



# IDS

## Infrastructure Decision Support



### Future proofing New Zealand's infrastructure

IDS are a non-profit, service orientated, industry driven organisation that provides infrastructure management support to New Zealand asset owners, and specialises in road and water infrastructure.

[ids.org.nz](http://ids.org.nz)

## HOW WE CAN HELP

IDS can assist you in optimising the financial and whole-of-life performance of your infrastructure assets. We manage the license distribution and utilise network performance modelling software; dTIMS (Deighton Total Infrastructure Management System), which is available to every RCA regardless of their size or resources.

We have deterioration models developed in New Zealand for New Zealand conditions. These assist us in predicting future risk of infrastructure failure, renewal and inspection needs.

## OUR SERVICES

**NZ Roads** Our primary aim is to support road network managers in their quest for finding the best balance between investment into renewal programmes and levels of service required through the pavement and surface performance of their networks.

**NZ Water** Water infrastructure is one of your most valuable assets. Through detailed analyses of your asset requirements and investment profiles, we can help you evaluate your current and future water infrastructure maintenance needs and provide insight into associated service level outcomes. We can give you confidence in your replacement profile for the next 10, 20, 50, and 100 years.

**Bureau Service** Through our Bureau Service, we offer support to infrastructure managers who may not have the required resources or term appointed service providers available to undertake projects.

We draw on a resource pool represented by leading service suppliers in asset management and can provide customised solutions to suit your specific requirements.

## CASE STUDY

**On Monday 14 November 2016, the second biggest earthquake in New Zealand's history hit south-west of Kaikoura. The quake devastated the main transport arterial route through Kaikoura which links Picton and Christchurch, cutting off the small town and severely impacting the main freight transportation network in the region.**

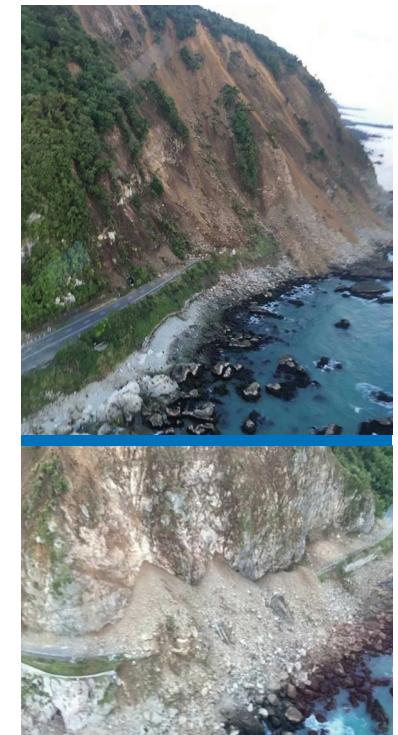
The New Zealand Transport Agency's immediate requirement was to analyse and advise on a safe, alternate transport route as quickly as possible.

Gordon Hart, from the NZTA and Director at IDS, and his team were tasked with this challenge. They were given a two-day turnaround to assess what their options were for an alternate route for primarily freight vehicles, which at that stage was the State Highway 63 to State Highway 7 network. They needed to know what additional surfacing and paving work might be required on this alternative route in order to create a sustainable route for the medium term, with a time horizon, at that time for planning purposes, of up to three years.

The impact on the alternate route was going to be a massive seven-fold increase in pavement loading. A reconnaissance team was quickly assembled, including key people who were already very experienced with the route. Based on their knowledge of the network and on what they could see of the route's current performance, they realised they needed to take a more multi-layer approach and utilise all the tools available to them.

They engaged IDS's industry modelling tool dTIMS (Deighton Total Infrastructure Management System). Robust modelling work had recently been carried out on the national network and this was used as a starting framework to assess the new route over two working days and one weekend.

*...continued over*



The team found the dTIMS tool was flexible enough for them to customise and add in extra functions, specifically the expected traffic loading increases. This increased the sensitivity of the model, resulting in a model generated work program that aligned very well with the program visually assessed by the team in the field that was based on people's knowledge of the network. It gave the whole team confidence they were in the right ball park.

The biggest challenge was not just the timing, but the fact that the network was live.

Mr Hart said; "It was pretty much a case of using all the tools that we had and the dTIMS (Deighton Total Infrastructure Management System), modelling tool was very much a part of that. It's always nice to have a lot of time to plan but the reality is we were dealing with a live situation and that is one of the reasons it was essential to recognise that we had the tools to be that responsive. To be able to theorise the capacity of the network, we needed to go out and do some testing and get a little bit more information about the pavement itself and that takes time. But to be able to get started on an immediate package of work on the most vulnerable sections of the network, we had to have results in an extremely short period of time and dTIMS was invaluable in providing that response."

## Contact us

For more information on IDS services or the dTIMS (Deighton Total Infrastructure Management System) modelling tool visit **ids.org.nz** or contact:

**Dr Theuns Henning** – IDS Chief Executive  
**M** 027 5288 622 **E** theuns@ids.org.nz