

Registered Detail

Registered
detail No: **STAS/13/049/RD03/01**

Date: **6 January 2014**

A Registered detail Holder:

Applicant: Guardian Building Products Ltd., 101-105, Victoria Crescent, BURTON-ON-TRENT, ME20 7SX

Contact E-mail: **joek@guardianbuildingproducts.co.uk** Tel: **08000665832**

B Registered Detail Title:

Guardian Warm Roof System for New Build and Replacement Conservatory Roofs

Overview of Registered Detail Application

This Registered Detail is based on a composite roof construction partly constructed off site and completed on site to take account of local conditions. The composite roof comprises a metal tile look alike roof finish, with a breathable under felt on open jointed 150 x12mm exterior plywood sarking laid and fixed to aluminium roof sections in-filled with insulation materials achieving the U-value limits and finished on the underside with a foil faced PIR insulation with a bonded gypsum board face to form a ceiling following the sloping roof profile. Suitable for installation in roof pitches between 15° to 30°.

C Conditions of certification: Validity and Scope

1. That 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.
2. That 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.
3. That the layout plan details and the materials specified shall not be changed without first gaining approval so to do from Local Authority Building Standards Scotland [LABSS]. Failure to do so will invalidate the registered detail.
4. That the registered detail shall be valid until invalidated by formal notice by LABSS.
5. 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
6. That this Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the Limitations of Use Section to this Registered Detail.

Limitations of use: Structure

7. That this Registered Detail covers only the "replacement roof element" which comprises:
 - a series of aluminium ring beams, ring beam angles, box gutters, victorian / edwardian ridge, lean-to ridge, victorian hip, georgian hip, rafter/gable and cleat and screw fixings, (depending upon the replacement roof configuration), and

- a roof make up of 60mm insulated plasterboard; 40mm insulation board; 25mm insulation board; open jointed 150 x12mm exterior plywood sarking boards; vapour permeable underlay; 25x50mm treated softwood timber battens; roof tile; ridge tile; foam tape and
 - roof void ventilation via eaves and ridge ventilators providing an air flow between the topmost insulation layer and the underside of the metal roof materials through open jointed timber sarking.
8. That site specific elements not included in those elements specified here under Section 7 and as shown and specified in the supporting drawings, specifications and supporting literature are outwith the scope of this Registered Detail.
9. The Registered Detail does not cover the installation of rooflights within the new roof structure although it is recognised that such installations can be accommodated within prescribed roof zones identified by the structural engineers guide. The specification and installation details will be the subject of the site specific building warrant application.

Energy - Design guidance and parameters

10. Site specific information:
That confirmation shall be provided of the date of erection of the "existing conservatory or stand-alone building" which is the subject of the conversion or alteration.
NOTE: This information is needed to allow compliance with Mandatory Standard 6.2 to be determined when cognisance is taken of Clauses 6.2.6, 6.2.7, 6.2.9, 6.2.11, 6.2.12 and 6.2.13.
11. That this Registered Detail has been assessed and accepted with a U-value of 0.18 W/m²K which satisfies Guidance Clause 6.2.9, Table, Column (b) for insulation which is installed at rafter level . In meeting this criterion, compliance with Guidance Clauses 6.2.6, 6.2.7, 6.2.11, 6.2.12 and 6.2.13 will be achieved.
12. This Registered Detail takes cognisance of the guidance for compliance with Energy use as defined by
- Clause 6.2.0 Conversions.
Where the building as converted shall meet the requirements of this standard in so far as is reasonably practicable.
 - Clause 6.2.9 U-values.
Where the *insulation envelope* of a dwelling or a building of dwellings is extended, the new *building fabric* should be designed in accordance with one of two levels of elemental U-values for walls, floors, roof, windows, doors and rooflights, as shown in the table to Clause 6.2.9,
 - Clause 6.2.11 Infill of large openings.
The infill of an existing opening of greater area (than approximately 4 m²) in the *building fabric* should have a *U-value* which achieves those in Column (b) of the table to clause 6.2.9,
 - Clause 6.2.13 Reconstruction of Elements
Where the build-up of an element forming part of the *insulation envelope* is to be altered or dismantled and rebuilt, the opportunity should be taken to improve the level of thermal insulation. Column (b) of the table to clause 6.2.9 gives benchmark U-values and in many cases these can be achieved without technical risk, within the constraints of the existing construction.

