



CASE STUDY

High-flow water ingress solved for South East Water

SUMMARY

Client

South East Water

Location

St Kilda West, Victoria

Challenge

Prevent high-flow water infiltration into a U-sheet pile pit through targeted injection and ground stabilisation.

Sector

Water & Wastewater

Solution

SPETEC® Hydrophilic (Flexible) & Hydrophobic (Rigid) Injection Resins.

Outcome

All water infiltration was successfully and permanently eliminated in a rapid, two-day operation.

Products

SPETEC® STOP H100, SPETEC® SEAL AG100

Hychem Infrastructure delivered a successful water ingress and ground stabilisation solution for a critical South East Water (SEW) asset in Victoria.

Using a tailored combination of SPETEC® hydrophilic and hydrophobic injection resins, contractor Spartan Remedial Services was able to completely and permanently stop high-flow water infiltration into a sheet pile pit, ensuring the asset's structural integrity and safety.

The challenge

SEW faced a significant challenge with active water infiltration on the negative side of a sheet pile wall, compromising the integrity of the pit. The project required a highly reliable and fast-acting solution to seal the leaks and stabilise the surrounding ground. The chosen system needed to be adaptable to different conditions within the structure, requiring both flexible and rigid sealing capabilities to ensure a permanent, durable barrier against water ingress.



The engineered solution

A dual-system approach using Hychem's SPETEC® injection resins was engineered for this application. The hydrophilic acrylic resin was selected for its flexibility in areas prone to movement or ongoing moisture. In parallel, the hydrophobic polyurethane resin was used to create a robust, rigid, and permanent barrier in other sections. This tailored combination, praised by Spartan Remedial Director Leigh Driscoll as doing "exactly what was required", allowed the team to methodically drill, pack, and inject the resins until all water flow was completely eliminated.

The outcome

The project was a complete success, with the targeted injection strategy permanently stopping all water infiltration in just two days. The adaptable SPETEC® resin system provided a reliable, long-term solution that was perfectly suited to the environmental demands of the asset. The rapid and effective result highlights Hychem's expertise in providing specialised geotechnical solutions for critical water infrastructure.

