

## DRIVING PROGRESS





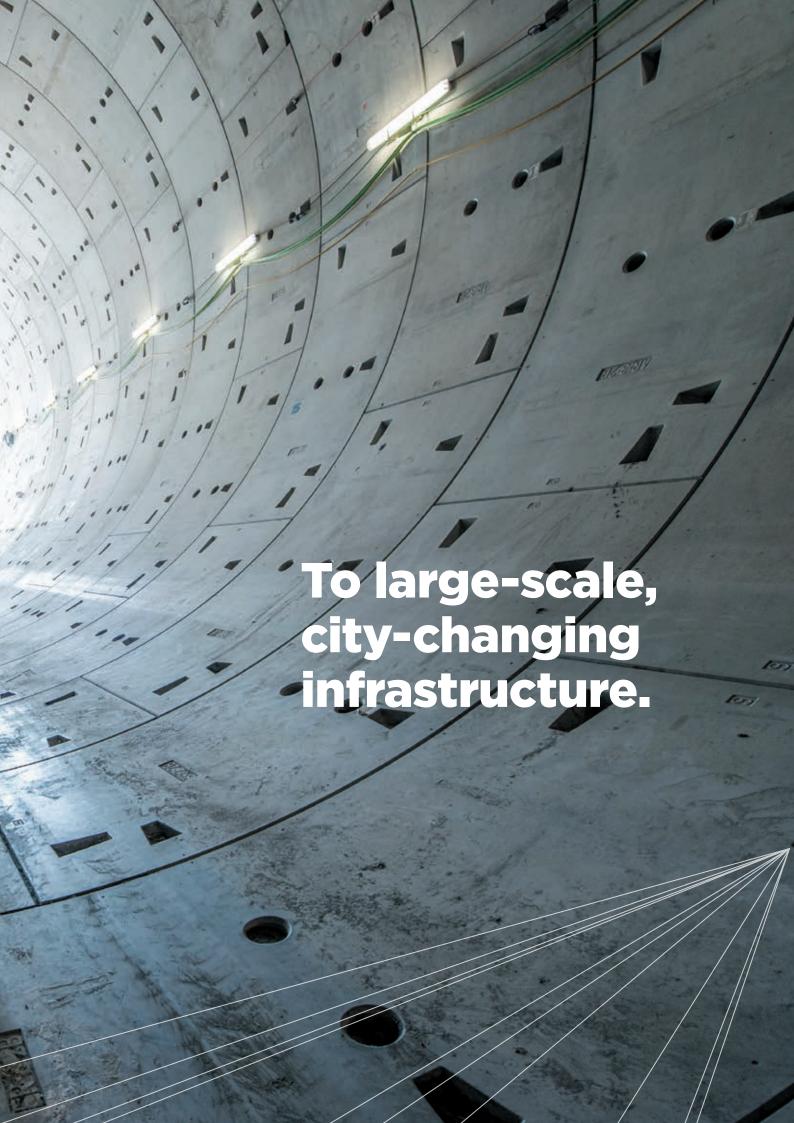




# From ambitious resource projects in remote locations.



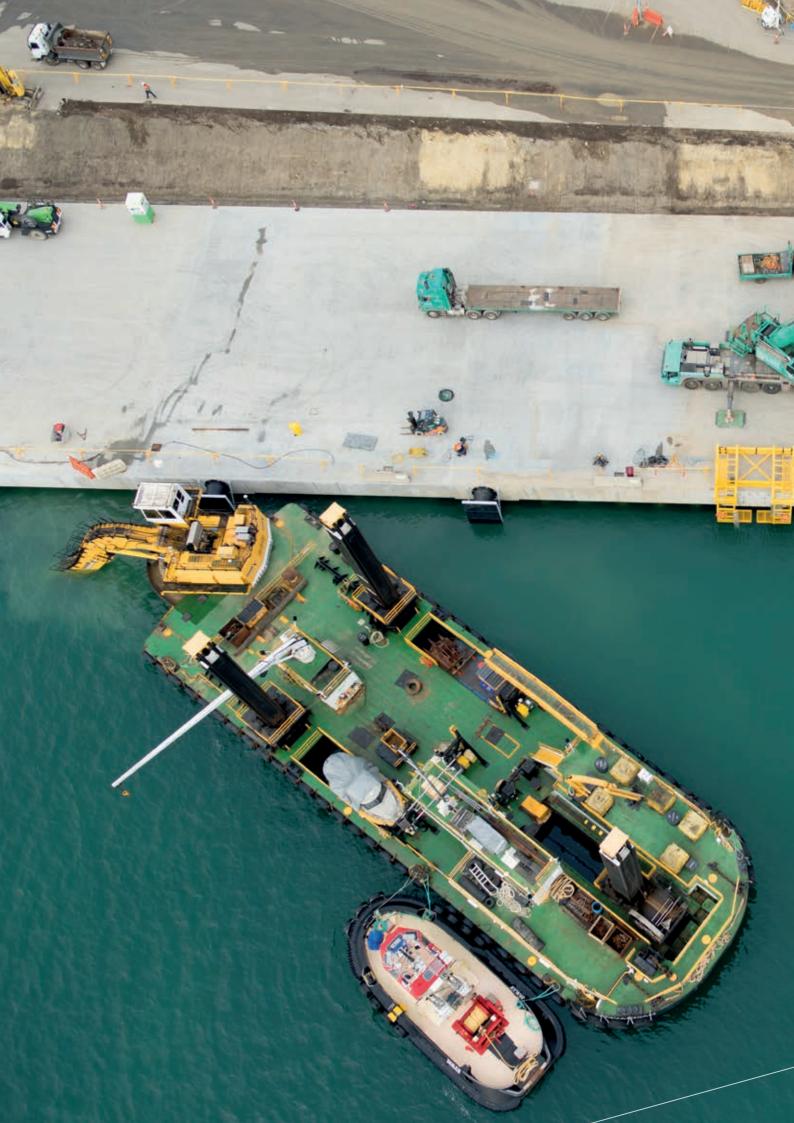






For over 50 years customers have been coming to us with complex projects that require innovative solutions.







So we've built a culture of progressive thinking. It's an approach that looks for opportunities, embraces change...

## ...and finds different, creative solutions to complex problems.





## BUILDING BETTER COMMUNITIES AND PROVIDING A BETTER LIFE

The McConnell Dowell Group is founded on a proud heritage of innovation and pioneering spirit. In collaboration with our customers and partners, we have a proven track record of building better communities through safe, smart and efficient infrastructure. Since the early 1960's our reputation has been forged by finding innovative solutions and delivering creative construction outcomes that contribute positively to those communities.

Our progressive thinking, on-going culture of expertise, innovation and creative approach is what sets us apart.

## INNOVATION THAT IMPROVES LIVES

At McConnell Dowell we care deeply about the people we work with: our customers, our employees, our partners and the communities we serve around the world.

