Case Study: ADS N-12 HDPE Pipe

Bracken Ridge, Queensland - Brisbane City Council and Georgiou

Installation date: March 2017

GENERAL PROJECT INFORMATION

- Multi-million dollar Telegraph Road, Bracken Ridge QLD project
- Brisbane City Council Engineers and Georgiou
- Power Transmission Easement location - **quick installation required** alleviate work safety concerns due to high voltage towers.
- ADS HDPE pipe install took **just 8 hours saving 3 days!** Project plan allowed 4 days for pipe installation.
- **164m of triple cell 1050 diameter** ADS HDPE N12 pipe selected.
- **Arc** shape required
- ADS HDPE N12 pipe chosen over RCP & FRC pipe due to the **fast laying procedure and higher load capacity** than 1200mm class 6 RCP minimum. 1050mm was used as 1200mm class 6 RCP has lower flow due to low ID and steps in joints.

DESIGN CONSIDERATIONS

- All pipe designs require **AS 5100.2 – 2004 live loads** as inputs.
- ADS HDPE N12 pipe could carry 100kN electrical power cable equipment & vehicle stabilizing jacks safely.
- Pipeline **installed in 8 hours** in a curve for hydraulic benefits.
- ADS N12 pipe could sit directly on bedding without structural and time disadvantage of bedding removal for over size bells. Cast in situ headwalls also utilized.
- HDPE N12 pipes laid on stone aggregate as required by pipe laying standards and backfilled accordingly.
- Cover over pipes to a finished level approx 1.1m with construction traffic required at 500mm cover in line with TMR's mandatory T54 dog and truck live load at 500mm cover.

DESIGN STANDARDS

- Materials had to comply with the relevant Australian design standards and codes AS 2566.1 with the higher AS 5100.2 live loads, stabilizing jack loads and construction loads.