

In addition, the existing mineral wool insulation, which has deteriorated and is now in poor condition, will be replaced with natural flexible insulation made from industrial hemp and jute fibres. While the original intention was to install a vapour control layer beneath the new insulation, guidance from SPAB and Ecological Building Systems advises that, due to the existing lath and plaster ceilings, the formation of air pockets would be unavoidable and could cause more harm than benefit to the ceiling structure. The proposal is therefore to install the flexible insulation without a VCL and instead improve ventilation to allow moisture to dissipate. This will be achieved by reducing moisture vapour reaching the roof void through the sealing of penetrations, gaps and cracks within the ceiling.

IndiBreathe[®]
FLEX

For a breathable thermal envelope, vapour open flexible insulation batts made with UK industrial hemp & recycled jute.

- Exceptional vapour transport and moisture management – keeping buildings dry and preserving building fabric.
- Circular by design, with recycled content and can be reprocessed at the end of life.
- Reduce embodied & operational carbon emissions.
- Light and soft to touch for installers.
- Durable and with rigidity to resist slumping.
- Warm in winter, cool in summer – indoor temperatures and humidity stay comfortably even.



Technical data

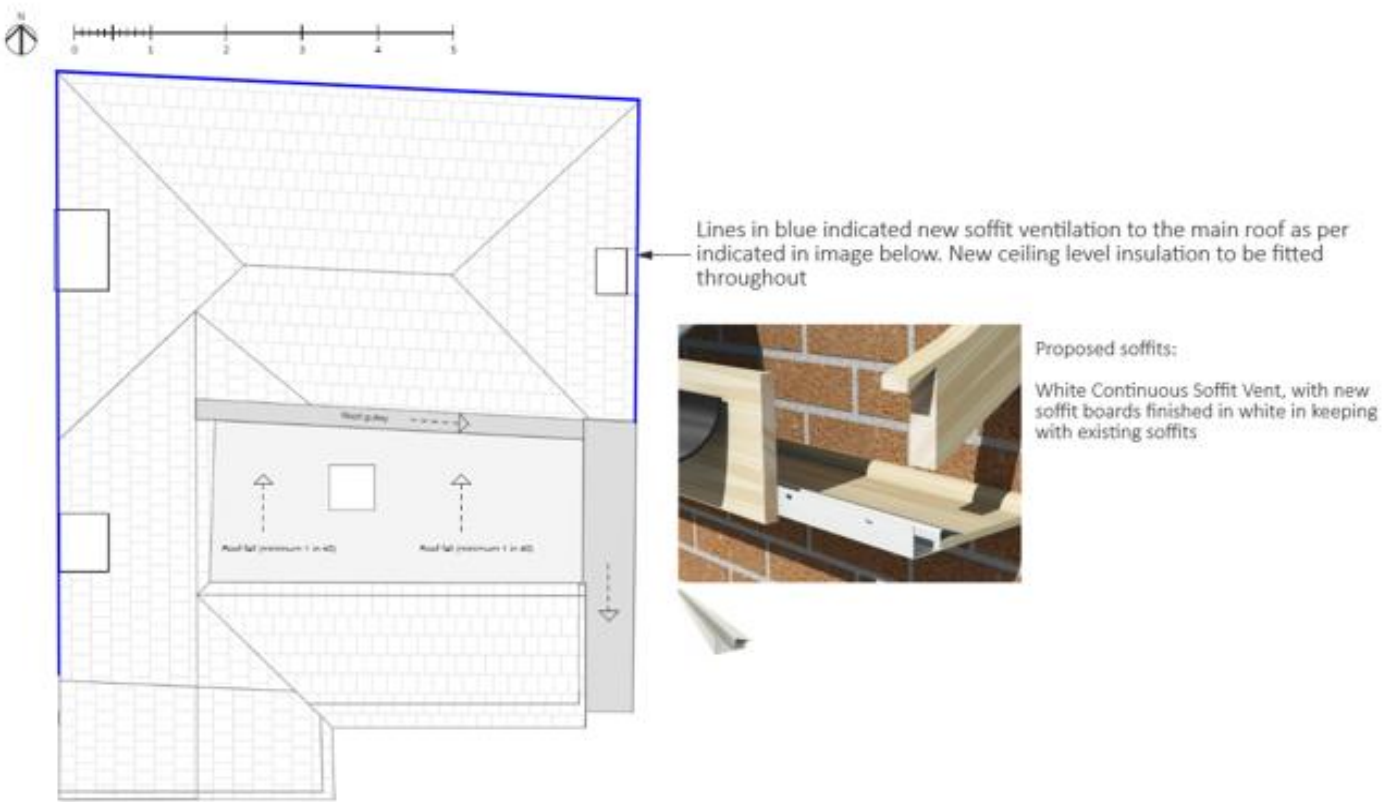
Thermal Conductivity λ (W/m.K)	0.039, 20-100mm 0.042, 120-140mm
Density ρ	35 kg/m ³
Specific Heat Capacity C	1857 J/(kgK)
Vapour Diffusion Resistance μ	0.48
Reaction to Fire (BS EN 13501-1)	E
Sound Reduction	Min 41dB (50mm+)
Sound Absorption	Class C (40mm) – Class A (100mm)
Carbon (net negative) incl. biogenic	-0.63 kgCO ₂ eq/kg
Carbon (net negative) insulation only	-0.51 kgCO ₂ eq/kg

Further ventilation will be provided by perimeter ventilation where the new flat roof meets the pitched roof, allowing for cross ventilation.



The choice of insulation has also been informed by SPAB guidance on regulating humidity through the use of moisture-buffering materials. These materials can absorb and release excess humidity, helping to regulate condensation and reduce the risk of mould formation within the roof structure, making them particularly suitable for problematic roofs.

The proposed soffit vent is discreet and flush-fitting, providing continuous roof-void ventilation in accordance with BS 5250 and Approved Documents C and F. This addresses the established condensation and timber decay within the insulated roof. The vents will be colour-matched to the existing white soffit boards, ensuring no harm to the building's character and aligning with conservation guidance that favours low-visibility, traditional-appearance solutions.



Planning Condition 5.

Natural roof slate: The roof of the hereby approved rear extension shall be clad in natural slate, a sample of which shall have first been submitted to and approved in writing by the local planning authority.

The proposed roof slate is a natural stone in grey colour as follows:



Proposed

The proposed natural slate has been selected for its close visual match to the existing slates and its suitability for heritage projects, providing a distinctly natural appearance to the roof. The slate is classified as W1 ($\leq 0.6\%$), T1 and S1, having been tested in accordance with, and complying with, the relevant sections of EN 12326-1:2014.

- Thermal cycling T 1
- Exposure S02 S1
- Water Absorption W1
- Meets the requirements of NHBC Standards