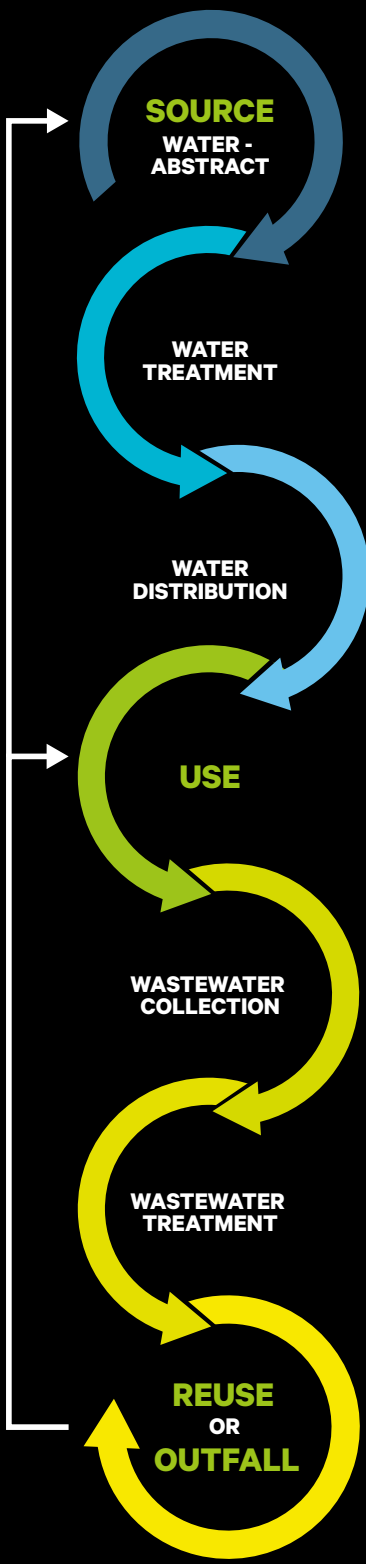


Your water solutions



Downer
Relationships creating success

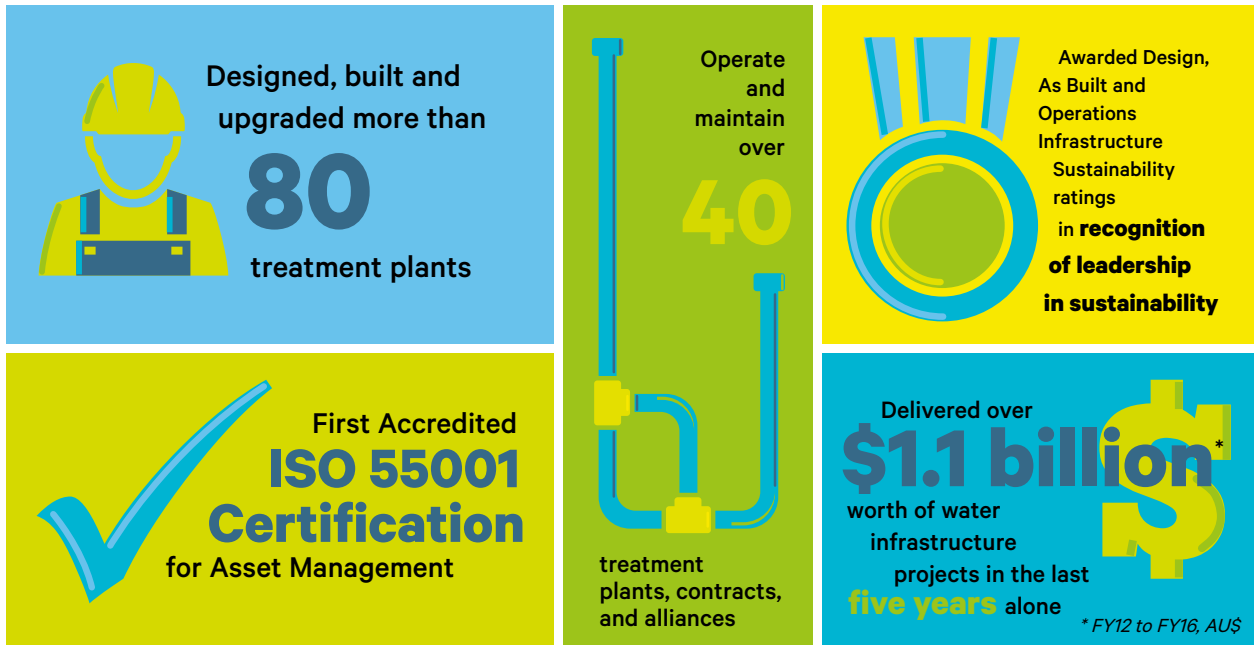


Immerse yourself in water

Downer provides complete water lifecycle solutions for municipal and industrial water users. We support our customers across the full asset lifecycle from the conceptual development of a project through design, construction, commissioning and optimisation. We also operate and maintain treatment, storage, pump station and network assets.

