



HALE STREET LINK

Go Between Bridge (formerly known as Hale Street Link) is a key component in Lord Mayor Campbell Newman's multi-billion dollar TransApex plan aimed at ensuring Brisbane is a well designed, accessible and connected city for now and into the future.





THE ROAD TO SUCCESS

It takes a unique combination of engineering nous, skilled labour and specialised machinery to undertake conduit installation at a site like the Hale Street Link project. The sensitive riparian environment, working adjacent to the Brisbane River; busy main roads, and constant stream of pedestrians all added to the already challenging work environment. But this is exactly the kind of challenge Setlow Constructions have the ability to resolve successfully, with industry leading civil engineering expertise backed by on-ground resources.

Setlow's successful bid included upgrading and extending approximately 300m of existing 600mm diameter ductile water service running the length of Montague Street on the Southern Bank of the Brisbane river to feed into the service cavity traversing the new Hale Street Link bridge, and approximately 200m of 600mm diameter High Density Polyethylene Pipe to Coronation Drive on the Northern bank of the Brisbane river bank which included live connections and access pits.

"Both activities required a solid combination of our core expertise coupled with unique stakeholder and environment consideration," said Setlow CEO, Darren Fletcher. "Overall the Hale Street Link project was a fantastic challenge especially with sensitive night works being

undertaken, high density population, heavy pedestrian traffic periods, multiple subcontractors in tight conditions and the closely adjacent Brisbane River".

"The unusually testing conditions presented us with the opportunity to develop innovative solutions, which Setlow is renowned for".

Part of Setlow's approach to environmentally responsible civil works is to create an Environmental Management Plan (EMP) for every project. The EMP for Hale Street Link covered issues such as truck entry (deliveries), water runoff and siltation, access to the site via boat, limited space issues and managing the shared pedestrian area. It also outlined measures for ground stabilisation due to the filled ground conditions, contingencies around cutting into the live conduits, plans for dust and sound monitoring, night works and management of the Brisbane River environmental issues as they related to the works.

A team of twelve Setlow operatives, comprising a project manager, a site supervisor, two pipe layers, three machine operators, two labourers, two welders and a safety officer, worked for three months on the Northern bank project and five weeks on the Southern Bank. Their plant onsite was comprised of two 20 tonne excavators, a 12 tonne excavator, loader, bobcat and two truck and dog combinations. One of Setlow's strengths is they are equipped with all the plant and skilled operators required to complete a project they have designed and engineered.

In over 12 years of operation, Setlow have earned their reputation as experts in civil construction. Their team of over 100 skilled people, together with the extensive fleet of well-maintained, quality equipment, are especially skilled at undertaking projects in challenging environments.

Their core business is conduit installation, particularly large diameter pipes for sewer, water, electricity and gas. They have a track record of complying with requirements while working on and around live services such as gas and optical fibre. Their team completes projects where spaces are confined, trenches are deep and the ground is wet, often the scenario when undertaking maintenance of sewer systems and associated structures.

Setlow have a strong commitment to the community and to cultural heritage, and work in unison with local stakeholders when engaged on important community projects, like the Hale Street Link. They are committed to quality in everything they do, and have certified Quality, Occupational Health & Safety and Environmental Management systems. This company also has an exemplary safety record, another result of good management of men, machines and materials, on even the most difficult site.

Busy, challenging sites are familiar territory, with the company CV featuring projects for many of the nation's leading construction firms and a wide diversity of civil infrastructure projects. Examples of Setlow's track record include: Installation of the Neumann Petroleum fuel pipeline in Brisbane East; Earth works & upgrade to existing services for the Banora Point Bypass Project; Augmentation of conduits for the Airport Link Alliance Brisbane; Recycled Water Grid Augmentation for the Eastern Pipe

Alliance in South East Queensland; installation of sections of the Brooklyn to Lara gas main installation in Victoria; Trunk Main Sewer installation for Gold Coast City Council; Tenix Alliance Recycled Water project in Mernda, Victoria; BMP Alliance sewer trunk main upgrade; Earthworks, lagoon construction, pipe works and electrical conduits for the Kingscliff Sewage Treatment Plant Construction by Fulton Hogan; and civil works for the General Rail Accelerated Improvement Program with John Holland.

