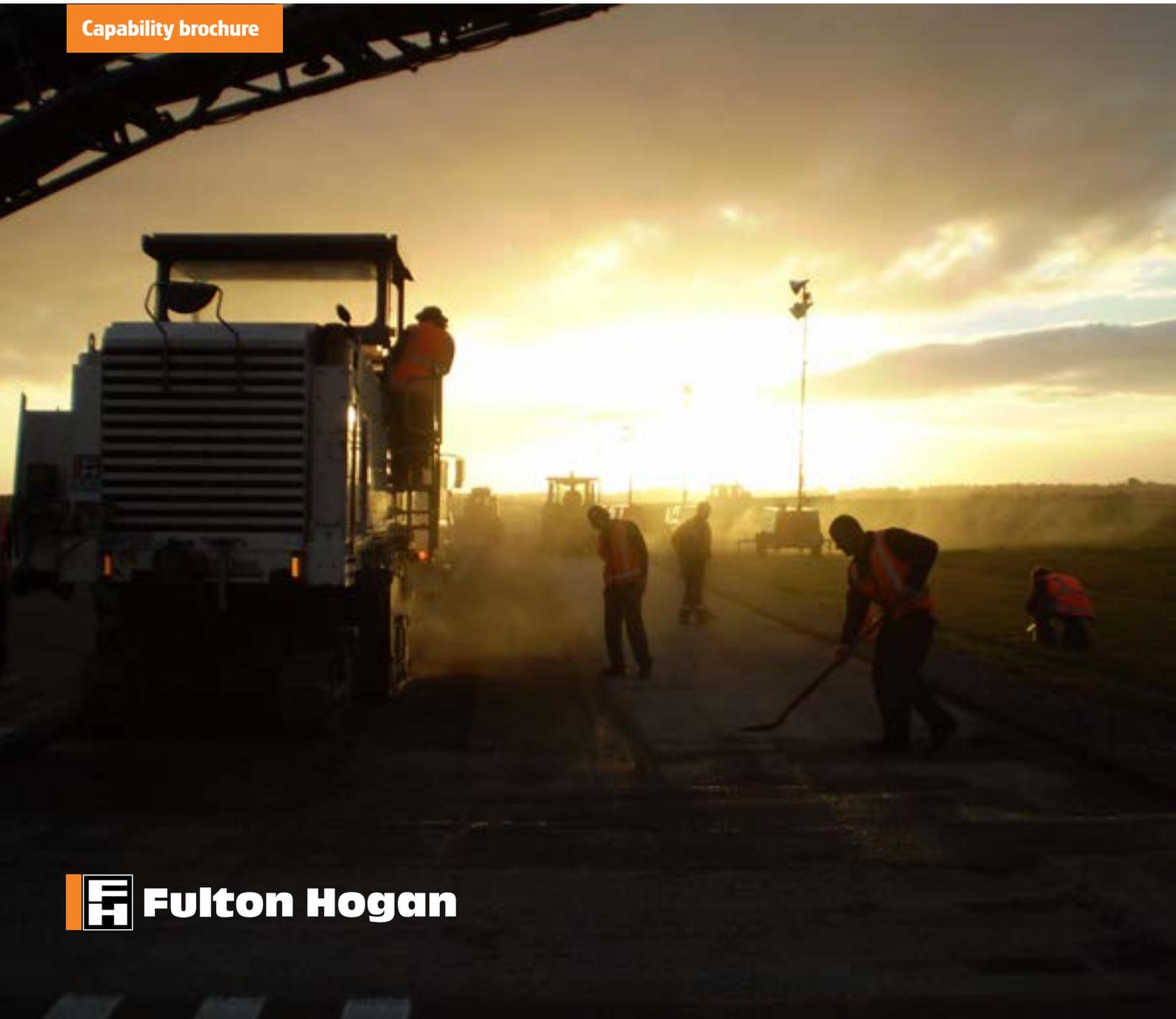

Airports and Ports

Capability brochure



Partnering with Australasia's leading transport operators

Connecting communities through land, air and sea

Transport operators and owners play a vital role in keeping New Zealand connected efficiently and safely. Not only do they improve infrastructure, they also support communities, business and tourism activities.