Our ability to self-perform mechanical and electrical, controls and instrumentation works is complemented by our manufacturing capability that includes switchboards and precision pressure vessels. Our technical capabilities deliver innovative pipe-bursting and micro-tunnelling techniques which minimise surface disruption and project costs, benefiting local communities and the environment.

In Australia and New Zealand, we:



Value added, future-proofed engineering design

Our Water design solutions are proven to have lowered the average cost per mega litre of treatment. We challenge you to find another organisation that can make this claim.

In-house value engineering

Our people know water and it is this deep knowledge and experience that enables our teams to deliver water solutions to meet specific customer needs.

Our customers (and competitors alike) often rely on outsourced consultants for their engineering and planning designs.

What makes us unique is that we bring together the experience of a design house, a constructor and an operator and maintainer. This means quicker turnaround fit-for-requirement designs that include value-added, long term personalised considerations.

Having our own in-house team means we can take on (and manage) more risk. It is the foundation on which we've built a culture of innovation – one that drives cost and time efficiency.

We continually improve on our existing expertise by maintaining a direct link and feedback system through all phases of our water solutions – from construction through to operations and maintenance.

This learning loop enables us to continually innovate and improve our engineering IP that in turn improves our engineering delivery for our customers.

Least Whole Lifecycle Cost (LWLC)

Operational costs can often be a key driver (and consideration) for our customers.

Our extensive experience in cost effective design, including smart material selection, contributes to lower front-end cost. We deliver real value to our customers by designing solutions that pull costs out of the overall life of the water solution.

Future-proofing

Is your water solution taking into consideration emerging renewable technology?

Have you thought about how your current water solutions integrate into future network integration? Are you planning for future growth that may impact your current design?

We are already engaging with a number of customers and helping them consider design implications on future impacts such as population growth, mega or super plant integration and environmental impacts such as rising temperatures and sea levels.

We are also looking keenly at emerging technology – such as investing in waste to energy technology and how it can integrate into the designs we build that could potentially provide additional revenue streams for your water solution.

Do you want to future proof your water solution? We can give you guarantees on the performance of our water solutions – from power, chemical and other costs.





In his presidential address to the Institution of Professional Engineers in New Zealand, Arnold Downer talked about the importance of 'human engineering'. From the late 1940s Downer was among the first to use joint venture contracts starting with the construction of the lower Nihotupu dam in the Waitakere Ranges of New Zealand.

Today, we continue that important and proud focus we place on building an enduring relationship. We believe that relationships enable us to deliver shared success.

Relationships creating success is more than just a brand tagline for us.

It's about putting our customers at the heart of everything we do.

It's about bringing world leading ideas to transform possibilities into reality by truly understanding and predicting the needs of our customers.

It's about trusted relationships we build with our customers, colleagues and communities that allow us to create and sustain our modern environment.

Pictured: Roxborough Dam, 1955 where Downer worked with two other international companies on the construction of one of the first large hydroelectric projects in the South Island of New Zealand.

Proven innovation in our solutions

We are proud to be recognised as an innovative leader in the water industry.

Innovation and thought leadership

Pilbara Clearwater Alliance
– winner of the 2015 Australian Water Association (WA) Infrastructure Project Innovation Award.

AAT Alliance – winner of the 2014 Australian Water Association's ACT Infrastructure Project Innovation Award.

Thought leadership is about remaining at the forefront of our industry, employing the best people, and having the courage to challenge the status quo. It's something we live and breathe within our Water solutions team.

We have collaborated with Murdoch University in Western Australia on a **world-first Parallel Nitrification and De-Nitrification (PND)** process with our pilot near completion at one of our plants in the Queensland Whitsunday region.

As regulations that govern treated wastewater progressively tighten, particularly in respect to residual nitrogen, we are proactively seeking ways to improve nitrogen removal and in turn open the way for more compact treatment plants that use fewer materials, less energy and emit less carbon.

Initiatives like PND showcase our predisposition to provide innovative solutions that enhance our reputation and deliver a competitive advantage. More importantly though, is the learnings we can take away from such initiatives and apply to future projects, reducing whole-of-life costs for our customers.

Construction smarts

From new concept projects to modifications, upgrades and retrofits, we're dedicated to delivering innovative construction solutions for our customers' capital projects.

