MAIN CONSTRUCTION COMPANY : John Holland
PROJECT VALUE : $530 million

ON TRACK WITH JOHN HOLLAND

The $530M Melbourne Level Crossing Removals project involves the removal of four level crossings at Burke Road, North Road, McKinnon Road and Centre Road. Removing the crossings will allow more trains to run, improve safety and travel around Melbourne and will revitalise local communities with many areas benefiting from station rebuilds.

In May 2015, the Victorian Government announced a $524 million package to remove the level crossings at Burke Road in Glen Iris, Centre Road in Bentleigh, North Road in Ormond and McKinnon Road in McKinnon.

This project was awarded to John Holland in an Alliance with KBR, VicRoads, the Level Crossing Removal Authority, Metro Trains Melbourne and Public Transport Victoria.

The project forms part of the Victorian Government's $2.4 billion plan to remove at least 20 level crossings by 2018. There is a strategic longer-term plan to remove 50 level crossings by 2022.

The project will see the removal of four road/rail level crossings, the rail line lowered below Burke, North, McKinnon and Centre roads, and the Gardiner, Ormond, McKinnon and Bentleigh stations reconstructed. It also results in numerous improvements to road and public transport connections.

With the simultaneous removal of the North, McKinnon and Centre roads level crossings, the works required the biggest rail disruption in Melbourne since the City Loop was built in the 1980s – a rail shutdown of 37 days between Caulfield and Moorabbin on the Frankston Line.

"Around 1,000 workers on rotational shifts worked 24/7 for the full 37 days, with more than 750,000 man hours recorded and no major incidents," Alliance Manager, Stephen Litterick said.

"It was the first time three level crossings have been removed concurrently in Victoria. Such a scale had never been attempted before, with the excavation volume being almost four times the previous maximum," said Mr Litterick.

Mr Litterick added that constant innovation is required to successfully deliver the project. "Our approach is a blend between using a tried and tested 'kit of parts' and identifying new innovations which addressed particular conditions at each site."

An example of innovation on this project is the use of Giken piling rigs to install steel sheet piles which formed the retaining walls for the rail cuttings.

"The Giken machine uses an innovative 'press-in' method which reduces the levels of noise and vibration experienced near residential and adjoining properties. This method can be used in the very narrow space between the rail and property boundary to reduce rail disruption."

Up to 70 buses replaced trains on part of the Frankston rail line during the works, with more than 800,000 customers travelling on the replacement bus service.

As part of the occupation, more than one million items of communication were distributed. Weekly information sessions were held during the major works program for residents, traders and the community, and project staff were stationed at each of the bridge decks at set times to take questions from members of the public, keen to see the historical works for themselves.

To support local businesses during the works, an Open for Business campaign was rolled out. The campaign included promoting the open for business message via a dedicated website, brochures/letterbox drops, social media, and press and radio advertising. Open for Business advocates were also strategically located at train replacement bus stops to remind commuters that the local shopping strips were still trading, and to spruik offers from local businesses. The project also offered professional marketing workshops and business mentoring services to traders requiring additional support.

John Holland has recently been awarded a $324 million contract to deliver an early works package with Melbourne Metro, excavating massive shafts in Swanston Street for a tunnel and five new underground stations.

It has also been awarded contracts for the Sydney Metro Northwest project as part of a consortium. This includes the construction of twin 15km tunnels (the longest rail tunnels ever built in Australia) and excavation and civil works for five new stations and two service facilities.

For more information contact John Holland, Level 5, 380 St. Kilda Road, Melbourne VIC 3004, phone 03 8698 9400, email external.affairs@jhg.com.au, website www.johnholland.com.au

Below Jelmac provided directional drilling services for Melbourne Levels Crossing Removals

Jelmac Directional Drilling has a reputation for going where other companies won't when it comes to trickier jobs – and their work on the Melbourne Level Crossing Removals project was no exception. Where other drilling companies were concerned about the possibility of getting stuck with a large diameter bore in the sandy, wet ground, Jelmac Directional Drilling tackled the job head on.

"We were involved with installing the cable services route," explains Jelmac Directional Drilling Managing Director, Brad Boote. "Where the ground was unable to be open cut – for example on roads or for difficult areas to get to, we directionally drilled."

Brad says the lengths and the depths of drilling required on the project were varied. "We did a couple around the 8m or 9m mark and a couple up towards 11m deep. We actually completed some quite large bores for the equipment we had. One bore in particular was 230m and we pulled three 180mm conduits through."