SETLOW CONSTRUCTIONS

T. 07 3382 7068

F. 07 3382 7081

M. 0438 666 004

E. info@setlow.com.au

W. www.setlow.com.au



MARINE EXPERTISE HELPS BUILD BRIDGE

Long before infrastructure started coming out of the ground, the Hale Street Link Alliance had been in contact with QPort Marine Services regarding the availability of floating plant and marine methodologies that would be used to help construct the Go Between Bridge.

Over an eighteen month period from go to woe QPort Marine Services was the predominant marine floating & marine logistics provider to the Hale Street Link Alliance, providing continuous marine personnel to site works, supplying barges and tug vessels as required, setting up specialised operations and helping with the design and installation of the 100m floating access pontoons to the northern side of the project.

With it's Brisbane Barge Berth base at Hemmant, QPort Marine Services facilitated the lay-down area for the precasting of concrete modules that went into the construction of the bridge, enabling precast units, other materials and gantries to be loaded directly to barge(s) at the Brisbane Barge Berth and delivered direct to site.

The Brisbane Barge Berth was also used for loading cranes to barge(s) and setting up various barges with spud and spudkeeper systems to hold the barges in position once on site. With the rail bridge just downstream of the new bridge being built, there wasn't a lot of water room to manoeuvre big barges with cranes and spuds rising above the deck levels and a lot of preplanning went into these marine logistics.

QPort Marine Services has been operating from its base on the Brisbane River for the last twenty years providing marine floating plant, logistics and marine solutions to Government, Corporate, Construction, and Shipping companies along the East Coast of Australia and sometimes beyond.

At the same time as the Hale Street project was in full swing, QPort Marine Services was also the principal supplier of floating plant and support services to the Gold Coast Desalination project and the Sydney Water Delivery Alliance Twin Pipe Laying project in Botany Bay.

The French and Australian partners in the Hale Street Link Alliance were good to work with, professional in their approach, and took the time to listen to advice given and understand the marine aspects which were ever present during the construction of the Go Between Bridge. QPort Marine Services was pleased to have contributed it's expertise to this project over the entire project duration.

QPORT MARINE SERVICES PTY LTD
1517 Lytton Road
Hemmant QLD 4174
t. 07 3893 0066
f. 07 3893 0188
e. qport@qportmarine.com.au
www.qportmarine.com.au

MOVING EARTH ROUND THE CLOCK

Night or day for two years, D&M Plant Hire provided men and machines for the earthworks along Montague Road and Coronation Drive for the Hale Street Link project. Their task included challenges such as working machinery while floating on a barge in the Brisbane River, working in very confined spaces, using 22 tonne excavators in a busy urban setting and performing under tight time limits for several different supervisors.

D&M were responsible for a large majority of the earthworks on Montague Road and Coronation Drive, and according to the Hale Street Link Alliance Construction Manager, Sydney Phillips, "have proved to continually provide benefit to the project through being reliable, providing competitive rates and excellent level of service both from operators and office personnel."

Machinery provided for the Hale Street job included small bobcats, excavators and combos ranging from 1.5 tonne through to 40 tonne excavators, tandem tip trucks and trailers, water carts, and backhoes. D&M floated their own machinery onsite, as well as floating other machinery for the project and organising haulage for outside materials to be delivered to site. All operators received ongoing training in machinery operation, site safety and protocols, in addition to general site induction and pre-engagement drug testing. Projects of this magnitude can't risk delays through equipment failure. One of the strengths of

