WinMark – Performance of Curtain Walling and Rainscreen Cladding

1.0 Introduction

1.1 The scheme is owned and operated by Wintech Engineering Limited (WEL) in accordance with the requirements of BS EN ISO/IEC 17065:2012 "Conformity Assessment — Requirements for bodies certifying products, processes and services". The product certification scheme is a voluntary scheme intended for the independent third party certification of Curtain walling and Rainscreen cladding systems.

1.2 The scheme covers a variety of Curtain walling and Rainscreen cladding systems in order to demonstrate compliance with the appropriate section of the 2017 NHBC requirements section 6.9 or the latest versions thereof.

1.3 A top level review of the key related requirements from The Building Regulations 2010 (England and Wales), The building Regulations 2004 (Scotland) and The Building Regulations (Northern Ireland) 2012 is also conducted based on the clients audit information. Comments are made by WEL on whether the products can contribute to the Building Regulations requirements.

1.3 The scheme sets out both general organisational requirements as well as product specific technical requirements to be satisfied in order to gain product certification.

1.4 All of the requirements set out in this scheme document must be satisfied in order to achieve the 'WinMark – Performance of Curtain walling and Rainscreen cladding' third party certification scheme.

1.5 This scheme is available to all companies involved in the manufacture and or fabrication of Curtain walling and Rainscreen cladding systems. However, WEL reserve the right to reject an application if the applicant has previously had any WEL services terminated due to non-payment of fees, if WEL do not possess the necessary resources to carry out the work or if the applicant has a history of repeated non-compliances or has participated in any illegal activity.

1.6 Features of the scheme

1.6.1 The scheme provides independent third party certification of Curtain walling and Rainscreen cladding systems in order to satisfy the minimum requirements outlined by the 2017 NHBC requirements section 6.9 or the latest version thereof. A top level review of the key related requirements from The Building Regulations is also untaken to establish if the products contribute to the Building Regulations requirements.

1.6.2 The specific product (or product range) shall comply with all appropriate requirements to demonstrate performance of the Curtain walling and/or Rainscreen cladding systems in respect of in-service performance.

1.6.3 WEL product certification requires that the manufacturing and or fabrication facilities where the product is produced shall be subject to an audit as part of the product certification process. The evaluation shall take the form of an initial audit/s followed by on-going annual surveillance audits. Should the applicant have more than one facility, it may be necessary for the audit to take place at each facility.

1.6.4 WEL does not make ISO 9001 Quality Management System certification a mandatory requirement, however, factory production control processes must be implemented and documented within all manufacturing facilities where the products are produced for which certification is sought.

1.6.5 WEL WinMark product certification operates on a 3 year frequency during which all elements of this scheme shall be operated and maintained. On the 3rd year a full recertification audit is undertaken.

1.6.6 The WinMark certification scheme is limited to the production of the certified product and does not assess the ability of the applicant to install, commission or repair the certified product. The applicant shall not claim to be certified for any of these items.

2.0 Definitions

2.1 WinMark Scheme — voluntary third party certification scheme operated by WEL for the independent certification of Curtain walling and/or Rainscreen cladding systems by this scheme document.

2.2 Product Certification — evaluation and granting of certification covering a defined product or range of products.

2.3 This scheme requires that the Initial Certification process is spilt into three stages:

- Stage 1 FPC audit – A remote documentation review and assessment as to the readiness of the organisation to progress onto a full Stage 2 FPC audit.

- Design Review – A remote documentation review based on the appropriate sections of the 2017 NHBC requirements section 6.9 or the latest versions thereof.

- Stage 2 FPC audit – An onsite FPC audit, reviewing all processes and procedures in place.

2.4 This scheme has a three year cycle of audits:

- Initial certification – Includes a Stage 1 FPC audit, Design review and Stage 2 FPC audit

- Year 1 – Surveillance Audit

- Year 2 – Surveillance Audit

In the 3rd year a full Stage 2 ‘recertification’ audit is carried out to ensure that the organisation continues to fulfil the standards requirements.

2.5 Test Evidence — test reports produced detailing the results of tests conducted at an accredited laboratory to establish the performance of a product for which certification is sought.

