

High School Raised and Re-supported

INDUSTRY

Council

STRUCTURE

School building

PROBLEM

Cracked walls

LOCATION

Yanco, NSW, Australia

DURATION / YEAR

1.5 Days / 2012

TECHNOLOGY

Uretek Slab Lifting &
Uretek Deep Injection

BUSINESS UNIT

Mainmark Australia



Summary

At the famous Yanco Agricultural High School building in Southern NSW the footings of the main meeting hall building had sunk into the ground due to drought causing shrinkage of reactive clay soil. Severe wall cracking had occurred. 12 swimming pool surround slabs had also sunk. The large Uretek Deep-Lifting project was completed in just one and a half days, with wall cracks closed and trip hazards eliminated.

Objectives

To raise and re-support the building and the slabs quickly and efficiently.

Solution

The Joss Facilities Management company, acting for The NSW Department of Public Works contacted us to inject expanding structural resins into the ground. Precise planning was required to meet the timing objective. The plan for the project was set out with the Wagga Wagga Engineer and the Joss Project Manager

Uretek resins were injected through small diameter tubes. As the resins went into the ground, they expanded. The ground was compacted and voids were filled.

Continued injection and expansion of the resins, constantly monitored by laser levels, produced the power to lift and re-level the heavy structure.

To ensure that the lifting rotated the walls back into place with absolute accuracy, the Joss team put Acro props against the top of the walls.

Some of the wall cracking was 42 mm wide. But the crack closure was complete and the walls and the pool slabs were raised right back to where they had been originally.

The potential trip hazards were eliminated and the whole process took only a day and a half! Such a short time to carry out this set of big tasks was remarkable and the interruption of the school's activities was absolutely minimal. The Yanco High Principal was delighted.

Above, left: Wall cracking was up to 42 mm wide.
Above, right: Cracks completely closed as the wall footings were raised.