



# Conservatory Warm Roof Conversion System



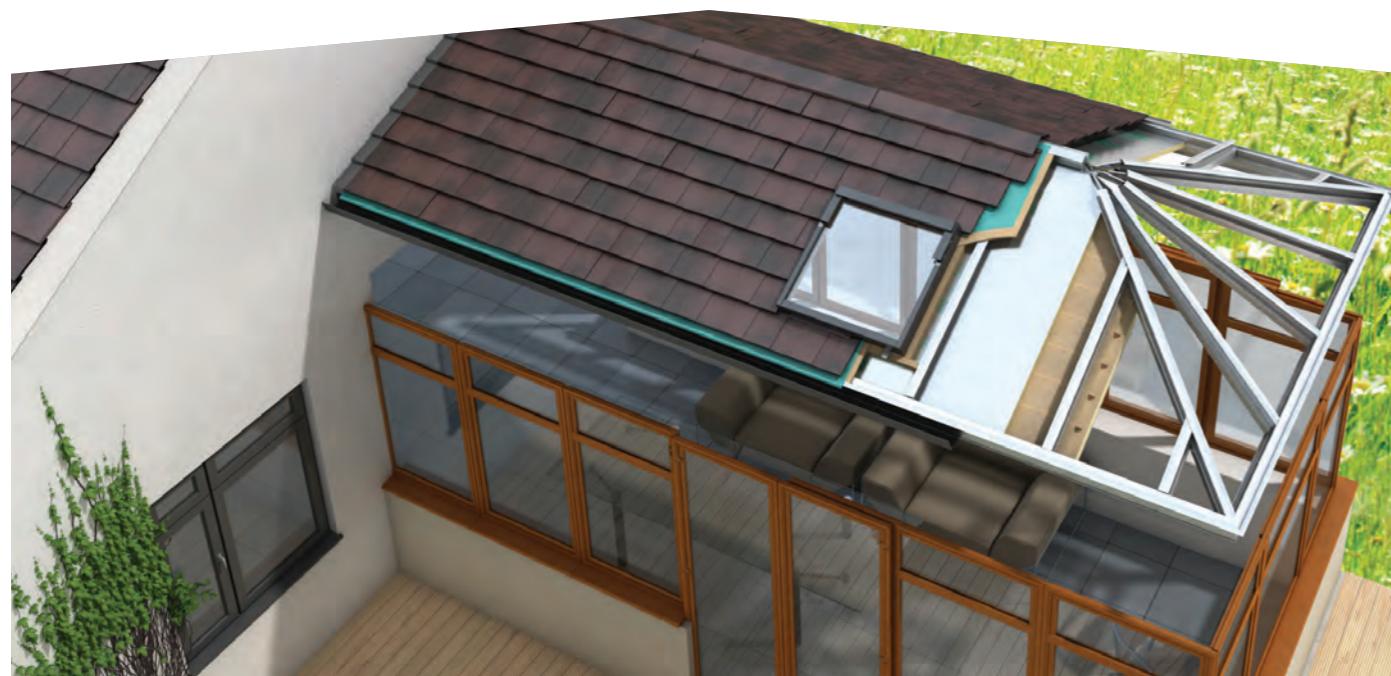
## Is your existing conservatory roof:

Too hot in summer or too cold in winter? | Waste of valuable living space? | Unable to relax to watch TV?

# Transform your conservatory into a comfortable, all year round living space...

...with the Guardian™ Warm Roof Conversion System:

High performance insulated warm roof conversion system | Lightweight aluminium frame  
Reduced energy cost | Reduces rain noise and sun glare



**The Guardian™ Warm Roof System is the biggest revelation to hit the home improvement market in the last ten years.**

**You can now change your old conservatory roof for a new Guardian™ roof and effectively turn your old conservatory into a new extension that can be used all year round. The complete changeover takes just a few days with very minimal disruption to your household.**

The roof system is designed to replace the existing glass or polycarbonate roof of a conservatory while retaining the original windows, doors, frames and walls. At the same time providing substantial energy cost savings.

