

TUNNELLING



ABERGELDIE
COMPLEX INFRASTRUCTURE

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Developing sustainable underground infrastructure for growing communities

Abergeldie provides the complex infrastructure to build better communities. From design to construction and commissioning we apply innovative techniques and state-of-the-art technologies to deliver projects safely, on time and on budget.

Abergeldie offers tunnelling and shaft services for the water supply, waste water, underground storage, transport, energy, communications and mining sectors.

Our capabilities include:

- Conventional tunnel construction
- Tunnel refurbishment
- Pipe jack tunnels and pipelines
- Micro-tunnelling
- Cut and cover
- Declines
- Shaft and tunnel lining
- Vertical shafts
- Drill and blast
- Blind boring



EQUIPMENT

Our plant includes tunnel boring machines (TBMs) for a broad range of geological conditions, from soft ground earth pressure balance machines (EPBs), to mixed ground slurry machines capable of tunnelling through running sand and hard rock or gripper/main beam TBMs for hard rock conditions.



Abergeldie complements its TBMs with a comprehensive inventory of underground construction equipment, including jumbo drills, bidders/scoops, road headers and continuous miners for hard rock, soft ground and coal environments.

Our shaft sinking equipment enables us to work through any ground conditions.

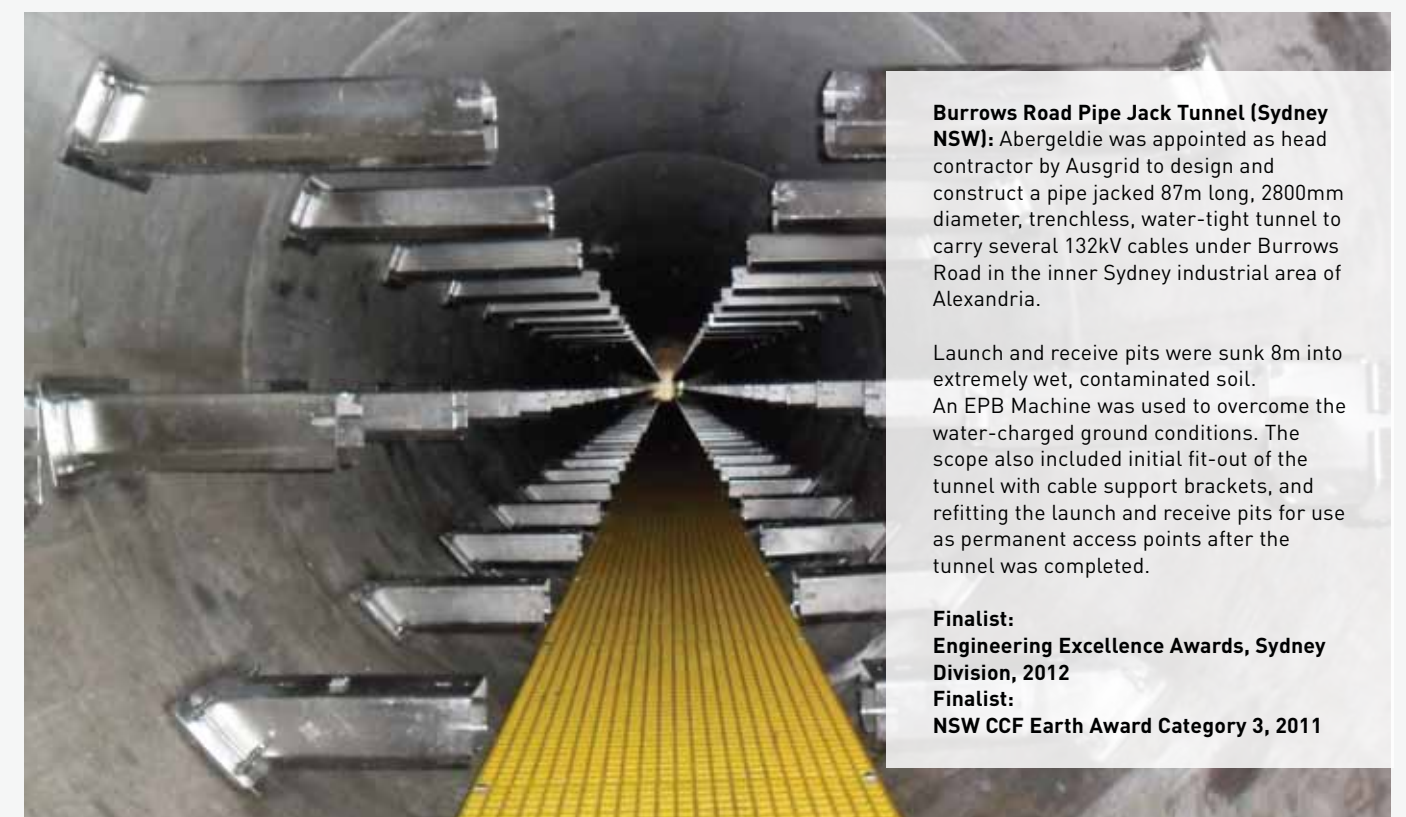
On-site or off-site fabrication facilities enable us to offer a wide range of shaft linings, including options that can be fully hydrostatic.

INDUSTRY RECOGNITION

Cotter Tunnel No 3 Stabilisation (Canberra, ACT): Deterioration meant the tunnel needed to be stabilised to protect the existing water main from Cotter Dam and facilitate the installation of an additional pipeline should it be required as part of the Cotter Dam Upgrade. The 150m long tunnel and varied in height from 2 - 2.8m and width between 2 - 2.7m. At its deepest point it is approximately 9m below the ground's surface.

The project was completely redesigned after consultation between Abergeldie, ActewAGL and Parsons Brinckerhoff revealed the existing design and methodology could be improved to provide a better end result for the client. After an extensive process of evaluation an alternative method was devised that facilitated maintenance of the existing water main and ensured that the capacity of the tunnel could be increased as required.

Winner:
ACT CCF Earth Award Category 2, 2009



Burrows Road Pipe Jack Tunnel (Sydney NSW): Abergeldie was appointed as head contractor by Ausgrid to design and construct a pipe jacked 87m long, 2800mm diameter, trenchless, water-tight tunnel to carry several 132kV cables under Burrows Road in the inner Sydney industrial area of Alexandria.

Launch and receive pits were sunk 8m into extremely wet, contaminated soil. An EPB Machine was used to overcome the water-charged ground conditions. The scope also included initial fit-out of the tunnel with cable support brackets, and refitting the launch and receive pits for use as permanent access points after the tunnel was completed.

Finalist:
Engineering Excellence Awards, Sydney Division, 2012
Finalist:
NSW CCF Earth Award Category 3, 2011

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