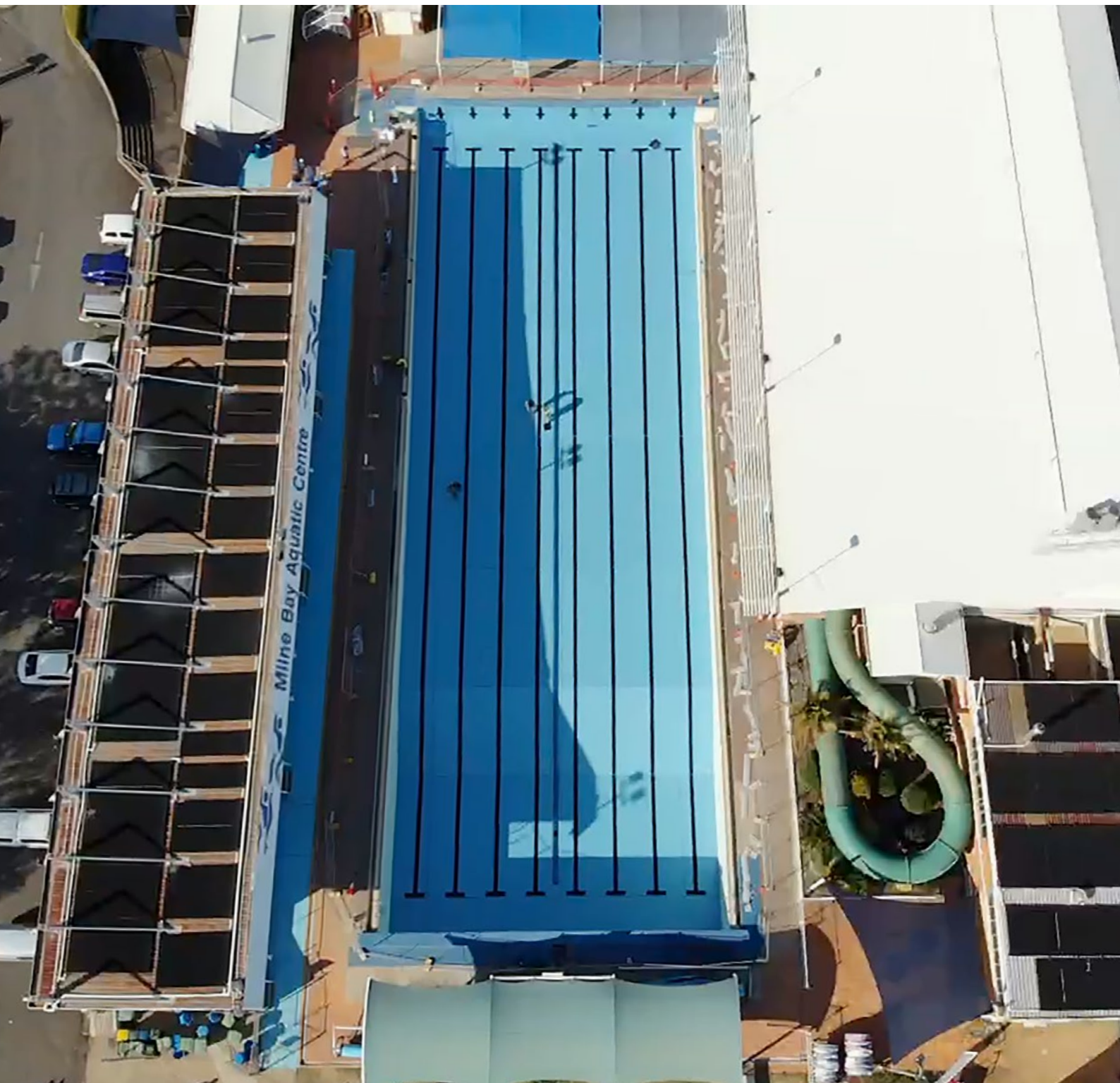




**Concrete Seal**  
WATERPROOFING & REMEDIAL  
EST 1996



Milne Bay Aquatic Centre  
Toowoomba, Qld  
Olympic Pool Remediation



## The Project

### Olympic Pool Remediation

Site: Milne Bay Aquatic Centre – Toowoomba, Qld

Client: Toowoomba Regional Council

The pool is a full-size Olympic pool approximately 70 years old constructed of a concrete shell, a wet deck incorporating several construction and expansion joints together with a centre feed line. The pool was lined with a combination of fiberglass and tiles and was leaking around 20,000 litres of water per day. This was likely due to compromised joint and centre feed line integrity.

The outcome sought by the client was to remediate the complete floor surface, underlying joint and centre feed line structure and re-line the prepared surface with a high performing fit for purpose epoxy coating system.

#### Highlights

1. Job was completed in approximately 8 weeks (excluding inclement weather restrictions).
2. Pool was returned to service with no evidence of water loss due to leaks.
3. Client was extremely happy with the final outcome.
4. An excellent and productive working relationship was formed between Toowoomba Regional Council and Concrete Seal.
5. On a technical level the following solutions were provided and successfully delivered:-
  - The diagnosis, identification and remediation of the source of water leaks.
  - Rebuilding of the severely damaged and corroded joints - brought back to "as good as new".
  - Redesign, manufacture and installation of the centre feed line cover plates, eliminating the requirement for earth bonding.





