



PIPELINE
SOLUTIONS



CASE STUDY

Corrugated Iron Culvert Rehabilitation

Quality

Environment

Health & Safety

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



CASE STUDY

Corrugated Iron Culvert Rehabilitation

OVERVIEW

TDM Pipeline Solutions were engaged by a local Council to deliver a DN450 Corrugated Culvert Refurbishment in Regional, Victoria.

The Council quickly dismissed traditional open-cut trenching methods due to several factors.

Completing the project with traditional excavation methods would have required a complete road closure over multiple working days, leading to significant traffic volumes using a diversion route.

The space around the 7m deep culvert was also restricted and located within an environmentally sensitive area.

With the potential for high community impact and carbon footprint on the project using open-cut trenching, the Council decided to investigate TDM's rehabilitation options.



TDM SOLUTIONS

- TDM completed the condition assessment of the culvert using portable state-of-the-art CCTV inspection equipment, allowing a survey to be conducted without closing the roadway.
- With the inspection detail, TDM could determine the required liner design to establish complete structural integrity and load bearing.
- TDM proposed the use of a GRP UV CIPP liner.
- Due to limited access, TDM built a custom walkway to allow safe access to the work area.



" All in a day's work, TDM successfully restored the structural capacity and added years of satisfactory performance to the culvert structure while keeping it open to traffic and minimising the impact on the community and environment "

RESULTS

- The Corrugated Iron Culvert was rehabilitated and engineered to meet specific regulations and guidelines to ensure proper function and to protect against potential future failures.
- The project was completed without excavation and without disturbance to highway traffic, the surrounding community and the environment.
- Trenchless rehabilitation was the safest repair methodology because the culvert was up to 7m deep.
- Outstanding material characteristics of the GRP liner and unique, proven-quality fibreglass fabric complex with a long working life of more than 50 years provides significant benefits to Council.
- The reduced carbon footprint from less site traffic and operation.
- Large cavities behind the Culvert are sealed, eliminating sink holes and additional road/easement collapsing.



Liner Installation



Pre Inflation



Post Curing at the Outfall