



# SILVER<sup>2IN1</sup>

**INSULATING VAPOUR BARRIER**

**THE ORIGINAL BBA CERTIFIED MULTI-FOIL**

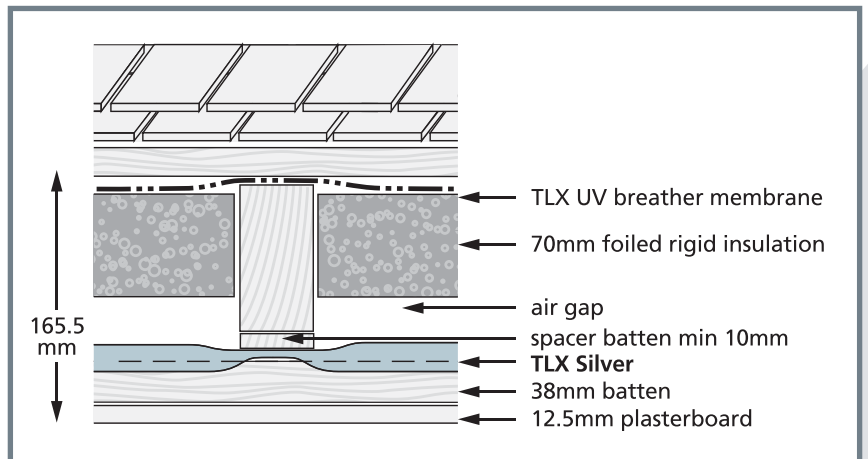
## Installation instructions

Thin, flexible multi-foil insulation

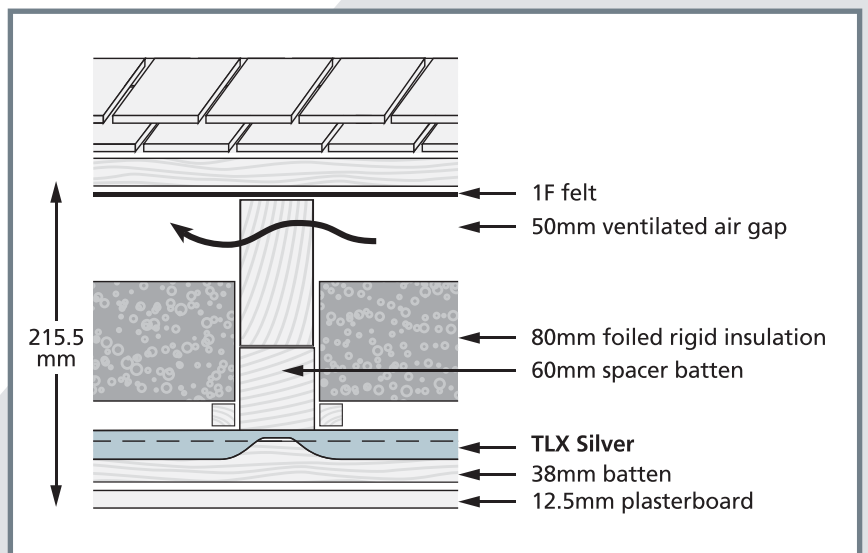


# Below rafter 0.18 solutions

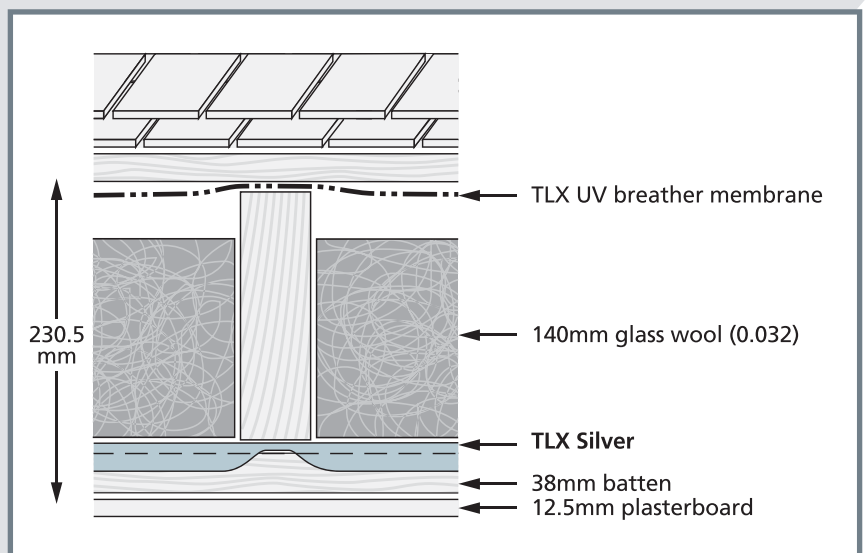
## Below 100mm rafter + 70mm foiled rigid insulation