"It is our experience, really, that got all that done," he adds.

Starting work on site in late October last year, Jelmac Directional Drilling finished in early to mid-February. Up to six of Jelmac's guys worked on the job, with three on site most of the time.

"For us the biggest challenge was the interference of the rail network with our tracking equipment," Brad says. "That's what challenged us at depths upwards of 6m or 7m. It really tested us. We had to purchase a larger range sonde to combat that, which allowed us more depth."

As its name suggests, directional drilling is the company's main area of expertise, with Brad and the team skilled in installing varying conduits under a range of landscapes. This includes environmental areas, roadways, footpaths, driveways, sewerage and drainage systems, and water courses and river crossings.

The company also has two 8,000L vacuum trucks, for removal of non-solid, non-biological liquids and mud, including during the directional drilling process.

The impressive track record of the company on big projects, combined with the reputation of its Managing Director, has seen Jelmac Directional Drilling become a key player in the directional drilling industry.

Brad was introduced to directional drilling at 16 years old when he was employed by his father Bill at All States Directional Drilling Pty Ltd in 1996.

After working his way up to crew leader, he was involved in the installation of major optic fibre lines and extensive pipe installation along the east coast of Australia. Brad has also operated directional drills throughout the country and in parts of the United Kingdom and Ireland.

Central to the services Jelmac Directional Drilling delivers to its valued clients, is the ongoing skills training of its staff – all hold the industry certifications as per site and industry requirements.

The experience and ability of Jelmac Directional Drilling to get the job done has seen it regularly contracted to work with major clients across the construction industry. This includes working on other level crossing removal projects in Melbourne.

The company started works on the Bayswater Level Crossing Removal project in June. This has seen Jelmac complete lengthy bores of 130m under Scoresby Road and 220m under Bungalook Creek (a highly sensitive environmental area).

Again pulling through multiple conduits in the one bore. This included six 180mm power conduits which required them to open up a 700mm in diameter bore hole, again, a very impressive achievement for the size of their machinery.

Jelmac Directional Drilling is also in the early stages of negotiation for directional drilling works on the Caulfield to Dandenong Level Crossing Removals project.

JELMAC DIRECTIONAL DRILLING

For more information contact Jelmac Directional Drilling Pty Ltd, 2 Jeanette Maree Court, Kilsyth VIC 3137, mobile Brad 0417 351 908, email info@jelmac.com.au, website www.jelmac.com.au

Phone: 03 9242 1500
Address: Level 25, 570 Bourke Street, Melbourne VIC 3000
Website: www.benichu.com.au
Fax: 03 9242 1599

As a major supplier of sheet piles to infrastructure projects across Australia and throughout Oceania Marubeni-Itochu Steel Oceania (MISO) is a trusted provider of quality steel solutions. With an ability to deliver high-quality steel at a competitive price for its clients, MISO was contracted by John Holland Group (JHG) to provide cold-formed sheet piles for the Melbourne Level Crossing Removals project.

"As one of Australia's premier contractors working on essential infrastructure projects, particularly in Victoria, JHG have more than demonstrated their capabilities as a contractor of choice," says MISO's Business Development Manager.

"MISO is pleased to be associated with JHG and the Melbourne Level Crossing Removals project. As one of the world's largest steel trading companies with access to multiple steel mills and products, MISO were able to source over 130 tonnes of cold-formed sheet piles from its world class associates."

"The sheet piles were used as temporary retaining structures and were delivered to suit exact requirements and ahead of schedule to the satisfaction of JHG."

