

# Restoring 30m Deep Access Chambers With Interchem R

Access chambers and underground concrete sewer structures which have deteriorated beyond the means of rectification offered by protective coatings, such as Interchem P, require structural restoration.

## The problem:

The Western Branch Main Sewer runs below the inner Sydney suburb of Ashfield. Interflow was awarded a tender to rehabilitate a section of the sewer main which also included renewal of 12 gas-attacked access chambers. The chambers were reaching the end of their service life. In most cases chamber surfaces had deteriorated to the extent that the aggregate was exposed.

The problem was that some of the access chambers were more than 30m deep and in water charged ground so leaks and high humidity were an issue.

## The solution:

Interchem R is a general-purpose epoxy mortar repair system used to restore severely gas attacked underground sewer structures.

Interchem R is a strong 20mm thick epoxy mortar applied by trowel and sandwiched between a layer of high bond pure epoxy primer base and a protective epoxy glaze top-coat. The finished product is strong, hard-wearing, durable and resistant to chemical attack.

## The Project:

Interchem R was selected for this project because it was ideally suited for application in the challenging conditions. In addition it also conformed with the client's epoxy repair specification requirements.

The access chambers varied in depth from 4.5m to 33m with most chambers located below the natural water table. This meant that before any restoration work could commence the issue of infiltration had to be addressed. Leaks were plugged and sealed and at the clients request drainage ports were installed at various points along the structure walls.

Temporary platforms were constructed inside the access chambers to enable working in deep depths.



To avoid disrupting the sewer flow the majority of the work was performed at night when flow levels were lower. This allowed work to be performed in live flow conditions.

Prior to application of Interchem R the surfaces were cleaned with high pressure water. Cleanliness tests were then conducted to confirm that the surface had been cleaned properly.

Epoxy primer was then brushed onto the cleaned surfaces. The primer ensured high adhesion to the substrate.

Whilst the primer was still tacky the epoxy – sand aggregate mortar was applied by trowel in a 10mm thick layer.

After cure a 2nd 10mm thick layer was applied to build a final thickness of 20mm on the access chamber surfaces.



The restoration was finished by applying 3 coats of epoxy glaze on the external surface. This provided the structure with additional protection against chemicals and abrasion.

The project was completed by the specified projection completion date. In total 12 access chambers were successfully restored and their service life extended using Interchem R.