As one of Australia's most experienced providers of seamless interfaces, we have a proven ability to help customers achieve their operational objectives.

With minimal disruption to active services and surrounding environments, we work closely with all of our customers to ensure collaboration through all stages of the project.

From irrigation schemes stretching hundreds of kilometres to the design and build of an award winning wastewater treatment plant, we have the right knowledge and collaborative nature to make your next project a success.



3D modelling of our Point Lookout WWTP on North Stradbroke Island in Queensland where a number of innovative solutions were implemented. Some of these solutions addressed future expected community growth while others eased the logistic challenges of constructing on an island environment.



Wesfarmers Curragh Curragh Mine – Blackwater Creek Diversion

The diversion of approximately 10.2 kilometres of Blackwater Creek was an ambitious and technically challenging engineering project to re-establish an important ecological corridor.

It involved relocating the creek to enable access to coal reserves beneath it. The diversion comprised bulk earthworks, civil works, and the rehabilitation of approximately 167ha of land with 35,000 seedlings, hydromulch pastures and native shrub species.

With key objectives of reinstating habitat, creek biodiversity and ecological function, the project exceeded its vegetative cover and flora species diversity targets 12 months ahead of schedule.

Besides diversions, Downer also brings extensive mining water infrastructure experience including washdown bays, separators, dams and levees.

Our community relationships are pivotal to our success

Our working relationships with farming landowners is proving instrumental in the successful delivery of the Central Plains Irrigation scheme in New Zealand.

The Central Plains Water Enhancement Scheme will provide a sustainable water solution to 60,000 hectares of dairy, arable, horticulture and stock finishing land between the Rakaia and Waimakariri Rivers.

Downer was contracted with installation of the pipe distribution network for this community irrigation project – 132 kilometres of pipe across working agricultural land in stage one alone using one of the world's largest chain trenchers to build the pipe network.

We have met regularly with the landowners of about 120 properties to identify their service requirements and agreed standard of reinstatement once work on their land is complete. We are in regular communication to understand their individual farm operations including how their stock and shelterbelts need to be handled to make sure their farm can continue to function – community feedback has been overwhelmingly positive.

Safer, more sustainable solutions

Designing, Building and Operating sustainable solutions

Downer is the first company in Australia to be awarded with an Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability (IS) Design rating for our Whitsunday Wastewater Treatment Plant.

Our Whitsundays Wastewater Treatment Plant Upgrade project is also the first project to achieve both Design and As Built Ratings – more about the project on the next page.

We are also the only company to be awarded with Design, As Built and Operational IS Ratings.

Placing such an importance on sustainability allows us to identify and unlock substantial long term economic, social and environmental value which has been shared with our customers and our local communities.

In conjunction with ISCA, we have developed sustainability tools that our engineers, operations and Zero Harm teams are trained to apply on different projects – from design through to construction. Our intention is to roll these tools out to the wider Downer business to promote a better understanding of what Sustainability is and how it can be applied to the projects we work on.

Our highly experienced team can also work with you on a Net Present Value (NPV) report where we compare lifecycle costs vs efficiency of operations to provide you with the information you need to make educated decisions on cost saving improvements to your overall water solution and delivery.

More about ISCA and IS

The Infrastructure Sustainability Council of Australia (ISCA) is the peak industry body for advancing sustainability in infrastructure. It is a member-based, not-for-profit industry (public and private) council that has developed and administers the Infrastructure Sustainability (IS) Rating scheme. IS is Australia's only comprehensive rating system for evaluating sustainability across design, construction and operation of infrastructure.

Safer water solutions

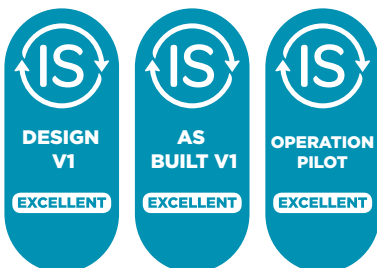
The health and safety of our people, including our contractors, is our first priority as it is central to the success of our business.

Our approach to safety has been recognised by the National Safety Council of Australia, winning their 2013 Best Continuous Improvement of a Safety Management System Award for a serious injury prevention program we introduced in 2012.

Locally, our teams continue to be recognised for the importance they place on safety, such as our Logan Water Infrastructure Alliance winning the Best Work Health and Safety Management System in the 2014 Queensland Safe Work Awards.

We challenge ourselves to applying design and engineering solutions to make Water Solutions safer through designing out safety issues and/or minimising risks.

To further embed our safety culture, through Engineers Australia, we have rolled out Zero Harm Safety In Design training to all our principal and lead engineers who work in the Utilities sector.