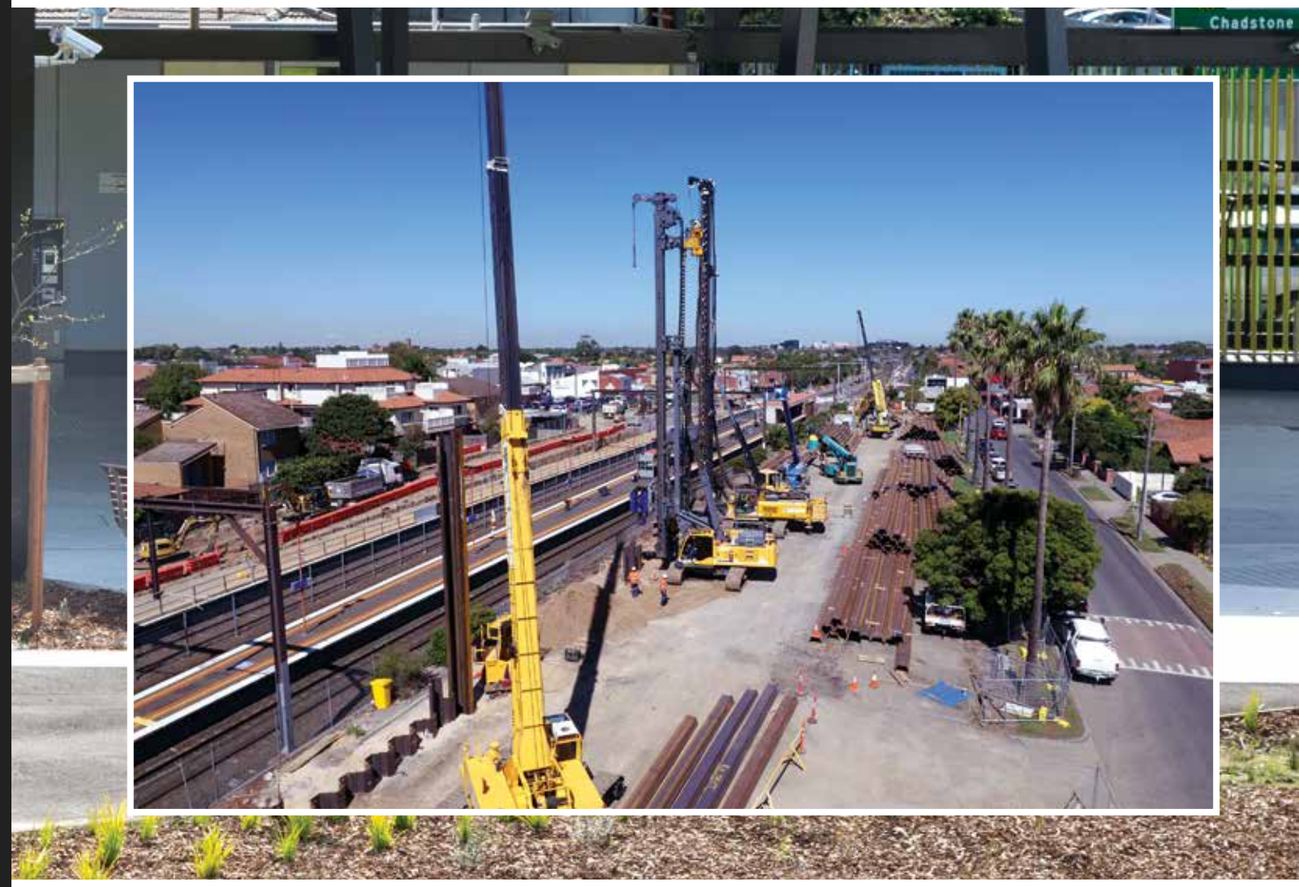
As a 100% owned subsidiary company in Australia, the group has offices strategically located in Melbourne, Sydney, Adelaide and Auckland. This ensures the group is able to effectively deal with the growing demands of the Oceania steel market.

The company's sheet pile product range covers both traditional forms and the most recent technically advanced 'Hat' type sheet piles.

Other products that MISO can supply include pipe sheet piles, pipe piles, high modulus piling systems, tie rods and accessories. This makes the company a complete piling materials supplier – available either from stock or new mill rollings.

MISO's other capabilities include rail and accessories, large structural sections 'Hyper beam', extra-large and standard hollow sections, special profiles and specialised civil engineering products.

Below Austral Construction provided sheet pile installation for the Melbourne Level Crossing Removal Project.



Since it was founded in 1979, Austral Construction has evolved to become a leading national contractor with capabilities in piling, marine construction, civil construction and mining infrastructure. With wide-ranging construction capabilities, Austral was a natural fit to work on Victoria's largest dedicated Level Crossing Removal Project, completing sheet pile installation for the project's retaining wall structures.

Around 30 of Austral's 100+ employees worked on the Melbourne Level Crossing Removal Project, which also marked the first time Resonance Technology has been used in Australia.

"Resonance Vibration is a very new technology that utilises ultra-high frequency vibration for pile installation, minimising the potential for damage to sensitive adjacent structures and footings. The technology hasn't been used in the Southern Hemisphere before, and was integral in achieving the low ground vibration targets demanded by the project," explains Austral Construction Managing Director, Craig Allen.

