Catalogue

Marine
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Why Choose Brian Perry Civil?
Doing what we do well – working above and below water.

Capability and Innovation

Brian Perry Civil is New Zealand’s leading foundation engineering and pipeline contractor, with proven experience working in marine environments.

We have a reputation for performance, innovation and quality in demanding and high risk jobs.

Our workforce is highly trained, committed and has a range of practical skills backed with experience.

A diverse team of experienced professionals provide technical support and management skills.

Strong relationships with New Zealand’s leading geotechnical consultants adds to our technical capability.

Specialised plant provides versatility and we lead the industry with our range of cranes, piling equipment and marine plant.

We are committed to safe work places, employee health and protection of the environment.

We are certified to the ISO 9001 quality standard.

We understand our clients and deliver what they expect. Good communication and trust with our customers is very important to us.
We have successfully delivered contracts in New Zealand for more than 50 years. Over this time we have built an impressive reputation for reliability and innovation.

Brian Perry established in the Waikato region.
Brian Perry Marine Division established. First job, NZ Steel Taharoa loading facility.
In October 1986 Brian Perry Civil becomes part of Fletcher Construction.
Completion of Cook Strait HDVC Cable Lay.
Wellington sewage outfall completed at Moa point.

History and Track Record

We have created engineering landmarks throughout New Zealand and the South Pacific. Over time we have accepted challenges of increasing complexity.

Our marine project track record is broad and varied. From small wharf maintenance and marina refurbishing in the early days, to more recent harbour bridges and deep water ports.
Brian Perry Civil wins NZ Contractor Award 2001 for construction of Northport, Whangarei.

Construction of Upper Harbour bridge duplication and causeway widening.

Kumutoto Public Spaces, wins 2008 NZ Contractors Federation award.

Tauranga Harbour link stage 2 piling. Due to be completed in July 2009.

Brian Perry Civil continues to offer small scale marine services in its own right and works as part of the team on large Fletcher Construction marine projects.
Expertise
‘Before work started, they were quite innovative... their ideas were really good and saved a lot of money, time and effort.’

– Anton van Staden, Centreport, Wellington

People

Our long and proud history has created a team of people with real and valuable expertise and experience.

Brian Perry Civil has industry experts in marine construction who have produced some of New Zealand’s key marine-based projects.

These include Auckland’s Upper Harbour Bridge and America’s Cup Viaduct Basin, the Tauranga Harbour Link Stage 2, the Northport Port Facility Berths 1, 2 and 3 and the Wellington Ocean Outfall.

Clients often request our experts by name due to previous successful relationships and industry reputation.

Brian Perry’s expertise is often best used early in project development to assist with value engineering, conceptual design and saving time and cost when construction starts.

As well as being relentless in achieving delivery to agreed outcomes we value being ‘good to deal with’.

This is reflected in our desire to develop relationships and understand the needs of our clients and their non-contractual objectives.

We are mobile and able to deliver projects in New Zealand and the South Pacific. Our people have experience in remote locations as well as long-term joint-venture and subcontractor relationships.

This allows us to deliver projects from the depths of the Manapouri 2nd Tailrace Tunnel in Fiordland to the Rewa Bridge in Fiji.
Environmental Management

We understand that our clients seek high levels of build quality, with a delivery process that doesn’t compromise environmental values.

The Brian Perry approach toward environmental responsibility is based on compliance, minimisation of effects and ‘going the extra mile’ because of personal commitments to protecting / enhancing the New Zealand environment.

Our Environmental and Quality Manager develops environmental project plans and monitoring systems for the company and specific projects.

Our environmental systems and plans are implemented and drawn from throughout the wider company with leadership provided by Fletcher from a team of experienced environmental coordinators through Brian Perry Civil and Fletcher Construction.

Our approach works – and our environmental performance wins industry awards.

Our Environmental Toolkit is used by all site teams. The toolkit is a document giving easy-to-use techniques and systems for the site to manage earthworks, water contamination and spills, through to community liaison, and dealing with issues like noise and dust.

Responsibility
Our objective: Compliance, minimum impact, trust, people prepared to go the extra mile.

Our response: Highly Experienced Environmental Managers. People with a passion for working around water. Smart ideas and knowledge about how best to achieve compliance. Proven systems.
Marina and Waterfront Enhancement

We understand that our clients seek high levels of build quality that will ensure enduring aesthetics and asset value.

Quality workmanship, especially in marina and foreshore enhancement projects, improves the experience for the final user – creating appeal for the greater community.

We have proven quality management systems which ensure industry best-practice is achieved for our clients.

Our track record demonstrates our ability to deliver high profile projects in environmentally sensitive areas to consistently achieve industry recognition.

Developing marinas and other foreshore facilities can be contentious, calling for a contractor that understands community and environmental issues.

