

Interflow[®]

CUSTOMER

Lower Murray Water

PROJECT NAME

Maintenance Hole
Rehabilitation

LOCATION

Mildura, VIC

DELIVERED

June 2015

REFERENCE NO.

09-WAS-LOWE11



RENEWING MILDURA'S DEEP MAINTENANCE HOLES

Lower Murray Water's Sewer Rehabilitation Term Contract includes a regular program of condition assessment of their underground assets including inspection of concrete sewer maintenance holes. Like concrete pipes, these also corrode in acidic sewer conditions.

THE CHALLENGE:

An inspection in Mildura showed that several maintenance holes required some degree of rehabilitation.

While for most, recommendations for rehabilitation ranged from coatings to protect the surfaces of maintenance holes in good condition, through to thick re-build coatings to restore structural strength, two maintenance holes were found to be beyond repair, needing total re-building. They were deep maintenance holes in a built up part of the city.

THE SOLUTION:

Interflow has a range of maintenance hole coatings to meet different requirements and so was able to propose a program matching the type of coating with the maintenance hole rehabilitation needs.



Before: Image shows maintenance hole deterioration caused by sewer gases



After: Maintenance hole restored to structural capacity using Interchem® CAC, an acid resistant inner coating.

INTERFLOW DELIVERED A PROGRAM MATCHING THE TYPE OF COATING WITH THE MAINTENANCE HOLE REHABILITATION NEEDS



THE PROJECT:

The two maintenance holes requiring re-building were over 10 metres deep, located in the roadway near the Quality Hotel Mildura Grand, a Mildura landmark. It was proposed to re-build these maintenance holes with steel reinforced calcium aluminate cement to provide structural strength and corrosion resistance.

A vital part of any maintenance hole coating project is thorough cleaning to remove all acid attacked concrete. On this project, cleaning was completed using a 25,000 psi hydro-demolition unit which ensured the surface was cleaned under strict safety procedures to a suitable condition to be coated.

An internal scaffolding tower was erected to allow safe access in the deep maintenance hole. This was a considerable achievement in a maintenance hole with an internal diameter of only 1.2 metres.

The Calcium Aluminate Cement (CAC) wall required two layers of steel mesh reinforcement. Anchor holes were drilled in the remains of the existing maintenance hole wall in a grid with spacings between 400mm and 600mm.

Reinforcing bars cut to lengths of 120mm were epoxied into these holes to a depth of 50mm. Reinforcing mesh was tied to these epoxied bars.

Temperatures during the day approached 40°C. Coating was carried out at night in cooler conditions to guard against the CAC curing prematurely in the heat. Spraying of Interflow's Interchem® CAC mortar was undertaken in three layers to build up the specified thickness of 90mm. The reinforcing bars provided a guide to the applied thickness.

CONCLUSION:

The project was successfully completed in these demanding conditions. The corrosion resistance of Interflow's Interchem® CAC in these harsh sewer conditions means that these maintenance holes will have a long effective life.

Interflow is committed to offering its customers optimum solutions of the highest value for pipeline rehabilitation.

For more information about Interflow's integrated renewal services, and to find out about the full range of innovative products Interflow can provide, visit www.interflow.com.au

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