2.6 WEL Approved Test Laboratory — a laboratory approved by WEL as acceptable to provide test evidence in support of Product Certification. WEL only accept test evidence from laboratories that hold appropriate ISO 17025 Accreditation issued by UKAS or an

International equivalent whose accreditation scope includes the test procedures for which test reports are issued.

2.7 Evaluation — the assessment of performance of a product against the requirements of this Scheme Document. This covers the evaluation of the product against specific design and test criteria and the effectiveness of a factory production control system.

2.8 Stage 1 FPC Audit — a remote/desktop audit conducted to establish if adequate documentation is available in relation to manufacturing processes of the product(s). The purpose of the stage 1 FPC audit is to assess the readiness of the organisation to progress to an onsite Stage 2 FPC audit.

2.9 Design Review – A remote documentation review of the certified products design based on the appropriate sections of the 2017 NHBC requirements section 6.9 or the latest versions thereof.

2.10 Comments on The Building Regulations – WEL will use the information gathered from the evaluation process and design review to comment on if the certified products contribute to the requirements of key regulations. If uncertainty is present at the time such comments will not be made.

2.11 Stage 2 FPC Audit — an onsite audit conducted to establish that adequate control is applied to manufacturing processes of the product(s) subject to certification in order to maintain conformity of manufacture, fabrication , assembly and traceability. This audit is repeated in year 3 as a Stage 2 'recertification' FPC audit.

2.12 Surveillance FPC Audit — an onsite audit conducted to verify that ongoing adequate control is applied to manufacturing processes of the product(s) subject to certification in order to assess the continual conformity to manufacture, fabrication , assembly and traceability processes.

2.13 Stage 2 'recertification' FPC Audit — an onsite audit conducted to establish that adequate control is applied to manufacturing processes of the product(s) subject to certification in order to maintain conformity of manufacture, fabrication , assembly and traceability. This is a full audit of all processes and procedures in place.

3.0 Scheme Requirements

3.1 Performance of Curtain walling and Rainscreen cladding systems shall be designed and specified to ensure adequate in-service performance.

3.1.1 General

3.1.2 Provision of Information

Fully detailed drawings and specification information must be made available to perform the certification process. At the minimum the information on application should include:

- A full set of system drawings
- Specific details of all interfaces
- Manufacturers specification
- Available test data

3.1.3 Loads and movements

Curtain walling and cladding systems, including brackets and fixings, shall allow movement without causing damage or deformation, and safely transfer loads to the building.

3.1.4 Support and Fixings

Curtain walling and cladding systems shall be securely fixed with suitably durable fixings to ensure adequate in-service performance.

3.1.5 Durability

Curtain walling and cladding systems shall provide satisfactory durability (subject to routine inspection and maintenance). The system should be designed to avoid the need for disproportionate work when repairing or replacing individual components.

3.1.6 Interfaces

Curtain walling and cladding systems shall have suitable interfaces and resist the penetration of water and wind and be designed to be weather resistant.

3.1.7 Insulation

The insulation shall be suitable for the intended use and product type.

3.1.8 Damp proofing and vapour control

Curtain walling and cladding systems, including damp proofing materials and breather membranes, shall adequately resist the passage of water into the building and allow water vapour to pass outwards.

3.1.9 Electrical continuity and earth bonding

Curtain walling and cladding systems shall ensure electrical continuity and earth bonding is specified at the design stage of the products.

3.1.10 Maintenance

Curtain walling and cladding systems shall have appropriate access arrangements for the purposes of cleaning, inspection, maintenance and repair.

3.1.11 Glazing, gaskets and sealants

Glazing shall be carried out in accordance with relevant standards. Materials used for glazing, gaskets and sealants shall provide satisfactory performance.

3.1.12 Ventilation screens

Any ventilation openings shall be protected from the entry of birds and animals.

3.1.13 Handling and storage

Materials, products and systems shall be protected and stored in a satisfactory manner to prevent damage, distortion, uneven weathering and degradation.

4.0 Curtain Walling

4.1 Acoustic performance

The curtain walling system should be designed to resist the passage of airborne and impact sound within the building.