Testing and Accreditation

13. That the replacement roof shall be manufactured and installed strictly in accordance with the manufacturer's instructions, in accordance with the registered detail holder's instructions and fully in accordance with the accredited certification and supporting test reports.
14. That this Registered Detail is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 1.1, 2.5, 2.8, 3.10, 3.15 and 6.2 of the Building (Scotland) Regulations 2004 when read with the accompanying Registered details and associated test reports – see Sections E, F and G below.

Site Specific Assessment

15. **McColl Associates, 1 Meadowbank Place EDINBURGH EH8 7AW provide** supporting calculations for the Edwardian and Victorian roof configurations, together with lean-to, gable and hip roof configurations all as referenced here under Section F. These confirm that a structural appraisal has been carried out for the discrete composite roof which is the subject of this Registered Detail and which will complement any subsequent site specific structural appraisal/certification.
16. That confirmation of a holistic approach to structural adequacy of the entire completed building shall be provided by a registered engineer to the verifier within whose area the site specific building is to be built should the verifier so request.
17. That further site specific information WILL BE made available when a building warrant is sought and should take cognisance of Procedural Guidance on Certification dated April 2010 Version 2 including information to be submitted with a Building Warrant Application should a verifier request such information.

D Climatic conditions: The design may be built in areas where the climatic conditions are equal to or less than those detailed below:

Wind: (as defined in BS 6399-2)	Standard effective wind speed, $V_e =$ For maximum effective height = Has funnelling been considered?	24.50 m/s 5m NO
Snow: (as defined in BS 6399-3)	Site snow load, $S_o =$ Influenced by adjacent buildings?	1.2 Kn/m2 No
Resistance to moisture/durability of exposed elements:	Max exposure (to wind driven rain) grading, as defined in BRE Report – Thermal Insulation: Avoiding Risks, Second Edition, 1994, to be exposure zone: Exposure to sea spray (i.e. coastal region) or de-icing salts? Other air contaminants or biological factors – please specify any enhanced resistance if applicable (refer to BS7543 for guidance)	Zone 3 NO – Site Specific
Design Life: (per BS 7543 – Durability of buildings and building elements, products and components)	Category of building design life = Design life of primary building envelope	50 years 20 years

E Drawing Number:	Description:
Design Drawings	
Guardian Warm Roof Drawing GWR 04 Rev B	"Rafter, Verge, Gable & Hip" dated 17/10/13
Guardian Warm Roof Drawing GWR 03 Rev B	"Ringbeam, Lean to Ridge & Ridge" dated 17/10/13
Hydro Drawing RB 4000	"Ringbeam fabrication" dated 23/10/13
Hydro Drawing RB 6500	"Ringbeam fabrication" dated 23/10/13

Structural Drawings	
"Guardian Roof System –Structural Guide Report – 150mm wide x 12mm thick exterior grade sarking board"	McColl Associates
"Guardian Roof System – Structural Calculations for Victorian Roof System"	McColl Associates
"Guardian Roof System – Structural Calculations for Edwardian Roof System"	McColl Associates
"Guardian Roof System – Structural Calculations for Lean to Roof System"	McColl Associates
"Guardian Roof System – Structural Calculations for Gable Roof System Ridge Beams"	McColl Associates
"Guardian Roof System – Structural Calculations for Hip Roof System Ridge Beams"	McColl Associates
Energy Data -	
Specification Information supplied by Methorne Design Engineering Dated 19/10/13	"Thermal Analysis of Guardian Roof – Hybrid Option 3a 60 PIR with 150 x12mm exterior plywood sarking board & counter battens"

F Certification Documents	
Edwardian dated 23/27 August 2013 Victorian dated 23/28 August 2013 Plus Lean-to, hip and gable roof designs	Job Reference 1130380 Structural Assessments have been confirmed by McColl Associates, 1 Meadowbank Place EDINBURGH EH8 7AW
Climatic Conditions/Design life information	McColl Associates
Statement of Structural Adequacy Dated August 2013 received on 16 September 2013	McColl Associates
Agrément Certificate 07/4470	Metrotile Roofing System
Agrément Certificate 05/4292	Eurotop N35 roof file underlay
Agrément Certificate 95/3126	Kingspan Thermapitch TP10
SER Ltd ACD Certificate or equivalent is to be provided on Site Specific Building Warrant Submission	

H Authority: This Registered Detail consisting of 4 pages is authorised by David McDowall, East Ayrshire Council, acting as Lead Authority on behalf of the Local Authority Building Standards Scotland. Dated: 6 January 2014	Signed: 
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