For over 80 years, Fulton Hogan has been working with transport operators and owners to connect communities; building the roads, ports, airports and infrastructure which bring people together.

A major supplier of civil engineering solutions across Australasia, our 5,500+ strong team continues to grow and diversify into new markets, taking on new challenges and making Fulton Hogan one of the largest civil contracting companies. We have delivered a wide range of projects ranging from \$1M to \$100M in value.

With the breadth of our experience, it will come as no surprise that we understand the extreme performance requirements for civil infrastructure on airports and ports and the unique demands of their owners and operators. Our focus is to work with our customers to deliver quality outcomes that are on time, on budget and on target.

Working in partnership with Fulton Hogan will ensure you stay at the leading edge of innovation in maintaining and improving your transport infrastructure.

The Fulton Hogan advantage

Working in partnership with leading transport operators - big and small - continually adding value through our vertically integrated business model and innovative solutions.

One stop shop

As a specialist in civil construction, surfacing and maintenance, Fulton Hogan is able to provide a whole-of-life pavement management service. Our vertically integrated business model allows us to construct new airport and port facilities and maintain this infrastructure to ensure a long and efficient life.

New Zealand wide

Fulton Hogan has over 3,500 employees in New Zealand and the Pacific Islands operating from over 40 locations. We have the capacity to mobilise our fleet across the country. Our widespread geographical footprint allows us to deliver outstanding outcomes by bringing our regional knowledge to projects and engaging with local communities.

Leaders in pavement innovation

Fulton Hogan is committed to achieving outstanding results by going beyond convention and seeking new and innovative solutions to meet our customers' needs. Technology such as the Watercutter leads the industry in pavement texture restoration, providing many safety, cost and efficiency benefits for airport operators. Our grooving technology provides many safety and cost benefits.

Collaborative relationships and alliances

Creating a high level of collaboration is a core value for Fulton Hogan. We have the experience and resources to enter into collaborative arrangements, both as a partner and head contractor and work closely with our customers to provide solutions.

Customer focused

Over our long history, Fulton Hogan has focused on understanding our customers' long-term needs, delivering projects on time and on budget and frequently exceeding their expectations. With over 90% of our work coming from repeat customers, it's clear our customers matter to us and we deliver the results they are after.

Self-performing, vertically integrated

As one of New Zealand's leading civil construction companies, Fulton Hogan has the in-house resources to undertake a broad range of activities, supplemented, where appropriate, by specialists. We operate our own quarries, asphalt and manufacturing plants. By managing the internal supply chain through this vertically integrated business model, we minimise delays, maximise value, improve quality and control and deliver effective, long-term outcomes.

Industry-leading safety practices

Working safely is Fulton Hogan's number one priority. We understand the safety and security demands of working airside and portside. Our 'Zero Harm' policy has led to the company approaching industry best practice in safety.



Wellington International Airport

Client: Wellington International Airport Limited
Contract value: \$96M
Completed: 2009

This project involved the renewal of Wellington Airport's 1945m runway. There were a number of challenges whilst working in an operating airport, including the requirement to carry out night works, mitigating disruption to airline scheduling. Fulton Hogan worked with the client to ensure minimal disturbance, with completion on time and on budget. Wellington Airport's runway extension project won a New Zealand industry award for excellence in engineering.

