



ABERGELDIE
COMPLEX INFRASTRUCTURE



**Largest shaft
to date reaches
target depth**

December 2014

Keeping you in the loop...



On behalf of everyone at Abergeldie Complex Infrastructure, I would like to take this opportunity to wish all our clients and partners the very best for the festive season. It has been a year of celebration at Abergeldie having reached the milestone of 20 years building better communities.

It has also been a year of growth and development as is highlighted in this newsletter. The cover photo of the team at our southern coalfields project is a picture of what makes Abergeldie special. At this vent shaft project, we have drilled 516m at 6.2m diameter in a single pass. The equipment used to drill the shaft was designed and manufactured by Abergeldie. It is an achievement of world significance for mechanical shaft sinking. Bigger than anything, anyone has drilled anywhere in the world.

In this newsletter we also introduce Abergeldie Watertech. Formerly known as, Kembla Watertech, the pipe relining and pipe rehabilitation business became part of the Abergeldie team in September this year. It is a great addition to our complex infrastructure portfolio.

Many of you will have seen the Abergeldie signage if you have been to Parramatta this year. Abergeldie has had the privilege of working on one of the Lennox sandstone bridges across the Parramatta River right in the heart of Parramatta. This heritage project is one we are very proud of.

We were also proud to accept an RMS quality award for our road and bridge project in joint venture with OHL, at Schofields Road completed earlier in the year.

A year of celebrating 20 years building better communities.

A year of great achievements on our projects. We are looking forward to a short break and Christmas with family and friends.

We wish you a Merry Christmas and a Happy New Year and look forward to working with you in 2015.

Mick Boyle
Managing Director
Abergeldie Complex Infrastructure™

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RMS Quality Award Win

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ENGINEERING

ENERGY

WATER

MARINE

MINING

TUNNELLING

ABERGELDIE WATERTECH

- INTRODUCING A NEW SIDE TO THE BUSINESS

Who is Abergeldie Watertech?

Abergeldie Watertech is the newest addition to the Abergeldie family. Formerly Kembla Watertech, the business has roots similar to Abergeldie. It is of a similar age, was founded by a visionary who went on to grow and develop the company, and within its own market delivers a range of complex projects that help build better communities.

What does Abergeldie Watertech do?

Abergeldie Watertech is a specialist pipeline rehabilitation (or pipe relining) services contractor with current turnover of around \$30 million per annum and about 100 staff. Abergeldie Watertech operates all around Australia with permanent staff in Sydney, Melbourne and Brisbane. The core pipe rehabilitation business focuses on sewer and stormwater pipes although in the near future this will also include potable (drinking) water pipes. Pipe renewal ranges in size from small reticulation pipes of 150mm diameter up to large man entry pipes of 1800mm diameter.

The vast majority of works are completed using specialised trenchless techniques. That is, pipes are rehabilitated in-situ as opposed to digging them up and replacing them. Abergeldie Watertech is the sole provider of an array of industry leading products making it one of the leading players in pipe rehabilitation. As part of the rehabilitation process Watertech also provides a range of related services including CCTV inspections, pipe cleaning, sealing junctions, traffic control and a range of civil works. The majority of works are completed by Abergeldie Watertech personnel.

Over the past 20 years Abergeldie Watertech has completed works for all major water authorities in Australia and most major and minor councils. Current major clients include Sydney Water, City West Water, Western Water, Gippsland Water, Eurobodalla Council, Rockhampton Regional Council and South Burnett Regional Council.

What makes Abergeldie Watertech special?

The strength of Abergeldie Watertech lies with its people. Most Abergeldie Watertech staff have been with the business for many years and are highly skilled and experienced. This loyalty and focus on quality means many happy, repeat clients and excellent project outcomes. It also means the ability to complete some of the most complex works ever attempted in Australia including the rehabilitation of the Bennelong Stormwater Channel running under Sydney's CBD. This project was awarded the 2013 Project of the Year by the Australian Society of Trenchless Technology.

Watertech also has a great history of embracing emerging and advanced technologies to meet the ever increasing demands of clients. In the last five years Watertech has launched numerous new systems including UV cured CIPP Lining, 3D Camera Maintenance Hole Inspections, Spiral Wound Pipe (SWP) DiaFit expanding spiral lining for mid-sized diameters and SWP Sliplining (SL) fixed diameter spiral lining for very large diameters. In 2015 Abergeldie Watertech, in conjunction with 3M and Yarra Valley Water, will launch 3M spray lining technology into the Australian potable (drinking) water pipe rehabilitation market.



PROJECTS UPDATE

- CURRENT AND NEWLY AWARDED PROJECTS

Customer Car Parks

TRANSPORT FOR NSW

Abergeldie was awarded package 1 of the Car Park Conversions Program for Transport NSW on 25 August 2014 comprising 15 varying size car parks across Western Sydney and the Blue Mountains. It is part of a program designed to deliver over 1200 car spaces across the Sydney Trains network.

