

CASE STUDY

Slopehill Road House



PRODUCTS USED

Earthwool® glasswool: Ceiling, R5.2
Earthwool glasswool: Ceiling, R6.3
Earthwool glasswool: Wall, R2.8
Earthwool glasswool: Acoustic, R2.0
Earthwool glasswool: Acoustic, R1.4

PROJECT

Slopehill Road House

ARCHITECT

Team Green Architects

CONTRACTOR

Barker Construction

"We wanted to create a high performing and sustainable home for the owners of Slopehill Road residence. We were impressed by the range of high R-Values that Knauf Insulation were able to provide," said Sian Taylor, from Team Green Architects.



CHALLENGE

The objective of Slopehill Road House was to blend good architecture and building physics whilst maintaining a continuous R-Value throughout the property where possible.

The roof profiles in this home varied from room to room. The main living space boasted a high pitched skillion roof and the bedrooms either had a lean-to skillion roof with narrow rafters or traditional trusses.

To meet the objective of a continuous R-Value throughout the property and Local Authority requirements of maintaining a 25mm air gap in skillion roofs, it was important for the insulation to be resilient and provide high thermal performance.

SOLUTION

Where the rafters permitted, Earthwool® glasswool: Ceiling batts, R6.3 and R5.2 were installed. Earthwool glasswool: Ceiling batts are amongst the highest thermally rated glasswool products available in New Zealand. The inherent thermal performance of glasswool insulation not only helped achieve a high R-Value but also provided sound absorbing and energy saving benefits.

In the rear bedrooms where the ceiling rafter thickness was narrow, Earthwool glasswool: Wall batts, R2.8 were installed. By using the highest thermally rated 90mm wall product available, it meant the difference in thermal performance from this section in comparison to the rest of the house was kept to a minimum.

Earthwool glasswool: Wall batts, R2.8, were installed in the 90mm wall cavities. Like most high performance homes in New Zealand, Slopehill Road had an extra 50mm cavity on the inside of the air-check membrane. This was insulated with Earthwool glasswool: Acoustic batts, R1.4 to significantly reduce thermal bridging. Earthwool glasswool: Acoustic insulation not only improves the thermal performance of the home but also reduces sound transfer to improve the comfort of the home.

RESULT

By using high performing Earthwool glasswool, Slopehill Road is a super-insulated future-proof home. It will provide a comfortable, energy efficient environment for the occupiers for today and tomorrow.

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