Geodetic Response to the September 2010 (Darfield) Canterbury Earthquake.

At 4:35 AM on Sat Sept 4 2010 Canterbury was hit by a magnitude 7.1 earthquake at a depth of 10 kilometres. The earthquake caused metres of deformation along the fault scarp and pockets of localised deformation from liquefaction. This resulted in deformation of the physical geodetic control network (survey marks) over a wide area.

Within days of the earthquake work began to establish the extent of deformation and to begin rebuilding a reliable control network. This response was based on two major priorities:
- supporting cadastral and other geospatial applications, and;
- supporting utility providers to re-establish services by, in particular, providing reliable height control.

The planning and survey work involved consultation and coordination between central and local government agencies and private companies. The work was undertaken in several stages, the results from earlier stages being fed back into planning subsequent work, with interim results made available as the work progressed.