Abergeldie's scope involves converting allocated spaces into commuter parking areas through pavement and resurfacing works, linemarking, signage, fencing, wheelstops, lighting and CCTV cameras.

Value \$7 million



Wulkuraka Retaining Wall

QUEENSLAND RAIL

Abergeldie was awarded the contract to construct a 430m long 5m high reinforced concrete retaining wall for Queensland Rail as part of their \$4.4billion New Generation Rolling Stock Project. The contract required excavation and retention of an earth batter to provide additional access for the new railway bypass line into the facility. One major risk of the project was a high pressure gas main buried within the batter which was at risk of collapse during excavation. Abergeldie safely installed bored piers to support the gas main prior to constructing the wall. Work is progressing well with the team striving to finish before Christmas.

Value \$3.5 million

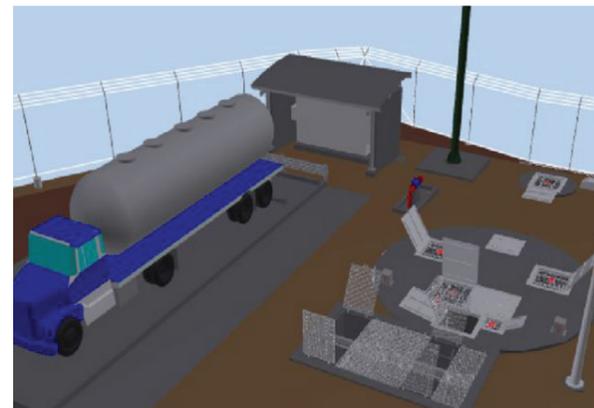


St Marys Wastewater System

SYDNEY WATER

The works package for St Marys consists of construction of a new pump station and pressure main pipeline. The project is proceeding well with the design for the pump station site at Jordan Springs and the 1km rising main due to be issued for construction. Works to construct the rising main by horizontal direction drill commenced in mid-November, this should see the bulk of this work complete prior to commencement of the construction of the new pump station. The design package for the new 2.8km carrier main at Minchinbury is also nearing completion with works to construct the main expected to commence in January.

Value \$6.8 million



Gayndah and Munduberra Raw Water Intakes

NORTH BURNETT REGIONAL COUNCIL

As part of the Australian and Queensland Governments Natural Disaster Relief and Recovery Program, Abergeldie has now completed the construction of new raw water intakes from the Burnett River at Gayndah and Munduberra after they were destroyed in the 2011 and 2013 floods.

The pump well intake structure at Gayndah was constructed in 5m of water beside the existing Claude Wharton Weir and the well shaft was built by stacking eight precast segments on top of each other. Each segment weighed between 34 and 50 t.

The intake structure at Munduberra involved the replacement of the existing jetty that would provide the structure to suspend the water intake pumps and pipework. The jetty consists of 6no. 900mm x 10m long steel lined reinforced concrete piles socketed 3m into bedrock. The jetty now carries the pumps and rising main to connect into the existing water supply.

Value \$4.5 million



PROJECT FOCUS

- COMPLEX PROJECT SPOTLIGHT



Lennox Bridge Portals

Heritage preservation in the modern age has provided Abergeldie with a unique opportunity. We have been contracted by Parramatta City Council to construct two access portals within the State Heritage listed Lennox Bridge over the Parramatta River to allow pedestrians and cyclists to travel safely along the river banks. The bridge consists of two distinct sections. The older section, constructed in 1839, was a sandstone arch bridge and was constructed in two halves. The bridge was widened in 1934-35 by adding on to the west a reinforced concrete ribbed arch bridge. These two distinct sections of the bridge are immediately adjacent to one another and together carry two lanes of traffic, two parking lanes and two pedestrian paths, spanning approximately 23m over the river.

During construction of the portals, archaeological excavation works revealed the presence of a third wall beneath the Church Street road surface, the old 'Gaul Bridge' that crossed the river before Lennox Bridge. The artefacts are being researched and conserved by qualified archaeologists.

In July, a pier from the old 'Gaul Bridge' was found which dates from 1802 - 1806. The Gaul used to be located behind the Riverside Theatre, where Prince Alfred Square is today in Parramatta. Abergeldie is continuing to work with the designers, Council and the Heritage Office and is dedicated to respecting the bridge's heritage significance.

The northern portal has had a major milestone with both the eastern and western sandstone walls being deconstructed, and the opening in the existing western concrete wall being cut through and removed. This is the first portal to have a continuous tunnel through the entire bridge.

The southern portal stage 1 structural concrete works are now complete, with the existing sandstone external wall being reconstructed over and around the portal entry. Works are progressing on the concrete road barrier above the southern portal to complete the balustrade construction currently at 80% complete.

Eastern balustrade cladding is progressing, with new stone being pinned and installed to the outside face of the newly constructed balustrade. These works are being completed off an additional bridge that Abergeldie has installed spanning over the Parramatta bridge adjacent to Lennox Bridge.

