



Level best: a precision concrete repair for Sydney Water's digester

Project name: Hornsby Wastewater Treatment Plant – Digester

Project owner: Sydney Water

Partners: Confluence Water (delivery partner) / GNK Plant & Civil (works)

Location: Hornsby, NSW

Application: Strengthen & Repair



PROJECT SNAPSHOT

At this vital wastewater facility, Megapoxy supported upgrades to a massive concrete digester that breaks down sewage solids into biogas (a renewable energy source) and reusable byproducts. A new 16.8-metre steel dome cover was installed to keep out oxygen, contain harmful gases like methane and hydrogen sulfide, and capture biogas safely. The 60-metre-circumference concrete rim was levelled with Megapoxy 206 Ultra, creating a perfectly flat, high-strength epoxy surface for a precise seal between the structure, rubber layer and steel cover.

Client needs + challenges

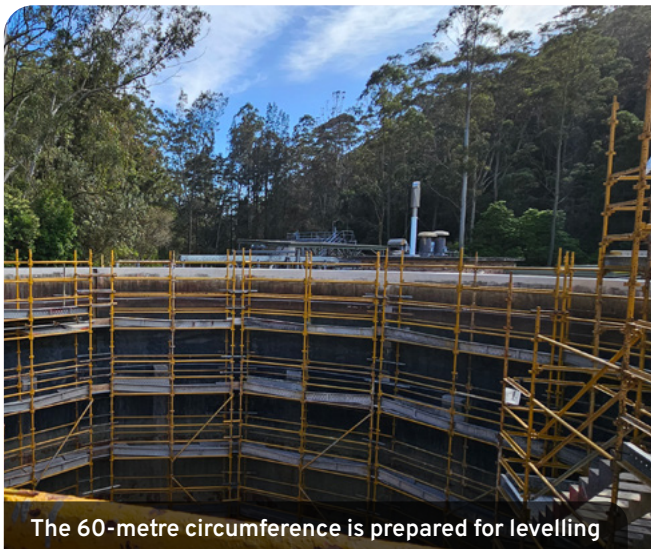
- Level the worn concrete rim of an existing 60-metre-circumference digester.
- Create the even surface needed for a reliable, tight seal between the concrete tank and steel cover.
- Support environmental compliance by safely containing process gases.
- Deliver a fast, consistent pour around the full perimeter, at challenging height and angles.
- Minimise heat build-up during large-volume epoxy pours.
- Ensure long-term durability with exposure to heat and chemicals.
- Ensure reliable supply of large volumes (nearly 1000 litres), right on time.

Solutions, service + simplicity

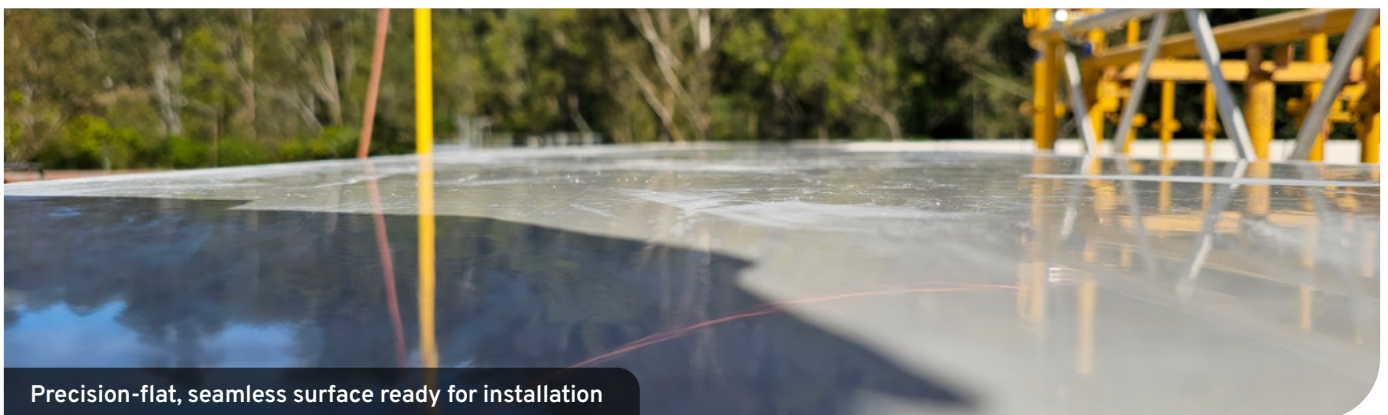
Megapoxy 206 Ultra was selected for its high flow, self-levelling consistency and strength – ideal for achieving a seamless, perfectly level finish over the rim variances of 5mm to 50mm. With excellent chemical resistance, it adheres and cures under adverse conditions and retains its strength after prolonged immersion in water.

Megapoxy representatives visited the site to provide hands-on guidance for preparation and pour design before application. They advised on product volumes, mixing ratios and pouring techniques to minimise air entrapment and ensure a consistent finish.

Crews constructed formwork inside and outside the top edge, then progressively poured 16-litre kits along the full 60-metre circumference – allowing controlled heat generation. The result was a precision-flat, seamless surface ready for installation of the new steel dome and rubber seal.



The 60-metre circumference is prepared for levelling



Precision-flat, seamless surface ready for installation

PRODUCTS USED

- Megapoxy 206 Ultra >

Standout benefits

- Created a level and extremely durable surface for tight sealing.
- Delivered excellent compressive strength and impact resistance, proving a shock-absorbing base for the lid.
- Supported contractors with clear technical direction and responsive service.
- Reduced installation time compared to mechanical grinding to a level surface – from weeks to days.
- Proven, Australian-made system for critical water infrastructure.



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