He adds that the use of the Resonance Technology on the project was a success. "We will definitely use this technology again. The feedback we've had from the industry indicates a very real need for vibration sensitive alternatives to conventional piling methods."

Guided by its six key core values – leadership, safety, environment and sustainability, integrity, innovation and continuous improvement, Austral continues to work on multi-million-dollar projects throughout Australia.

The company's piling and marine projects range from sub-$1 million piling subcontracts to $60 million marine infrastructure projects, whilst mining infrastructure projects include large-scale maintenance upgrades and oil and gas expansion developments. Additionally, Austral's civil infrastructure arm has a long history of delivering quality projects for clients nationally.

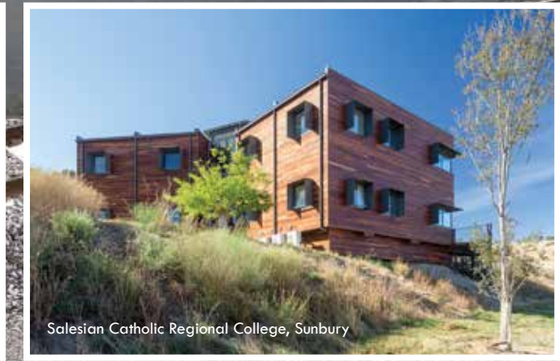
Craig adds there were a number of good outcomes for Austral in working on the Level Crossing Removal Project. "The main benefit to come out of this project was being able to realise our innovation objective by using Resonance Technology," he says. "To contribute towards such a significant piece of Victorian Infrastructure was also a highlight."

For more information contact Austral Construction, 126 Hallam Valley Road Dandenong, VIC 3175, phone 03 9797 2700, email ac@australconstruction.com.au, website www.australconstruction.com.au

Below Prebuilt have prefabricated modular buildings for the Melbourne Level Crossing Removal Project and other various commercial projects.

Below Nilsen provided light and power distribution for the Melbourne Level Crossing Removals.


Gardiner Station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Gardiner Station

Prefabricated modular building has received significant exposure from the successes achieved by Prebuilt Commercial, in the delivery of seven new railway stations across Melbourne as part of the Melbourne Level Crossing Removal Project. Prebuilt is a market leader in modular buildings and offers clients creative and innovative solutions to complex commercial construction challenges.

The Level Crossing Removal Project is currently Victoria's largest infrastructure project intending to remove 50 dangerous level crossings over the next eight years, with 20 to be completed by 2018. Prebuilt was responsible for project managing and constructing the new station buildings for Bentleigh, McKinnon, Ormond, Gardiner, St Alban's, Ginifer and Heatherdale.

Delivering the project within a limited timeframe is one of the projects major challenges. Prebuilt Managing Director, Rob Colquhoun, said that the Level Crossing Removal Authority needed to roll out this extensive project with minimal disruption to commuters and the general public. "Prebuilt's ability to deliver within an extremely tight time-frame enabled this objective to be achieved. The off site construction of the buildings proceeded at our Kilsyth factory while on site works including the excavation of 250,000 metric tonnes of soil to lower the rail corridor were undertaken. Over the span of one week, Prebuilt had a window to deliver four train stations to four separate sites across Melbourne."

A highlight for Prebuilt Commercial was the amount of positive feedback it received. Business Development Manager for Prebuilt, Jason Sceberras, said that the Premier, the Minister for Public Transport, the Authority and the general public were all impressed by the streamlined and time-efficient process of off site construction. "A great amount of awareness for modular building has come out of this project, modular building techniques have allowed architecturally designed buildings to be built off site and delivered in a cost and time effective manner."

Prebuilt Commercial, in addition to delivering the above train stations, are currently working on the Wesley College boarding house development and several display suites for Lendlease, Mirvac and Stockland as well as numerous high end residential homes throughout Australia.

For more information contact Prebuilt Pty Ltd, 33 Garden Street, Kilsyth VIC 3137, phone 03 9761 5544, email info@prebuilt.com.au, website www.prebuilt.com.au

Celebrating 100 years in business, the family-owned Nilsen shows no signs of slowing down when it comes to providing its range of electrical services across Australia. This includes working on some of the country's most renowned projects – the Melbourne Level Crossing Removals being just one, with Nilsen contracted to complete electrical and communication works at Ormond Railway Station.

