposed loads, dead loading and wind loads must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

9.1.6 The drainage systems for inverted roofs, zero fall roofs, blue roofs, green roofs or roof gardens must be correctly designed, and the following points should be addressed:

- 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.

9.1.7 Inverted roof specifications must be designed in accordance with the BBA Information Bulletin No 4 *Inverted roofs —Drainage and U value corrections.*

9.1.8 Insulation materials used in conjunction with the product must be suitable for use within inverted roofs, the subject of a current BBA Certificate and used in accordance with, and within the scope of, that Certificate, and used in accordance with the manufacturer's instructions.

9.1.9 Where active joints are encountered, the system must be used with suitable expansion joints. The Certificate holder must be consulted for suitable products and design of detailing. This advice, and materials, are outside the scope of this Certificate.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A.

9.2.3 The NHBC requires that the Wilotekt Plus Second Generation Monolithic Hot Melt Structural Waterproofing System, once installed, is inspected in accordance with *NHBC Standards* 2023, Chapter 7.1, Clause 7.1.12, including undergoing an appropriate integrity test, where required. Any damage of the product assessed in this Certificate must be repaired in accordance with section 9.4 and reinspected, in order to maintain product performance.

9.2.4 Where required, the Certificate holder's recommended inverted roof finishes (insulation, ballast, paving slabs, green living roof, blue roof finishes) should be applied in accordance with the Certificate holder's instructions.

9.2.5 When used on a trafficked deck, the system must be overlaid with a suitable wearing surface as soon as practicable after installation of the membrane and before the system is subjected to vehicular trafficking. The Certificate holder must be consulted for suitable products, but such advice and materials are outside the scope of this Certificate.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the product must be carried out by trained contractors using specialist equipment.

9.4 Maintenance and repair

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

9.4.2 The product must be the subject of six-monthly inspections and maintenance in accordance with the recommendations made in BS 6229 : 2018, Chapter 7 and Certificate holder's own maintenance requirements, where relevant, to ensure continued satisfactory performance.

9.4.3 Where damage has occurred it must be repaired in accordance with the Certificate holder's instructions.

9.4.4 Any damage to the product must be repaired as soon as possible to ensure that the integrity of the waterproofing is maintained. The advice of the Certificate holder should be sought but such advice is outside of the scope of this Certificate.

9.4.5 Where maintenance or repair of any of the roof components above the waterproofing system is necessary, care must be taken to avoid damage to the membrane. If damage occurs, it should be repaired in accordance with the Certificate holder's instructions.

9.4.6 In the event that the product is contaminated by chemicals, oils and greases, the advice of the Certificate holder should be sought, but such advice is outside of the scope of this Certificate.

10 Manufacture

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate

10.1.3 The quality control procedures and testing to be undertaken have been assessed and deemed appropriate and adequate

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

†10.1.6 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the product is delivered to site in packaging bearing the product name, the Certificate holder's name, weight of contents and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate.

11.3 Reinforcing and protection layers are packaged with labels bearing the Certificate holder's trade name and must be stored under cover and kept dry.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product and/or components under the *GB CLP Regulation* and *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

CE marking

The Certificate holder has taken the responsibility of CE marking the product, in accordance with European Technical Assessment 03/0049, issued by DIBt under ETAG 005 : 2005, Parts 1 and 5.

Management Systems Certification for production

The management system of the manufacturer for Wilotekt Protection Membrane has been assessed and registered as meeting the requirements of ISO/IEC 9001 : 2015 by AFAQ (Certificate QUAL/1996/5190.11).

The management system of the manufacturer for Wilotekt Elastomeric Bitumen has been assessed and registered as meeting the requirements of ISO/IEC 9001 : 2015 by Silmos-Q s.r.o. (Certificate 15013).

Additional information on installation

General

A.1 Concrete structures should be designed and built in accordance with BS EN 1992-1-1: 2004 and its UK National Annex.

A.2 New concrete(1) must be well compacted and finished, preferably by power floating, and without excessive laitance, to a dense, smooth finish, free from defects.

(1) Concrete toppings/screeds must be well compacted and bonded to the substrate and have a skip float finish with minimum laitance.

A.3 A curing period of 28 days should be allowed before installing the product on new concrete substrates.

