Certificate No: EWS529

This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

Ultraframe (UK) Ltd – LivinRoof

Description of Product

LivinROOF' manufactured by Ultraframe is the first roofing system designed to give you the flexibility to combine solid and glazed roofing seamlessly. The LivinROOF roofing system is constructed from insulated composite external panels and Rigid Polyurethane Foam insulation. The Structure of the roof utilises the Ultraframe Classic roof system to provide strength and rigidity.

In England and Wales, this Registered Detail Certificate is designed to fast-track, not remove, the requirement to obtain Building Regulation Approval through LABC. This can only be demonstrated through a Completion Certificate issued following satisfactory inspections made as part of a valid Building Regulation application by Local Authority Building Control teams.

In Scotland, a Building Warrant is required in every case from the Local Authority Building Standards teams.

Key Factors Assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Safety in Use
- Energy Economy and heat retention
- Durability serviceability and identification

Validity

This certificate was first issued on 1st December 2014 and is valid until 4th April 2016

Issue Dated 25th November 2015

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Scope of Registration

The system uses the Ultraframe aluminium "classic" chassis enhanced with the use of insulated steel stiffening members/connector. The roof is then supported by the existing conservatory frame – either frames with existing metal reinforcement or by improvements to the existing frame (subject to inspection/remedial work as well as inspection of existing foundations).

Fully checked by Structural engineers against all configurations and spans as set out in the System Overview and Design Guide which also gives details of spans, roof configurations & locations allowing for exposure and wind speeds.

Live load tests have also been carried out on the structure by Ultraframe to determine deflection of the roof panels.

The roof specification designed to achieve 0.18 W/m2K comprises;
A 0.9mm insulated steel stiffener and pvcu isolator fixed around existing aluminium roof profile and connected into new reinforced eaves and ridge steel frame. 25mm thick insulated roof panels are then fixed into the aluminium profile with new roof cappings. 90mm Celotex GA4090, 90mm Ballytherm BTR or 90mm Kingspan TP10, fitted tightly between the rafter profiles with 25mm Celotex FR5025, 25mm Ballytherm BTR or 25mm Kingspan TP10 and 12.5mm plasterboard and skim finish or 25mm Celotex PL4025 insulated plasterboard and skim finish all fixed at 450mm centres into steel stiffener.

Refer to LABC Technical Guidance Note MG0010411 Application of Part L to Conservatories attached to existing dwellings
http://www.labc.uk.com/Media/Default/library/Technical%20Guides/MG0010411%20Application%20of%20Part%20L%20to%20Con servatories%20attached%20to%20existing%20dwellings.pdf
and LABC guidance on solid roofs to conservatories and porches attached to dwellings
http://www.labc.uk.com/Media/Default/Public%20Documents/labc_4258%20TechG%20Conservatories.pdf

For Scotland purposes:
This certificate covers the 'LivinRoof' system by Ultraframe (UK) Ltd. This certificate covers only the LivinRoof component parts and assemblies as described by the structural models and calculations for the roof styles defined in the supporting documents.

Six distinct roof styles are covered by this certificate;

- Lean-to roof,
- 3-bay Victorian roof,
- 5-bay Victorian roof,
- Georgian roof,
- Gable roof and
- 'P-shaped' roof.

Each roof style is defined more fully within the supporting documents.

The LivinRoof system is intended to be used as a replacement roof system for existing conservatory roofs. However, it can equally be used in new build construction. This certificate covers the system when used as a replacement roof.

This certificate does not cover the entire completed structure. Site specific factors and interactions with existing and supporting structure must be determined for every project. Structural stability must be independently assessed and verified for every project.

For the purpose of this certificate, each of the listed roof styles has specified design geometric and loading limits defined within the supporting documents. In all cases it has been assumed that the roof is unaffected by adjacent buildings and attached construction.

Conditions of Certificate

The product can be designed with window frames to all elevations, full masonry walls or brick piers. It should be noted that full replacement of walls/new build works are not covered by this Registered Detail:

- If bi-folding doors are to be used they MUST be bottom supported NOT top hung.
- The system can incorporate various styles of Velux roof windows or glass in any one of the panel positions. Cut outs for roof windows must be selected at point of ordering and should not equate to more than 25% of the floor area with the glazing achieving a U-value 1.6W/m2.K

The Registered Detail relates to the reroofing of existing conservatory or porch roofs that satisfy the requirements of Schedule 2, Class 7 to the Building Regulations 2010 (as amended); i.e. It must be at ground level; it must not exceed 30 m2 in floor area; the thermal separation between the building and the conservatory or porch must be maintained; and the building's heating system must not be extended into the conservatory or porch.

If the thermal separation is removed then a separate Building Regulation Application needs to be submitted and the amount of glazing to the former conservatory or porch roof should be reduced to less than 25% of the floor area and the glazing should achieve a U-value 1.6W/m2..K (alternatively heat loss calculations will be required).