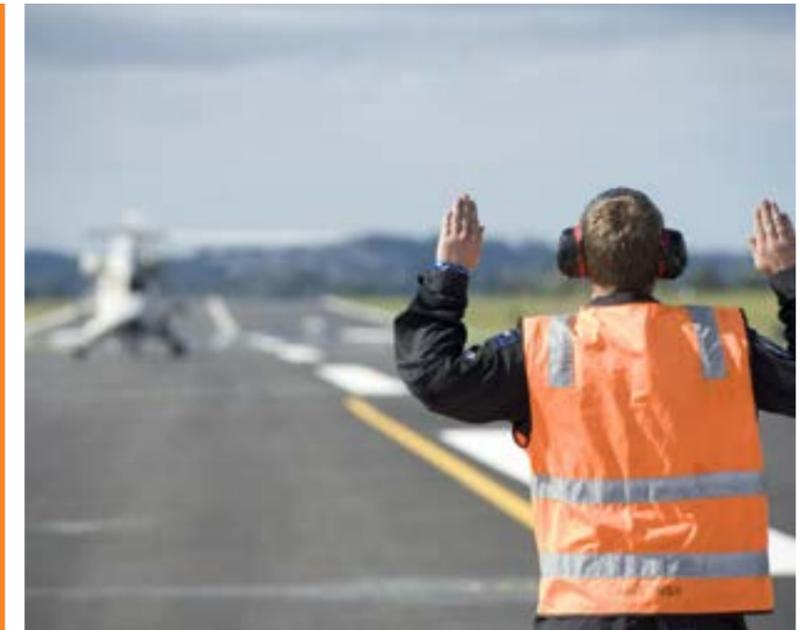
Defence Force Facilities

Client: Royal New Zealand Air Force

Fulton Hogan undertakes maintenance and construction of airport runways for Defence Force facilities across New Zealand including:

Taxiway Charlie (\$11M) 22,000 tonnes of asphalt was produced by Fulton Hogan's mobile asphalt plant for the overlay of the main runway on Ohakea Airbase.

Whenuapai Base (\$28M) In an upgrade to this airfield, an overlay of the 1,000m main taxiway was completed with 10,000 tonnes of SuperPave asphalt, improving its transport operations and enhancing the safety and reliability of the airfield for the future.



Malborough Airport

Client: Blenheim Airport Limited
Contract value: \$39M
Completed: 2010

This regional airport undertook one of its largest projects in 2010 when it resealed its main runway and taxiway, installing new taxi and runway lights and overlaying its commercial apron area. Additionally, Fulton Hogan carried out civil works, improving apron drainage and lighting. A new apron gatic slot drain was constructed, two new SPEL Stormceptors and a 200m² enlarged infiltration mechanism were installed and 3.27m lighting towers erected.

Airports



Taxiway Lima

Client: Auckland International Airport Limited
Contract value: \$15.5M
Completed: 2013

Designed to accommodate the Airbus A380 aircraft, a new 600m long, 60m wide taxiway was constructed for the Auckland International Airport to double aircraft access from the international terminal to the main runway. The new taxiway was built to reduce aircraft congestion and delays at the Airport, as well as improve safety at times of low visibility. This taxiway is the first of what will eventually be the network of taxiways serving the airport's northern runway. Taxiway Lima was constructed over nine months from 50,000 tonnes of recycled concrete and 15,500 tonnes of asphalt. This approach reduced the demand for raw material and the impact on the environment. Utilising Fulton Hogan's multi-disciplinary engineering capabilities, the 600m long runway has 20km of electrical ducts, 6km of subsoil drainage, 1km of concrete pipes and 53 airfield lights running through it.

Christchurch International Airport Maintenance Contract

Client: Christchurch International Airport Limited (CIAL)
Completed: Ongoing (2002-2019)

As part of an ongoing contract that has undergone multiple renewals, Fulton Hogan carries out a diverse range of pavement maintenance and construction works at the Christchurch International Airport, helping care for this essential infrastructure for the city, region and the South Island. The scope of works include crack sealing, line marking, asphalt patching, pavement widening, bituminous resealing surface rejuvenation and airfield lighting modifications. Throughout the life of the contract, Fulton Hogan has introduced a number of environmentally and financially sustainable products which has led to several awards, including CoolPave with LEA™ (low emissions asphalt) and the use of Gilsonite on low traffic pavements to reduce ongoing maintenance costs. These innovations have helped CIAL become the first airport in the southern hemisphere to achieve and maintain carbon neutral status.



We have the experience

With proven performance of over 80 years, we continue to provide solutions our customers are looking for while maintaining the highest standards of risk and safety management.

Proven performance

With over 80 years experience working with airport operators in Australasia, Fulton Hogan has grown to be a market leader in runway overlay work. We currently care for over two thirds of all airports in New Zealand which is attributed to delivering high quality results that combine our extensive technical knowledge of heavy duty surface construction with our experience of managing complex civil projects.

