

# WAYS TO ACHIEVE THERMAL EFFICIENCY IN NEW HOUSES

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Insulation has been, de facto, mandatory in New Zealand for many years. Yet, houses built since 1978 often face the same problems as the older housing stock: they lack proper insulation<sup>1</sup>. As a result, they are cold and damp in winter, hot in summer and expensive to heat or cool. Subsequently, their occupants can be exposed to the same health risks that different studies identified in older, partially- or un-insulated houses<sup>2</sup>.

This paper identifies the key problems that preclude new houses from delivering on expectations for warmth, comfort and energy efficiency leading to potential non-compliance with relevant requirements of the NZBC (H1).

Furthermore, the paper makes three key recommendations on how these problems can be solved without significant cost impacts. Effective, easy to make changes are suggested to how houses are designed, what insulation products are selected for them and how these products are fitted.

<sup>1</sup> 'Investigating quality of insulation in new build residential homes', RealSure, 2010

<sup>2</sup> Retrofitting houses with insulation: a cost-benefit analysis of a randomized community trial. R. Chapman, P. Howden-Chapman, H. Viggers, D. O'Dea, M. Kennedy.

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