A.4 The product must be installed in accordance with the relevant clauses of BS 8000-0 : 2014, the Certificate holder's instructions and this Certificate, on a dry and frost-free substrate. After rain or snow, the substrate must be allowed to dry before installation can commence.

A.5 To assess the suitability of a substrate to receive the membrane, bond tests must be carried out. If bonding problems occur, advice should be sought from the Certificate holder, but such advice is outside of the scope of this Certificate.

A.6 Metal substrates must be free from oil, rust, paint or other coatings liable to affect the bond.

A.7 Prior to the application of the membrane, defects in the substrate such as cracks, irregularities and other areas of potential weakness must be repaired using a repair product approved by the Certificate holder (outside of the scope of

this Certificate), and the substrate cleaned in accordance with the Certificate holder's instructions. Any gaps, irregularities and areas of potential weakness may be filled with a suitable latex modified repair mortar. The Certificate holder can advise on suitable materials for this purpose, but such advice and materials are outside of the scope of this Certificate. The membrane may be used to fill minor depressions in the substrate.

A.8 The substrate should be primed with Wilotekt Surface Conditioning Primer and allowed to dry before application of the other system components. Coverage will vary depending on the porosity of the substrate, but the minimum coverage rate is 0.15 litres per m^2.

A.9 The system should be covered with an access or protective layer immediately after installation, in accordance with the Certificate holder's instructions.

A.10 Detailing must be formed in accordance with the Certificate holder's instructions.

A.11 Guidance on the design of flat and zero pitched roofs is given in the Liquid Roofing and Waterproofing Association (LRWA) Note 7 – *Specifier Guidance for Flat Roofs.*

A.12 Recommendations for the design and maintenance of green roofs and roof garden specifications are available within the latest edition of *The GRO Green Roof Guide – Green Roof Code of Best Practice for the UK*.

A.13 The growing medium or other bulk material should not be stored on one area of the roof prior to installation, to ensure that localised overloading does not occur.

A.14 Guidance for the design and construction of blue roofs is available in the NFRC *Technical Guidance Note for the construction and design of Blue Roofs*.

A.15 *NHBC Standards* 2023 requires a minimum fall of 1:60 for green roofs and roof gardens.

A.16 Gaps between selected roof finishes should be between 4 and 8mm to achieve effective drainage; a gap of 10 to 12 mm should be maintained around perimeters of the pedestrian surface to facilitate drainage.

Procedure

A.17 Wilotekt Reinforcement Mesh is rolled out loose over the substrate with 100 mm overlaps.

A.18 The blocks of Wilotekt Compound are heated in an electronic or propane gas, thermostatically controlled, insulated melter.

A.19 The operating temperature range for the molten compound is between 160 and 180°C. The temperature of the compound must not exceed 200°C.

A.20 The molten compound is poured onto the reinforcement at a coverage rate of a minimum 2.5 $kg \cdot m^{-2}$ and the Protection membrane is simultaneously unrolled into the compound and fully bonded.

A.21 The finished product must have a minimum depth of 6 mm.

Maintenance

A.22 Additional guidance on maintenance for green roofs and roof gardens is available within the latest edition of the *GRO Green Roof code – Green Roof Code of Best Practice for the UK*.

Bibliography

BS 6229 : 2018 *Flat roofs with continuously supported flexible coverings — Code of practice*

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

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

BS EN 1991-1-1 : 2002 Eurocode 1 : *Actions on structures — General actions— Densities, self-weight, imposed loads for buildings*
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 1991-1-3 : 2003 + A1 : 2015 *Eurocode 1 : Actions on structures — General actions — Snow loads*
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BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1 : Actions on structures — General actions — Wind actions*
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EOTA TR 003 *Determination of watertightness – May 1999*

BS EN 1931:2000 *Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roof waterproofing. Determination of water vapour transmission properties*

EOTA TR 006 *Determination of the resistance to dynamic indentation* – May 1999

EOTA TR 007 *Determination of the resistance to static indentation – May 2004*

EOTA TR 008 *Determination of the resistance to fatigue movement – May 2004*

EAD 030065-00-0402 *COMPOSITE ROOF WATERPROOFING KIT – May 2018*

EN 427 : 2013 *Bitumen and bituminous binders – Determination of the softening point – Ring and Ball method*

Conditions of Certificate

Conditions

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- relates only to the product that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
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- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
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