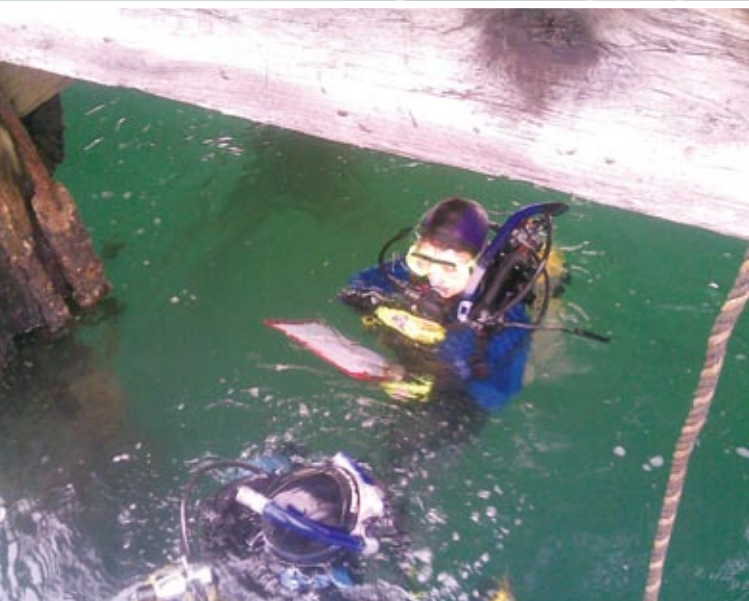
D&M is their 24-hour in-house engineering and mechanical service backup, and their ability to have any essential unique part such as specific bucket or attachment manufactured immediately to order by sister company Titan Manufacturing.

On all their assignments, D&M take great care to protect the environment. All machinery is generally turned over every two to three years, which not only guarantees each project the best possible machines, it minimises pollution risks from oil leaks. As a company, D&M also take a responsible approach to minimising the carbon emissions from their business.

D&M Plant Hire have been in business for the past 37 years. This expansive industry experience combined with operator knowledge, mechanical staff support and the administrative staff's ability to build rapport with clients so as to understand their needs and manage logistics to provide specific machines in tight time frames, makes D&M a preferred supplier for major projects like Hale Street Link.

D&M PLANT HIRE
Level 1, 55 Enterprise St
Cleveland QLD 4163
t. 07 3286 5088
f. 07 3286 7033
e. debbie@comstar.net.au

SUBMERGED SITE SPECIALISTS



Working underwater in the dimness of the Brisbane River, Dermody Diving and Marine Services (DDMS) undertook essential diving support work for the Hale Street Link project including inspections, welding, cutting and lifting operations, Pile protection and wrapping system.

“Some of the challenges faced on this particular project besides the standard Brisbane River currents and limited visibility were: dealing with floods and associated debris washed downstream into the work area; the small tide time windows to complete some tasks; undertaking work inside pile caps with no natural light; transit to and from inside the pile cap worksite for materials; and general logistical problems from passing vessels and site positioning,” said DDMS Director, Brian Dermody.

“A protective cage had to be made to protect divers from river debris after floods. Cutting under pile caps had to incorporate different cutting methods due to tidal influence and complete submergence on high tides.”