"Nilsen's scope of works at the railway station consisted of light, power and emergency exit distribution for the concourse, platforms and carpark areas," explains Nilsen Project Manager, Jarrod Malesevich. "This included power distribution to a sump pump station that contained multiple 30KW pumps for stormwater dispersion. The work also involved power distribution for passenger lifts. Both these services are backed up by a 220 KVA Generator with automatic switching if the railway station were to lose mains power."

Another part of the works package for Nilsen was the OCS (Operational Control Systems). "This scope included the CCTV surveillance, security and access control systems, public address, passenger information and IT communication systems," said Jarrod.

Given the tight schedule of works, the compressed program was one of the biggest challenges faced by Nilsen on the Ormond Railway Station.

"When Nilsen started on site on 11th of July, we had a live substation. That was the extent of works that had been undertaken," says Jarrod. "Our critical path was to have power on to the pump station and all critical containment complete by 30th July so the track could be operational.

"After this milestone was completed we had a further 27 days to fit out, commission and handover the fully operational railway station, all while working around live rail."

Nilsen's ability to complete electrical and communication works at Ormond Railway Station within such a tight timeframe is no doubt another success story in the long and rich history of the company.

For more information contact Nilsen (VIC) Pty Ltd, 43 Sheehan Road, Heidelberg West VIC 3081, phone 03 9450 1300, email NilsenVic@nilsen.com.au, website www.nilsen.com.au

Below Maguire Shotcrete provided the shotcrete for Melbourne Level Crossing Removals.

Below RABS Group completed the asphalting for station platforms, carparks and roadways

As custom concrete specialists, Maguire Shotcrete has shown it is capable of taking on any sized project – from a domestic basement, large commercial underground carpark, through to spillways on some of Australia's largest reservoirs. The company's latest works saw it based on the North Road section for the Melbourne Level Crossing Removals project, working day and night.

"We were there for 10 or 11 days of the occupation and had two machines there around the clock. We had two crew on day shift and two on night shift with two people in each crew," says Maguire Shotcrete's Brian Maguire.

He adds that the job was a fairly straight forward one. "It was a really normal sort of job – it was one of those jobs that went very well. It was done with shotcrete and steel fibre in a lot of areas, rather than steel reinforcement. Basically they excavated the ground to various depths and we would shotcrete. Essentially, it was dig, shotcrete, dig, shotcrete until they reached the bottom."

Brian adds that working around the clock was a challenge – both for staff and machine wear. "One of the things we had to be aware of was fatigue management. To help with this, we put staff who lived more than half an hour away from into accommodation. Fatigue management and machine management are the two biggest challenges when going into an occupation," Brian says.

"We made sure we had freshly serviced machinery with 20 to 30 hours since their last service. We also replaced all the wear parts – so we knew we had good machinery for the job."

A lot of Maguire Shotcrete's work is in multi-level commercial basements, however, as seen by the Melbourne Level Crossing Removals project, the company works on a range of developments.

Maguire Shotcrete is also working for Geotech on the St Albans Level Crossing Removal and is pricing some works for other level crossing removal projects. This is the third major occupation that Maguire Shotcrete has been involved in since their last service. Other major projects they've worked on include Mitcham and Burke Road.

For more information contact Maguire Shotcrete Pty Ltd, PO Box 253, Inverleigh VIC 3321, (Brian) mobile 0417 304 862, (Daniel) mobile 0437 680 758, email brisus@bigpond.com.au, website www.magyreshotcrete.com.au

While RABS Group has been around for six years, the company itself has more than 35 years of experience in the road construction industry, starting out as RABS Sweeping Services. Specialising in asphalt paving and road profiling, RABS Group now has 40 employees and is quickly becoming one of the leading independent pavement rehabilitation companies in Melbourne.

Working on the Melbourne Level Crossing Removals project RABS Group completed the asphalting for station platforms, carparks and roadways. "We completed three of the station platforms. This was quite a logistical operation considering that for two of the platforms the asphalt equipment and the asphalt itself had to be craned onto the platform," says RABS Group's Justin Strunk.

In order to lift the asphalt machinery on to the platform a 200-tonne crane was required.

"It was a lot of coordination between ourselves and John Holland," Justin adds. "Additionally, one of the station platforms had to be completed in the 37 day occupation. It was quite challenging because it was such a big program of works and we had to make sure we were flexible with our program."

Safety was always a priority for the company, with all RABS Group staff on the project completing the job with no incidents. "From our point of view we didn't have one safety issue, no lost time injuries or any medical treatment injuries or first aid injuries," Justin says.

