

NOVOLOX-XT600 SHORELINE WWTP

CASE STUDY

THE SITUATION



In order to safeguard concrete containment structures exposed to raw wastewater, the Shoreline Wastewater Treatment Plant in Redland Bay, Queensland, needed a long-lasting internal coating system.

The presence of hydrogen sulphide (H₂S) gas in wastewater treatment environments creates sulfuric acid, which is the main cause of corrosion and deterioration in concrete infrastructure.

Redland City Council needed a strong coating system that could withstand chemical attack and offer dependable waterproof protection in confined wastewater environments in order to guarantee long-term durability and preserve the integrity of the containment structures.

Liquimix collaborated with Silverstrand Developments, the principal contractor, and The Superseal Group, the authorised applicator, to provide a protective coating system made especially for internal wastewater containment structures.

THE SOLUTION



The concrete substrate was mechanically prepared to a Concrete Surface Profile (CSP) between 2 and 3 in compliance with International Concrete Repair Institute standards in order to attain optimal performance and long-term adhesion.

By doing this, the coating system's ability to adhere to the concrete surface was guaranteed.

Civilox-LV100, a penetrating epoxy sealer intended to stabilise and prime the concrete substrate, was first used to seal the surface.

After priming, a high-build, protective coating was created by applying two coats of **Novolox-XT600** epoxy coating, each with a minimum thickness of 200 microns. **The Novolox-XT600** system was chosen due to its exceptional resistance to sulfuric acid formation and hydrogen sulphide gas exposure, both of which are frequent in wastewater treatment settings.

Adhesion testing and dry film thickness verification were among the stringent quality control procedures used during installation to make sure the coating system fulfilled all project performance specifications.

THE RESULTS



Critical wastewater containment structures are shielded from harsh environmental conditions by a corrosion-resistant coating provided by the completed system.

Among the installed system's main advantages are:

- Resistance to attacks by sulfuric acid and hydrogen sulphide (H₂S) gas.
- Wastewater containment using a chemical resistant protective coating.
- Improved concrete infrastructure protection.
- Long-term robustness with an expected service life of more than 20 years.

Redland City Council's long-term operational dependability and infrastructure protection are supported by the project's successful delivery of a strong internal coating system that helps protect the wastewater treatment facility.

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PROJECT OVERVIEW: Shoreline WWTP Sewerage Treatment Plant

PRODUCTS USED: Novolox-XT600 / Civilox-LV100

SOURCE: Redland Bay, Australia