4.2 Weather resistance

The curtain walling system should be designed to resist the passage of water to inside the building.

4.3 Thermal bridging and condensation

The curtain walling system should be designed so that thermal bridging is controlled.

4.4 Air infiltration

Curtain walling systems should be sealed with preformed factory-moulded 'picture frame' type vulcanised EPDM or silicone internal gaskets.

4.5 Opening doors and lights

Any openable doors and lights should be installed so that they fit neatly and with minimal gaps to ensure effective weatherproofing of the system is maintained.

4.6 System testing

Air and water testing of a 'prototype' curtain walling system should be carried out in accordance with, and pass, the CWCT Standard test sequence A or B. Panels tested should be of a similar size and configuration to those to be used on the building. Testing must be completed by a WEL Approved Test Laboratory.

Test sequence A - when tested at a test pressure of less than 600 Pascals

Air permeability –	CWCT Section 5
Water penetration - static –	CWCT Section 7
Wind resistance –	CWCT Section 11
Repeat air permeability –	CWCT Section 5
Repeat water penetration - static –	CWCT Section 7
Hose Test –	CWCT Section 9
Wind resistance - safety –	CWCT Section 12
Hard and soft body impacting – Dismantle, inspect and report	CWCT TN76

Test sequence B - when tested at a test pressure equal to or greater than 600 Pascals

Air permeability –	CWCT Section 5
Water penetration - dynamic –	CWCT Section 7
Wind resistance –	CWCT Section 11
Repeat air permeability –	CWCT Section 5
Repeat water penetration - dynamic –	CWCT Section 7
Hose Test –	CWCT Section 9
Wind resistance - safety –	CWCT Section 12
Hard and soft body impacting – Dismantle, inspect and report	CWCT TN76

5.0 Rainscreen Cladding

5.1 Acoustic performance

Noise from the Rainscreen cladding system caused by rain striking the outer surface of panels should be accommodated without being intrusive through the use of material that is noise absorbing, or anti-drumming.

5.2 Weather resistance

External and internal air and water seals and a drained cavity should be provided at all interfaces.

5.3 Thermal bridging and condensation

The system must be designed to minimise the risk of thermal bridging, surface and interstitial condensation.

5.4 Air infiltration

Before installation of the system, the backing wall should be considered in regard to airtightness.

5.5 Compartmentation

Rainscreen cladding systems that have open joints between the panels should be designed to be pressure equalised.

5.6 System testing – cladding with an airtight backing system

All Testing must be completed by a WEL Approved Test Laboratory. Testing of a 'prototype' Rainscreen cladding system should be carried out in accordance with, and pass:

Air permeability –	CWCT Section 5
Water penetration - dynamic –	CWCT Section 7
Wind resistance –	CWCT Section 11
Repeat air leakage –	CWCT Section 5
Repeat water penetration - dynamic –	CWCT Section 7
Wind resistance - safety –	CWCT Section 12
Hard and soft body impacting –	CWCT TN76
Dismantle, inspect and report	

5.7 System testing – cladding without an airtight backing system

All Testing must be completed by a WEL Approved Test Laboratory. Testing of the 'prototype' Rainscreen cladding system should be carried out in accordance with, and pass:

Water penetration - dynamic –	CWCT Section 7
Wind resistance –	CWCT Section 11
Wind resistance - safety –	CWCT Section 12
Hard and soft body impacting –	CWCT TN76
Dismantle, inspect and report	

6.0 Brick Slip Cladding

6.1 Weather resistance
Timber and steel framed backing walls should have a cavity between the wall and the insulation.

6.2 Thermal bridging and condensation
The system should be designed so that thermal bridging is controlled.

6.3 Air infiltration
Before installation of the system, the backing wall should be considered in regard to airtightness.

6.4 Brick slip cladding: slips, carriers and joints
The design of Brick slip systems, including proprietary carriers forming an integral part of the system are to be considered. Mortars, proprietary mortars and grouts should also be specified and adequate for purpose.