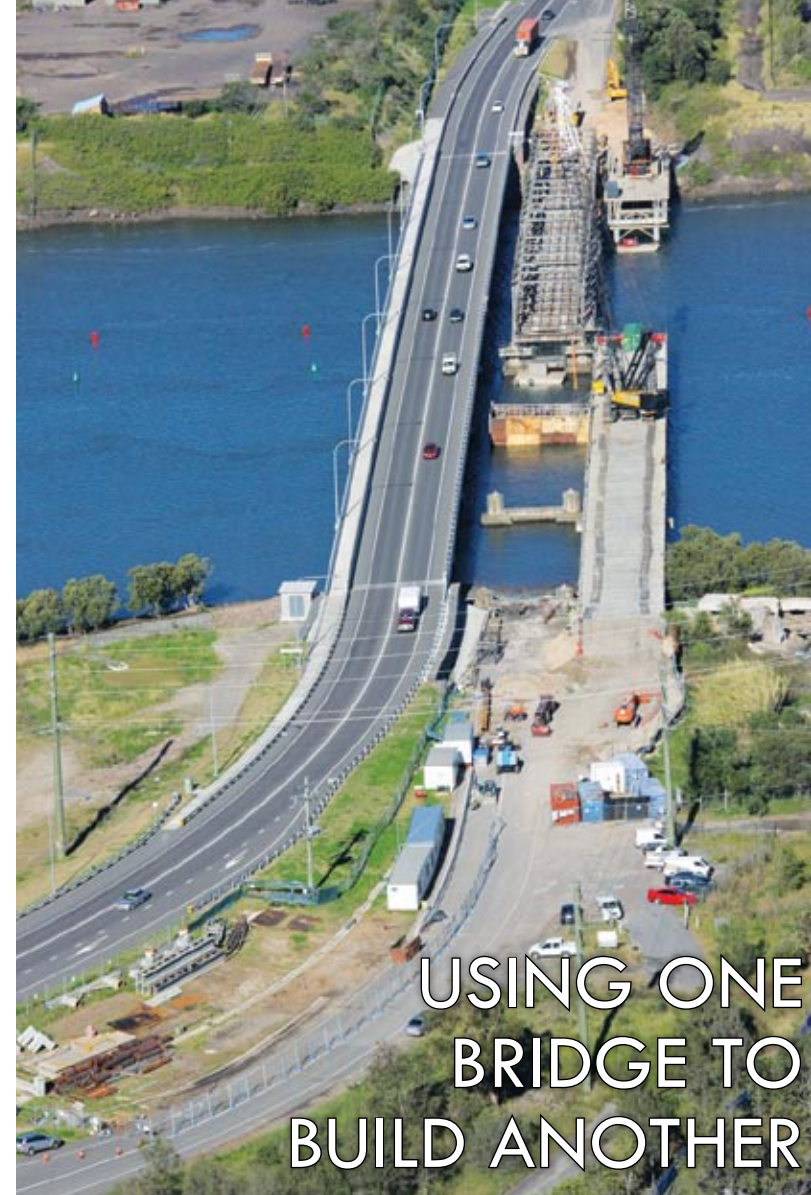
DDMS were established in 2007, and provide general and construction diving support services to Government and Private corporations and projects in both Australian and international waters. DDMS use a fully supported workshop, vehicles and vessels along with a large range of diving and marine equipment, and are an ISO 9001-2008 Quality Endorsed Company, with certified ISO 14001-2004 Environmental Management and certified AS/NZS 4801-2001 Occupational health & Safety. The senior staff possess extensive experience in onshore and offshore commercial diving, and several staff also possessing engineering, mechanical and other trade qualifications. All staff are accredited under Australian Diver Accreditation Scheme (ADAS) for commercial diving work.

“We provide a full range of Inspection, Construction, Maintenance, pile protection, Salvage Diving services and also provide Scientific Diving services including Environmental Impact Assessments, Consultancy and Project Management. Our company also provides Remote Operated Vehicle (ROV) services for underwater inspections up to 300 metres.” said Brian Dermody.

“We are committed to providing a safe work environment for not only our staff but all persons associated with us on projects. We provide our clients with a full Occupational Health Safety and Environmental Management Plan along with dedicated Job Safety Environmental Assessments.”

DDMS are a Member of the Australian Diving Contractors Association, Water Industry Operators Association Australia and the Australian Marine Industry Export Group. Other company services include non destruct testing, high pressure hydroblasting and underwater engineering. Their skills are supported by plant and equipment including specialist underwater welding spreads, survey equipment, barges, punts, hydraulic tools, dredging and airlifting apparatus, access equipment, construction equipment and transport, with a containerised rapid deployment system for fast response from either the Sydney or Brisbane base to underwater tasks of any magnitude, anywhere.

DERMODY DIVING AND MARINE SERVICES PTY LTD
2/12 Distribution Ave
Molendinar QLD 4214
contact: Brian Dermody
t. 07 5564 5497
f. 07 5564 7618
m. 0414 848 755
e. brian@dermodydiving.com.au
www.dermodydiving.com.au



USING ONE BRIDGE TO BUILD ANOTHER

Building the new Go Between Bridge with minimal disturbance to the Brisbane River's environs was accomplished with the use of an innovative temporary bridge designed and constructed by Smithbridge Australia, a West End based marine contractor with a direct line of sight to the project.

The 10m wide, precast temporary bridge system supports up to a 200T crane, and can be installed at the rate of 50m a week. Smithbridge's barge Leonora, with a deck mounted 200T crane for constructing the second pier, and their piling barge Maeve Anne with a purpose built piling leader were also mobilised for the works.

“The bridge system gave a temporary work platform which allowed access to one of the river piers. The Hale Street Link Alliance had a requirement to get heavy equipment out into the river, and the bridge gave them the ability to do that without the time and expense of building from new,” said Smithbridge Managing Director, Paul Brady.