Integrated solutions

Fulton Hogan provides an integrated solution to airport operators and owners across our core areas of expertise: construction, surfacing, and infrastructure maintenance. This is delivered as an integrated solution and supported by extensive research and development, highly mobile plant and equipment, and highly trained, experienced crews.

Keeping your operations running smoothly

Most major airports don't have the luxury of closing down during construction. Our dedicated airport teams work closely with our local operations ensuring optimum service levels, mitigating risk and downtime. We bring advanced risk management strategies into play, combined with mobile asphalt plants, so that construction can run comfortably alongside existing operations without risk to people and property.

Safety and security management

Our teams understand that working in airports and ports places extraordinary demands on safety and security. Using advanced project management and programming skills we work collaboratively with all parties to ensure a 'Zero Harm' outcome. We have testing regimes which meet the most demanding safety and regulatory specifications.

Helping businesses achieve their goals

"Over the years, Fulton Hogan has played an important part in providing airfield maintenance and construction services at Wellington International Airport. Their commitment to working in a very critical, and often challenging environment has allowed works to be carried out with minimal disruption to airport operations. Their crew's awareness of the requirement of working in an airside environment has allowed for positive collaboration between Fulton Hogan & WIAL in the planning and execution of works."

Nick Petkov
Airfield Maintenance Manager
Wellington International Airport

We have the people, technology and know-how

We are known for our innovative approach including materials R&D, pavement design and application of new techniques.

In-house pavement specialists

Our people are our ultimate strength. Fulton Hogan has in-house specialists who are leaders in designing pavements that withstand the unique operating requirements of airports. Our national airports team have extensive experience working in operational airport environments and are often engaged prior to construction works to maximise outcomes. We also research and develop specialist airport proprietary products that enhance life-cycle management.

Specialty products

Fulton Hogan offers a range of speciality products for airport application, including SEST (Surface Enrichment Spray Treatment), CSS or ASS emulsions to replace missing bitumen on oxidised airport pavements, Emulseal for patching cracks up to 15mm wide and FibreDec, a sprayed crack treatment comprising a combination of bitumen emulsion, aggregate and chopped glass fibre strands, polymer modified binders and warm mixes.

Plant and equipment

Fulton Hogan has a comprehensive fleet of asphalt pavement construction plant and equipment at its disposal. This includes more than 40 asphalt plants, five mobile asphalt plants and seven emulsion plants strategically located around New Zealand and Australia.

Asset management

Fulton Hogan is renowned as a leader in asset management. We focus on what is best for the asset and whole-of-life cost cycle planning while taking into consideration the dynamic needs of our customers. This includes the use of specialised software such as the Ground Penetrating Radar (GPR) by our highly skilled practitioners to identify current and future needs.

Watercutter

Developed and patented by Fulton Hogan, the Watercutter uses fine needles of ultra-high-pressure water to remove rubber build-up on runways without the mess or environmental problems caused by chemical removal.

R&D

Fulton Hogan operates facilities dedicated to researching binders and asphalt. They are internationally renowned and have been responsible for developing many unique products, intellectual property and testing gear.

Laboratories

Our six laboratories are International Accreditation New Zealand (IANZ) accredited to ISO 17025 standard, allowing Fulton Hogan to conduct regular testing, and ensure the quality of the raw materials and output from its manufacturing facilities. Fulton Hogan also operates portable laboratories which are set up with the mobile asphalt plants to ensure the asphalt products are produced to the requirements for runways.

Friction testing

With the ever increasing expectation and requirement that airport operators maintain runways in a condition that provides adequate levels of skid resistance, friction testing provides qualitative data that reassures both operators and third parties. Fulton Hogan's Griptest[™] capability has seen us undertake friction testing for many years across Australasia – with no airport too small or remote. All testing is performed to ICAO and CASA requirements to ensure customers are provided with the highest quality data.

