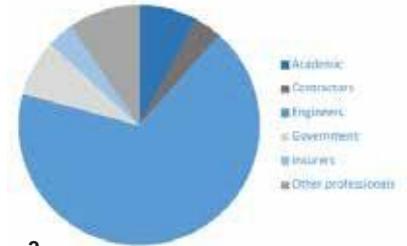


2



3

1 Investigation locations and the inferred soil behavior type 2 Data quantity available on the CGD 3 Composition of CGD users (by profession)

## Canterbury Geotechnical Database

**Project Location:** Canterbury

**Tonkin & Taylor for MBIE**

**Disciplines:** Geotechnical Engineering, Engineering Geology, IT, Computer Programming



The Canterbury Geotechnical Database (CGD) is an online database that Tonkin + Taylor developed initially for the Canterbury Earthquake Recovery Authority (CERA), and more recently for the Ministry of Business, Innovation and Employment (MBIE) to assist in the rebuild of Christchurch following the Canterbury Earthquake Sequence (CES).

It was designed as a searchable repository to share existing and new geotechnical information. The shared data concept is a unique and innovative feature of this database.

By April 2016, the database contains over 22,500 cone penetration test records, 4,900 boreholes, and 1,000 piezometers with accompanying groundwater monitoring records, 6,000 laboratory test records plus other data. The data sharing model in Canterbury has enabled a significant dataset to be developed to the benefit of private and public sectors – a quiet success story and one of the positive lasting legacies coming out of the CES.

The system developed rapidly in a recovery environment. It started with simple upload functionality, progressively upgraded with users' technical sophistication and data sharing appetite. The development was shaped to encourage wide use and break long held resistance to data sharing.

Complexity of the project has come from the dynamic recovery environment, the wide ranging stakeholders and changing nature of stakeholder organisations. The primary innovation is the database's collaborative nature – unique in the world.

Geotechnical and IT expertise were key to the database's development – along with the ability to identify pragmatic solutions. Technical expertise enabled identification of the database's future potential. This has led to a solution that is elegant in its simplicity and compatibility with computer platforms around the world.

Environmental, sustainability and safety considerations are encompassed by two broad outcomes from the system. The ultimate accolade is the MBIE's decision to expand the CGD from a local response in disaster recovery to a permanent national system that will launch soon.

### Judging & Copyright Statement

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

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