



Above: Retaining Wall Drawing Tool. Right: Screenshot showing solution costing

Sapper

Project Location: Whangarei

Cook Costello for IAG New Zealand Limited

Disciplines: Information



The Sapper Project arose from the need of private insurers to progress the residential claims requiring foundation solutions following the Canterbury Earthquake Sequence.

Determining a suitable foundation solution could not be achieved using a flowchart approach due to the highly variable geotechnical, site and dwelling constraints of each property, therefore the foundation solution and costing model Sapper was developed. Our client also required readily consentable solutions, and this was achieved through a parameterised form of the MBIE guidance, with costs calculated from the solution component materials rate and quantity rules.

The foundation costing tool was initially developed in Microsoft Excel, but quickly evolved to a spatial database with web user interface. The system was soon developed to accommodate a similar Costing Model for Retaining Wall Assessments. While the Foundation Costing Model uses the databases spatial capabilities with address geocoding, shape file queries and ground investigation log presentation, it is the Retaining Wall Assessment that takes full advantage with map drawing tools to record site observations and wall locations. The Retaining Wall assessment enables collaboration between the Engineer and Quantity Surveyors to coordinate and complete their work aspects and generate comprehensive property reports of damage and remedial actions, including cost estimates, support in site maps and photos.

The collection of data in a digital medium is a valuable and intuitive information resource for clients with varying levels of technical ability. Sapper has proven to be an efficient and valuable costing programme which has aided the Canterbury Earthquake recovery effort.

Judging & Copyright Statement

This project is a Finalist entry in the 2016 INNOVATE NZ Awards of Excellence competition. The winners will be announced on Friday 2 September, 2016.

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