

# NORTHERN PIPELINE INTERCONNECTOR Stage 2

**MAIN CONSTRUCTION COMPANY :** Northern Network Alliance

**CLIENT :** LinkWater Projects

**COMPLETION :** December 2011

**LENGTH :** 48km long

**VOLUME :** Transport 65 megalitres per day

**PROJECT END VALUE :** \$468 Million

## QUENCHING EVERYONE'S THIRST

The Northern Network Alliance (NNA) was engaged by LinkWater Projects, a Queensland Government owned entity, to design and construct the Northern Pipeline Interconnector (NPI) – Stage 2.

The NNA is led by LinkWater Projects; and involves key contractors Kellogg Brown & Root Pty Ltd, AbiGroup and McConnell Dowell.

The Northern Pipeline Interconnector (NPI) – Stage 2 is a \$468 million investment to help secure water supply for the growing region.

NPI – Stage 2 is a vital piece of drought contingency infrastructure that will have the capacity to transport a target volume of 65 megalitres (ML) per day of potable water between the Sunshine Coast and Brisbane. The operation of the pipeline was redesigned to enable reverse-flow to be achieved to provide security of supply to the Sunshine Coast. This expanded the project works over 100 kilometres, from North Pine to Noosa Water Treatment Plant, and included critical tie-ins to existing operating infrastructure.

NPI – Stage 1 was completed in December 2008 and runs from the Morayfield Reservoir in Brisbane's north to the Landers Shute Water

Treatment Plant. A connection continues to Eudlo where the Stage 1 pipeline connects with the NPI – Stage 2.

Overall the NNA has used an integrated planning method for the construction of NPI – Stage 2. Involving all function teams including construction, environment, safety, communications, rehabilitation, hydro testing and commissioning, has meant that all works have been coordinated as a group to ensure maximum productivity. The fluid program accommodates the complex nature of NPI – Stage2, and means that the schedule is always adjusting to meet mixed needs.

A key achievement for the NNA was the Pringle Hill microtunnel. The tunnel is the longest single pipe-jacked microtunnel of its kind in the southern hemisphere, travelling at a depth of up to 90 metres under the established suburban area of Nambour. The success of the Pringle Hill microtunnel is highlighted because a tunnel of this length is typically divided into sections serviced by intermediate shafts. Due to the steep slope and terrain this standard method was ruled out, and it was built as one long 1,032 metre tunnel.

As part of the works, the NNA works closely with landholders along the construction corridor. Approximately 24 per cent of the pipeline travels through existing road reserves and 68 per cent through electricity easements – which are often co-located on privately held freehold lands. It has been critical for the project to ensure landholders are aware of what is going on every step of the way to minimise impacts wherever possible.

Prior to construction commencing, all landholders were consulted to identify potential issues and concerns. Their feedback was documented and used to develop mitigation strategies and individual Landholder Construction and Rehabilitation Plans. This innovative strategy was built from experience gained by the Alliance partners from previous pipeline construction projects, and ensured joint understanding of expected outcomes.

In addition to its work with landholders along the pipeline route, the NNA provides relevant and timely information to all stakeholders about construction activities through meetings, the free 1800 community information hotline, regular newsletters, fact sheets, e-updates and the project website.

The NNA also currently supports the Sunshine Coast communities through a local spend of \$65.4 million, which equates to 719 indirect jobs. The NNA's employment peaked at about 500 workers, with 87 per cent of the construction workforce local to the Sunshine Coast.

### NORTHERN NETWORK ALLIANCE

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# A SOLID FOUNDATION

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Working closely with the Northern Network Alliance on the Northern Pipeline Interconnector project, Rob Carr Pty Ltd performed various works including major tunneling and trenchless crossings. The company provided a total construction solution for this project. Key attributes included:

- major rail, road and creek crossings,
- construction of deep shafts in difficult ground conditions
- connections to existing infrastructure
- restricted site access and work space
- high level of OHS&E management and coordination with the NNA team
- construction in alluvial soils through to high strength rock ground
- construction of DN1500 pipelines via tunneling and installation of DN1290 Sintakote inside the enveloper and grouting of annulus
- construction of DN1290 Sintakote pipelines via conventional excavation in difficult and water charged ground conditions
- construction of concrete caissons (to 19m deep) via underpinned and sinking techniques.

