

# Northern Pipeline Interconnector

Stage 2 – J series jacking pipes and interjack stations

Case study



# Humes and NNA push pipe-jacking to new limits

Humes played an integral role in the successful completion of the Southern Hemisphere's longest pipe-jack, at Nambour in South East Queensland. The pipe-jack is part of the Northern Pipeline Interconnector (NPI) – Stage 2, which involves construction of 48 kilometres of underground, reverse-flow water pipeline from the Noosa Water Treatment Plant at Cooroy to the NPI - Stage 1 at Eudlo. This project is a key component of the South East Queensland Water Grid. The Northern Network Alliance (NNA) is designing and constructing the NPI – Stage 2 for LinkWater. The NNA is comprised of LinkWater Projects, McConnell Dowell Corporation Limited, Abigroup and KBR.

The pipeline alignment includes a section through Pringle Hill in Nambour. Tunnelling through Pringle Hill represented a significant construction challenge given the tunnel's length of 1,032 m, its height difference of 60 m from the launch position to the final target, and the design requirement for a significant vertical curve.

Usually a microtunnel of comparable length would be divided into sections with one or more intermediate shafts. However, the steep slope and topography of the area made this option impossible, so the Pringle Hill tunnel had to be one long, continuous tunnel.

The Humes DN2100 J series pipe-jack was integral to the successful completion of the tunnel, and a significant accomplishment for tunnel engineering in Australia. Ten interjack stations were deployed inside the tunnel to enable the pipe-jack to achieve this significant length.

By successfully installing the J series jacking pipes over a distance of more than one kilometre, both NNA and Humes have demonstrated there is greater scope for infrastructure designers to choose more economical routes, which may also deliver benefits to residents and the environment.

## Project

Northern Pipeline Interconnector – Stage 2, South East QLD

## Client

Northern Network Alliance (NNA)

## Product supplied

341 DN2100 J series jacking pipes, 10 DN2100 interjack stations, 242 DN1500 J series jacking pipes, 5 DN1500 interjack stations



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