We foster a safe, high-quality, systematic and structured approach that allows people to challenge ideas, find hidden insights, look for innovative solutions and deliver infrastructure that improves the quality of life and benefits all stakeholders.









## LOCAL KNOWLEDGE INTERNATIONAL EXPERTISE

Innovative design and construction forms a significant part of our business, we pride ourselves on being the local construction specialist that brings international expertise & experience to every job.

We operate throughout Australia, Asia, New Zealand, Pacific Islands and the Middle East.



## ONE TRUSTED PARTNER FROM START TO FINISH.

We offer the complete solution throughout the full project life cycle. This integrated approach means you can engage us at one or all stages of the project, leveraging our experience and expertise in:

- Project Management
- Engineering
- Procurement
- Construction
- Commissioning
- Operations

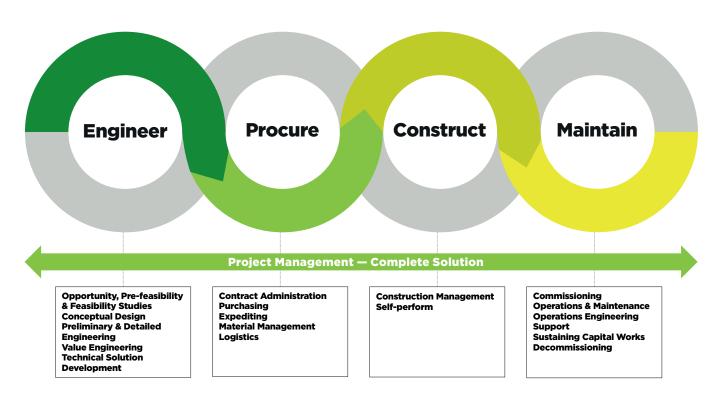




## **BUSINESS MODEL**

A value offering encompassing part or full optimal integration of the complete life cycle of project execution; Project Management, Engineering, Procurement, Construction, Commissioning and Operations.