The new pipeline has the capacity to transport up to 65 megalitres per day of potable water between the Sunshine Coast and Brisbane through a 48 kilometre underground pipe. This project was necessary for the area due to the ever-increasing population rates South East Queensland is experiencing.

Since its inception, Rob Carr Pty Ltd has prided itself on employing staff that are client focused, ethical and hard working. With dedicated offices in Queensland, New South Wales and Western Australia, Rob Carr Pty Ltd provides the opportunity for new employees to become involved in a diverse range of civil construction and tunnelling projects throughout Australia.

Through a dedicated training and recruitment program, Rob Carr Pty Ltd is able to provide a highly skilled team that allow the company to undertake and successfully deliver the most complex pipeline infrastructure projects. The company is experienced in providing project works involving tunneling, pump station construction, specialist concrete structures, conventional trench excavation for gravity trunk mains and rising mains plus bulk excavation.

Rob Carr Pty Ltd has successfully worked with many well-known and respected clients both in the private and government sectors. These clients include Queensland Urban Utilities, Water Corporation WA, Brisbane City Council, Allconnex, Gold Coast Water and City Council, Link Water, Sydney Water, South East Water, Melbourne Water, Toowoomba City Council and the Northern Territory Government. The client list of construction industry companies includes Baulderstone, Leighton Contractors, John Holland, McConnell Dowell, Bovis Lend Lease, Tenix, United Group, Fulton Hogan and Thiess.

Since 1989, Rob Carr Pty Ltd has delivered pipeline projects throughout Australia and their microtunneling operations have expanded significantly in the past years. The company currently features a large fleet of machines including excavators, loaders, trucks, shoring, power generators and pumps. Rob Carr Pty Ltd also own and operate 30 Tunnel Boring machines which cater to a diameter of 2400mm for varying ground conditions.

Over the years Rob Carr Pty Ltd has completed the installation of several hundred kilometres of gravity mains for sewer, storm-water and power, 10 pumping stations and has connected more than 5000 properties to sewer infrastructure. The company has built a solid reputation as a leader in trenchless construction. Through experience, strong leadership and provision for innovative solutions, Rob Carr Pty Ltd provides its clients with the necessary skills and expertise required to successfully deliver quality infrastructure projects.





## SUPPLY & DEMAND

Vermeer is a leading construction, environmental and industrial equipment supplier. With a focus on customer service and quality products, Vermeer has grown from a single person operation to an international organisation which manufactures, distributes

and services construction, environmental and industrial equipment. Now with over 100 dealerships worldwide, 2000 plus manufacturing personnel and a reputation as world leaders, Vermeer continues to grow from strength to strength.

Vermeer has dealerships strategically located in Queensland, New South Wales, Victoria, South Australia and Indonesia ensuring that their products are easily accessible to their clients.

When its production per hour that counts, Vermeer's range of tree care equipment, surface mining, trenching and directional drilling equipment is the gear Australia's top contractors turn to.

Years of experience in construction, forestry and mining applications has led Vermeer to find new solutions to their customers problems. Their products are backed by a worldwide support network that is among the best in the industrial trade. In

fact consistency and proven support are the keys to the Vermeer dealer network - the reason why they've served thousands of growing businesses.

Vermeer dealers are on the frontline every day - standing by their customers for the long haul. The team constantly strives for success and superior customer service. The Vermeer way is to understand that when customers are successful, the company is successful. In order to provide this ongoing level of satisfaction, service, training, certified parts and exceptional warranty programs are just a few of the resources Vermeer offers once a customer takes delivery of a machine.

Vermeer provided equipment for the Northern Pipeline Interconnector project. The delivery of equipment was easy due to the strategically located offices throughout Australia. Vermeer is able to supply equipment to projects of all sizes.

Just some of the specialised equipment Vermeer has to offer are listed below:

- Trenching machines
- Surface mining equipment
- Trenchless – Horizontal drilling equipment
- Wood chippers, stump cutters and grinders
- Rental, new and used equipment
- Genuine spare parts & service

The team at Vermeer are experienced product specialists and technicians who are capable of providing expert advice and diagnosis in order to support their clients. The Vermeer service centres have the ability to perform timely routine checks right through to complete system rebuilds.