Whitsundays Wastewater Treatment Plant Upgrade

The upgrade of two treatment plants at Proserpine and Cannonvale in North Queensland are to serve growing communities and meet the most stringent effluent discharge requirements to protect the Great Barrier Reef. They will also provide benefits to the local community by reducing sewage overflows and improving noise and odour.

Working with the customer on applying sustainability, the project has seen:

Action taken:	Result:
<p>Fewer construction materials:</p> <ul style="list-style-type: none"> ■ 4,400 tonnes less materials; ■ Green concrete used for roads; ■ Use of 40% fly-ash blend in 40MPa concrete; and ■ 100% of excavated materials were beneficially reused on site. 	<ul style="list-style-type: none"> ✓ \$900,000 saved; ✓ Reduction in environmental impact of 2,300 EcoPoints (30%); and ✓ Reduction in embodied carbon emissions of 1,661 tCO₂-e (30%).
<p>Reduced electricity use through energy efficient processes and equipment—reduced by 450MWh per annum.</p>	<ul style="list-style-type: none"> ✓ \$120,000 saved per annum in operation; and ✓ 20% reduction in total scope 2 carbon emissions.
<p>Green IT Strategy used for construction.</p>	<ul style="list-style-type: none"> ✓ \$4,000 saved in electricity.
<p>Hybrid vehicles for construction.</p>	<ul style="list-style-type: none"> ✓ \$3,000 saved in fuel.
<p>Better dust suppression.</p>	<ul style="list-style-type: none"> ✓ \$100,000 saved.
<p>Reduced water use through efficient use of recycled effluent.</p>	<ul style="list-style-type: none"> ✓ 43% reduction in water use; and ✓ 3GL water saved.
<p>More efficient sludge dewatering methods.</p>	<ul style="list-style-type: none"> ✓ \$48k saved per annum.
<p>Climate change risk identification and management.</p>	<ul style="list-style-type: none"> ✓ 22 climate change related risks were identified and actioned.

Setting best practice in managing and sustaining your assets

Leading the way with asset management

We are the first company in the Southern Hemisphere and one of the first ten organisations globally to have passed through the rigours of the formal assessment process to achieve an

Accredited ISO 55001 Certification in Asset Management.

Being awarded the first Australian ISO 55001 Accredited Certification is endorsement of our credibility and leadership in having a well-structured and robust approach in effectively and efficiently managing assets on behalf of our customers.

As with AS/NZS 4801 (Occupational Health and Safety Management Systems) and Office of the Federal Safety Commissioner Accreditation (Safety), ISO 9001 (Quality) and ISO 14001 (Environment), an Accredited ISO 55001 Certification independently validates our application of asset management practice, safety and quality management, technical skill and continuous improvements to maximise the value of the assets we manage.

Together with collaborative customers, we are able to continue building on our leadership in asset management by bringing our aspirations into the practicalities of implementation.

This encourages us to work harder to continue driving the performance and consistency of assets to return as much value as possible for our customers through improved business processes and efficiency of operations.

Extensive operate and maintain expertise

We have designed, built and upgraded more than 80 treatment plants in Australia and New Zealand and currently operate and maintain more than 40 plants, contracts and alliances.

In the past five years alone, Downer has delivered more than \$1.1 billion worth of water infrastructure projects.

Our significant experience ensures we hit the ground running. Purpose-built job management systems keep our customers confident – and with the right resources in place, we can ensure delivery and exceptional results from day one.

Strong financial management, real time tracking, and integration with customer systems ensures a detailed overview of service requests, reactive works, planned maintenance and integrated levels of asset data for long-term planning.





Yarra Park Recycled Water Treatment Facility

Downer has designed, built and now operates Victoria's largest underground Recycled Water Treatment Facility (RWTF), capable of producing Class A recycled water.

The facility incorporates a number of innovative design and construction features and leads the way in the Victorian water industry.

The MCC-owned plant treats and re-uses sewage from the local sewer network, delivering on government management goals and setting a benchmark for others to follow. Designed to meet the requirements of the Melbourne Cricket Club (MCC) and the various regulators, the water is used to provide a secure, long term sustainable supply to the heritage listed Yarra Park, Punt Road Oval and toilet-flushing at the iconic Melbourne Cricket Ground. The plant reduced the MCC's reliance on potable water by 50 per cent and removed it from the list of Melbourne's top 100 water users.

The project has been recognised with:

- Australian first ISO 55001 for its asset management system;
- Infrastructure Sustainability Council of Australia's first IS Operations ('Excellent') rating;
- 2013 Banksia Award finalist for Water – Our Most Precious Resource Award;
- 2013 Australian Water Association (Vic) Award for Infrastructure Project Innovation.



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