For Scotland purposes:

A Building Warrant is required in every case for this replacement roof system.

The roof structure must be manufactured, assembled and installed in accordance with Ultraframe (UK) Ltd design guide and installation specifications.

Project specific information comprising structural inspection/survey report and drawings must be produced and submitted with every Building Warrant Application. Any additional information requested by the Verifier shall be provided. As a minimum the warrant application drawings should:

- Specify the Ultraframe roof type being used
- Provide a plan of the roof showing the roof member layouts, spans and their dimensions including member sizes and connection details for the particular roof

To meet the conditions of this Registered Detail, every Building Warrant Application shall require a Structural Design Certificate (signed by a SER Ltd member) that takes cognisance of the roof design included within this registration and the structure to which it will be built from and supported on.

The specifications and materials referred to have been assessed and approved in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which came into force with effect from 1 October 2013.

Where reference is made on a plan or specification document to any Code of Practice, British or European Standard or manufacturer's instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this registered detail.

The materials specified shall not be changed without first gaining approval so to do. Failure to do so will invalidate the registered detail.

This Registered Detail should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 1 May 2005. It supports the site specific building warrant submission required in every case.

This Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the Scope of Registration and the Conditions of Certificate Sections to this Registered Detail.

Regulations

LABC and LABSS consider that, the LivinRoof, will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;

The Building Regulations 2010 (as amended) England & Wales

Regulation 7	Materials and workmanship
Note:	The products are acceptable.
AD A	Structure
Note:	Subject to limitations detailed below in Conditions section.
AD B	Fire Safety
Note:	The products can contribute to meeting this Requirement.
AD C	Site preparation and resistance to contaminants and moisture
Note:	The products can contribute to meeting this Requirement.
AD L1B	Conservation of fuel and power
Note:	The thermal insulation performance of this system should be considered in the context of the contribution made to the overall performance of the roof structure.

The Building Regulations 2010 (as amended) England

None presently

The Building Regulations 2010 (as amended) Wales

None presently

The Building (Scotland) Regulations 2004 (as amended)

Technical Handbooks - Domestic

Regulation 8	Durability, workmanship and fitness of materials
0.8.5:	Ways of establishing the fitness of materials
Regulation 9	Building Standards applicable to construction
Note:	Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

Mandatory	
Standard 1.1	Structure
1.1.0	Introduction
1.1.1	General
1.1.2	Loading
1.1.3	Design and construction
Note:	Subject to conditions. All site specific buildings erected in Scotland must be supported by confirmation of full structural stability taking account of the above standards and to take account of ground conditions and the stability of existing buildings

Mandatory	
Standard 2.5	Internal linings
2.5.1	Internal linings

Mandatory	
Standard 2.8	Spread from neighbouring buildings
2.8.1	Roof coverings

Mandatory	
Standard	3.10 Precipitation
3.10.1	General provisions
3.10.8	Roof constructions (pitched)

Mandatory	
Standard	3.15 Condensation (Domestic)
3.15.1	Condensation
3.15.3	Control of condensation in roofs
3.15.4	Surface condensation – thermal bridging
3.15.5	Interstitial condensation

Mandatory	
Standard 6.2	Building insulation envelope
6.2.0	General
6.2.6	Conversions of unheated buildings
6.2.7	Conversions of heated buildings
6.2.9	Extensions to the insulation envelope
6.2.11	Alterations to the insulation envelope
6.2.12	Conservatories
6.2.13	Stand alone buildings

Non-Regulatory Information

LABC Warranty

The use of the LivinRoof has not been assessed to meet the requirements of the LABC Warranty Technical Manual. If you would like to discuss a specific use please make an enquiry to technical.services@labcwarranty.co.uk

Supporting Documentation

Ultraframe LivinRoof System Overview and Design Guide version 1 June 2014
Ultraframe LivinRoof Installation Guide version1 2014

Ultraframe LivinRoof drawings;
09832, 10155, 10160, 10167, 10212, 10234 (sheets 1,2,3), 10239, 10382, 10317 (sheets 1,2,3,4), 10737 (sheets 1,2), 10792 (sheets 1,2,3).

Ultraframe LivinRoof calculations (dated 23.06.2015);
Lean-to roof 4.0m x 3.7m
3-Bay Victorian roof 4.8m x 4.9m
5-bay Victorian roof 4.5m x 4.6m
Georgian roof 4.5m x 4.5m
Gable roof 5m x 4.8m
'P-Shaped' roof 8.1m x 6m
ULTRAFRAME LIVINROOF SUBMISSION TO LABSS Climate loads re-submission - Wind loading and snow loading calculation.
Ultraframe LivinRoof Solid Roof Conservatory Conversion Installation Guide V3 June 2015
Ultraframe LivinRoof Thermal Analysis, Oct 2014 Rev. A, by Melin Consultants

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