The bridge had previously been used on an outfall pipeline project in Perth and was mobilised by rail to the Hale Street site. “We have almost 400 lineal metres of bridge, which equates to 130 semi-trailer loads, so transport around the country is a significant cost and environmental impact. Rail is usually competitive and certainly the most eco-friendly option.” Once its task at Hale Street was completed, it went to Newcastle to facilitate the demolition of an old steel truss bridge over a river. “This is a portable and modular system which can move about the country. The beauty of it is there is no disturbance of the marine bed, only two steel tubes enter the bed every 12 metres; and we had



SMITHBRIDGE
AUSTRALIA PTY LTD



floating silt curtains on shore for extra environmental protection.” In order to avoid damage to the mangroves on the river bank at Hale Street, Smithbridge successfully designed and installed temporary guide piles to divert and suspend barge mooring wires above the riverbank.

To remove the temporary bridge, Smithbridge mobilised their own powerful pile extractor, which extracted all but one of the piles. Smithbridge were quick to take up the availability of biodegradable hydraulic oils for use in their equipment, a wise precaution while working over water.

The company's combination of technical strength, skilled personnel and specialist plant, coupled with extremely high safety and environmental values, gives them the ability to self-construct projects for both bridge and marine infrastructure. They have been awarded two Earth Awards in the past three years with a string of successfully completed projects including wharves, jetties, offshore pipelines, bridges over water and other marine-based complex structures.

SMITHBRIDGE AUSTRALIA PTY LTD
PO Box 5338
West End
Brisbane QLD 4101
Level 2, 12 Browning Street
West End
Brisbane QLD 4101
t. 07 3844 7645
f. 07 3846 6563
www.smithbridge.net

TOLLING GOES SUPER-SAVVY

The Go Between Bridge is yet another successful example of the technological edge of Visionstream, installers of the tolling gantries and tolling equipment on the South Brisbane side. This is the second major Brisbane installation of the Swedish-designed KAPSCH equipment carried out by the company, who are at the forefront of Intelligent Transport Systems (ITS), and toll-enabled the CLEM 7 tunnel.

"The challenge was the delivery pressures. We signed the contract in December 2009 for February/March 2010 installation. The components had to come from overseas - the electronics from Sweden, and the two interlocking gantries designed in Sweden and manufactured in Korea," said Visionstream Project Manager and Project Engineer, Gerd Lindner.

"We come later in the program and become a key part of the delivery team, and there is always time pressure at the end of the program."

Visionstream's onsite team included around 20 staff and subcontractors, including cranes, rigging, electricians and electrical installers. A two week testing period was undertaken for calibration of the system, including the tolling data-collection points for e-tags, and testing of the tolling sensors with moving vehicles. The installation was carried out without any OH&S issues. The excellent safety record on all their projects has been recognised with a National Safety Award.

This project represents only one facet of Visionstream's ITS capabilities, which also include electronic signage, vehicle detection, traffic counting and traffic control.

In fact, Visionstream operate at the leading edge of every aspect of communications technology, whether cable-related or wireless. Their talents are used by Telstra and other Carriers, Channel Partners, Government Departments, and major contractors for both civil and commercial projects.

As a leading Network Service Provider, Visionstream deliver national based telecommunications construction, maintenance and engineering services across the board in both Australia and New Zealand territories. Their core commitment is delivering excellence in communications systems.



VISIONSTREAM PTY LTD
Head Office
Locked Bag 3
Bentleigh East VIC 3165
t. 03 9258 5700
e. info@visionstream.com.au

Brisbane Office
9 Welch Street
Underwood QLD 4119
t. 07 3340 7100
www2.visionstream.com.au



THE VITAL LINK OF A SECURE SITE

Nothing is left to chance when Infront Security are on patrol. They maintain the highest level of quality assurance in the security and asset protection business, utilising comprehensive training and monitoring systems. For Hale Street Link, Infront provided both static guards and K9/handler combinations to protect multiple sites.

"The main need of the Hale Street Link Alliance was for risk minimisation. Our security team did multiple roles, including handling truck and car parking and signing visitors in and out, as well as keeping unauthorised persons out of the works areas, preventing graffiti and incidents which may have posed a public liability risk," said Infront Security Managing Director, Matthew Bhimbhai.

