MAITAI STAGE 1-STAGE 3

CONSTRUCTION OVERVIEW
Pre-Construction overview

Installation of approximately 6.7KM of 650 Dia. CLS pipe.

Considerations;

• Sensitivity of the Maitai river/valley region, river crossings
• Handling logistics and storage of materials
• Narrow construction corridor – Average 4.5m wide, little more than a 30T excavator
• Rock and varying substrate conditions – GPR prior to excavating
• River crossings
• Pipeline shutdowns and connections
• Stakeholder management
• Pavement and finishing work
Environment

- Importance of the Maitai area for recreation
- Complying with the project consent conditions
- 70m crossing through the river at Smiths Bridge
- 45m river crossing at Poleford Bridge
- General dewatering in trench
- Weather challenges – December 2012 flood
Materials and Handling Logistics

Stage 1 – 4026m approximately 323 x 12m pipes plus bends and valve Tee’s and specials. Bedding 11,000 Tons, fill material 17,000 Tons.

Stage 3 – 2700m approximately 261 x 10m pipes plus bends valve Tee’s and specials. Bedding 8,000 Tons, fill material 10,000 Tons.
Typical construction corridors

- Average 4.5m wide
- 35ton excavators
- Road widening required
Excavating in Rock

- Use of Ground Penetrating Radar (GPR) to Assess
- Use explosives
- Ripping with bulldozer
- Excavator equipped with a Hydraulic breaker
- 5500 m3 of R1 rock
River Crossings

- River Diversions and environmental controls
- Rock excavation within river
- Bulk concrete (total 120m³)
- Planning to mitigate flood risks
Connection Chamber

- Planning with NWTP
- Planning with NCC
- Planning for contingencies
750dia valve installation

- Planning with NWTP
- Planning with NCC
- Planning for contingencies
- Site access issues
Stake Holder Management

• Had expected considerable pushback from residents during the road closure
• Fulltime Public Liaison proved invaluable (second required during the most sensitive areas)
• Residents parked in temporary car park and taxied to and from home by liaison staff
• Amazing what concessions a basket of chocolate goodies will buy you?
Finishing and Enhancement

- Reinstatement of reserves
- Rock work for protection
- Sight rails
- Sealing
- Driveway entrances
Questions