## Original

*Requested by Client*

- Re-coat existing Laminate Glass system on floor and south wall. Prepare and install Epoxy coating.

## Revised

*Based on findings*

- After the water in the pool was emptied, a pull off test for drummy areas of fibreglass was conducted. This test concluded a high percentage of the fibreglass coating had in fact delaminated from the concrete substrate and really needed to be removed. Once the fibreglass was removed, the client advised they would like to epoxy the complete floor surface so that it looked uniform. This meant removal of the tiles to expose the original concrete substrate. Removing tiles is a slow and cumbersome process. It often results in slight depressions in the substrate as a result of penetrations formed by the action of the tile lifting spade hammering the surface. Hence necessitating the installation of an epoxy resin/sand screed to restore the surface to an even profile.

- Re-sealing, Re-jointing and Re-profiling of Expansion joints maintaining existing format.
- Wet deck channel remediation including re-instating expansion joints, prepare and install Epoxy coating.
- Centre Feed Line remediation including re-instating expansion joints, prepare and install Epoxy coating.

- Upon removal of the fibreglass and tiles, it became evident the joints were quite damaged and several areas required Re-profiling before they could be Re-sealed. Re-profiling basically meant re-construction of the joint with epoxy/sand mix and then re-grinding the joint gap to the required depth and width. Expansion joints required a complete bandage detail to provide optimum protection. Remediated as per scope.
- Re-profile southern end wall with Waterproofing render system. Re-profile floors with a thixotropic Epoxy resin system.
- Issues with the stainless steel angle supporting the wet deck grate meant we were unable to remediate, due to re-construction of the wet deck channel proposed for a future date.
- Upon removal of the Stainless Steel cover plates, it became evident the joints were quite damaged and several areas required Re-profiling before they could be Re-sealed. Re-profiling basically meant re-construction of the joint with epoxy resin/sand mix and then re-grinding the joint gap to the required depth and width. Waterproofing was required to prevent water ingress leaking into the channel from the negative side.
- Re-design centre feed line cover plate to avoid re-earthing, hence eliminating earth bonding requirement.
- Expansion joints required a complete bandage detail to provide optimum protection.





## Remove Lining and Investigate Substrate



Removal of tiles and fiberglass lining.



Investigate and report on condition of construction and expansion joints. Propose solution to remediate.

## Rebuilding and Reprofilng Joints



Epoxy resin system Repair to Joint Junction.



Epoxy Joint Repair - Troweled off to Match Original Substrate and Joint Profile.

## Centre Feed Line Rebuild



Investigate and report on condition of centre feed line channel. Propose solution to remediate.

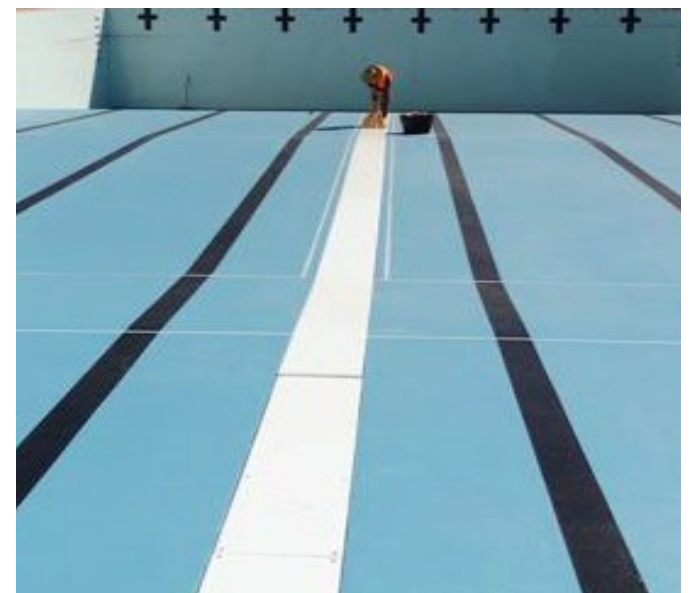


Rebuilding of channel base and walls with Epoxy resin system. Re-cut new joint detail to match original profile.

## Waterproofing and Joint Sealing



Joint band system installation to expansion joints.



Chemical resistant sealant installed to construction joints subsequent to Epoxy pool coating installation.





## Install Epoxy Screed and Pool Coating



Installation of Epoxy resin system applied to the complete floor surface prior to priming.



Installation of primer base coat to complete floor surface.

## Centre Feed Line Cover Plate Installation



Installing and set up new centre feed line cover plates.



Completed installation of new cover plates.









# **Concrete Seal**

WATERPROOFING & REMEDIAL

info@concreteseal.com.au

**07 3806 2904**

Unit 42/17 Cairns Street

Loganholme QLD 4129

ABN: 39 083 213 601

**www.concreteseal.com.au**



*Proud Member*

**Concrete Seal Pty Ltd**

QBCC Act Licence No: 81995