CASE STUDY

CUSTOMER
Water Corporation

PROJECT NAME
Maylands Branch Sewer Refurbishment

LOCATION
Maylands, WA

DELIVERED
January 2019

REFERENCE NO.
22-WAS-WAT001-040

MULTI-SKILLS NEEDED FOR PERTH SEWER REHABILITATION PROJECT

The Water Corporation's (WA) Maylands Branch Sewer Refurbishment Project specified structural lining of an ageing DN990 sewer, concrete pipe coating of a curved section, the construction of a new parallel sewer with reconnections of the house service lines and civil works on access chambers. Interflow had the full range of skills to deliver this project.

THE CHALLENGE:

A large reinforced concrete sewer built before 1937 in the inner-Perth suburb of Maylands needed refurbishment to extend the life of the asset.

The total length of 1.2 kilometres was corrosion attacked, with reinforcement exposed in the worst areas. One section had a large radius 90° bend, while two sections had a total of 21 lateral house connections. Access was via small square 750mm or 900mm shafts. The sewer carried constantly high flow.

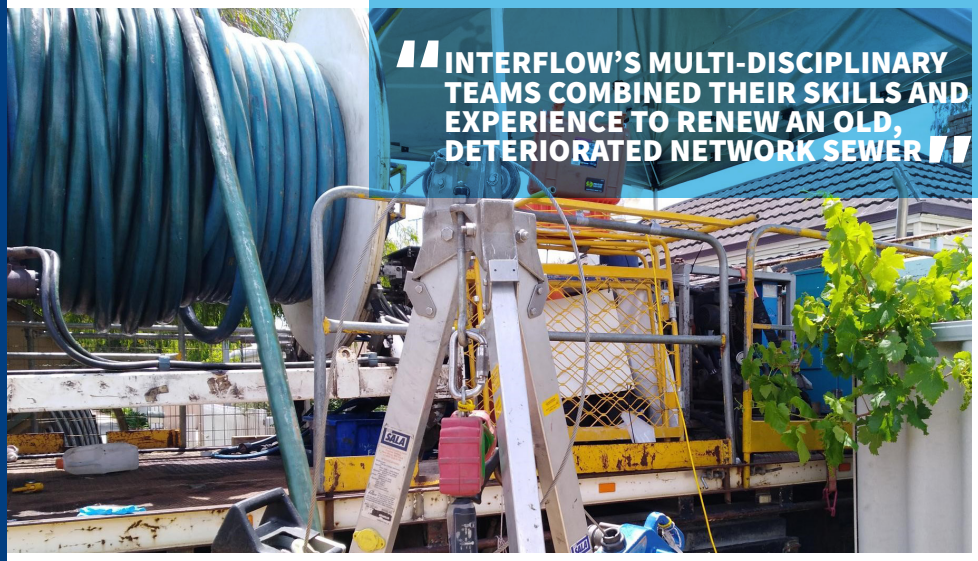
THE SOLUTION:

Interflow proposed to line the DN990 sewer with a grouted Rotaloc spiral wound liner.

Due to high flow, a temporary bypass system needed to be constructed to take sewer flow from upstream of the works to an access point downstream.

A 240-metre parallel sewer was constructed to bypass the flow in the main line and allowing the house services to be uninterrupted.

Rotaloc machine operator lining the pipe by remotely controlling the machine.



> "INTERFLOW'S MULTI-DISCIPLINARY TEAMS COMBINED THEIR SKILLS AND EXPERIENCE TO RENEW AN OLD, DETERIORATED NETWORK SEWER"

THE PROJECT:

The flow bypass system designed and installed by Interflow, used twin 300mm pumps and DN315 PN10 polyethylene pipe. Approximately following the route of the sewer, it had sections above ground, trenched into the ground and passing through a DN1800 stormwater pipeline.

Rotaloc is installed from existing access points, with the machine removed from the sewer at the end of each shift. On this project the small shafts wouldn't allow this access, so the winding machine remained in the sewer while the full 1.2-kilometre length was lined. A special control system was developed for remote machine operation and control from above ground, using wireless communication with routers and fibre optics.

The fabricated PVC liner for the long radius bend used 10mm thick PVC sheeting heated and curved to the required diameter, and with lengths of about 700mm. They were formed-in-place in a lobster-back configuration, with segments welded together. The bend was grouted after liner installation.

House connections to the main were re-directed to a new DN150 sewer constructed by Interflow, running 240 metres parallel to the existing DN990 sewer. This meant connections did not need to be restored to the lined sewer.

Civil works for the access shafts typically involved replacement of the lids and modifications to the top sections.

CONCLUSION:

The project demonstrated Interflow's capabilities to carry out the full range of tasks needed for a complex pipe renewal project in an urban location.

This was an opportunity to showcase Interflow's expertise, quality of workmanship and experience in dealing with vital safety and community relations issues.

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

For more information about Interflow's sewer, stormwater and potable water renewal capabilities, and to find out more about the full range of pipeline services Interflow can provide visit www.interflow.com.au