Brian Perry Civil has in-house personnel dedicated to environmental management and stakeholder liaison.

This ensures low risk of conflict with third parties and minimal impact on the environment during the construction process.

The same high standard is achieved on projects that range from small boat ramps to jetties.

Our capability in marina and foreshore enhancement includes:

- Driven timber, precast or steel piles
- Installation of floating pontoons and walkways
- Pedestrian bridges
- Wooden structures
- Seawall construction
- Insitu and precast concrete
- Navigational structures
- Boat ramps and jetties
- Sheet piling
- Concrete wharf repairs
- Installation of corrosion protection
- Mooring dolphins

Wynard Wharf, Auckland – refurbishments

Our response: Proven quality system. Environmental and stakeholder management systems.
Kumutoto Public Spaces, Wellington – re-development of waterfront, including promenades, boardwalks and pedestrian bridges

Oriental Bay, Wellington – landscaping, new pier and stormwater outfalls
Wharves

Wharf structures can be complex to work with, requiring multi-discipline techniques and innovative solutions for working within the tidal zone.

For many years Brian Perry has been a first point of contact for clients regarding their wharf projects. This is because of our strong ability to offer innovative value-engineering solutions to difficult problems.

Our involvement at the concept stage can then transition into application of our design and construct capabilities, either using our in-house design capacity or leveraging off our strong relationships with New Zealand’s leading consulting engineers.

Innovative solutions and our delivery and compliance risks are mitigated with established quality, environmental and safety management systems.

Our mobile plant and people resources combined with strong relationships with specialist subcontractors, give us the ability to construct a variety of wharf types in different environments across the South Pacific.

Wharf Construction
Example of Wharf Construction techniques used on Northport berth 1 and 2

Piles brought to site and stored on floating dumb barge, ‘Kaupapa’. Bottom-driven tube piles installed by crane sitting on jack-up barge, ‘Tuapapa’.

Wharf deck cast in-situ on piles using a travelling formwork system. Sheetpiles installed using vibro-hammer and temporary works systems to guide piles.

Bund walls and armour rock installed with excavators and specialist survey systems. Reclamation made by dredging in front of new wharf.
Risks: Complex structures. Working in and around harbours and tidal zones.

‘Our key expectations for the project, including quality of construction, timely completion and project health and safety were all met and exceeded’

Francis Patten, Project Engineer at Northport
The success of bridge projects often lies in the ability of the contractor to overcome the logistics of delivering plant and materials. We have developed strong and reliable temporary works systems such as kitset access staging that reduces the headaches of working over water and saves ‘reinventing the wheel’ for each project.

In addition, our in-house temporary works design team lead the industry in innovative value engineering and working with challenging restrictions. We are adept at a number of bridging techniques: balanced cantilever, incremental launch, in-situ and precast construction. Having a number of options allows clients to consider additional less-tangible objectives.

Brian Perry Civil are particularly experienced at working with existing structures and have solved many difficult problems with outside-the-box thinking. Such projects include Tainui Bridge Widening and Auckland Harbour Bridge Seismic Retrofit which received NZ Contractors Federation Awards.


**Our response:** Multi-discipline contractor. Proven and experienced temporary works design.
Bridge Construction

Technique as used for construction of Tauranga Harbour Link, an incrementally launched harbour bridge.

1. Install temporary access staging using driven piles, steel beams, and concrete deck. Allows for cranes, drill rigs and material delivery for permanent works.

2. Install permanent steel casing into seabed using a vibrohammer.

3. Drill out pile to full depth using crane mounted drill for extra reach. Potentially use bentonite in soft soils.

4. Cast pile, then the column and finally the crosshead.

5. Push bridge out from casting shed on land including launching nose.

Rewa Bridge, Fiji – incrementally launched push bridge
Offshore Pipelines

Offshore pipelines pose the greatest exposure to the hazards of open ocean weather conditions, and the greatest potential for disaster.

At Brian Perry Civil we understand the New Zealand environment and that of the Pacific Ocean and Tasman Sea. We have a proven track record having delivering a number of ocean outfall and pipe / cable lay projects throughout the country.

When completing ocean outfall projects in New Plymouth, Timaru, Wellington and Waitara, we have successfully demonstrated sound experience and tenacity in the harsh coastal environment. There is no substitute for experience in these projects.

Brian Perry has demonstrated an ability to work well with specialist international contractors on projects such as the Cook Straight Cable Lay and the Maui A to B pipeline.

In these situations we provide the local labour and management to work with imported specialist plant or expertise.

Offshore projects face huge safety and environmental hazards which are mitigated through the systems built into our project management culture.

The development of good planning systems and value-engineering ensure certainty of delivery and sound risk management.

Our in-house design skills are put to good use on temporary works systems that make the job safe and efficient.

