

BREAKFAST CREEK TRUNK SEWER

A RECORD-BREAKING CURVED DRIVE BELOW INNER BRISBANE

With the Bowen Hills corridor expected to grow by nearly 40,000 people over coming decades, Queensland Urban Utilities initiated a major trunk sewer upgrade, one of the most technically demanding microtunnelling projects in southeast Queensland. Rob Carr delivered the works, with Empire Infrastructure supplying the jacking pipe and the precast shaft lining system.

SUPPLYING HIGH-PERFORMANCE PIPE FOR A RECORD-BREAKING DRIVE

Empire supplied 1,005 metres of CP&P DN1800 Reinforced Concrete Jacking Pipe with 2.5mm HDPE Liner and seven interjack sets. Brisbane Tuff bedrock, reaching compressive strengths of 150MPa, needed a pipe with exceptional dimensional consistency and compressive performance to sustain jacking forces across a single curved drive exceeding one kilometre.

"We love a challenge and this project certainly provided that. With a 1km-plus curved drive beneath critical infrastructure, we knew the pipe had to be of very high quality. The CP&P jacking pipe was up to the task, setting tunnelling records along the way," said Aaron Mackley, Director of Sales & Operations at Empire.

NAVIGATING ROCK, RAIL AND FREEWAYS

The drive launched from a 9-metre diameter shaft using Empire's Smoothbore Shaft Lining Segments, also supplied by Empire, at 8 metres depth. The alignment crossed beneath multiple rail lines and two major freeways, with no margin for surface disruption. Seven interjack sets distributed thrust load across the full drive length, maintaining pipe integrity throughout.

TECHNICAL EXPERTISE IN EVERY METRE

Empire's technical team worked closely with Rob Carr to align pipe specifications with the tunnelling methodology. On completion, the pipeline will serve tens of thousands of Brisbane residents, a permanent piece of infrastructure beneath a growing city.



PROJECT DETAILS

Location: Brisbane, QLD

Contractor: Rob Carr Pty Ltd

Client: Queensland Urban Utilities

Product: DN1800 HDPE-lined RCP Jacking Pipe + Shaft Segments

Scope: 1,005m DN1800 RCP + 7 Interjack Sets

Liner: 2.5mm HDPE


Installation: Microtunnelling


Empire supplied both the jacking pipe and the shaft lining system, working closely with Rob Carr to align specifications with the tunnelling methodology across one of Queensland's most technically demanding microtunnelling drives.

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