Fully tested and approved to all thermal and structural standards, the Guardian™ roof is a high performance insulated roof system comprising of a pre-engineered lightweight frame, two layers of rigid insulation board, internal insulated plasterboard, exterior grade plywood, vapour membrane and a choice of external tile finishes.



### The affordable Guardian™ Warm Roof Conversion System



LABC Approval  
(Building control England & Wales)



LABSS Approval  
(Building control Scotland)



Reduced fuel bills for  
the life of the roof



Comfortable ambient  
temperature all year round



A wide range of roof  
colours & finishes available



Fast installation utilising existing  
walls, windows and doors via our  
**nationwide installer network**



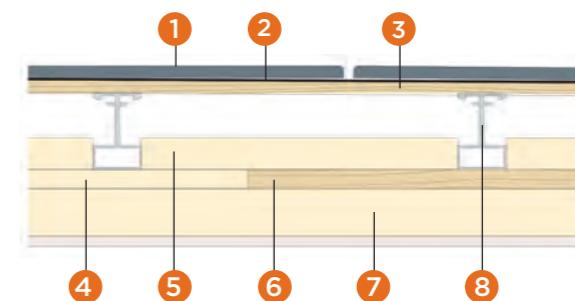
Achieves a maximum U-value of 0.18



Thermal, structural and  
condensation risk tested



Fully guaranteed



1 Choice of tile finishes

2 Membrane

3 Exterior grade plywood

4 25mm high performance insulation (timber batten cut back for clarity)

5 40mm high performance insulation

6 Timber battens

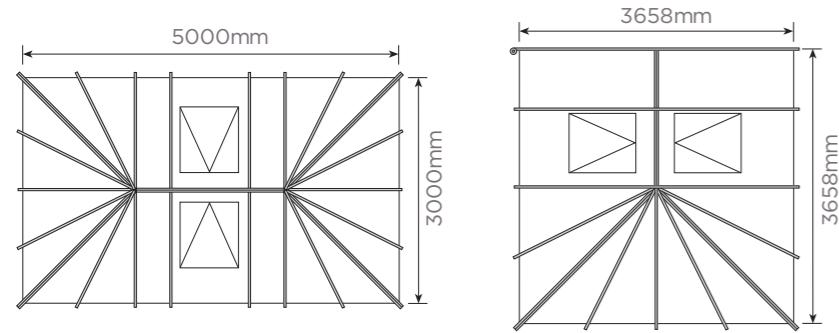
7 72mm high performance insulated plasterboards

8 Rafters

# Roof design options

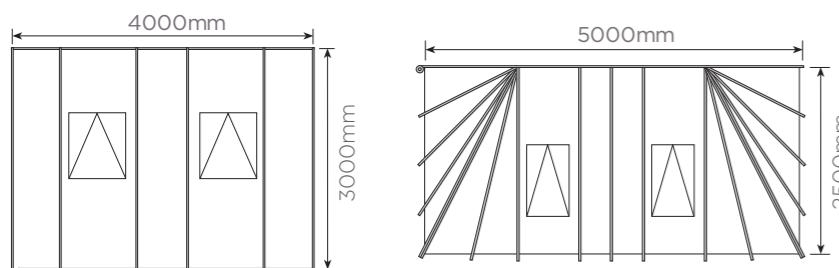
Guardian™ roof provide standard warm roof solutions for existing conservatory roof design. Bespoke solutions also available.

## Edwardian



This classic conservatory shape helps to maximise the living space and is the traditional extension style for image and convenience. The Guardian insulated roof will simply enhance this new living space, which you can now use daily, all year round.

## Lean-to

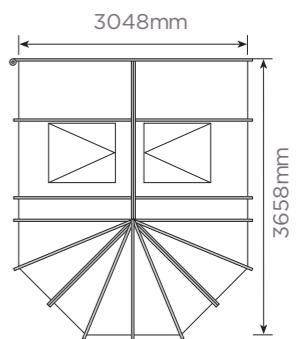


The Lean-to is ideal to maximise space at the rear of the house. The roof ends can have either one or two hips (slopes) and it is an ideal solution for a kitchen extension. The Guardian Warm Roof comes with an array of complementary tiles.