Pipeline Construction

Typical construction techniques for ocean outfall through surf zone

1. Deepwater trench dredged by excavator on jack-up barge, ‘Tuapapa’.
2. Install temporary access staging using driven piles, steel beams and concrete deck. Allows access for cranes and material delivery for permanent works. Access staging materials brought to site and stored on floating dumb barge, ‘Kaupapa’.
3. Excavate trench for pipeline through surf zone and out to sea. Potentially use sheetpiles to keep trench open in surf zone.
4. Lay pipe in trench or pull / lower string of pipes into trench. Strings of pipes floated further into position and lowered further out to sea.
Risks: Highest exposure to weather and heavy seas. Major safety and constructability issues. Potential for disaster.


Cook Straight, Moa Point - construction of Wellington Ocean outfall

Taranaki - construction of New Plymouth Ocean outfall
Dams and Waterways

Brian Perry Civil leads a select group of specialists in the field of dam and waterway construction in New Zealand.

We have a long and successful track record in this sort of work which requires a high degree of ingenuity and flexibility from a contractor.

Often the work is conducted in logistically challenging locations requiring anything from simple access tracks in environmentally sensitive areas to innovative rail systems, clever crane configurations and the use of helicopters.

Brian Perry has had early involvement in many projects of this kind, saving our client’s time and money.

The majority of this type of work involves enhancement and upgrading of New Zealand’s ageing dams and hydro schemes.

Working with existing structures generally poses more complex challenges than green field construction when often the structure is weak or vulnerable.

The contractor needs to have excellent skills in risk management and planning to deal with variable outcomes and a potentially changing scope.

Brian Perry’s strength in experienced and capable project management and construction planning allows our clients’ piece of mind as we work with their most valuable strategic assets.

An acknowledgment of this has been our involvement in the award winning Arapuni Dam Alliance with Trevi S.p.A, Damwatch and Mighty River Power.

Brian Perry also played an important part in the Manapouri 2nd Tailrace Tunnel. As a specialist in foundation and marine works, we installed an access bridge, jetty upgrade, sheet piles and also played a part with the dive crews on the renowned ‘21 day outage’.


'The work has necessitated innovation and Brian Perry has been up to the task showing leadership in planning and execution'

- Alistair Stewart, Watercare Services, Principle Engineer
Environmental Rehabilitation

Brian Perry Civil is excited to be involved in the emerging field of environmental rehabilitation.

We are aware of current and potential issues facing New Zealand’s ecosystems and we are aligning to deliver innovative and effective solutions.

We have been involved in a number of environmental rehabilitation programmes. These required clever ideas from dredging the Orakei Basin in Auckland, using a train of plastic boats, to the rehabilitation of Waiwhetu Stream in Wellington, with advanced sheet-pile temporary works systems.

We have a wealth of environmental experience to call on internally and from the greater Fletcher Construction team.

This includes people who have delivered the rehabilitation of Mangere Oxidation Ponds and cleverly locked up the contaminated dredging of the America’s Cup Viaduct Harbour into a ‘mudcrete island’.

Our strengths in this area come from an understanding of the environment and environmental management, combined with ‘outside the box’ engineering solutions.
Our response: Environmental systems. Understanding of natural environments.
Plant and Equipment

Application

Brian Perry Civil owns a variety of marine plant, from pontoons and work boats to our flag ship jack-up barge ‘Tuapapa’.

‘Tuapapa’ gives us a huge advantage in logistics for marine construction, allowing work to continue without tidal restrictions and in most weather conditions.

‘Tuapapa’
- Standard size: 24m x 18m
  (additional pontoons and ramps available)
- Operating weight: 419 tonnes

Barge capacity:
- Maximum crane capacity: 100 tonnes
- Maximum water depth: 18m

To complement the jack-up barge, the floating barge ‘Kaupapa’ is versatile and can be equipped with crane and construction equipment for smaller jobs or can transport large materials such as sheet piles and casings to the ‘Tuapapa’ on larger projects.

‘Kaupapa’
- Standard size: 25m x 9m
- Operating weight: 314 tonnes

We maintain a wide range of modern cranes and piling equipment appropriate to NZ conditions.

We understand the increased sophistication of modern projects and are always looking to upgrade and invest in the latest technology.

Marine plant is maintained up to MSA Safe Ship Management standards and regularly checked by accredited MSA inspectors.

Our marine operators are trained to the appropriate MSA levels for safe work on the water and conduct regular drills on emergency spill response and man-over-board rescues.

Wherever possible, hydraulic oils in the equipment are biodegradable – reducing environmental impact should the worst happen.

Tuapapa Barge – construction of mooring dolphin piles at Kauri Pt Wharf

Kaupapa Barge – carrying staging and equipment for the Tauranga Harbour Link project
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