"With a lot of critical infrastructure projects like Hale Street Link, safety is a vital aspect. There were many site inductions and continued ongoing training. All our staff have as a minimum qualification a Security License, and we offer further training in aspects such as conflict resolution, dog handling, crowd control, Maritime Security and monitoring, through our partnership affiliation with the RTO of National Security Training Academy. It is very important that staff have constant, verifiable training.

"Sometimes the Hale Street Link sites were very busy; the security had to be aware of everyone coming and going. There were a number of security procedures to follow; all sites had carbon copy logs, with a weekly report sent to stakeholders outlining any possible issues or breaches and things that might need adjusting."

K9 units working the sites were bred and trained on Infront Security's own 40 acre K9 facility from established working lines, trained to

a variety of critical tasks including scent detection and physical protection. These skills are extremely valuable to Government projects, major construction sites, major public events and infrastructure facilities. Infront Security are Quality Assured to ISO:2008 for all security functions and have a policy of Zero Harm.

Guards are overseen and linked into security central by the Uniguard patrol management system, which includes a welfare check calls to the control room every one or two hours. Supervisors are equipped with a digital Wand, which can extract all the information about patrols from onsite laptops. Seven nights a week a senior staffer undertakes audits around all the current Infront Security assignments.

"Our strength is a very good team of almost 400 people - many have been with the company since its inception ten years ago," said Matthew Bhimbhai.

"We've never lost a client, and we've never lost an operative. The key in our industry is to be always learning. When you acquire information from many different people that moulds you into a really good operative."

INFROUT SECURITY
166 Braun Street
Deagon QLD 4017
t. 07 3269 1300
f. 07 3269 1311
e. infront@infront-security.com
www.infront-security.com



HELPING BRIDGE THE GAP

With capabilities including Bridge Construction, Building Solutions, Ground Engineering, Special Structures, Repair & Strengthening, and Systems & Technologies VSL Australia contributed as a Specialist Sub Alliance Partner providing quality and innovative solutions from concept and construction through the lifecycle of Hale Street Link Project.

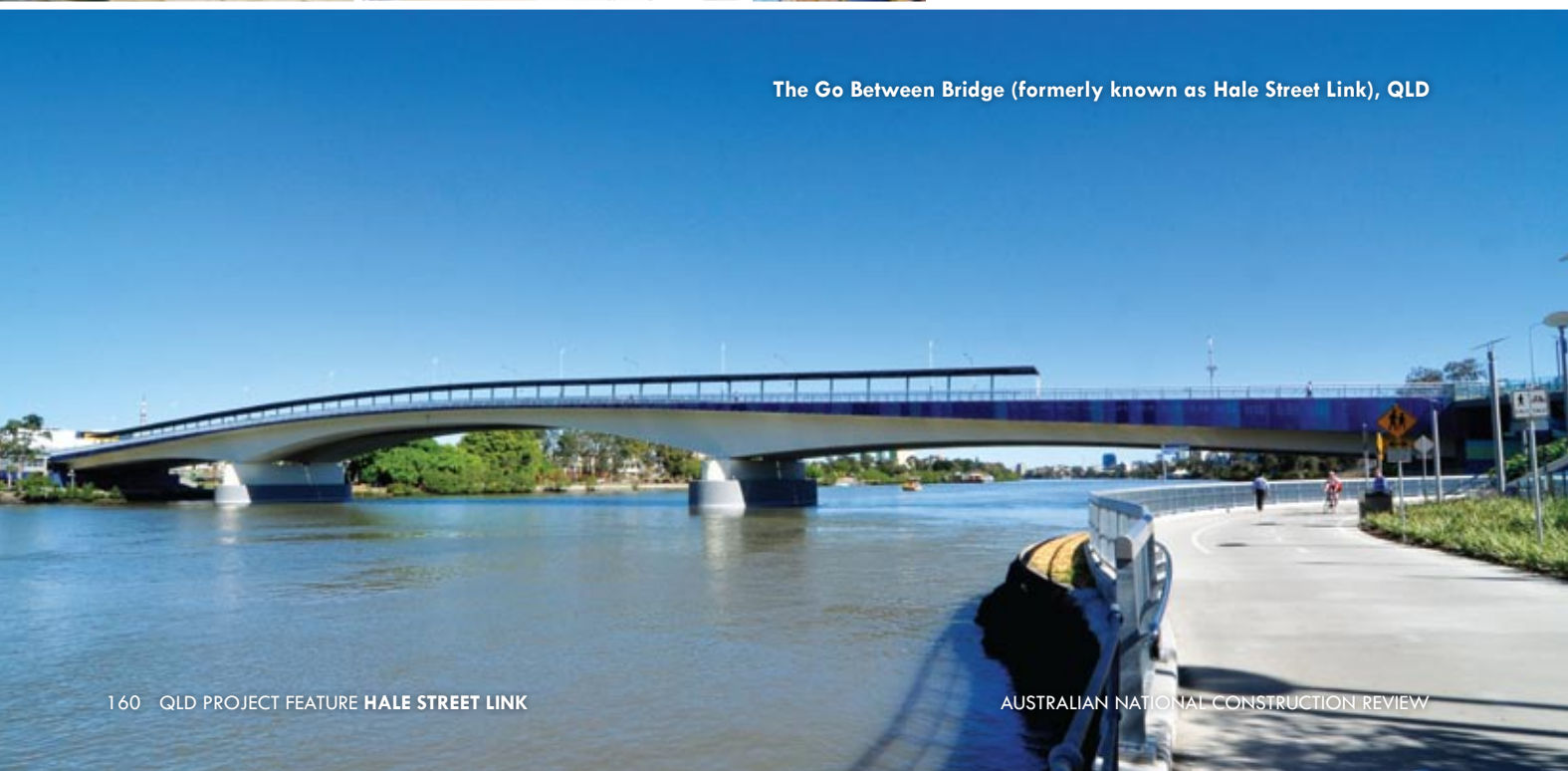
Our input is a clear demonstration of how the company's core business of post-tensioning has evolved to encompass a broad spectrum of the tasks and talents required for a project such as this. We also brought to the Hale Street site the strength, reliability, experience, and resources of a world-wide network.