RABS Group has built up a solid client base, supplying its asphalt and road profiling services to local government, state authorities and contractors.

Using its start-of-the-art fleet of asphalt paving/profiling and compaction equipment, RABS Group's services include asphalt re-sheeting and paving, road profiling and carparks, and civil construction and pavement sweeping.

Among its many projects, RABS Group continues to successfully be awarded a number of annual asphalt re-sheet contracts with local government and is currently working on four council contracts.

For more information contact Rabs Group, 71 East Derrimut Crescent, Derrimut VIC 3023, phone 03 8353 2285, email admin@rabsgroup.com.au, website www.rabsgroup.com.au

Below J Steel Australasia is the largest stockist of steel and vinyl sheet piles in Australia.

Below Victoria Asphalt laid the asphalt for the Melbourne Level Crossing Removals.

As a leading supplier of steel products to the construction and engineering industries in Australia, J Steel Australasia has a reputation for quality and value for money.

Contracted to the Melbourne Level Crossing Removals project, J Steel supplied sheet piles for the permanent retaining walls for the project's excavation. "Sheet piles were the ideal solution for a number of reasons," explains J Steel's Phil McPherson.

"Once installed, they act as a permanent wall with little to no finishing required, this meant that the program for the excavation and laying of the track could be reduced. With Giken silent piling technologies, sheet piling could be installed in confined working areas where conventional concrete piling equipment could not operate."

Phil adds that J Steel are now the agent for Giken silent piling equipment. "This equipment was used to install sheet pile around the clock without any noise or vibration impact on nearby residents. J Steel have these machines available for hire," he says.

Phil says a change in the installation equipment required a late change to the pile sections after their procurement was well underway.

"However J Steel were able to work with ArcelorMittal to accommodate the change and still meet the program without any additional costs."

In addition to providing sheet piles for the Melbourne Level Crossing Removals project, J Steel also provided design advice and services for the project in support of the head contractor's engineers.

The company's range of services are drawn from its extensive knowledge and experience working on significant projects from all over the world.

Additionally, through its world-wide partnerships with manufacturers, suppliers and fabricators, J Steel ensures it can provide the highest quality products from across the globe.

J Steel also supplies rail products from ArcelorMittal and are currently supplying rail for the Northwest Rail project in Sydney, and the second stage of the Gold Coast light rail project.

For more information contact J Steel Australasia Pty Ltd, Level 23, 207 Kent Street, Sydney NSW 2000, phone 02 8198 9500, email contact@jsteel.com, website www.jsteel.com.au

From its formation a touch over 30 years ago, Victoria Asphalt has since become a leading subcontractor for major rail corporations, local government organisations and large-scale projects.

The company's latest works can be seen on the Melbourne Level Crossing Removals project, where it laid asphalt for station platforms and pathways. Victoria Asphalt's Vincent Crivelli says working on the project produced many positives for the company.

"It is great to be part of the Level Crossing Removals project and to have our name associated with it," he said. "It is a pretty challenging project working logistically with all the other subcontractors on site. This required organisation with other subcontractors within a timeframe."

Formed in 1985 by Claudio Centofanti, Victoria Asphalt quickly grew, winning tenders for road and footpath maintenance for local government. The past 10 years has seen the company grow even larger, carrying out asphalt works for train level crossings and station platforms. The company also continues to work on numerous contracts with local councils for asphalt repairs and maintenance of footpaths and roads.

Victoria Asphalt's success can be attributed to its dedicated management team and its employees – all of whom are qualified and compliant with rail works for major rail industry bodies. "We are committed to safety with the foremost level of safety practices, all our operations are carried out with the highest degree of workmanship, with consideration for the environment."

Victoria Asphalt is working on a number of other projects, including work for Metro Trains on asphalt rail maintenance. This includes station platforms, level crossings, pedestrian crossings and drive pathways. It's also working with Coleman Rail on tram track asphalt maintenance works at various locations around Melbourne, the Preston tram depot workshop reconstruction and asphalt reconstruction works.

Additionally, Victoria Asphalt is working on the Furlong Main Level Crossing Removal project at Blackburn Road and Heatherdale Road in Melbourne's Blackburn and Ringwood areas, and the Glen Iris stormwater drainage improvement project.

For more information contact Victoria Asphalt, 62 Chifley Drive, Preston VIC 3072, (Ivan Fong) mobile 0407 503 385, (Davide Gazzola) mobile 0499 777 894, email info@victoriaasphalt.com.au