

## Regency Road & Muller Road, Adelaide Rehabilitation Project

**Client:** *BJ Jarrad*

**Asset Owner:** South Australia Water Corporation

**Project:** Rehabilitation of 4,630m of existing DN600 MSCL Locking Bar Trunk Water Main

ITS Trenchless offer Swagelining™ as a rehabilitation process for the renewal of pressure and non pressure pipelines in water, sewer and industrial applications. ITS Trenchless is a licensee to Innovative Pipeline Solutions (IPS) and currently is the only contractor performing swagelining™ in Australia. This is the second project for SA Water having also completed a pilot project in Adelaide in 2007, which confirmed the suitability of the technology for the Muller Road application.

Swagelining™ uses PE pipe, which has an outside diameter slightly larger than the ID of the pipe to be rehabilitated. After sections of PE pipe are butt fused together to form a continuous string, the PE pipe is pulled through a reducing dye to temporarily reduce diameter. This allows the PE pipe to be easily pulled through the host pipe. After the PE pipe is inserted, the pulling force is removed, allowing the PE pipe to return naturally to tightly fit within the host pipe. The lined pipe results in a flow capacity close to the original pipeline performance due to the excellent flow characteristics of the PE pipe. This technology is suitable for applications ranging in diameter from 150mm up to 1500mm.

This project involved the rehabilitation of an existing DN600 MSCL locking bar trunk water pipeline and is the first project of its kind undertaken in Australia. This pipeline runs beneath one of Adelaide's busiest roads, and utilising swagelining™ technology has resulted in a significant reduction in the impact and disruption to the community and environment. This project is a good example of where swagelining™ provided a cost effective solution that traditional techniques could not have delivered resulting in savings of many millions of dollars. For this project ITS commissioned ABS Trenchless to build a RBS1900 wire rope unit, the largest of its kind ever made with a pulling capability of 190 tons. This project established a few world firsts in relation to swagelining™. These included the use of a SDR11 pipe and swagelining™ through a number of long radius bends.



# PROJECT SHEET

## Project Profile

### Regency Road & Muller Road Rehabilitation Project

The project involved the rehabilitation of 4,630m of DN600 MSCL Locking Bar water main. Approximately 4km of the pipeline was rehabilitated using the technique of swagelining™ with DN594 HDPE pipe. ITS' scope of work included:

- CCTV & internal cleaning of existing water main
- HDPE Welding
- Swagelining™ (Pipe Installation)
- Installation of HDPE Stub Flanges for connection to existing pipelines
- Installation of HDPE Saddles for connections of branch pipelines

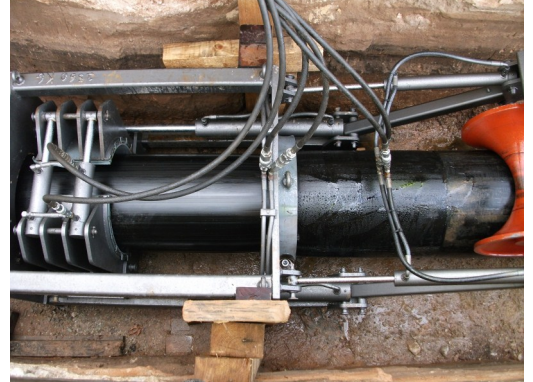
The project started in July 2010 and completed in November 2010. The route ran beneath one of the busiest roads in Adelaide. ITS was able to design the pipe with Swagelining Pty Ltd's assistance to significantly reduce the insertion loads during the swage process.

Utilising swagelining™ technology has resulted in significant reduction in community impacts and substantial cost savings in regards to restorations. Other key advantages include:

- Less raw material usage
- Less spoil to be removed and disposed of
- Significantly less truck movements
- Less noise and dust compared to traditional methods
- Significant reduction in time frame to complete Project

#### Project Highlights:

- Utilisation of new state of the art installation equipment
- Swagelining™ installation runs of up to 600m using a heavy walled PE pipe (SDR11) which has not been done before.
- Successful swagelining™ through a long radius bends
- Largest swagelining™ project undertaken in Australia
- No LTIs and zero complaints
- Completed on time and on budget



**ITS Trenchless Pty Ltd**  
ABN 49 115 288 527  
1/13 Stanton Road Seven Hills NSW 2147  
PO Box 318, Seven Hills NSW 1730  
**Phone:** 02 8603 2000 ♦ **Fax:** 02 8603 2001  
**Website:** [www.itstrenchless.com.au](http://www.itstrenchless.com.au)

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