### VERMEER

#### QUEENSLAND

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Townsville

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#### NEW SOUTH WALES

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Sydney

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#### VICTORIA

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Melbourne

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#### SOUTH AUSTRALIA

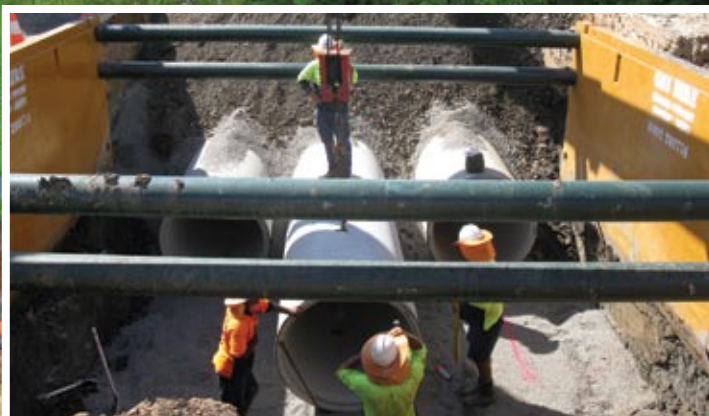
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**GSS HIRE**  
Ground Support Systems (Aust)  
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Ground Support Systems (Australia) specialise in the “Hire” of trench shoring equipment and accessories to the drainage, plumbing, underground boring, civil engineering and construction industries. Their equipment ranges from small lightweight 1.8m, 2.4m, 3m & 3.6m long aluminium and steel shoring for the smaller jobs, up to a range of 3.6m, 4.3m, 6.1m & 7.3m long heavy duty steel shoring for major projects.

On the Northern Pipeline Interconnector project, Ground Support Systems supplied various Trench Shoring equipment. This equipment ranged from small lightweight aluminium shoring to heavy duty steel shoring boxes for many of the crews working on the project including Tunnel Boring Pits and Valve Pits through to general construction and installation of the pipeline.

Ground Support Systems (Australia) has been operating under the current owners in Perth since 1996. In April 2006 Ground Support Systems opened their Queensland branch with a range of medium duty equipment and have continuously grown their list of dedicated and satisfied customers.

With many large infrastructure projects on the horizon and market demand for larger and stronger shoring boxes, Ground Supports Systems have introduced new products to their range. The new range of 3.6m, 4.3m, 6.1m & 7.3m long heavy duty steel shoring boxes are now part of their hire fleet, all of these having the capability of being assembled with internal dimensions of up to 6.1m clearance between the panels with either standard spreaders giving 1600mm clearance beneath the bottom spreader or with high clearance arches giving 2.3m clearance beneath the arch. Since introducing this new range of shoring and due to the popularity of the product and customer demand, Ground Support Systems have increased their stock many times over and have slowly expanded operations to include depots in Sydney during 2008, Melbourne in 2010 and Adelaide in 2011. The company also hires excavators, rollers and other machinery from the Perth depot and has recently started to do the same from the Queensland depot.

Ground Support Systems take pride in supplying all of their valued customers with the latest and highest quality products at competitive rates

along with the best customer service in the industry. This is reflected by their continual growth of customers and products over the years. This increase is primarily due to customers recommending their services to others.

The ever increasing expense of ensuring safety at excavation sites needs to be balanced against minimising the costs. Ground Support Systems specialise in reducing exposure to the hazards of trench collapse whilst optimising the effort and cost of trenching in unpredictable ground conditions.

Ground Support Systems have also supplied various equipment to projects such as; Southern Regional Water Pipeline Alliance, Seymour Whyte - Gold Coast Highway Upgrade, Labrador, John Holland - Desalination Project (Gold Coast) & Horizon Link Project (Richlands) More recently they have supplied equipment to Leed Engineering and Constructions & John Holland/Leed Joint Venture for major pipeline projects in South Australia plus equipment for many other Contractors and projects throughout Australia.

#### GROUND SUPPORT SYSTEMS (AUSTRALIA)

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# A QUALITY SERVICE

Atlas Chains supplied a comprehensive range of lifting gear for the Northern Pipeline Interconnector project. This extensive list included chain slings, round slings, wire rope, shackles, stainless steel fittings, rigging screws, turnbuckles, transport fittings, loadbinders, clevis pins, winches, girder trolleys, pulley blocks, plate clamps, pallet and reel lifters, drum clamps and more.

