

# Warehouse Floor Raised and Re-levelled

## INDUSTRY

Industrial

## STRUCTURE

Warehouse

## PROBLEM

Earthquake remediation

## LOCATION

Christchurch, New Zealand

## DURATION / YEAR

15 days / 2011

## TECHNOLOGY

Uretek Slab Lifting &  
Uretek Deep Injection

## BUSINESS UNIT

Mainmark New Zealand



## Summary

The ground floor slab of this occupied food distribution centre was re-levelled without complication. The racking systems and machinery remained in place and operational. Our client was caused minimal downtime.

## Objectives

Several areas within this food industry distribution centre suffered subsidence during the Darfield Earthquakes. The loading dock, the cold storage area, the north wall and the dry store had subsided. Tilt panel wall settlement of 90mm was the major concern. The slab settlement correction required was relatively minor because the main floor slabs in the cold storage section were post-tensioned, although the tilt panel slab footings required re-levelling.

## Solution

Uretek Deep-Injection and Slab-Lifting methods were employed whereby proprietary, engineered structural resins were injected to correct the 1200m<sup>2</sup> floor slab in the dry store, and the 600m<sup>2</sup> loading dock. Laser level measurements were taken to ensure that various locations on the site were treated to achieve the desired lift and return walls to plumb, in accordance

with the engineer's specifications. The teams worked in confined spaces in the cold storage area, in addition to working in open warehouse areas and locations with racking systems in place.

All the warehouse areas and the cold storage area were re-levelled to within 10mm tolerances. This decision saved the client significant costs which would have been incurred, if he had decided to demolish and rebuild the facility.

Pictured above: 1. As the 1200m<sup>2</sup> dry store floor slab was returned to level, the racks returned to correct positions. 2. Constant laser monitoring for precision. 3. Close-knit teamwork achieved minimal down-time and maximum precision. 4. Completely self-contained Operations Units facilitated efficiency.