

Large Swimming Pool Re-levelled



INDUSTRY

Council

STRUCTURE

Pool

PROBLEM

Sinking pool

LOCATION

QLD, Australia

DURATION / YEAR

10 days / 2011

TECHNOLOGY

Uretek Deep Injection & Uretek Slab Lifting

BUSINESS UNIT

Mainmark Australia

Above: Ten days in the blazing Queensland sun made a sun-shielding tent a necessity! An excellent result made it worthwhile!

Summary

The 25m long public swimming pool at Monto, two hours west of Bundaberg, Queensland had sunk into the ground by up to 200mm toward the deep end.

The water would no longer drain to the shallow end, so the pool reticulation system would not work and the pool water could not be filtered properly.

The pool had been built in sections of precast concrete. Using a carefully sequenced program of expanding resin injections into the foundation ground under the pool the team brought the complex pool structure right back to level without mishap.

Objectives

The objective was to get the pool as close to level as possible while avoiding over-lifting at any stage and disturbing the joints between sections of the pool structure.

Solution

The Regional Council had 3 options: 1. Re-do the plumbing and replace the filter system (very costly) but the pool would still be out of level, 2. Build a new aquatic centre (for millions of dollars), or 3. Re-level the pool with Uretek polymeric injections.

We were commissioned to lift the pool back to level. The pool had been built in precast concrete sections. The walls were precast with flat bases and concrete infill precast sections formed the floor of the pool.

Large Swimming Pool Re-levelled continued

The floor joints were set down with mastic filler and vertical joints were mastic filled. The fact that the sections were pre-cast dictated a need for extremely precise and careful lifting. Over-lifting any one section could break the joint. Also, due to its large precast base, the wall could easily rotate inwards or outwards.

Additionally, as the floor slab was sitting on a step joint, the internal slab could not be lifted as this could have caused this slab to lift at the joint. This meant a slow process of lifting each precast wall section a small amount at a time to slowly bring the pool back to an acceptable level.

Then the correction of levels was proved by pouring water in the gutter. The water in the gutter flowed to the shallow end again. Then the voids under the internal pool slab were filled very slowly with great care.

The result was extremely successful and the Regional Council saved a great deal of money compared with the alternatives. The chief council engineer congratulated the team on this excellent and problem-free result.