

# ON THE ROAD AGAIN

DEVELOPER : Transport for NSW  
MAIN CONSTRUCTION COMPANY : Daracon Group  
CONSTRUCTION VALUE : \$137 million



Scone Bypass involved construction of a 5km two-lane bypass which included three new bridges, intersections, associated stormwater drainage, street lights, and road signage. The bypass removes approximately 500 heavy vehicles per day from Kelly Street, and improves road safety and travel times for freight.

After extensive community consultation, planning and development since 2011, the construction of the Scone Bypass was funded by federal and state governments to address the Scone's rising road and rail volumes, as well as ongoing safety issues.

"Around 8,000 vehicles were using the crossing every day including 1,200 heavy vehicles," said Mark Cure, Project Manager with Transport for NSW. "There was also a poor crash history on the 4km section of the New England Highway in the study area, with 29 crashes in the five years to June 2014, including one fatality."

The New England Highway is part of the inland Sydney to Brisbane National Land Transport Network and the primary route connecting the Upper Hunter with Maitland and Newcastle. The bypass is focused on supporting freight and long distance travel and will remove around 500 heavy vehicles per day from the main thoroughfare of Kelly Street, improving road and resident safety and travel times.

Although a relatively short distance, the bypass includes three bridges, spanning a total of 705m: the Parsons Gully Bridges which runs over the Kingdon Ponds floodplain; the Rail Bridge which crosses the Great Northern Railway; and the Kelly Street Bridge.

"Firstly, we had to ensure the town remained accessible, so we have three intersections providing access to the south, middle and north of Scone," explained Mark. "Secondly, the project is almost entirely located within a floodplain. Hence, there was a significant amount of flood planning work carried out. We also had poor geotechnical conditions through Parsons Gully, meaning piles to the 540m long bridge through the gully are steel cased to support the sides and up to 35m deep through multiple layers of rock and coal seams."

After the project was approved in 2016, the main construction was awarded to Daracon Group in early 2018. "Main construction commenced in July 2018 and was completed at the end of April 2020," said Mark. "It took approximately 22 months and was finished six months ahead of programme."



Despite its relatively short distance, more than 170 bridge girders were required for the project, over 10,000m<sup>3</sup> of concrete was poured to build the bridges, and 23,000m<sup>3</sup> of specialised road base was placed.

A huge amount of road construction material was required during the 22 months, including over 250,000m<sup>3</sup> of fill material which was sourced from three different locations to reduce traffic impact on local streets, with truck movements peaking at 100 per day.

Bridge construction was planned around rail shutdowns, with Transport for NSW, Daracon and the ARTC working together to achieve milestones for construction of the 3-span bridge over the Great Northern Railway and lifting 24 75-tonne bulb-T bridge girders into place.

With a project this size, regular community meetings were held to update residents on how each stage would affect their movements in the short term. "Reducing impact to local residents with a significant



construction project was a key focus for us," said Mark. "The Scone community embraced the construction and Transport for NSW would like to thank them for their patience throughout."

The project has received positive acknowledgement from the community and local government for the benefit it will have on the town, as well as the broader logistical improvement for freight along the New England Highway.

"We're proud of the good communication with the local community and the fact we reported no environmental or safety incidents throughout," Mark said. "Through a great collaboration between Transport for NSW and our delivery partner Daracon, the result has been a high quality and finish of road and bridge construction, not to mention the bypass is a great scenic drive showcasing Scone as a destination."

For more information contact Transport for NSW, phone 1800 870 751, website [www.rms.work/SconeBypass](http://www.rms.work/SconeBypass)

# SOLID FOUNDATIONS

Steel Fixing are specialist steel reinforcement contractors providing reinforcement fixing services in civil, mining and commercial sectors of the construction industry throughout regional and metropolitan regions of eastern Australia.

BE Steel Fixing was awarded the steel reinforcement fixing works on the Scone Bypass project, with the works including bridges, abutments, headstocks and deck slabs. By completion of the Contract more than 1,350 tonnes of reinforcement steel were fixed. The works under the Subcontract were completed on schedule within 11 months with a steelfixing crew of nine staff.