6.5 System testing – cladding with an airtight backing system
All Testing must be completed by a WEL Approved Test Laboratory. Testing of a 'prototype' Brick slip cladding system should be carried out in accordance with, and pass:

Air leakage –	CWCT Section 5
Water penetration - dynamic –	CWCT Section 7
Wind resistance –	CWCT Section 11
Repeat air leakage –	CWCT Section 5
Repeat water penetration - dynamic –	CWCT Section 7
Wind resistance - safety –	CWCT Section 12
Hard and soft body impacting –	CWCT TN76
Dismantle, inspect and report	

6.6 System testing – cladding without an airtight backing system
All Testing must be completed by a WEL Approved Test Laboratory. Testing of the 'prototype' Brick slip cladding system should be carried out in accordance with, and pass:

Water penetration - dynamic –	CWCT Section 7
Wind resistance –	CWCT Section 11
Wind resistance - safety –	CWCT Section 12
Hard and soft body impacting –	CWCT TN76
Dismantle, inspect and report	

6.7 A top level review of the key related requirements from The Building Regulations 2010 (England and Wales), The building Regulations 2004 (Scotland) and The Building Regulations (Northern Ireland) 2012 is conducted based on the clients audit information. Comments are made by Wintech on whether the products can contribute to the Building Regulations requirements

7.0 Initial Audits

In addition to the above requirements, the location where the product/s is manufactured and or fabricated shall be subject to Factory Product Control Audit in order to ensure that adequate control is applied to manufacturing processes.

As part of the audit, WEL will assess the organisations effectiveness of at least the following:

- Contract review – enquiries, quotations and orders etc.,
- Production planning – when relevant
- Control of purchasing, including supplier approvals
- Control and storage of incoming materials and components
- Control of documentation related to the production, inspection, packaging and despatch processes – when relevant
- Identification and traceability of products
- Ongoing production inspection, testing and records thereof
- Maintenance of production equipment – when relevant
- Training records
- Internal audit reports including non-conformances and corrective actions
- Customer complaints
- Non-conforming product
- Labelling of products – when relevant
- Factory production control
- Control of key suppliers

If the customer has not previously held certification for this or other products, they will be subject to a pre-assessment Stage 1 audit which will assess their readiness for the full Stage 2 audit as outlined above.

All documentation including test evidence submitted as part of the Evaluation process must be written in or translated in to English by a certified translator and shall be provided together with the original document unless otherwise specified by Wintech Engineering Limited.

7.1 Where non compliances are raised during the audits these shall be dealt with as detailed in section 6 of this document.

7.2 All findings are recorded in a report produced by the auditor.

7.3 The completed audit report will be reviewed by WEL and a copy shall be provided to the organisation seeking third party certification.

8.0 Annual Surveillance Audits

8.1 Annual Surveillance audits shall be carried out at 12 month intervals, following the successful initial audit and every 12 months thereafter for the 3 year period of the product certification.

8.2 Certified companies shall be subjected to annual surveillance audits in order to ensure the continued and effective application of controls applied to all relevant processes.

8.3 As part of the surveillance audit, WEL will assess the organisations effectiveness of at least the following:

- Contract review – enquiries, quotations and orders etc.,
- Production planning – when relevant
- Control of purchasing, including supplier approvals
- Control and storage of incoming materials and components
- Control of documentation related to the production, inspection, packaging and despatch processes – when relevant
- Identification and traceability of products
- Ongoing production inspection, testing and records thereof
- Maintenance of production equipment – when relevant
- Training records
- Internal audit reports including non-conformances and corrective actions
- Customer complaints
- Non-conforming product
- Labelling of products – when relevant
- Factory production control
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All documentation including test evidence submitted as part of the Evaluation process must be written in or translated in to English by a certified translator and shall be provided together with the original document unless otherwise specified by Wintech Engineering Limited.

8.4 Where non compliances are raised during the audits these shall be dealt with as detailed in section 6 of this document.

8.5 All findings are recorded in a surveillance report produced by the auditor.

8.6 The completed surveillance audit report will be reviewed by WEL and a copy shall be provided to the organisation seeking third party certification.