Handling the supply of equipment since the project started in late 2008, Atlas Chains has enjoyed a professional and easy relationship with all contractors involved in the project.

The Northern Pipeline Interconnector project was led by the Northern Network Alliance (NNA) for LinkWater Projects, the Queensland Government's special purpose group for the design and construction of water infrastructure. The pipeline forms part of the South East Queensland Water Grid and includes an extensive pipeline corridor, pump stations and water-quality-boosting facilities. The project spans over 48 kilometres and included an upgrade to an existing water quality facility.

Atlas Chains is a family owned, Australian business, which has proven to be one of Brisbane's most trusted suppliers in their industry. With over 20 years experience, Atlas Chains remains a force in the supply and distribution of all lifting equipment.

Offering a complete service to their clients, Atlas Chains is registered with the National Association of Testing Authorities (NATA) and regularly carries out onsite inspections, repairs and testing of various types of lifting equipment.

Supplying products on projects of all sizes, Atlas Chains provides a fast turnover, usually within a 24-hour window. The quality of their products, pricing and customer service is highly regarded and has led to ongoing relationships with many clients.

Atlas Chains are highly committed to their customers and value their ongoing needs and special requirements. As a new age distributor, the company is aware of the ever increasing demands of their growing customer base and are dedicated to ensuring high grade service at all times.

The company policy embraces Australian standards and certifying of the entire range of products available ensuring the highest quality across their product range.

Atlas Chains strives in setting the standard for innovation, product research and development.

The company endeavors to continue upholding high business ethics and morals whilst implementing their Quality Assurance Management System, OH&S policies and NATA that will take them well into the 21st century and beyond.

Go to Atlas Chains website for more information on the range of products on offer. [www.atlaschains.com.au](http://www.atlaschains.com.au).

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# EARTHING WORKS

Corrosion Control Engineering were appointed as the corrosion and earthing consultants on the Northern Pipeline Interconnector project. Due to the close proximity of the pipeline to the High Voltage overhead powerlines and towers, the safety of the construction and future operations personnel was of great significance on this project. As a result, the pipeline earthing was a predominant factor in the design of the corrosion and personnel earthing protection systems for Northern Pipeline Interconnector project.

The design of the earthing and corrosion protection systems was, at times, difficult due to the changes in terrain. However, given the experience of Corrosion Control Engineering, the project went ahead with ease once all necessary design data was obtained.

Whilst the earthing installation was not unusual, the design of the earthing and corrosion protection systems utilised a drilled vertical installation method for the electrodes which, in good to reasonable soil conditions, enabled electrode stringing to greater depths.

Corrosion Control Engineering assisted the project during the construction process by inspection and supervision of some aspects of the installation works that presented problems. Corrosion Control Engineering also provided commissioning assistance and the final review of the commissioning data.

Established in Sydney in the year 2000, Corrosion Control Engineering has since expanded its operations to Melbourne and Brisbane. A Perth office also opened in July 2011. Corrosion Control Engineering is the largest Australian owned corrosion company specialising in cathodic protection and corrosion consulting. In addition, Corrosion Control Engineering offers service works such as installation, maintenance inspections, materials and repairs. Through the experience and

qualifications of their engineering staff, Corrosion Control Engineering can also provide services which include coating inspection and specification, corrosion failure analysis and material selection.



## CORROSION CONTROL ENGINEERING

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## MEETING DEMANDS

Master Hire is a family owned company which was established in 1990 with their Head Office situated in Toowoomba. Following substantial growth, there are now 9 branches in total throughout South East Queensland including the latest branch at Gladstone.

Master Hire are rapidly expanding their equipment range along with their branch locations and have proven to be fully capable of managing the supply of hire equipment to large projects such as the Northern Pipeline Interconnector.

Master Hire supplied hire equipment to Northern Pipeline Interconnector project from their Cooroy and Morayfield branches. The company provided a full range of devices as requested, with a focus on large water pumps and earthmoving equipment such as Posi-Tracks and excavators.

Like all large infrastructure projects, the Northern Pipeline Interconnector venture had a rigorous focus on safety with specific requirements regarding machine cleanliness and delivery procedures.