## Below 100mm rafter + 80mm foiled rigid insulation

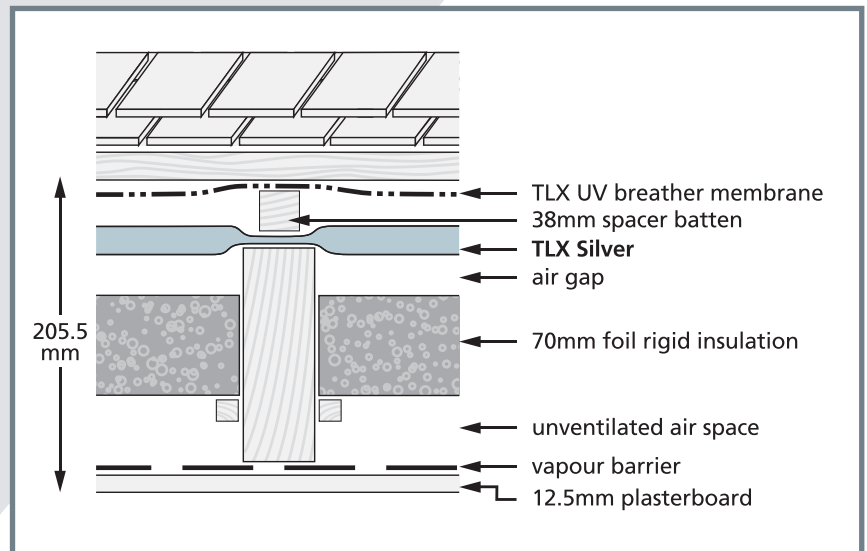


## Below 175mm rafter + 140mm glass wool

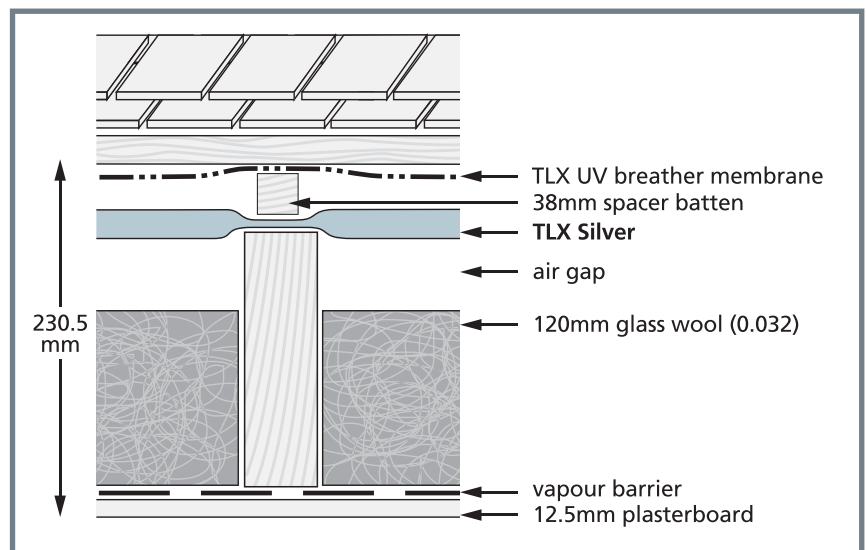


# Above rafter 0.18 solutions

## Above 150mm rafter + 70mm foiled rigid insulation



## Above 175mm rafter + 120mm glass wool



## Optimising internal living space

L1B states that: "Practical considerations with respect to an increase in structural thickness (particularly in terraced dwellings) may necessitate a lower performance target."

