CASE STUDY

CUSTOMER
Thiess Black & Veatch Joint Venture

PROJECT NAME
North West Sewer - Montgomery Park

LOCATION
Essendon, VIC

DELIVERED
September 2015

REFERENCE NO.
08-WAS-TBVM01

MANAGEMENT OF HIGH FLOWS NEEDED FOR LINING OF A LARGE, DEEP SEWER

This project required lining of a single 232 metre segment of Melbourne Water's North West Sewer. The sewer was DN1800, with maintenance holes at either end up to 24 metres deep. High flow conditions around the clock were one of many challenges that needed to be overcome.

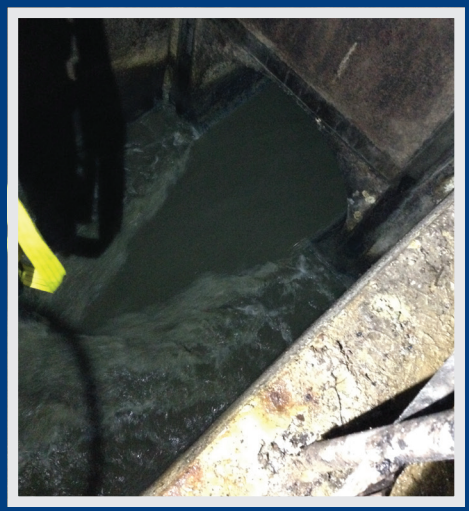
THE CHALLENGE:

Continuous fast flowing sewerage along the section of Melbourne Water's North West Trunk Sewer service had resulted in significant deterioration and corrosion of the concrete sewer. With the sewer servicing industrial clients upstream, low flow periods were short and irregular. The high flow rate, residential location and depth meant that bypass pumping should be avoided if possible.

THE SOLUTION:

The project was completed by installation of a steel reinforced polyethylene SPR™ PE - Ribline liner. SPR™ PE - Ribline met the structural and corrosion resistance requirements of the specification, while having the capacity to be installed with some flow in the sewer. SPR™ PE - Ribline installation does not block the pipeline and it can be reinstated to its full flow capacity at short notice.

SPR™ PE - Ribline only requires a small site footprint



Flow management was a vital project consideration.

"INTERFLOW'S CREWS NEEDED TO BE FLEXIBLE AND PREPARED TO ACCOMMODATE DIFFERENT START AND FINISH TIMES"

THE PROJECT:

While the access chambers at either end of the project were in a park, site establishment and noise management needed careful management because of the location in a residential area.

High flow conditions, even at night, were a challenge to be addressed by the flow management plan.

In cooperation with Melbourne Water, flow management involved partial closing of an upstream penstock, allowing no more than 500mm of flow – a depth that still allowed SPR™ PE - Ribline installation.

The length of time that flow could be held by the penstock varied from night to night. When the upstream storage reached a certain volume, Interflow's crew would be advised to secure the SPR™ PE - Ribline winding machine and prepare to restore the sewer to full flow capacity. The sewer was then able to fully function until work re-commenced the following night.

Interflow's crews needed to be flexible and prepared to accommodate different start and finish times. Sometimes no more than 3 hours of work was possible each night for liner installation.

CONCLUSION:

On completion of the project, Interflow had installed a structural liner with no loss in flow capacity and without the need for bypassing or excavation.

This project was completed under difficult circumstances - in 'live' flow conditions with non-standard working shifts, deep underground with minimal community disruptions.

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

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