PROJECT PROFILE
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mainmark

Office Building Floor Raised & Re-levelled

INDUSTRY
Commercial

STRUCTURE
Office building

PROBLEM
Earthquake remediation

LOCATION
Christchurch, New Zealand

DURATION / YEAR
7 days / 2011

TECHNOLOGY
Uretek Slab Lifting

BUSINESS UNIT
Mainmark New Zealand






Summary

The concrete slab ground floor slab of an occupied commercial building in Christchurch needed re-levelling after earthquake subsidence.

Objectives

The concrete slab-on-ground floor of this commercial building suffered up to 300mm of subsidence in the Darfield Earthquake. The building was occupied on the upper levels, and remediation works which would not disrupt the occupants were required.

Solution

Uretek Slab-Lifting method was employed whereby proprietary engineered structural resins were injected under the slab. The Operations Rig could be situated in the building car park without disruption to the occupants working in the commercial offices in the upper floors. Four Operators worked noiselessly over the 7 days to carefully achieve an even fall of the ground floor. Approximately 230m^2 were treated. Laser level measurements were taken during the works to monitor precise lift and provide reports to the project's consulting engineer.

The ground floor slab was raised and re-levelled to within 5mm tolerances. Clients working within the commercial building experienced no disruption, and the building owner did not have to evacuate the building in order to construct a new ground floor slab which would have been a considerable cost to the client. The Uretek method, therefore, was the most cost-effective and efficient decision for the building owner.

Above: 230m^2 of the ground floor were re-supported and re-levelled, without any interruption to the business operating on the floors above. Careful injection monitored by laser level ensured precise re-levelling of the badly dished floor dramatically apparent in the centre photo.