Dunedin International Airport

Client: Dunedin International Airport Limited (DIAL)

Contract value: \$5.3M

Completed: 2013

This project involved a full upgrade to the Dunedin International Airport's 72,834m² runway. With an onsite mobile asphalt manufacturing plant and a team of 53, Fulton Hogan was serious about delivering the quality product our client was after. Our new 180 tonne/hour plant ensured asphalt mix consistency and quality. The crew used 11,000 tonnes of asphalt and carried out 25,000m² of shoulder bitumen enrichment. It was also the first time that echelon paving, the paving of multiple lanes at one time, was carried out in the country. The majority of work was performed between 11pm and 6am, allowing the runway to return to normal service every day. All work was completed ahead of schedule without a single delay to passengers. A combined total of 10,324 man hours was invested in the project and there were no lost time from injuries – a Zero Harm project.



Ports

Sulphur Point Container Terminal

Client: Port of Tauranga Limited

Contract value: \$20M

Completed: 2012

This project at New Zealand's largest port involved the construction of 28 hectares of pavement over dredged sand. The works were staged as reclamation was completed. Fulton Hogan prepared the subgrade, 154,000m³ of base course and laid over 60,000 tonnes of deep-lift asphalt manufactured in an onsite asphalt plant complete with quality testing facilities.

Gisborne Port

Client: Port Gisborne Ltd
Completed: 2014

Stage 1 of this project involved extensive rehabilitation to a 3,500m² site in front of the port's debarker plant. The new pavement had to withstand up to 100 tonne loadings induced by the log loaders. Due to the 24 hour nature of its operations, Fulton Hogan also had to provide an innovative solution that minimised disruption. A Bitumen Treated Basecourse (BTB) pavement was used followed by a high shear strength AC14 surfacing. Both of these products allowed for quick placement and completion. Thanks to Fulton Hogan's understanding of the customer's needs and our quality approach, we will be continuing to complete Stage 2 and 3 of this project.



Tailored solutions

Our experience in constructing container terminals spans more than two decades in part to our ability to offer a complete package from earthworks through to construction.

Experts in civil infrastructure

Fulton Hogan's technical expertise and capabilities have enabled us to deliver complex, high performing pavement solutions for many major port projects across New Zealand. Our ability to draw from other business areas allows us to provide customers with a complete package of surfacing construction services, ranging from the construction of heavy duty pavements and surfaces for container terminals, through to intermodal pavement solutions for trucking, rail pavement for rolling stock, and loading and shipping platforms and berths.

Value for money

Many customers are returning for our 'Value Engineering' approach – maximising the long-term utilisation of their assets at the lowest costs. Our teams work closely with the customer during the entire process, from design to final delivery, to ensure the optimum solution each and every time.

Port maintenance

We also offer 'whole-of-life' pavement management and maintenance services, to ensure facilities operate to their fullest potential across their life spans - from pavement repair and maintenance of port road furniture through to vegetation control - all tailored to the specific requirements of each customer.

High performance solutions

As a technical leader in the field, Fulton Hogan takes pride in developing innovative solutions that provide benefits, both financial and functional, for our customers. We are known for our innovative approach including materials R&D, pavement design and application of new techniques. We use highly specialised pavement products to deliver tough, durable pavements that provide excellent wear characteristics and long life.

Collaborative approach

Our focus at Fulton Hogan is understanding our customers' needs and delivering projects on time and on budget. We value open communication and work hard to build long-term relationships with our customers.

Customer focused

Fulton Hogan understands the unique loading and operational requirements of maximising output in resource ports and container facilities. We work closely with our customers during the design phase to ensure quality long-term solutions that maximise productivity in a cost-effective manner. This close collaboration continues throughout construction to guarantee minimal operational disruption and an optimal outcome. Our dedicated ports team work closely with local operations to ensure optimum service levels.

Industry-leading safety

Working safely is Fulton Hogan's number one priority. We understand that working in a live bulk handling port or container terminal environment places extraordinary demands on safety and security. Our project managers work intensely with their teams and subcontractors to ensure our excellent record is maintained. The company's 'Zero Harm' policy has ensured a safety performance that is second to none.

Here for the long haul

Fulton Hogan is predominantly owned by its employees and the Fulton and Hogan families. We value and foster open and honest, long-term relationships with our customers, employees, alliance partners, suppliers and subcontractors. This has translated into a high level of employee and subcontractor loyalty and stability, repeat customers and contract renewals.



 **Fulton Hogan**

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