

ALKIMOS MAIN SEWER SECTION 1

STRENGTH IN SCALE: EMPIRE INFRASTRUCTURE SUPPORTS THE ALKIMOS MAIN SEWER STAGE 1 UPGRADE

As Perth's northern corridor continues its rapid transformation, major underground infrastructure is essential to support long-term growth. A key project enabling this expansion is the Alkimos Main Sewer Stage 1, delivered by Rob Carr Pty Ltd for Water Corporation of WA and DevelopmentWA. Central to the project's success was Empire Infrastructure's supplying the high-performance BOSSPIPE CC-GRP, SN64,000 jacking pipe required for the deep, large-diameter microtunnelling.

SUPPLYING HEAVY-DUTY PIPE FOR A HEAVY-DUTY ALIGNMENT

Empire Infrastructure supplied 463 metres of BOSSPIPE CC-GRP, OD1499, SN64,000 jacking pipe, along with three interjacks and specialised bends engineered for DN1500 microtunnelling. The alignment demanded pipe that could withstand substantial thrust forces while maintaining structural integrity across long drives which is a challenge perfectly suited to CC-GRP.

"Large-diameter microtunnelling pushes pipe performance to its limits, and CC-GRP is built precisely for this level of demand," said Aaron Mackley, Director of Sales & Operations at Empire Infrastructure.

MEETING THE CHALLENGES OF DEPTH, DIAMETER AND DENSITY

The project involves 830 metres of DN1500 sewer, constructed between deep shafts, microtunnelling, and open excavation. Two microtunnel drives, 157 metres and 306 metres, required precise navigation, including a critical tie-in beneath the Alkimos Station rail corridor built as part of METRONET's Yanchep Rail Extension.

With shaft depths reaching 9-12 metres, ground pressures and jacking loads were significant. CC-GRP's high strength-to-weight ratio offered reliability, while the interjacks distributed thrust over long distances, essential when installing large-diameter pipelines beneath existing and future transport infrastructure.



PROJECT DETAILS

Location: Alkimos, WA

Contractor: Rob Carr

Product Supplied: BOSSPIPE CC-GRP

Scope: 463m of OD1499 Jacking Pipe

Stiffness: SN64,000


Installation: Slurry-based TBM

A PROJECT BUILT ON COLLABORATION AND PRECISION

Rob Carr's consulted extensively with the Alkimos Central development precinct. Throughout design and delivery, Empire Infrastructure worked closely with the project team to ensure the pipe's performance characteristics aligned with the tunnelling methodology and staging requirements.

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