Abergeldie is also undertaking remediation works on the entire eastern face of the bridge and underneath the soffit. This will involve cleaning, desalination, repairs and repointing all of the joints to all sandstone elements. The life span of the current bridge will be significantly increased and with the addition of the new portals will be used for years to come.

COMMUNITY NEWS

- BUILDING BETTER COMMUNITIES



Ongoing Vinnies Van sponsorship confirmed

Abergeldie's support of the Vinnies Van in western Sydney is set to continue as we recently signed another 3 year sponsorship agreement. While Vinnies works to resolve the broader causes of homelessness, this service provides a valuable support to those who are either sleeping rough or simply like to get out and have a chat and a cuppa with a friendly member of the community. On Melbourne Cup day we presented our annual cheque payment and also acknowledged the 25 Abergeldie staff and associates who volunteer on the van throughout the year. We look forward to the arrival of a new van - due for delivery later in the year.

Wateraid Ball – Gold Sponsorship

As key members of the water industry in Australia – particularly with the addition of Abergeldie Watertech – Abergeldie were very proud to be a Gold Sponsor of the Sydney Wateraid Ball again this year. This ball raises substantial funds to allow Wateraid to assist communities in poor regions throughout the world to access clean water and proper sanitation. You may remember that our CEO Mick Boyle had the opportunity to view their work first hand on a trip to Timor Leste last year. The theme for the ball this year was Strictly Ballroom – so there was no shortage of lycra and sequins on the night!

A Win at RMS Quality Awards

Representing the OHL-Abergeldie Joint Venture, Mick Boyle was proud to receive a 2014 RMS Construction Quality Award for the recently completed \$39.8 million duplication of a 2.1 km section of Schofields Road and construction of twin, multi-span road bridges. Roads and Maritime Services presented the award in recognition of high standards of project delivery in the 'Projects Under \$50 million' category.

The road duplication and new 32.5m long twin bridges upgrade a 2.1 km stretch of Schofields Road, between its intersections with Windsor Road at Rouse Hill and Tallawong Road at Schofields in western Sydney.

The Award recognises high quality bridgework, best-for-project innovations in detailed design and construction methodology, tightly-controlled project management and the effectiveness of a highly cooperative approach to contract administration.

Abergeldie's Mick Boyle (Managing Director) and Jason Fielding (Project Director) received the award on Tuesday, 18 August 2014, at a breakfast presentation. "We are very proud to receive this award" said Mick. "It's a tribute to the dedication and skills of our team, all of whom put in a great effort to deliver the project on budget and on time to tie in with Roads and Maritime Services plans for next stage of upgrades to Schofields Road."



Geoff Fogarty (Director of Infrastructure Development, RMS) presenting Mick Boyle with the Construction Quality Award.

PROJECT FOCUS

- COMPLEX PROJECT SPOTLIGHT

Southern Coalfields Vent Shaft Project

In November, drilling of our southern coalfields vent shaft project reached its target depth of 516m. This is the deepest blind-bored shaft ever constructed by Abergeldie. It is a monumental achievement for the drilling team; even greater considering the shaft's unusually broad 6.2m diameter and the challenges of very hard rock in the lower strata.

With manufacture of shaft liners now complete, the team are focussed on streamlining the liner installation process to ensure smooth sailing for the duration of placement and grouting. Fabrication of the 170 composite steel/concrete liner units was being carried out in a temporary factory facility which Abergeldie set up on-site. Each segment is 3m deep, with a finished internal diameter of 5m. Once all the liners have been installed, the annulus between the drilled shaft wall and the liners will be filled with grout to give a smooth, hydrostatic finished surface.

Another of the team's major challenges has been working to treat the drilling process water. The blind boring process uses up to 18 million litres of water, which carries away the drilled spoil as suspended solids. The concentration of suspended solids can be as high as 70%. The solids must be removed so that the process water can be reused again and again as boring proceeds. With the project nearing completion, efforts now turn to further fine tuning this treatment system to produce clean water.

Despite some delays in drilling due to unusually difficult ground conditions, the project should be completed by March/April 2015. Abergeldie is proud to be delivering a very significant project for a very valued client.



Rig 100 drilling the Shaft



The site team

Trenchless technologies for pipeline renewals, pipeline and tunnel construction



Kembla Watertech has joined Abergeldie Complex Infrastructure and will now be known as Abergeldie Watertech.

Abergeldie pipeline renewal technologies include all major categories of relining, trenchless spot repairs, robotic cameras and cutters. We are serving the needs of major water authorities across Australia and overseas.

Our other trenchless capabilities include the use of Tunnel Boring Machine (TBM), roadheader and microtunnelling technology to deliver high quality tunnel infrastructure for water, sewerage, energy, and transport sectors.

Abergeldie specialises in providing infrastructure across eastern Australia such as bridges, dams, railway station upgrades, electrical substations, sewerage treatment and water reticulation plants, wharves and jettys, mining infrastructure including large diameter blind bore ventilation shafts, tunnelling and now pipeline renewal.

For all your infrastructure needs, trenchless or otherwise contact Abergeldie.

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