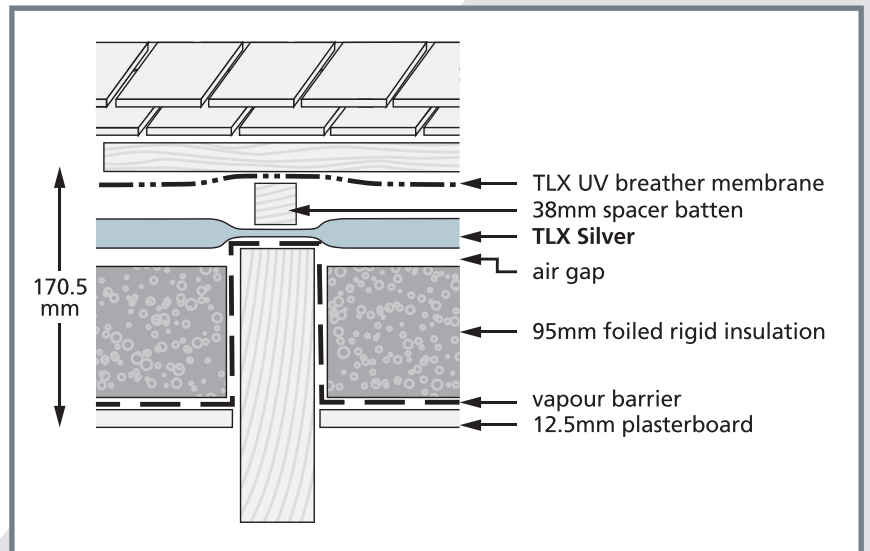
These solutions give U-values of 0.18 and 0.28 W/m<sup>2</sup>K for typical roof and walls respectively. Please contact the thermal hotline and we will provide a customised U-value for your own particular structure, or advice about using different thicknesses.



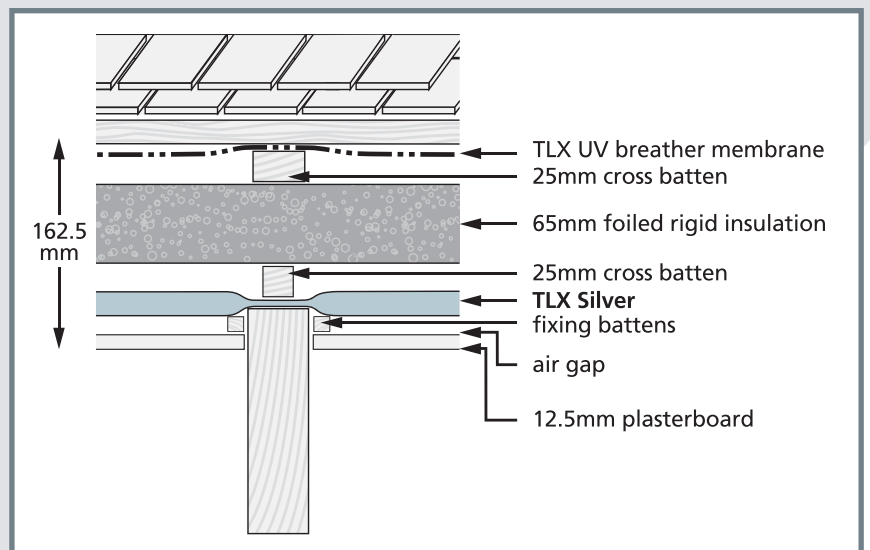


# Barn conversion 0.18 solutions

## Semi-exposed rafter + 80mm foiled rigid insulation



## Fully exposed rafter + 55mm foiled rigid insulation



### Building Control

TLX Silver is the original certified multi-foil. The system is fault tolerant, air and vapour tight cutting CO<sub>2</sub> emissions and saves energy. The product has zero global warming and ozone depletion potential.

With an average home losing 70% of its heat through radiation, you will be glad to hear that TLX reflects more than 95% of the radiation, playing a major part in reducing fuel bills and saving energy.

### Minimum thickness of additional insulation with TLX Silver

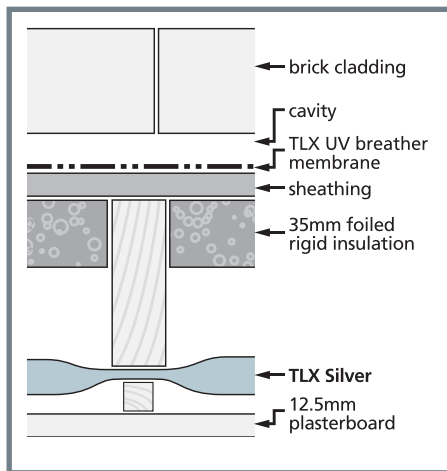
	Target U-value W/m <sup>2</sup> .K		
	0.20	0.18	0.16
Foiled rigid insulation	55mm	70mm	80mm
Glass wool (0.032W/mK)	100mm	120mm	150mm
Glass wool (0.035W/mK)	110mm	130mm	160mm

