

Large House Re-levelled by JOG and Uretek Resin

INDUSTRY

Residential

STRUCTURE

House

PROBLEM

Earthquake remediation

LOCATION

Christchurch, New Zealand

DURATION / YEAR

18 days / 2013

TECHNOLOGY

JOG Computer Controlled Grouting and Uretek Resin

BUSINESS UNIT

Mainmark New Zealand



Summary

This large residential property in Christchurch was subsided and tilted, due to earthquake liquefaction. With a combination of the JOG computer controlled grout and Uretek expanding structural resin injection, the house was back up to level in 18 days.

Objectives

The Earthquake-induced, differential subsidence of as much as 58mm, had occurred right across the raft slab construction of this home.

Solution

JOG injection was carried out via 55 injectors installed under the load bearing footprint of this large house. Under the floor slab, Uretek expanding resin was injected to bring those areas up at the same time as the structural load-bearing elements. This Mainmark treatment complemented very fine controlled lifting of defined areas as well as undersealing the slabs and filling the voids created by the JOG lifting.

The two-technology lifting process was completely successful. The property was raised very gently back to the required level.

Above: JOG computer controlled injection was carried out from both inside and outside the house.