Master Hire is flexible in adapting their work practices to accommodate their customer's unique strict policies and procedures and they proved this once again with the successful supply of equipment onto the project. The tight timeframes on the project meant Master Hire needed to provide urgent, around the clock response when issues arose, or equipment was required. Master Hire pride themselves on a level of service and ability to meet these demands as they arise.



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### NORTH TOOWOOMBA

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## THE STAND-OUT CHOICE

Since 1984 Pacific Data Systems has been using their passion for innovative technology to make it easier for businesses to harness the information required in order to focus on whatever it is that they do best. So when approached in 2009 to find a tablet computer suitable for use in the field during construction of the Northern Pipeline Interconnector, Pacific Data Systems knew the importance in finding a solution that was easy to use, without compromising on the technology and ruggedness required to achieve their customer's goals.

In consulting with Northern Network Alliance (NNA), Pacific Data Systems looked at how the tablets were to be used; supervisors in the field required a device to run a third party software application that logged the activities of the employees in their crew, along with materials used, and plant usage. With the information being collected critical to keeping the project on time and on budget, reliability was a key requirement. Pacific Data Systems knew that to provide this level of reliability and keep down-time to a minimum that not only was a rugged workhorse needed to cope with the demanding environment, but there also needed to be a strong support plan in place to cater for any breakages.

The stand-out choice was the TDS Yuma, a fully rugged tablet PC that offered clear advantages over its counterparts. As an IP67 and MIL-STD-810F Military Standard rated device, it was built to survive the inevitable exposure to mud, water, knocks, drops and even being driven over by a truck on the odd occasion – an actual documented occurrence! It also offered NNA an integrated 3G modem so that supervisors could connect to their software through a Remote Desktop Connection eliminating the need for cumbersome external wireless modems and reducing the potential for damage to USB ports.

The technology used in the 7" touch-screen makes it possible to view the screen in bright sunlight – a must for in-field operations. It is also equipped with both forward and front-facing cameras so that any faults or project-related images can be captured and the GPS coordinates logged by the internal GPS. And with supervisors needing to work

away from mains power for much of the time, the Yuma's all-day battery capacity was an obvious attraction.

As a service plan, Pacific Data Systems provided a "warm swap" option to NNA to counteract potential downtime in the event a Yuma required servicing or was damaged in the field. Amortised over the cost of the initial fleet purchase, a spare unit is kept on hand at Pacific Data Systems which can be sent overnight to NNA's project site. NNA has found this to be a highly valuable service and has commended Pacific Data Systems for their ability to provide quick turnaround whenever repairs or spare parts are needed.

Pacific Data Systems remains committed to providing top-quality, affordable data acquisition solutions to the Australian construction industry. In addition to supplying a wide range of affordable, reliable rugged laptops, handheld and tablet PCs, they also develop and manufacture their own solutions in-house for construction, mining and other industrial applications. The company's Wireless Data Survey Link provides land surveyors with remote communications between tablet computers and total stations and they have also developed a concrete-curing monitoring station for improving curing processes and meeting the Queensland Motorways project reporting requirements.

Paul Gapes, Sales Manager for Pacific Data Systems, says the company looks forward to being involved in future construction projects and welcomes enquiries from any businesses that are looking for an innovative solution for rugged computing, custom-built environmental monitoring systems and workplace safety.

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## ALFATEST - ALL SYSTEMS GO

In spite of difficult weather conditions and delays in production and the laying of pipe, AlfaTest Pty Ltd rose to the challenge and provided their specialised services on the Northern Pipeline Interconnector project.

With 8 employees working on the project, AlfaTest carried out non-destructive testing and were responsible for testing and inspecting the welded joints in the pipe lengths to ensure they met specifications and relevant standards. The process involved using various NDT (non-destructive testing) techniques including Visual Inspection, Magnetic Particle Inspection and Ultrasonic Inspection. AlfaTest conducted pressure testing on various parts of the pipeline and associated equipment.

NDT techniques were implemented across the project including bridges, gantries and other structures.

AlfaTest Pty Ltd is a wholly Australian, privately owned Company specialising in NATA accredited, non-destructive testing and mechanical testing of materials and equipment and servicing for the Mining, Fabrication, Sugar, Maritime, Aeronautical, Railway, Manufacturing, Petro-Chemical and Automotive industries.