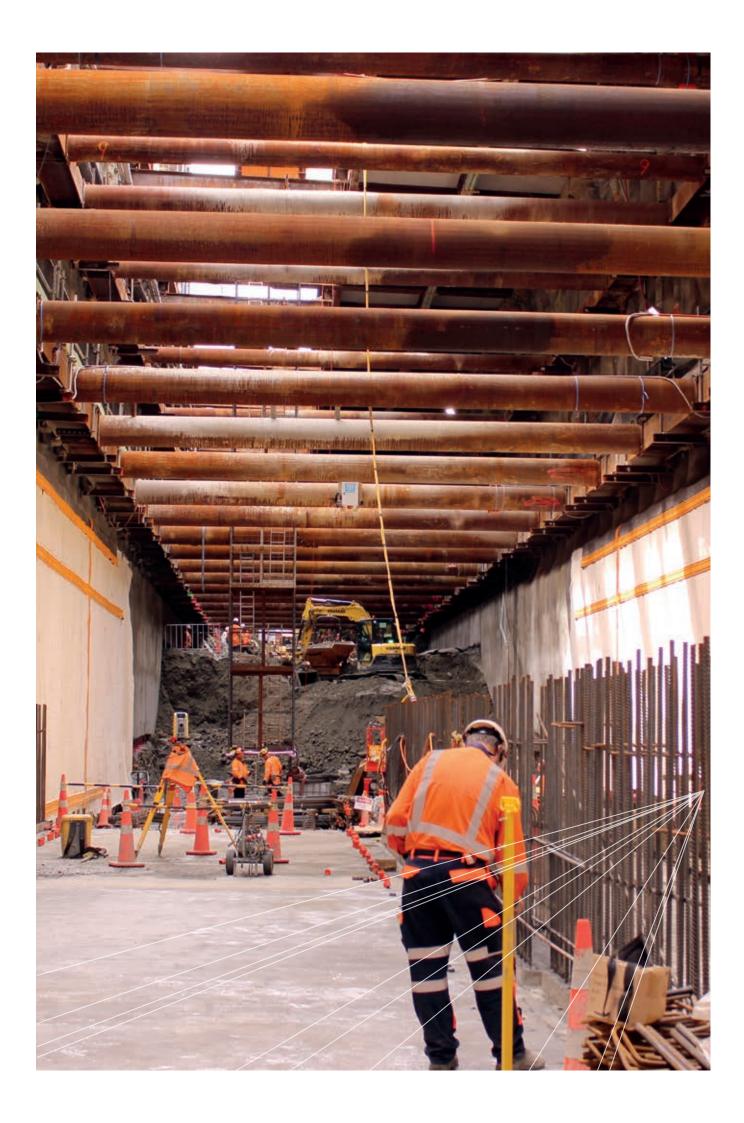
## **Value Offering**



### **Market Sectors**

#### Infrastructure **Building** Resources Marine Mechanical Mining Power Government & Metals **Pipelines** Civil Water & Commercial/ Oil & Gas **Waste Water** Industrial Tunnel & **Fabrication** Underground **Transport** Petrochemical Social/Residential **Building**

**Specialist Capabilities** 



## **Safety**



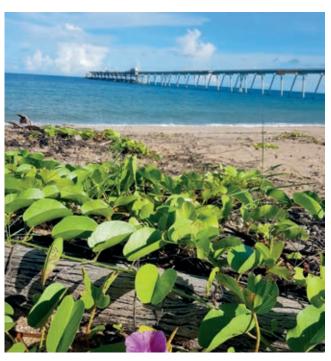
## The safety of our people is paramount to our success. Our customers demand a safe project, and we deliver. Our safety results place us in the top tier of contractors in our industry.

We nurture a culture of safety ownership. Every employee has a job description and set of safety obligations to meet. Our managers are visible safety leaders. In addition to traditional safety metrics, their performance is tracked in activities such as the number of safety audits they carry out personally, and how many 'SafeTalks' they deliver.

Our site safety teams are structured and resourced effectively. Every project maintains an HSE Risk Register and our teams work from a comprehensive set of Safe Operating Procedures, Safe Work Instructions, and JSEAs.



## **Sustainability**



#### We act today with the future in mind.

Thinking creatively and sustainably is fundamental when building infrastructure and resources for our communities. Ensuring a sustainable tomorrow for our teams, customers and the environment, means we must perform to the best of our ability today.

We are a progressive company and believe in empowering our employees to drive improvement in all areas of our business. Establishing a learning culture is a key focus, helping us shape our systems in the areas of safety, environment and sustainability and ensure our accumulated knowledge is shared throughout our business.

## **Environment**



## **Quality**



#### We continue to grow our capabilities and performance.

Our environmental commitment is second to none; we believe it is everyone's responsibility, regardless of role or the nature or location of the project.

We lead by example promoting environmental management and empowering our people to be their best. Everyone is encouraged to be creative and innovative in how they approach the management of our local environments.

Our dedicated team of environmental professionals actively support our teams, helping them achieve our high environmental standards delivering exceptional results for our customers and communities.

We take a positive and collaborative approach towards environmental management and maintain our focus on: accountable leadership; reducing emissions; efficient use of energy, resources and project materials; minimising waste; and by responsibly managing the biodiversity of local flora and fauna. It's this 'one team' approach with our customers and partners that enables us to create a framework for our environmental standards which has been recognised throughout the industry.

#### Raising the bar for excellence and accountability.

We pride ourselves on the quality of our work and have raised the bar for corporate excellence and accountability.

Infrastructure assets have to stand the test of time so we ensure the highest quality result for every project. Our quality system is the result of over 50 years of project experience, and has been honed, improved and refined to meet today's exacting ISO standards. Since 2003, all our operations have been certified by Lloyds Register Quality Assurance (LRQA) to AS/NZS ISO 9001.