9.0 Non-Compliances

9.1 Minor non-compliances raised during an audit can be closed out either during or following the audit visit by providing evidence of corrective action to the Auditor. All evidence of corrective action shall be reviewed during the next audit.

9.2 Should any major non-compliance be identified during an audit, WEL may require an additional visit in order to close out the non-compliance. This will be agreed between the Auditor and a nominated representative of the organisation seeking third party certification. This may incur additional costs and will be outlined in the form of a quotation.

9.3 During any one audit, a maximum of 5 minor non-compliances are allowed. Should more than 5 minor non-compliances be identified, or any major non-compliances, evidence of the successful implementation of corrective actions must be provided to WEL before progressing the evaluation stage. A suitable timescale for closing out non-compliances shall be agreed between WEL and the customer. Certification will not be granted until such times as all evidence is provided.

10.0 Conditions of Acceptance

10.1 Initial Acceptance

10.1.1 Following the successful completion of an Initial Audits as well as submitting the necessary test evidence, WEL will award certification for the product. This is subject to the completion of necessary paperwork and receipt of necessary fees.

10.1.2 The certificate shall clearly identify the following;

- The company name and address
- Name of the product range for which certification has been awarded
- The name of this scheme for which certification has been awarded
- Summary of performance following testing
- All details relating to the product including framing, glazing, hardware and sealing
- Certificate Number
- Date of issue and issue status
- WEL address and contact details
- Signature of WEL approved signatory
- UKAS Accreditation for WEL

10.1.3 The product certification issued will be listed on the WEL website under the certification section. It shall be accompanied by a description of the product certified and a reference to this scheme.

10.1.4 The company must maintain the requirements of the scheme outlined in this document on an ongoing basis for the certification to remain valid.

10.2 Change of Company Details

WEL must be informed of any changes which would affect the certification of the product under the requirements of this scheme, including a change of company name, company registration, resources or location. Should the location of manufacture or fabrication change, or an additional site is used, WEL must be informed and an additional audit may be required.

10.3 Changes Affecting Certification

When a change is made to scheme requirements, the customer shall be informed of these changes. The customer shall be expected to implement these changes within a specific time and shall be verified by Wintech either at the next Audit or sooner if applicable.

Should the customer wish to make changes that might affect certification, such as product modifications, key staff changes or location of manufacture the customer shall inform Wintech who will decide upon the appropriate action. This may include documentation collection and review, Audits or relevant product testing. If the changes are significant, a full evaluation, review and certification decision process may be conducted. Further information can be found in the Certification Agreement. If necessary, revised certification documentation shall be issued.

10.4 Cascading of Test Data

Test data submitted as part of the evaluation process must show testing evidence of the products to be covered by the certification. Testing must be carried out by a WEL approved testing laboratory.

11.0 Applications Process

11.1 All applicants should contact WEL at the following:

Wintech Engineering Limited
Halesfield 2
Telford
Shropshire
TF7 4QH

TEL: 01952 586580

EMAIL: certification@wintechtesting.com

Applicants will be sent an application form via email, or these can be downloaded from the WEL website. The application form must be completed in full and submitted to WEL in order for a quotation to be created.

11.2 WEL will provide a quotation based on the completed application outlining the initial and ongoing requirements and fees for WinMark product certification.

11.3 An official order will be required from the customer organisation prior to the start of the production certification process.

12.0 Overview of Product Certification Process

Wintech will issue an Application form to the customer requesting information about the company, products and manufacturing/fabrication facilities from which the scope of certification can be determined and agreed.

Wintech will liaise with the customer organisation to establish a plan of certification activities including audits, design reviews and any necessary testing in order to carry out a full Evaluation of the product.

Once the audits and design review have been carried out and the associated test results have been checked, an evaluation report will be created and submitted for review and internal decision making.

If the evaluation report is positive and a decision is made to grant certification, Wintech will issue a Certification Agreement to the customer which must be signed prior to the issue of the relevant certification documentation.

A certification 'certificate/scope' shall be issued to the customer together with the WinMark logo for use in marketing materials.

Wintech will liaise with the customer organisation on an ongoing basis following the plan of certification activities including annual audits and recertification audits in order to maintain the certification.