As a construction partner, VSL Australia provides a full range of services from design to execution, backed by our own state of the art equipment. Committed to providing the best solutions using innovative construction techniques, our goal is to increase site safety, site efficiency, improve durability and reduce costs.

Our completed projects include some of this nation's most noteworthy and challenging concrete structures.



VSL AUSTRALIA PTY LTD
t. 02 9484 5944
e. info@vsl-australia.com.au
www.vsl.com



The Go Between Bridge (formerly known as Hale Street Link), QLD

PERFECT EDGE FOR A ROAD

Getting the job of forming kerb and channel right, first time, on time, is how Precision Kerbs tackle a project. For the Hale Street Link, their crew of five working with two Arrow 770 machines produced over 2,000 lineal metres of kerb and channel.

Challenges included extensive nightworks, working alongside traffic on some of Brisbane's busiest roads and meeting a target of lineal metres. These were not unfamiliar conditions for the Precision Kerbs team, with previous projects including the Boggo Road Busway for Thiess and the Northern Busway for AbiGroup.

Michael Welsh of Precision Kerbs, hands on Director and Co-Founder, started operation in 2007. He had been previously working on site preparation for kerbs and supervising kerb works for Shamrock Civil, who gave Michael the impetus to begin Precision Kerbs, and have since become an ongoing client he describes as "an excellent company to work for."

"The Hale Street Link project was well organised and managed by the Project Managers, considering the amount of subcontractors on site," Michael said.

"We brought to Hale Street Link the experience we gained on the Boggo Road and Northern Busway projects. Hale Street was a very safety conscious site, and we are committed to producing superior work while also looking after the welfare of our workers, and all the other workers and members of the public on and around the site."

The Arrow 770 machines extrude ready-formed kerbing using a dry kerb mix. Having two machines in operation allows the crew to complete sections faster, an especially valuable attribute in the time-limited road closure scenarios of a major urban infrastructure project like Hale Street Link.

Business has grown steadily for Precision Kerbs, with their crew working on projects for new and existing roads in both South East Queensland and Northern New South Wales. Precision Kerbs are members of Master Builders Queensland and are a Code Compliant company.



PRECISION KERBS
m. 0403 566 086
f. 07 3888 4519
e. precisionkerbs@bigpond.com