Our quality leaders are also skilled in their craft and provide governance and assurance across all our projects. This means our customers have added confidence in the finished product. Most importantly, our people are passionate about getting it right. We provide them with the right tools, systems and training to ensure we deliver a quality project.

## **GROUP BRANDS**

The McConnell Dowell Group has a long and proud history of commercialising projects and is widely respected for delivering 'Creative Construction' solutions.

The McConnell Dowell brand is well regarded for integrity, consistency in application, value for money and being a technology-driven company.







McConnell Dowell - The Creative Construction Company, building better communities through safe, smart, efficient infrastructure.

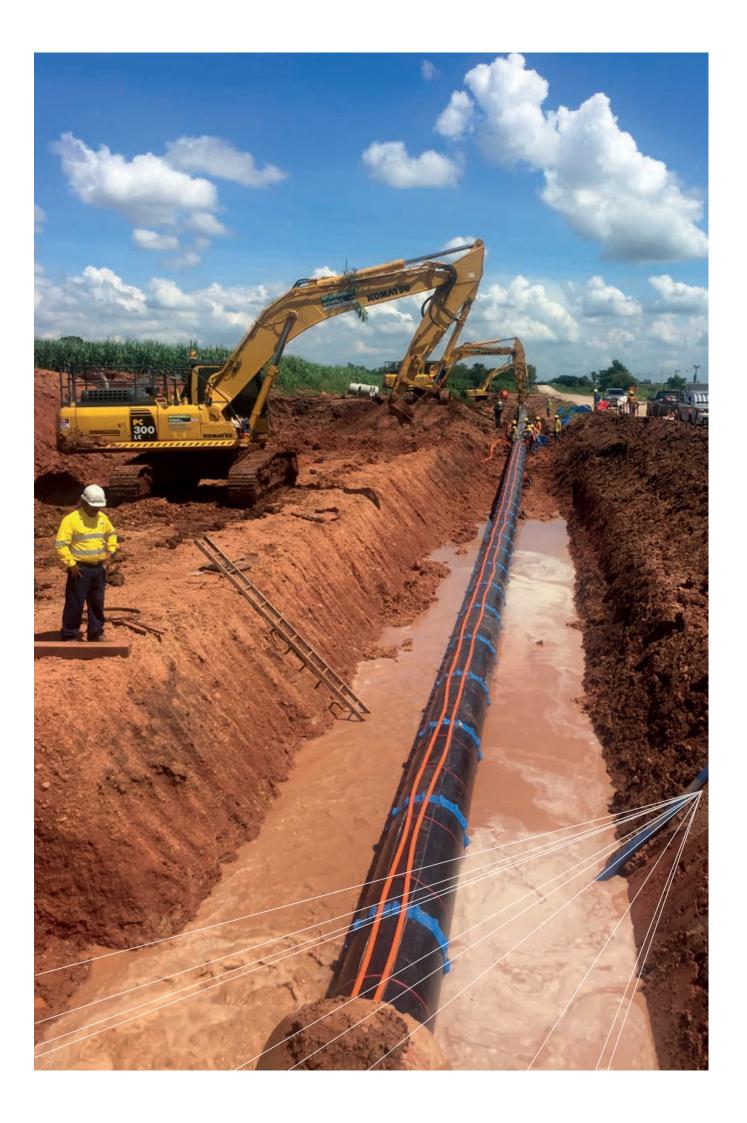
www.mcconnelldowell.com

Built Environs - Provides multi-disciplinary capability in design and construction of commercial, industrial and institutional buildings.

www.builtenvirons.com.au

Parent Company Aveng Limited, have a number of specialist operating groups.

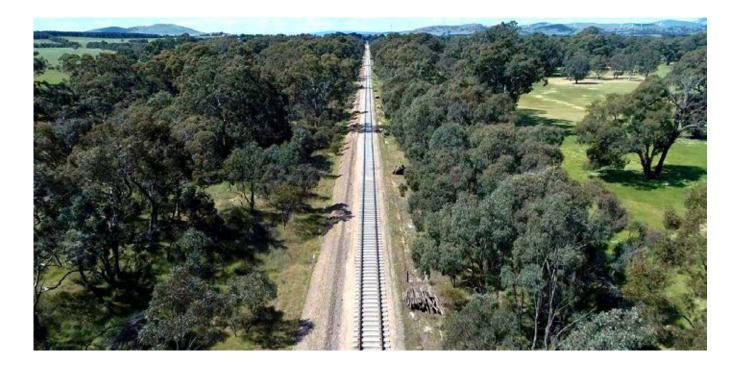
www.aveng.co.za







## RAIL



McConnell Dowell understands the rail sector and the need for robust design processes; safe, flexible construction approaches; and open communication with customers throughout the development or augmentation of a rail system.

