

PAVAROOF Pitched Roof System

The Pavaroo Pitched roofing system is for pitched roofs above 10° with vented roof coverings of all sorts. The system uses a water resistant interlocking woodfibre board over the rafters in an un-bridged layer, to provide a highly thermally and acoustically insulated roof. The Pavaroo Pitched roof system does not require either a membrane over the outside or any vapour barrier internally. GreenSteps will provide natural hygroscopic high performance insulation (either Thermafleece or Hemp) as infill insulation and environmentally friendly paint to complete the system.



PAVAROOF Installation at Trevone Bay, Cornwall

System Application:

The Pavaroo Pitched Roofing System is suitable both for new build and for the refurbishment/upgrading of existing roofs. It is particularly suitable for rooms in roofs and other applications where there can be problems with summer overheating or with external noise pollution. It is also highly suitable for breathing building construction and the refurbishment of historic buildings.



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System Benefits:

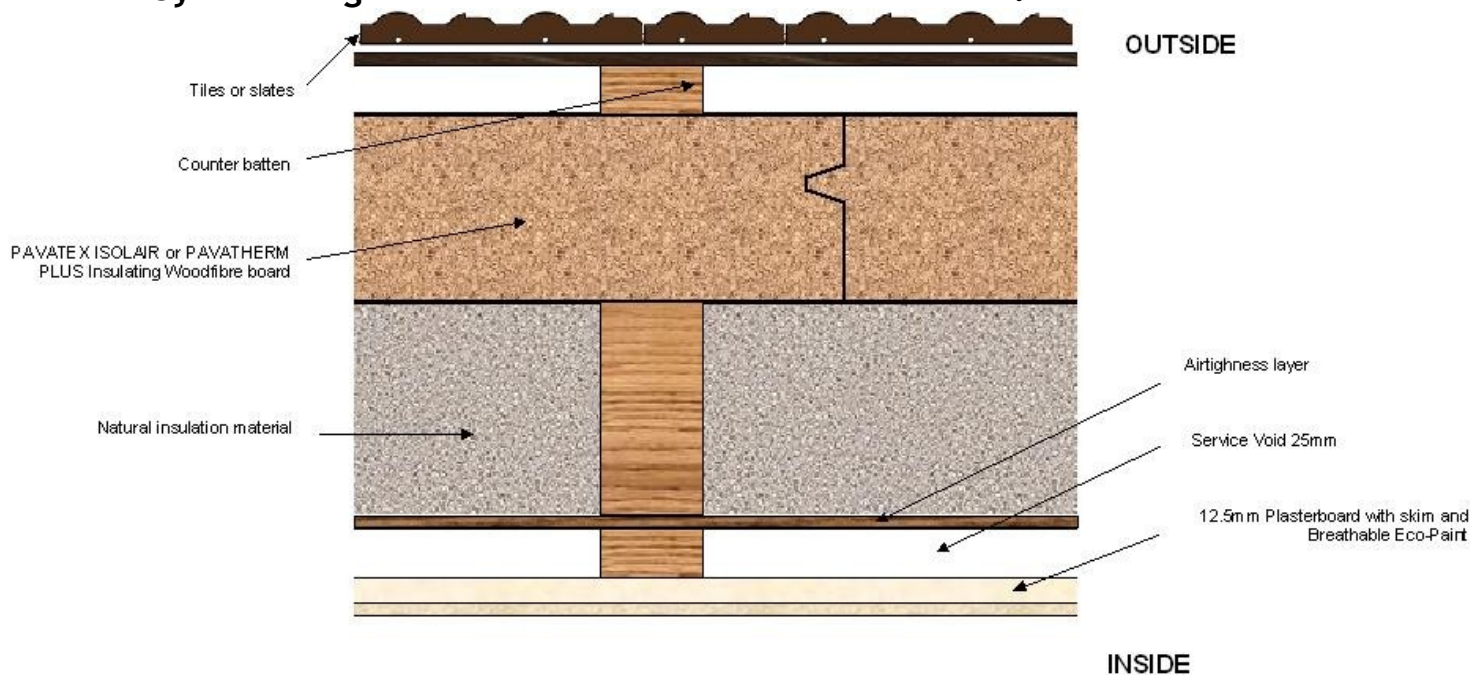
- Excellent thermal performance, with very low thermal bridging (y values), enabling slim construction for new Part L compliance
- Excellent wind-tightness
- Excellent acoustic insulation
- Excellent overheating control
- Fully breathing construction
- Full design and site support available
- Full systems parts from GreenSteps
- Robust and easy system to install
- Tried and tested system, fully certified

Environmental Performance:

- BREEAM Green Guide rating: A
- Carbon positive (1.2 tonnes of CO₂ in every 1 tonne of board) and non toxic
- Woodfibre Boards are over 95% waste

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System Diagram & Technical Performance Details:



Rafter Depth 100mm (fully filled with Thermafleecce or Hemp insulation, 0.039 W/mK)

Insulation Layer	22mm Isolair	35mm Isolair	60mm Isolair	60mm Pavatherm Plus	80mm Pavatherm Plus	100mm Pavatherm Plus
U-Value* [W/m ² K]	0.34	0.32	0.27	0.26	0.23	0.21
Decrement Factor	0.92	0.85	0.64	0.72	0.57	0.44
Decrement Delay [h]	2.6	3.6	5.7	4.9	6.4	7.7
Admittance [W/m ² K]	1.02	1.03	1.05	1.05	1.06	1.06

Rafter Depth 150mm (fully filled with Thermafleecce or Hemp insulation, 0.039 W/mK)

Insulation Layer	22mm Isolair	35mm Isolair	60mm Isolair	60mm Pavatherm Plus	80mm Pavatherm Plus	100mm Pavatherm Plus
U-Value* [W/m ² K]	0.25	0.24	0.21	0.20	0.19	0.17
Decrement Factor	0.86	0.78	0.56	0.64	0.49	0.37
Decrement Delay [h]	3.7	4.7	6.9	6.2	7.6	9.0
Admittance [W/m ² K]	1.04	1.05	1.06	1.06	1.06	1.06

*based on JPA calculation with 8% bridging (timber) and no service void. Typical acoustic performance with 60mm woodfibre board: $r > 52\text{dB}$



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Full System Components:

Insulation boards: Interlocking, waterproof Isolair boards (22, 35 or 60mm) OR Pavatherm Plus boards (60, 80 or 100mm).

Tapes and Glues: Pavatape and primer for exposed edges, valleys, hips, ridges, service penetrations etc. Special glues for board edges on pitches between 10° and 20°. On pitches over 20° board edges are not glued.

Fixings: A range of helical and screw fixings for different boards and roofing materials.

Infill insulation: GreenSteps will provide either Thermafleecce sheep's wool insulation Hemp insulation. Alternatively, GreenSteps can arrange for infill cellulose insulation to be installed by a specialist applicator.

Plaster boards and paints: GreenSteps can provide clay boards, plasters and environmentally friendly paints for ceilings.

Available Support:

Design support: Full design support including drawings review, assistance with detailing, thermal bridging (New Part L), and interstitial moisture calculations.

Training: On site for applicators, site managers etc.

Site Support: Assistance on site, advice on technical, application and quality issues.

Installation: Full installation service available in London and Essex region