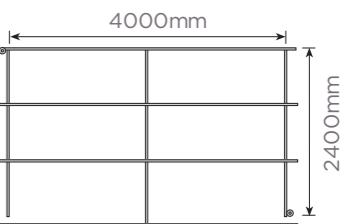
## Victorian

The Victorian style has heavy links to heritage, is extremely versatile and usually has a three or five facet finish. The Guardian solid roof can be tailored to your own specification with a wide range of tile finishes and colours.



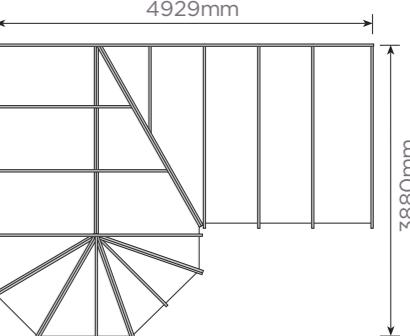
## Gable ended

The main feature of the Gable ended conservatory is the continuous height it brings to the room owing to the long ridge down the centre. The gable ended windows also ensure you are able to get maximum natural light into the conservatory. The Guardian tiled roof is suitable for replacement or new build projects.



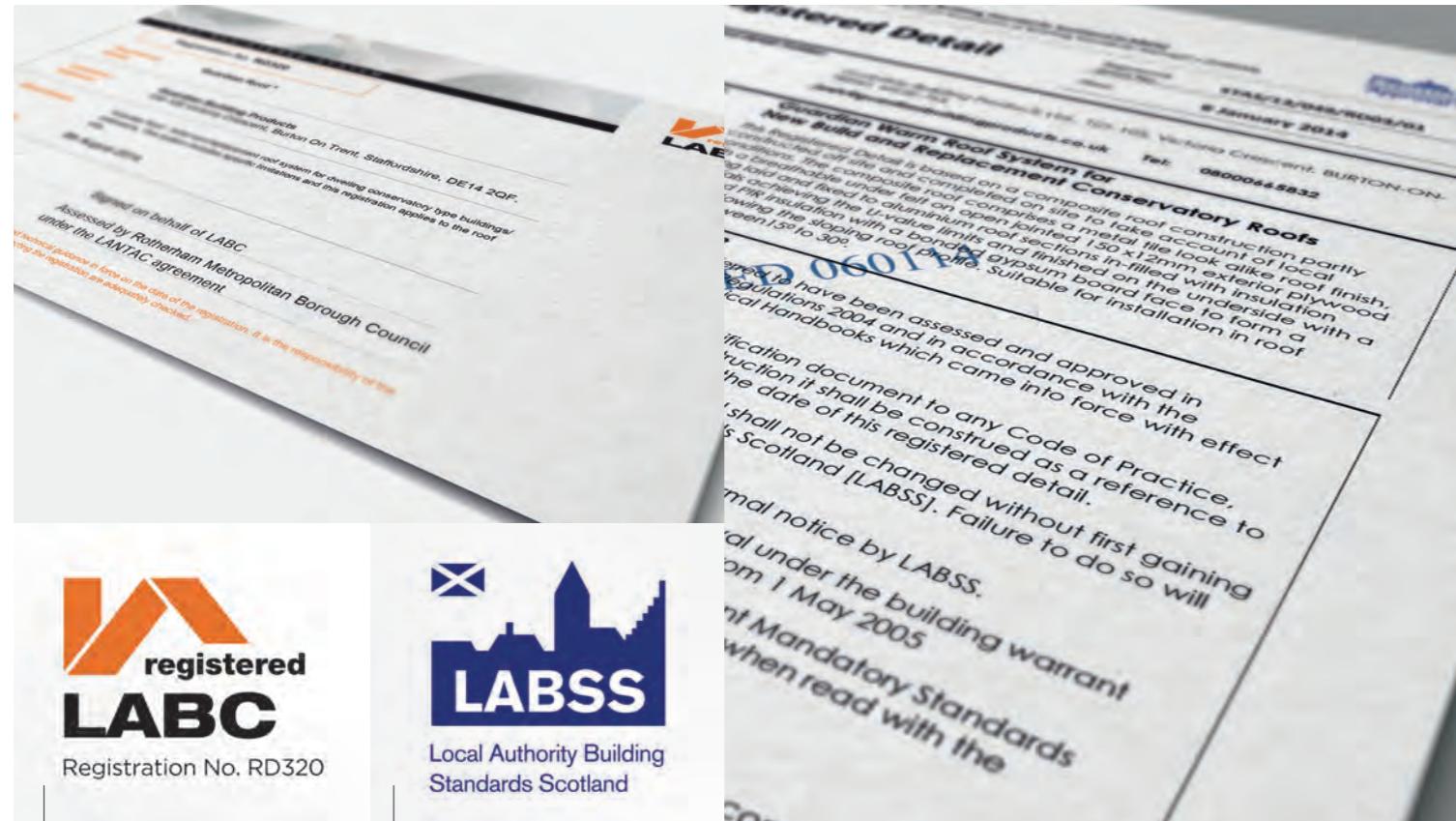
## Combination

The combination or P-shape Conservatory can allow you to have two different style living spaces under one Guardian solid roof. These spaces are extremely adaptable to create a unique, multipurpose room to your exact specification.



# What you need to know

The Guardian™ Warm Roof Conversion System has been designed to provide a high performance thermal and structural solution with zero condensation risk over the life of the roof.



LABC Approval

LABS Approval

Each of these elements has been fully tested and approved by independent industry experts to evaluate thermal performance, structural performance, condensation risk and quantify energy savings.

The Guardian™ roof best practice approach has enabled the Local Authority Building Control (LABC) to certify the Guardian Roof System as a LABC Registered System.

In some cases the Guardian™ roof conversion would be exempt if it was at ground level, does not exceed 30m<sup>2</sup> floor area, be thermally separated from the building it is attached to, have an independent heating system from the main building and have glazing that meets Part N in the critical zones.