We have expertise in the construction, maintenance and asset management of light, metropolitan and urban transport infrastructure through to regional and heavy haul railway networks.

We are fully equipped with our own rail plant and have a dedicated, state-of-the-art plant yard and workshop in Victoria to provide full maintenance of our fleet.

We are skilled at working on or near live railways during construction of track, rail systems, civil structures, stations and depot facilities.

We operate as an approved Rolling Stock Operator under Rail Safety Accreditation for a range of maintenance and renewal contracts across Australia.

- Springvale Road Grade Separation Project (Australia)
- Fortescue Metals Group Track Construction (Australia)
- Balaclava Station Upgrade (Australia)
- Gold Coast Light Rail Project (Australia)
- Murray Basin Rail Project (Australia)

## CIVIL



McConnell Dowell's broad civil capability is demonstrated in the delivery of both small and large scale projects, across the infrastructure, oil and gas, mining and building sectors. From metro tunnels in Singapore to runway upgrades at Melbourne Airport, to post earthquake reconstruction works in Christchurch, to the expansion of a petroleum gas refinery in Dubai, McConnell Dowell uses its strong experience in building foundations, precast concrete, piling, hardstands, roads, runways and bulk earthworks combined with our systems and processes to drive production and deliver projects for our customers on time and within budget.

Our multi-disciplinary experience in tunnelling, water, roads, bridges, structures and rail enables us to deliver complex major projects in regional and urban centres with minimal impact to the local community during construction.

- Russley Road Four Laning (New Zealand)
- City Rail Link Contract 2 (New Zealand)
- Glen Eden Storage Tank (New Zealand)
- Christchurch Southern Motorway Stage 2 (New Zealand)
- Dryandra Underpass (Australia)
- Papa, Uniform and Golf Taxiway Replacement (Australia)
- Hume Dam (Australia)

## **MARINE**



The McConnell Dowell name is synonymous with marine design and construction, with over 50 years of award-winning solutions for wharves, jetties, ocean outfalls, breakwaters, causeways and submarine pipelines.

Our fleet of marine equipment is ahead of the world, while our systems and procedures for marine project delivery are proven in the protection of our people, plant and the environment.

- Webb Dock Maritime Infrastructure Works (Australia)
- Vale Malaysia Manufacturing Project (Malaysia)
- Hay Point Coal Terminal Expansion (Australia)
- Fortescue Metals Group Berths (Australia)
- Hin Leong Marine Facilities (Hong Kong)
- BHP Billiton Rapid Growth Projects 5 & 6, Port Facilities (Australia)
- Port Kembla Outer Harbour Tug Berth Facility (Australia)
- Sydney Desalination Project -Distribution Network (Australia)
- Common User Facility (CUF) (Australia)
- Cape Lambert 80MTPA Wharf Upgrade Project (Australia)
- Dampier Port Upgrade (Australia)
- Tahuna Ocean Outfall (New Zealand)
- Rosedale AWTP Ocean Outfall Project (New Zealand)
- Swanson Dock Berth 1 Upgrade (Australia)
- Brisbane Ferry Terminals (Australia)
- Amrun Chith Export Facility (Australia)

## **TUNNEL & UNDERGROUND**



McConnell Dowell tunnels have provided the means to alleviate traffic congestion, extend rail networks, generate sustainable hydropower, unlock precious resources and sustain communities through new clean water supplies. We have delivered over 140 km of safe, smart, efficient tunnels and underground spaces while minimising community and environment impact.

Our skill is in selecting the right technology and approach to suit each project's unique requirements. We have engineered solutions using tunnel boring machines (TBM), road headers, drill and blast, pipe-jacking, micro-tunnelling and horizontal directional drilling (HDD).

Our strong relationships with key equipment suppliers mean we mobilise quickly and begin construction on time. Our standard practice is to coordinate underground and above-ground activities to minimise any inconvenience to businesses, residents and traffic.

- Waterview Connection (New Zealand)
- Beauty Word Station & Tunnels (Singapore)
- Ambuklao & Binga Hydropower Plants Rehabilitation (Philippines)
- Hobson Bay Tunnel Project (New Zealand)
- O-Bahn City Access (Australia)

## **PIPELINES**



McConnell Dowell is a leading international pipeline contractor. We have constructed over 30,000 km of new pipe networks across more than 200 projects including gas, petroleum, water and slurry pipelines.

These pipelines help drive economic and social progress across Australia, New Zealand, Asia, Africa and the Middle East.

McConnell Dowell is the partner of choice for complex EPC and construction projects. We are experts in large diameter pipeline construction and have delivered gas pipelines up to 1300 mm (50") in diameter and water pipelines up to 1800 mm (70") in diameter.

Our in-house specialist skills and plant enable execution of HDD, micro-tunnelling, marine pipe pulls, pipe bridges and other complex crossing solutions.

