

Large Building Re-levelled by JOG & UDI

INDUSTRY

Commercial

STRUCTURE

Office building

PROBLEM

Earthquake remediation

LOCATION

Christchurch, New Zealand

DURATION / YEAR

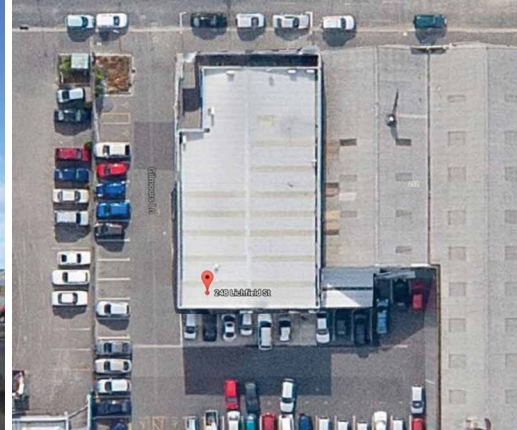
3 weeks / 2014

TECHNOLOGY

JOG Computer
Controlled Grouting &
Uretek Deep Injection

BUSINESS UNIT

Mainmark New Zealand



Summary

This two-storey commercial building with a footprint of 510m² had walls built of precast tilt-panels and had suffered significant earthquake subsidence.

In three weeks, Mainmark rectified the settlement, by applying JOG integrated computer grouting and injections of Uretek expanding structural resins.

Uretek Deep-injection was then undertaken to fill any voids in the foundations and to ensure full support for the floor slabs. Injections were made to a depth of 4,000mm; this part of the project taking 16 days, partly overlapping with the JOG work. The project was completely successful. The building was raised and re-levelled to the client's complete satisfaction. There was no disturbance to the neighbouring building.

Objectives

To raise and re-level the building precisely. It was essential to avoid any disturbance to the neighbouring building which was only 200mm from the rear wall.

Solution

A continuous JOG circuit of 64 injection ports was installed. We proceeded with a sustained sequence of injections of JOG cementitious grout. And over 14 days of very careful lifting the building was gradually raised and re-levelled.

Continuously monitored and computer-controlled, the lifting of this heavy structure was uniform and gentle. The average total lift was 59mm and the maximum lift in one location was 82mm.