

BUILDING RESILIENCE

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1. BRANZ

Although considerable research has been carried out into the resilience of buildings, materials and components, there are still substantial gaps in knowledge and the information available. Such areas include how these factors are influenced by extreme events, how buildings can be made more resilient and how maintenance can extend the service life of materials and buildings.

Over recent years, New Zealand has experienced a number of extreme events, which have led to increasing costs to the building industry, homeowners, councils, government and the insurance industry. Despite being built in areas of risk, New Zealand's housing stock has limited resilience, which is further compromised by poor maintenance and repair of our existing buildings. This puts the existing stock even further at risk and there is a strong need for our buildings to be made more resilient to such events.

Building on the development of the BRANZ Durability Verification and Residual Service Life tools, current research is delivering risk profiles and developing guidelines on materials and design that can inform stakeholders about actions that can be taken to improve the resilience of both new and existing dwellings. The research involves robust investigations into the resilience of buildings and structures, taking into consideration the material and building characteristics, property characteristics, external elements, geographical location and combinations of hazards. More robust information on the effect of maintenance on service life of materials is also being developed to allow more quantitative service life assessments to be made.

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