Based on rafters at 600mm centres

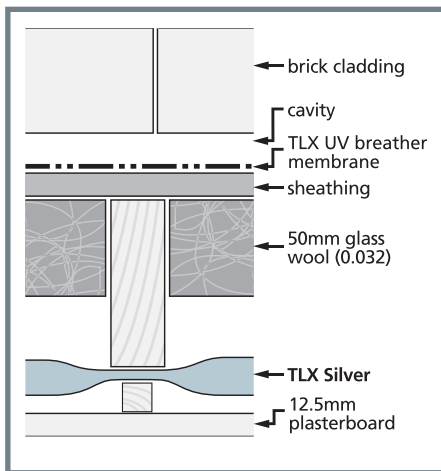
# Wall 0.28 solutions

## Timber frame 90mm stud

**Inside stud  
+ foiled rigid insulation**

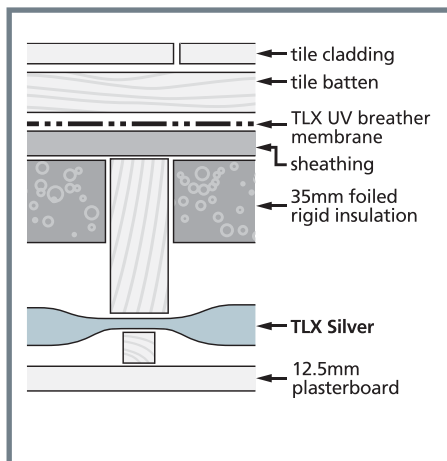


**Inside stud  
+ glass wool**

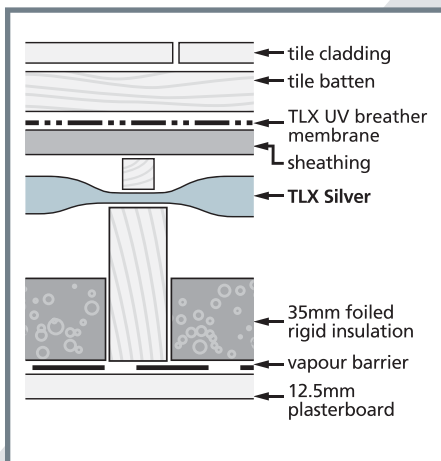


## Loft conversion solutions - dormer cheek

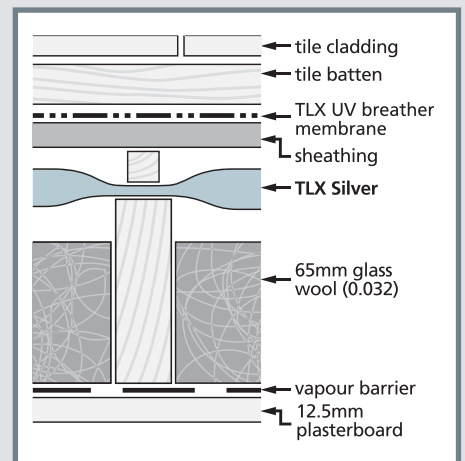
**75mm stud: inside stud  
+ foiled rigid insulation**