Our sustained success in the pipeline industry is based on strong customer collaboration and effective community consultation and environmental management.

- Northern Gas Pipeline (Australia)
- Southern Regional Water Pipeline (Australia)
- Nakhon Rachisima Pipeline (Thailand)
- Artillery Drive Stormwater Tunnel (New Zealand)

## **FABRICATION**



Modularisation is now an industry standard for major project developments, reducing site labour and construction costs, improving quality and safety, and expediting project delivery.

We deliver a comprehensive and integrated design, procurement construction and fabrication service through our four fully equipped steel fabrication facilities across the Group.

Through our facilities, we provide structural steel and marine structures, steelwork and process piping, process modules and pre-assembled racks, concrete structures and concrete modules. Our monthly production capacity is 3,400 tonnes of heavy structural steel, 1,700 tonnes of medium structural steel, 89,000 diameter inches of piping and 1,260 tonnes of plate work. Our large-scale wharf deck elements are used in the mining sector, while our pre-assembled racks (PARs) and modules (PAMs) are used in the oil and gas and power sectors.

## **MECHANICAL**



With a long history in delivering complex mechanical and electrical construction projects stretching back to the early 1980s, McConnell Dowell is the construction company of choice.

Our mechanical group has specialist skills in oil and gas, mining and minerals, chemical processing and water. We have carried out many complex and challenging projects under all contract models, including EPC, D&C, Alliance and construct only models, of various sizes ranging from \$5M to \$300M+. Our experience extends across remote locations within Australia and throughout Indonesia, Laos and PNG, to name a few.

We have delivered complex piping, mechanical and electrical construction projects in demanding environments for customers such as ExxonMobil, BP, BHP Billiton, DuPont, and various water authorities. Our project engineers and managers have specialist skills in piping, mechanical and electrical design and installation, having successfully managed projects with peak workforces in excess of 1000 people. We've achieved industry leading results in safety performance and quality and customer satisfaction.

- Adelaide Desalination Project, SA Water (Australia)
- Martabe Gold and Silver Mine, PT Agincourt Resources (Indonesia)
- Te Mihi Geothermal Power Station, Contact Energy (New Zealand)
- Ma'aden Reduction Area Mechanical & Piping Installation Contract, Ma'aden (Saudi Arabia)

## **BUILDING**



As the commercial building brand of the McConnell Dowell Group, Built Environs has the ability to deliver everything from small scale refurbishments through to major developments across Australia.

Built Environs has commercial building construction expertise in the following sectors:

- Accommodation
- Defence
- Education
- Entertainment and Sport
- Government
- Health
- Industrial
- Office
- Retail
- Transport

#### **Key Projects**

#### Government

- Gold Coast Light Rail Building Works (Australia)
- Parks Community Centre Redevelopment (Australia).
- RAAF Base Edinburgh Single LEAP (Australia)
- Whyalla Hospital Cancer Centre Redevelopment (Australia)
- Transforming Health Modbury Hospital Specialist Ambulatory and Rehabilitation Centre (SpARC) (Australia)

### **Commercial/Industrial**

- Adelaide Desalination Plant Building Works (Australia)
- ACI Owens Illinois Glass Production Plants (Australia)
- Ocean Keys Shopping Centre Redevelopment (Australia)
- Ravensthorpe Nickel
- Urbanest at the University of Adelaide (Australia)
- West Franklin Residential Accommodation (Australia)

#### Social/Residential

- Adelaide Oval Western Grandstand (Australia)
- Adelaide Showground Goyder Pavillion (Australia)
- University of South Australia Hawke Building (Australia)
- University of Western Australian Biomedical Research Facility (Australia)





# INFRASTRUCTURE

## **Power**



McConnell Dowell helps create safe, sustainable and efficient power infrastructure that supports today's energy hungry and environmentally conscious communities. We deliver civil, electrical, mechanical, pipelines and tunnelling works across all power generation types.

## **Water & Waste Water**



Every community needs access to a safe and reliable water supply to thrive. Our expertise in water is world class, delivering projects that capture, store, treat, distribute and dispose of waste (outfall).

We've designed and delivered some of the world's largest and most efficient desalination plants, built new dams and large diameter water pipeline networks, ensured water security for urban and rural communities and installed environmentally responsible outfall pipes.

## **Transport**



Our creative construction approach in transport minimises community disruption and drives progress in our major cities.

As urban communities continue to grow, the pressure and demand for complex transport facilities increase. Whether it's a new tunnel, the refurbishment of an historic bridge, the expansion of a highway, or the construction of train and tramways, we have the capacity and capability to meet any transport challenge.

Experience and intelligent engineering has allowed us to push 3000 tonne bridges into place over night. Smart construction staging has allowed us to rebuild an inner-city railway station while keeping passengers moving safely and on time. And tireless stakeholder communication has kept residents and businesses fully informed and connected during their road system upgrade.