The business was founded in Brisbane, Queensland in 2001 when the parent company, Bentech Services Pty Ltd, a NATA Accredited Laboratory and manufacturer and supplier of testing equipment, restructured to facilitate the creation of an independent entity dedicated to the provision of expert professional engineering services. AlfaTest now operates as a registered and accredited inspection company operating throughout Queensland, all Australian States and the Asia Pacific Region.

A continued commitment to training and a wide variety of experience in the Mining, Fabrication, Sugar, Maritime, Aeronautical, Railway, Manufacturing and Automotive Industries ensures a broad range of professional services are offered by AlfaTest Pty Ltd and all its personnel.

AlfaTest Pty Ltd operates two NATA Accredited Laboratories which provide Non-destructive Testing methods, including Liquid Penetrant, Magnetic Particle, Ultrasonic, Eddy Current, Radiographic and ACFM Inspections, and Mechanical and Metallurgical Testing, including Tensile, Hardness, Bolt, Impact, Hydrostatic and Poly Pipe Testing as well as Chemical Analysis, Failure Analysis and Macroscopic Investigations.

AlfaTest has extensive experience in testing pressure vessels, pressure piping and associated components to Australian Standards, ASME and API requirements including welding and fabrication Consultant work, QA QC, Third Party AIA, auditing and coating inspection.

AlfaTest holds Civil Aviation Safety Authority (CASA) approval for non-destructive testing on aircraft.

Technical personnel are required to undergo regular formal on and off job training to ensure maximum levels of technical expertise are maintained.

AlfaTest Pty Ltd is committed to the implementation, maintenance and continual development of the AlfaTest Quality System to ensure ongoing customer satisfaction in all services provided.

**AlfaTest**  
"Delivering Results"



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## MAKING IT EASY!

Specialising in the supply and delivery of on site refuelling and information management solutions, Bulk Fuel Australia attended to the Northern Pipeline Interconnector project. The company was responsible for providing refueling services for all mobile and fixed plant on site. Bulk Fuel Australia delivered just under 1,000,000 litres of fuel to the Northern Pipeline Interconnector project.

Apart from the extended periods of wet weather causing slippery conditions, the Northern Pipeline Interconnector project presented no significant problems for Bulk Fuel Australia. An impressive feature provided by Bulk Fuel Australia is the onboard computer systems which enable the capture of accurate and timely information in the field from the equipment being refueled. This data includes time, date, plant numbers, engine hours, odometer, location etc. The information is then compiled into detailed reports which are automatically emailed to clients as required.

Through tireless innovation and an uncompromising eye for quality service, Bulk Fuel Australia are pioneers in providing service with excellence that rivals the countries best. Bulk Fuel Australia operates a substantial fleet of Hino Tankers throughout South East Queensland and Northern NSW. Each tanker is equipped with a 30 meter hi-flow hose reel that is purpose built for the refueling of mobile and fixed plant in industries such as earthmoving, marine, rail, agriculture, manufacturing, power generation, road transport and government departments. Each vehicle stocks a range of quality lubricants helping customers to help minimise equipment downtime.

Bulk Fuel Australia operates with an experienced team of more than 20 staff who are dedicated to providing their clients with a fast and efficient service at all times.



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## THE FIRST AID & FIRE SAFETY SPECIALISTS

Specialising in first aid and fire safety courses, Rapid Response First Aid provided training for the contractors on the Northern Pipeline Interconnector project.

The Northern Pipeline interconnector Stage 2 project involved 45 kilometres of underground reverse-flow pipe between the Noosa Water Treatment Plant and the termination point of Stage 1 at Eddlo.

There was also the introduction of 4 new pump stations, a five ml balance tank and a new quality management facility and upgrade at Landsborough along with 2,403 metres of trenchless construction, including the southern hemisphere's longest pipe-jacked tunnel at Pringle Hill totaling 1,032 metres.

Rapid Response First Aid is a certified first aid training business based at Buderim on the beautiful Sunshine Coast of Queensland. The business was created by Judy Bartlett, a Registered Nurse, who identified a need in the market for professional first aid training for small groups and organisations. Judy's background in nursing brings invaluable practical experience to the training programs.

