



PIPELINE
SOLUTIONS



CASE STUDY

STORMWATER REHABILITATION UV CIPP

Quality

Environment

Health & Safety

CCTV INSPECTION | CLEANING & EDUCATION | RELINING | SECTIONAL POINT REPAIRS



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CASE STUDY

Stormwater Rehabilitation

Great Eastern Highway Drainage upgrade
UV CIPP

OVERVIEW

TDM was engaged to rehabilitate a stormwater pipeline in an environmentally sensitive area adjacent to the Great Eastern Highway.

The Great Eastern Highway is a road that links the Western Australian capital of Perth with the city of Kalgoorlie. A key route for road vehicles accessing the eastern Wheatbelt and the Goldfields.

The project involved rehabilitating a 100m VC Stormwater pipeline parallel to the Great Eastern Highway that flows directly into the Helena River. Our crews successfully relined the pipeline using UV CIPP technology.

The surrounding environment and river were protected without impacting the main road or the local community.



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Stage One

Pipeline Condition Assessment & Location



Portable Solutions

The stormwater asset's location was restricted within an environmentally sensitive area. With limited access, TDM provided portable solutions to complete the necessary work. Pipeline Cleaning was conducted utilising a portable jetting easement reel, and the CCTV inspection was completed using a portable camera system.

CCTV Inspection

CCTV inspection was completed from the Headwall upstream to identify the broken section of the pipeline. The inspection was abandoned at 19.27m- as the crawler could not traverse further from this point due to a severe displacement within the pipeline.

The inspection presented.

- A buried pit located at approx. 1.94m from the Headwall. The pit was located and marked above ground.
- Broken pipeline from the buried pit to the 19.27m mark. – This location was located and marked above ground.

Locating Services

TDMS CCTV Crawler has an integrated locating transmitter to ensure that the crawler can be localised in the pipe at any time.



Accurate Location Services



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PinPoint locating services provided by TDM ensured that the Civil Contractor made no error in locating the pipeline and installing the new AC before relining.



Stage Two Pipeline Rehabilitation UV CIPP

Solution

The CCTV inspection confirmed that the structural integrity of the stormwater pipeline was compromised by multiple fractures, cracks and other defects.

Had the pipe not been rehabilitated or replaced, there was a significant possibility of collapse and damage to the road above.

With the problematic accessibility and requirements for the minimum impact on the surrounding environment, roadway and community, TDM proposed using a (UV GRP) cured lining method.

Results

- The whole lining operation was completed in just one night shift.
- The project's overall cost was significantly less than could have been achieved using open-cut replacement techniques.
- The carbon footprint of the project as a whole was also considerably lower.
- UV cured lining enabled work to be completed in an awkward location due to the minimal amount and portability of the equipment used.
- The high-strength Glass Reinforced Polyester (GRP) liner was designed to provide a 50+ year design life, which makes it suitable for high load situations.



PRE AND POST UV CIPP