### **Key Projects**

#### Power

- Te Mihi Geothermal Power Station (New Zealand)
- Ambuklao and Binga Hydropower Plants (Philippines)
- Keppel Merlimau Co-generation Power Station (Singapore)
- Bogong Hydro Power Station (Australia)

#### Water & Waste Water

- Adelaide Desalination Plant and Transfer Pipeline (Australia)
- Hume Dam Upgrade (Australia)
- Rosedale WWTP Outfall (New Zealand)
- Sydney Desalination Project, Distribution Network (Australia)
- Maris Hydro (Philippines)

#### **Transport**

- Waterview Connection (New Zealand)
- Christchurch Southern Motorway Stage 2 (New Zealand)
- Kundaberg to Kempsey (Australia)
- Tuas Road Bridges (Singapore)

## RESOURCES

## **Mining & Metals**



The mining and metals sector is driven by efficiency, safety and value, and McConnell Dowell's multidiscipline capability and remote construction experience is highly valued by our customers.

We have specialised plant and people skilled in the construction of cross-country pipelines, marine terminals, process plants, materials handling equipment, rail infrastructure and underground construction. McConnell Dowell has delivered efficient new mining infrastructure in remote locations: from the harsh, dry Australian desert to the tropical rainforests of PNG, Indonesia and Laos.

## Oil & Gas

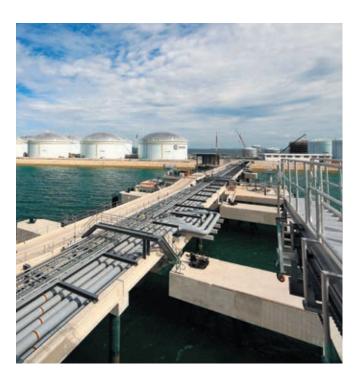


A sector as broad as oil and gas demands a comprehensive skillset. Our portfolio expertise includes marine facilities, storage terminals, processing plants, pipelines, topsides, power, and water infrastructure.

We offer a multi-disciplined, integrated service with expertise in engineering, procurement, fabrication and the construction disciplines of pipelines, civil, marine and structural mechanical piping. We're also at the forefront of modularisation and preassembly with in-house fabrication and precast facilities. This approach minimises site labour, enhances quality and reduces construction programs.

Our engineering to procurement and construction solutions support innovative and intelligent thinking and provide our customers with the simplicity and accountability of a single management interface. Combined with our industry-leading systems to optimise safety, environmental and quality outcomes, we deliver cost-effective solutions and achieve outstanding results for our customers.

## **Petrochemical**



Design, interface and integration management are crucial to success in the petrochemical sector. Our multidisciplinary approach is what sets us apart from our competitors.

Our skills encompass civil, mechanical and electrical solutions, and cover instrumentation, fabrication and piping. Whether blending facilities in Singapore, process plants in Thailand, or storage and distribution facilities in Indonesia, we've got the experience to deliver safe, high quality, well planned projects to all petrochemical customers.

## **Key Projects**

#### **Mining & Metals**

- Koniambo Nickel Project (New Caledonia)
- Vale Malaysia Manufacturing Project (Malaysia)
- Bakan Gold Mines Project (Indonesia)
- Ore Car Repair Shop (Australia)

#### Oil & Gas

- Singapore Parallel Train (Singapore)
- Australia Pacific LNG Project (Australia)
- Fourth Parallel Transmission Pipeline Stage 2 (Thailand)

#### **Petrochemical**

- Helios Bulk Liquid Storage & Blending Facilities (Singapore)
- Lanxess Compass Civil Works Package (Singapore)
- Jurong Aromatics Complex Jetty Works (Singapore)
- Dow Petrochemical Facility (Malaysia)

# **BUILDING**

## **Government**



## **Commercial/Industrial**



We are proud to work with government to build better, more efficient infrastructure that serves communities. From local council, to state and federally-funded initiatives, we maximise value-for-money and manage a broad range of stakeholder and community relationships to ensure delivery is smooth and successful.

We combine a collaborative, best-for-project approach with accredited environmental, quality, safety and project management systems, to deliver consistent high quality construction – on time and on budget.

From large-scale industrial processing plants and high-tech manufacturing facilities to multi-storey office developments and landmark retail developments, we are experienced in working across all commercial delivery models and frameworks.

Our unwavering commitment to customer satisfaction, coupled with our commercial and contractual flexibility has produced a solid history of successfully delivering a diverse range of construction projects for a wide range of customers.

From traditional lump sum contracts to guaranteed maximum price and design and construct projects, we have the proven capability to deliver your next industrial or commercial construction project.

## **Social/Residential**



With a strong history of delivering world-class education, entertainment, sporting, and leisure facilities, it is our commitment to customer-centred, solutions-based construction that achieves excellent results for our customers.