Rapid Response First Aid also provides Snake and Insect Awareness training on request and Advanced courses in Resuscitation, Oxygen and Occupational First Aid.

Catering to businesses of all sizes, Rapid Response First Aid tailor individualised training for their clients.

Rapid Response First Aid makes it easy for clients to receive high quality first aid and CPR training from a professional trainer with nationally recognised Accreditation.

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# A PERFECT MATCH

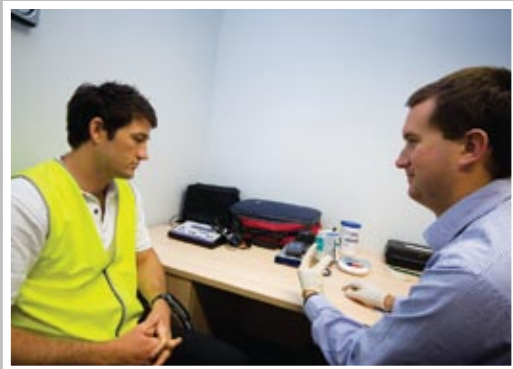
Konekt worked in partnership with the Northern Network Alliance employers to provide coordinated pre-employment health screening and risk management activities, such as functional capacity evaluations, drug and alcohol screening at pre and random post-employment sessions. Konekt also provided incident & injury management consultancy as required throughout the project.

The services successfully provided on the Northern Network Interconnector were comprehensive and included the utilisation of Konektiva (Konekt's online database). This system enables:

- A single contact point via a 1300 number for coordination of all pre-employment assessments, managed by a dedicated account manager
- Real-time access to log and track referrals, track assessment times and results, via a secure, web-based health management system
- Priority access to appointment times through an extensive network of providers across the country
- Guidance provided in information kits and via telephone for candidates and contractors so that they are aware of the processes and pre-testing requirements

- Training and education to ensure that businesses specific requirements and proformas are consistent for every candidate referral
- Organisation, at no further cost, of further testing by specialists where required
- Quality assurance of every assessment guaranteed
- Statistical reporting on pre-employment numbers and results by project, region, state and holistic national data
- Centralised invoicing so that all associated pre-employment costs are received by, and made to Konekt, simplifying the pre-employment process.

Konekt is the largest provider of workplace health solutions for Australia's private sector. Their focus is on helping businesses to minimise the impact of workplace injury and related workplace costs, resulting in reduced workers' compensation premiums and faster back-to-work outcomes. Konekt delivers the full breadth of services required for occupation care, prevention of injury, rehabilitation and risk management across every state and territory in the country, backed up by an unparalleled investment in industry technology development to better serve customers like the Northern Network Alliance.



**KONEKT**  
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Please go to [www.konekt.com.au](http://www.konekt.com.au) for a full list of services and office / serviced locations around Australia



# TIME TO GROW

Evergreen Power Seeding Pty Ltd provided hydro-mulching services to the Northern Pipeline Interconnector project. Evergro Blended Fibre Mulch was chosen and supplied by Evergreen Power Seeding. The organic mulch is Australian made and produced and is a onestep erosion control product that delivers outstanding performance at an affordable price. Evergro is designed to improve germination while reducing soil loss and water runoff.

As landscaping consultants and designers who cater to larger industry environmental concerns, Evergreen Power Seeding Pty Ltd is equipped to manage the most challenging soil erosion and re-vegetation situations, utilising the industry's most advanced agronomic technologies. Evergreen Power Seeding is a family operated business and was established in 1983 bringing years of experience to todays market.

Evergreen Power Seeding Pty Ltd have completed major projects throughout Queensland, New South Wales and the Northern Territory. They operate the latest, most modern and reliable machinery available, capable of handling all types of terrain.

Together with on-site expertise and dedicated support Evergreen Power Seeding Pty Ltd specialise in helping achieve the most economical way to keep soil on-site and to have sustainable vegetation established quickly.

An integral part of all work carried out by Evergreen Power Seeding includes soil erosion management, which usually involves assessment of soil condition and implementing any improvements which may be necessary along with the selection of plants suitable for the terrain and landscape design. Preference is always given to using native re-vegetation.

