




Merewether Beach ERS Rehabilitation



\$916k 
project value

Hunter Water 
customer

NSW 
Newcastle

2023 
year completed

130 
meters lined

The project

The Merewether Beach relining project rehabilitated 130m of an ovoid wastewater Emergency Relief Structure. Faced with the environmental challenge of managing the tides, Interflow used cofferdams to ensure their CIPP solution could be successfully installed.

In the beachside suburb of Merewether in Newcastle NSW lies the Merewether Emergency Relief Structure (ERS).

This DN1295 oviform pipeline extends from an access hole and relieves major sewer networks during wet weather events and/ or failure of the Burwood Waste Water Treatment Works.

A new CCTV inspection of the ERS revealed that the downstream sections of the pipe were in poor condition and cracks along the pipe wall were allowing sand in. This was exacerbated by the oviform shape, slope, and lack of non-return valve of the pipe, meaning sand accumulation within the pipe was inevitable.



The primary objective of the project was to reduce sand infiltration into the system by relining a 130m section of pipeline.

This concept was simple enough in theory, but the unique site conditions saw the project team take on the ocean itself to safely deliver relining works.

Our crew installed sandbag cofferdams to minimise the chance of water affecting the relining process. Once in place, water was then pumped out of the pipe, allowing both the cracks to be sealed and the pipe to be cleaned prior to lining. Following this preparation, a UV-cured CIPP liner was used to restore the pipeline.





The challenge

For the CIPP solution to work, it would need to be installed and cured in dry conditions to ensure complete and even curing.

At high tide, the pipe is about a metre below water. This meant crews needed to find a way to isolate the pipe from the tide, not only to reline, but to first clean and prepare the pipe for lining.

In addition to the need to control the ocean, the beach location presented other challenges for the team. Salt, wind, damp, and sand took a toll on equipment and vehicles and created a challenging work environment for crews.

The solution

Each access hole also had a cofferdam built around it made from smaller sandbags as added protection from tidal surges.

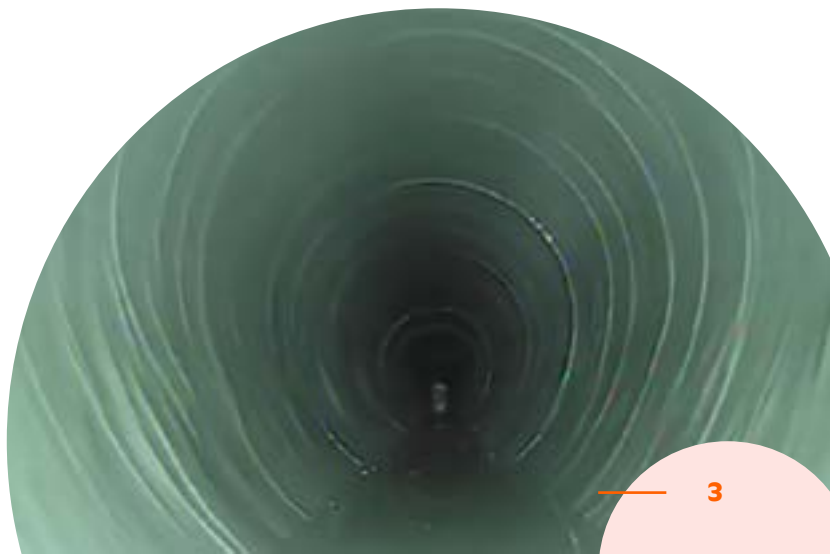
The team needed a three-day window of perfect weather conditions – low swell, low wind, and manageable tides – for lining work to happen. When this presented itself, they worked quickly and the liner was winched in and cured using UV light.

A dam wall was built using one tonne sandbags. Unfortunately, higher than anticipated overnight swells all but washed the wall away and the team was forced to start again. In the end, across the two dam walls, one at each end of the pipe section, 100 tonne of sand was needed to build a wall big enough and strong enough to control the tide.

Less than 24 hours after completing the works and vacating site, huge swells enveloped the beach and washed away any sign the team had been there.

Faced with a series of environmental challenges, Interflow was able to innovate and overcome the challenging conditions.

Successfully relining the oviform pipeline with CIPP, Mereweather Beach and the community now has an ERS that is safeguarded against the tide, wave actions and sand accumulation.



How we help

Our 4 Waters



Water



Stormwater



Wastewater



Culverts

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