However, Building Control approval should always be sought. But with Guardian™ systems being LABC certified, this process should proceed without complication.

The Guardian™ Warm Roof Conversion System is fully compliant for use in a conventional situation such as an extension and has been fully approved by LABC for use as a full replacement conservatory roof.

With Building Control approval, Guardian™ high performance insulated roof conversions may allow the removal of the wall between the house and the conservatory, offering the flexibility to extend and enlarge an existing kitchen, living room or bedroom.

Please consult your installer for more details.

## Structural analysis



## Technical Note

Project:	Investigating the Effects of Insulated Conservatory Roofs	Job No:	60270677
Subject:	Results from IES Dynamic Thermal Modelling	Date:	25 <sup>th</sup> June 2012
Prepared by:	Elizabeth Ward	Date:	26 <sup>th</sup> June 2012
Checked by:	Ewan Jones	Date:	26 <sup>th</sup> June 2012
Approved by:	Ewan Jones	Date:	26 <sup>th</sup> June 2012

The installation of insulation systems to reduce heat loss from conservatories and similar spaces provides a number of benefits. These include reduced heating requirements for both the conservatory and the adjacent dwelling as well as improved comfort levels due to the effects of radiant heat loss.

AECOM have undertaken a dynamic thermal modelling analysis to investigate the impact of installing an insulated roof compared with a standard conservatory roof. The effect of the insulation on a number of key variables has been assessed, particularly relating to energy requirements and carbon dioxide emissions.

## Aecom energy saving study

AECOM modelled a typical house with a standard "Victorian 12' x 12'" conservatory.

The conservatory was northward projecting with an electric heating system. A future energy price forecasts was accounted for under the "Green Stimulus" price forecast that yielded a saving of £5,447 after 25 years.