**75mm stud: outside stud  
+ foiled rigid insulation**

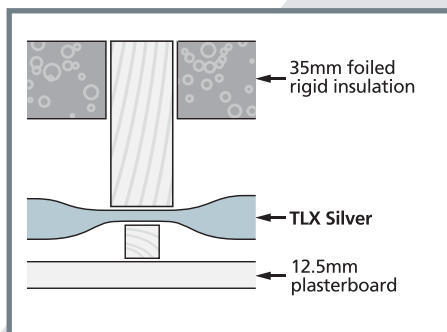


**90mm stud: outside stud  
+ glass wool**

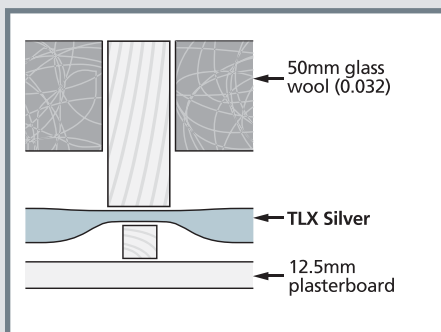


## Loft conversion solutions - dwarf wall

**75mm stud: inside stud  
+ foiled rigid insulation**

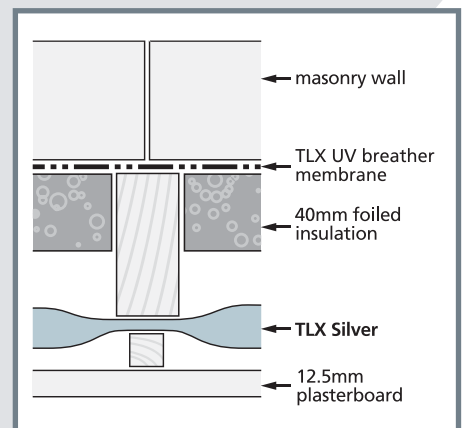


**75mm stud: inside stud  
+ glass wool**



## Solid masonry wall

**65mm stud: inside stud  
+ foiled rigid insulation**



## GENERAL INSTRUCTIONS

- Protective clothing is not required when handling TLX Silver.
- TLX Silver may be installed either way up.
- Bare electrical wiring must not be allowed in contact with TLX Silver. PVC coated electrical wiring to normal domestic items such as light fittings may come into contact with TLX Silver.
- If electrical cables are surrounded by insulation they may need to be de-rated and guidance should be sought from a qualified electrician.

## INSTALLATION PROCEDURE

- TLX Silver is unrolled above or below the rafters in horizontal layers, parallel to the eaves. The product should be installed from ridge to eaves, and over- or under-lapped to ensure that any water inside the rafter space runs down and does not penetrate the insulation or the rafter space. As the TLX Silver is unrolled across the rafters it is fixed in place using nails or staples of at least 14mm depth. The next roll of TLX Silver must overlap the preceding layer by at least 50mm, and the overlap should be sealed along the entire length using the specified adhesive tape.
- When installing TLX Silver, try to retain the full width (with two seams) whenever possible. For the bottom layer, it is better to use a complete layer, and increase the overlap with the next layer up, rather than cutting along the TLX Silver to maintain a 50mm overlap.
- TLX Silver should be permanently held in place using wooden battens fixed with nails. Battens may run either parallel or perpendicular to the rafters.
- Standard plasterboard is fixed to the battens. Foil-backed plasterboard is not required.
- A breathable roofing membrane is fitted above the rafters following the manufacturer's instructions. Tiling battens and tiles are then fitted.

## CUTTING

- TLX Silver can be cut using a sharp knife with the TLX Silver resting on a board, or with carpet fitter scissors. When cutting TLX Silver, always retain as much of the welded seam as possible. Where TLX Silver has been cut and the layers are exposed, the cut edge should be taped together.
- Pieces which have been cut should be stapled and battened as soon as possible, and should not be left only partially secured overnight.
- Awkward shapes (such as triangular pieces for dormer cheeks) should be taped up, stapled and battened immediately.
- Any tears or holes should be repaired with the specified adhesive tape.

## TAPING

- It is important that TLX Silver is securely taped at overlaps and junctions with walls or windows. Unibond Power tape is recommended as a suitable tape. Other tapes should not be used unless they have been shown to have equivalent bonding to Power tape.
- TLX Silver must always be taped together when the surfaces are clean and dry.

## AIR LAYERS

- Unventilated air layers form an important part of the TLX Silver Insulation System. If the air spaces are omitted, whilst there is no danger of condensation, the overall thermal performance of the structure will decrease, and the U value will be higher. Additional insulation may be needed to achieve the desired U-value for the roof.

## ADDITIONAL INSULATION

- Install additional insulation according to the manufacturers' instructions.
- Provide for air gaps between additional installation and TLX Silver as instructed.

## STORAGE

- TLX Silver rolls must be stored on a flat dry surface, protected from the weather and direct sunlight.
- Make sure when installing TLX Silver that it does not come into contact with heat sources above 80°C.

## VAPOUR CONTROL AND VENTILATION

- Where TLX Silver is fitted below rafters it also performs as an effective vapour barrier, preventing water vapour from the house from penetrating the roof structure and possible condensing on a cold surface. No additional vapour barrier is required.
- Where TLX Silver is fitted above rafters, it is necessary to install an additional vapour barrier below the rafters. Foil-backed plasterboard **IS NOT** a suitable vapour barrier. 1000 gauge (0.25mm) polythene sheet or Visqueen HP Vapour Barrier may be acceptable vapour barriers.
- Ventilation of the rafter space is not needed if a breathable roofing membrane has been used. If a non-breathable (or 1F type) membrane is in place, then a 50mm ventilated air space beneath the felt is required.
- Ventilation of the space between the membrane and the outer roof covering is not required for air-open coverings such as clay or concrete tiles and natural slates.
- If in any doubt about possible harmful condensation, contact TLX Insulation or Building Control for guidance.

## ACHIEVING BETTER U-VALUES

- U-values lower than those given in the examples may be achieved by using a second layer of TLX Silver, or a greater thickness of additional insulation.



**We've got the answers... just ask**

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