We understand that cost, quality and schedule are all imperative in building social infrastructure. That's why our dedicated team of in-house design management, and costing and planning professionals work closely with our customers, their stakeholders and our internally-assigned project teams to develop fully costed value-engineered designs that deliver greater cost, quality and time surety.

### **Key Projects**

#### Government

- Gold Coast Light Rail Building Works (Australia)
- Parks Community Centre Redevelopment (Australia)
- RAAF Base Edinburgh Single LEAP (Australia)
- Whyalla Hospital Cancer Centre Redevelopment (Australia)

#### **Commercial/Industrial**

- Adelaide Desalination Plant Building Works (Australia)
- ACI Owens Illinois Glass Production Plants (Australia)
- Ocean Keys Shopping Centre Redevelopment (Australia)

#### Social/Residential

- Adelaide Oval Western Grandstand (Australia)
- Adelaide Showground Goyder Pavilion (Australia)
- University of South Australia Hawke Building (Australia)
- University of Western Australian Biomedical Research Facility (Australia)
- Urbanest at the University of Adelaide (Australia)
- West Franklin Residential Apartments (Australia)





Level 3 ward refurbishment with Approximately 2000 m<sup>2</sup> fitout

Incorporating a new Day Treatment Gymnasium

The construction of new kitchen and laundry areas for patients

## **Modbury Hospital Redevelopment**







The Modbury Hospital Redevelopment Project won an award in the Commercial Fit-out up to \$5m category at the Master Builders Building Excellence awards 2017.

The Modbury Hospital Redevelopment Project, was part of the State Government of South Australia's Transforming Health initiative. It has delivered improved hospital infrastructure and consolidated health services for residents in Adelaide's north eastern suburbs.

The Built Environs project team delivered this fast-tracked, multi-staged project within a live hospital environment.

The Modbury Hospital's Specialist Ambulatory and Rehabilitation Centre (SpARC) received a Commendation for Excellence in the Commercial / Industrial Building \$10m to \$20m.

Ensuring the Modbury Hospital and its associated health services remained operational throughout the project's duration was a key driver to our customer, SA Health.

2.4 km Waterview Tunnel Between Pt Chevalier and Mt Roskill



## **Waterview Tunnel**

The Western Ring Route and Waterview Tunnel is a significant step in transforming the way people and freight move around Auckland and New Zealand. It represents the biggest change in travel patterns since the opening of the Auckland Harbour Bridge in 1959.

Completing the Western Ring Route will create extra motorway capacity, ensuring thousands of vehicles can travel around the city. This will also free up local roads by transferring traffic onto the state highway network.

Opening such a large piece of transport infrastructure means travel patterns will change. Some areas will benefit from reductions in traffic, although Auckland's growing population means traffic will still be heavy in some areas at peak times.



#### **EPC Contract**

60 km of 42-inch diameter pipeline, 18 block valve stations

20 km of pipe installation by Direct Pipe processes



## Nakhon Ratchasima Pipeline Extension

The Nakhon Ratchasima Pipeline Project is being delivered for PTT Public Company Limited, Thailand's state-owned oil and gas company.

The project involves the design, procurement, construction and commissioning of a 48 km, 28-inch diameter gas pipeline linking the Provincial Gas Transmission Pipeline Project to Nakhon Ratchasima Extension Phase.

The works include procurement of all line pipe, valves and permanent materials, construction of four block valve stations and tie-in facilities, SCADA and communications systems. The project is using innovation construction methodology utilising trenchless technology to minimise impact on stakeholders.



## Port Capacity Webb Dock

2017 Australian Construction Achievement Award for the \$390M Melbourne Port Capacity Project, Maritime Works. 900 Tubular steel piles up to 1500mm diameter and 45 m long driven as single length piles

40,000 m<sup>3</sup> of structural concrete

10,000 tonnes of reinforcing steel

40,000 m of sheet pile installation

210,000 tonnes of imported quarry product

15,000 m<sup>3</sup> of rehabilitated concrete deck

The removal of 2.3 Million m<sup>3</sup> of dredge material



#### **Our Approach**

Melbourne Port Capacity Project - Maritime Works, Webb Dock East and West, was a major redevelopment within Melbourne's main port precinct, expanding one existing wharf with two new berths to cater for continued growth in containerised cargo, and development of a new automotive terminal capable of handling one million cars per annum.

### The Challenge

Webb Dock was a large, complex marine construction project delivered within a major operational port and within very tight environmental controls. A critical challenge of the project was to ensure there was no impact on the operation of the working port, which was no easy task. The project included marine demolition & construction with extensive rehabilitation of a decades old wharf.

Further complicating the challenge, Webb Dock was constructed next to six other major concurrent development programs as part of The Port of Melbourne expansion and development.

With the challenges of working within an operational port environment, the McConnell Dowell team worked closely with our customer to manage interfaces and ensure zero unplanned disruption. Sequencing and staging of works was successfully programmed to accommodate all stakeholder requirements.