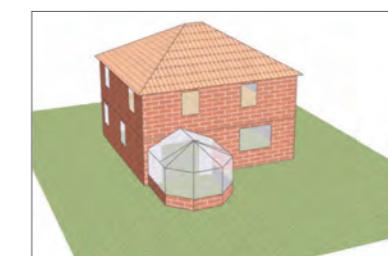
The key conclusion drawn from this evaluation is that the greatest benefits from installing the "Guardian™" roof are made when it is retrofitted, as a result of the greater difference between the U-values of the original roof and the new roof type.

Any of the above reports are available on request from Total Conservatory Roof Systems

## Kingspan thermal analysis & Kingspan Insulation condensation risk analysis



## Modelling Methodology and Key Modelling Inputs

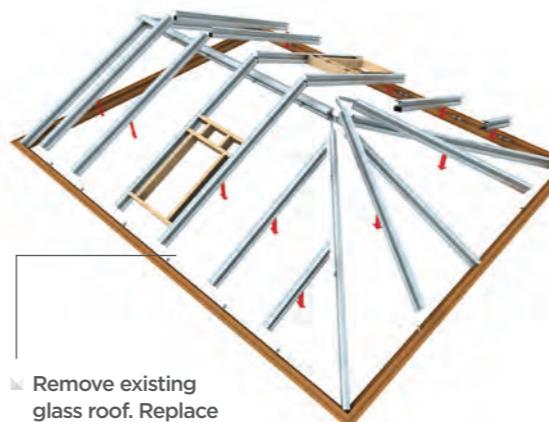


# The Guardian™ Service Package

Building work of any kind can be a daunting process. The Guardian™ Service Package is the hassle-free way to achieve the roof conversion you want. We will manage your project and keep you informed at every stage, providing a seamless process from your original enquiry, through Planning Permission to final installation and Certification.



## Transform your living environment in twelve simple steps



Remove existing glass roof. Replace with Guardian™ Warm Roof ring beam



Watertight envelope in 1 day



Fix box gutter to existing wall



Fix ring beam to existing windows



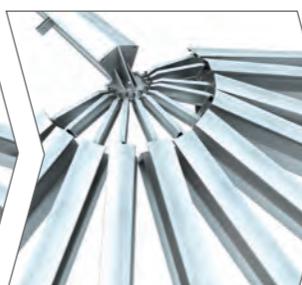
Fix rafters to ringbeam



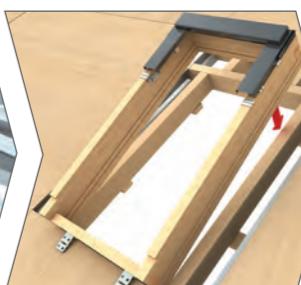
Install external insulation



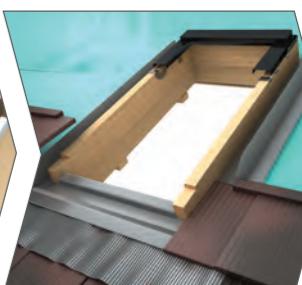
Edwardian conservatory



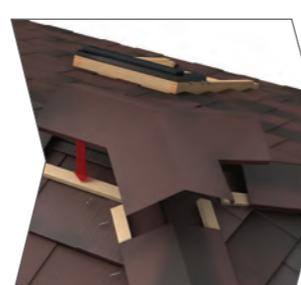
Victorian conservatory option



Install roof window frame



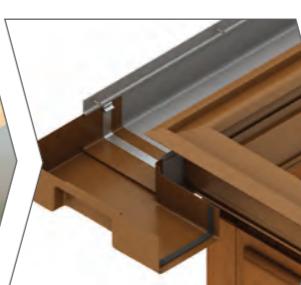
Install roof window



Fix rafter cap and ridge



Install insulation between batten



Fit gutter



Plaster ceiling

# Gallery



▀ If you're looking for a specific, unusual or particular type of roof and can't find it on our gallery please let us know and we'll try and source it for you.



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Glass and Glazing Federation