Evergreen Power Seeding also provide the following services:

- Environment Erosion & Revegetation
- Soil Stabilisation - Bonded Fibre Matrix
- Hydro Stolonising
- Native Flora Revegetation
- Dust Suppressants
- Hydro mulching
- Straw Mulching

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## ALL ROUND SUPPORT

Australia's major plastics pipe manufacturer, Iplex Pipelines Pty Ltd is a major supplier of FLOWTITE™ pipe to the Northern Pipeline Interconnector project.

FLOWTITE™ is a glass fibre reinforced polymer (GRP) pipe, suitable for pressure and non-pressure applications. Manufactured by RPC Pipe Systems in Adelaide, with sales and technical support provided nationally by Iplex, FLOWTITE™ is available in sizes up to 3000 diameter. This advanced technology pipe offers asset owners real benefits, due to its ability to withstand acidic or saline environments and soils of low resistivity. Therefore FLOWTITE™ will not corrode in conditions detrimental to conventional pipe materials and is completely unaffected by stray currents.

Iplex Pipelines also supplied AVK Valves to the Northern Pipeline Interconnector Project.

Established in Australia in 1938, Iplex Pipelines has grown to become a recognised leader in the supply of pipeline products to the water and gas industries. Today the company is a wholly owned division of Fletcher Building Ltd with thirteen manufacturing sites located across the country.

Iplex Pipelines supply a comprehensive range of pipes, fittings and valves from 15mm to 3000mm in diameter, in PVC, PE, GRP, PE-X, PB, PP, Polymer Concrete and ductile iron. Products are used to convey potable water, stormwater, gravity and pressure sewerage, trenchless pipeline rehabilitation, chemical and slurry pipelines and irrigation systems.

Through its technical publications, design software, Australian and ISO pipe standards committee work and involvement with the Plastics Industry Pipe Association, Iplex Pipelines ensure their customers are kept at the forefront of worldwide advances in pipe innovation and technology. To support its customers, Iplex Pipelines employs experienced engineers and technicians who are available to assist in pipeline design, product selection, installation advice, pipeline optimisation and cost benefit analysis.

**IPLEX PIPELINES Pty Ltd**

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**iplex**  
Pipelines

## TRAKIDA - A GOOD FIND

Trakida Pty Ltd was responsible for identifying and locating existing underground utility services on the Northern Pipeline Interconnector project in Queensland.

These utility services included power, gas, telephone and water mains along with private services that crossed or ran parallel to the pipeline. Once located these services were used by the design team to accurately record the details on their construction drawings.

Formed in 2000, Trakida Pty Ltd has worked on various large projects including the Southern Regional Water Pipeline and the Airport Link Northern Busway.

In 2010, Trakida Pty Ltd incorporated Taskforce Technologies Pty Ltd trading as Trakida Locating & Potholing Services. The company has seen substantial growth and prides themselves on delivering a service that is second to none.

Both electronic locating machines and harmless digging vacuum excavating trucks were used by Trakida Pty Ltd on the Northern

Pipeline Interconnector project. These procedures and special purpose equipment ensure that Trakida Pty Ltd can carry out all required services with ease.

Trakida Pty Ltd also work in the Civil Communications industry which involves pit and pipe installation, optic fibre cable hauling and optic fibre cable installation by zero tension direct bury techniques.

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## SERVICES

Drilling / Casing - Permanent / Temporary Strand Anchors / Rock / Soil Nails  
Rock Bolts - Tension / Micro Piles - Stressbar / Shotcrete / Special finishes  
Textured Shotcrete - Drilled Drainage - Injection / Pressure / Curtain Grouting  
Plant / Equipment / Labour Hire - Post-Tensioning - Heavy Lifting - Diamond Coring

## A GREAT BASE

The Northern Pipeline Interconnector has been designed to secure the water supply for South East Queensland. This vital piece of infrastructure is required to cope with the growing population in the area, which is set to continue to increase in coming years.

On this project, Perfect Earth was responsible for soil improvement, erosion control, revegetation services, environmental services, equipment hire and the supply of seed and fertilisers. Ensuring minimal disruption and erosion to the soil and surrounding environment was paramount on the Northern Pipeline Interconnector project.

With a focus on quality, Perfect Earth provides a complete package from soil analysis through to project handover. With a team of experienced staff members, Perfect Earth pride themselves on doing the job right the first time ensuring a smooth transition and perfect outcome for their clients.

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