

RUAPEHU SUSTAINABLE HOUSING

THE NGATI-RANGI LOG HOME

Ruapehu has a distinct lack of affordable healthy housing. The district's uninsulated houses are causing many health issues over the winter. So far, the development of healthy housing has been prohibited by a challenging local economy. The Ruapehu Sustainable housing team aims to solve this by developing a healthy and affordable Ngati-Rangi Log home.



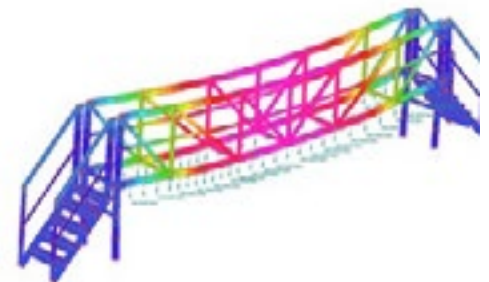
The log home is often thought of as the American log cabin or the Scandinavian chalet, however what does a New Zealand log home look like?

We will work extensively with the Ruapehu community to design an inspiring 'Ngati-Rangi' log home. One that 'feels' right to the community.



Log homes have been known for their warmth and comfortable year round temperatures. We will employ advanced thermal modeling to show just how efficient these homes are. These results can be taken by councils, log home builders and designers to help forecast the energy needs and to draw comparisons with conventional buildings.

Engineering techniques such as FEA (finite element analysis), will be used to study the structural integrity of log homes. We already know log homes are strong and there is a wealth of anecdotal evidence used to show that well-built natural log homes have outstanding seismic performance. We aim to use these state-of-the-art engineering tools to add concrete proof of these qualities.



We are fortunate in New Zealand to have an abundance of high quality timber. We will be investigating the thermal performance, durability and strength of different timbers to choose one which best makes a healthy and affordable log home.



Our research, design and demonstration work will put log homes on a concrete foundation for the people the Ruapehu District.