48 BE Steel Fixing have worked on numerous projects similar to the Scone Bypass, however the geographical location added a unique challenge to ensure the highest standards were met.



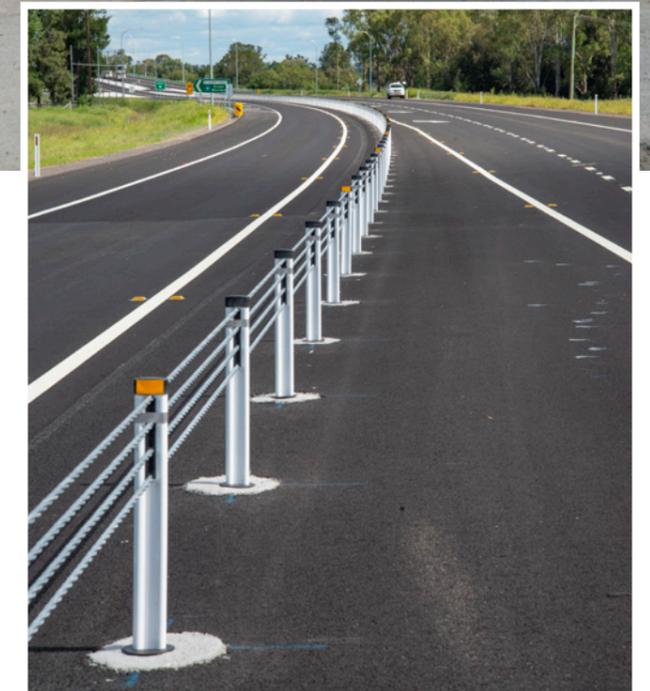
Mobilisation of the crew was paced to meet with project programmes. This allowed BE Steel Fixing to commence works with a smaller crew, before ramping up labour later in the project. Weather conditions throughout the majority of the construction period ensured we were able to stay on target with Daracon's construction programme.

BE Steel Fixing works on numerous government infrastructure projects throughout Queensland and New South Wales, and relish the challenges associated with each individual development due to the confidence in their depth of expertise and knowledge, as well as their capabilities.

"As BE Steel Fixing has grown, we have identified the additional services that are often critical to ensuring the steel fixing works are carried out efficiently for our clients, and we are pleased to offer our clients the opportunity to take advantage to these services which include crane hire, prefabrication offsite services and welding services as required," said Stephen Boland (BE Steel Fixing Operations Manager). "The BE Steel Fixing team prides themselves on providing quality service and systems to Australia's civil, mining and commercial contractors, with the focus continuing to aim to meet project targets, being on budget on all projects, and maintaining full project and industry compliance with a focus on quality, environmental and safety requirements."

BE Steel Fixing's goal is to reinforce Australian infrastructure while never compromising on service and quality.

For more information contact BE Steel Fixing Pty Ltd, phone 07 3286 7321, email [info@besteelfixing.com.au](mailto:info@besteelfixing.com.au), website [www.besteelfixing.com.au](http://www.besteelfixing.com.au)



# KEEPING YOU SAFE

With over 40 years of combined experience installing, maintaining and repairing guardrail systems and numerous projects under their belt, Guardrail Systems were the go-to company to install the guardrails along the new Scone Bypass.

"We began work on the project just before Christmas 2019, and completed the runs in April," said Guardrail Systems' Director, Leigh Brenton. "Our team of five, installed about 1,500m of wire rope and 4,000m of guard rail."

Approached by Daracon to complete the work, it was Guardrail Systems' reputation for reliability and quality that secured their involvement.

Although a relatively short distance, the bypass presented a challenge in that there is no median strip down the centre of the road. The road was built as one and then divided, making the surface harder to drill. Guardrail brought in a heavier excavator to tackle the drilling.

"It was also on the finished road, so we had to keep the dirt from the whole of the finished surface," explained Leigh.

"We are hands on throughout a project, they're dealing with me and dealing with Tim, our Works Manager, who's onsite all the time. You're not dealing with someone who's distant, or not a manager," Leigh said. "We pride ourselves in the quality of our work."

The family owned company has completed projects for Transport for NSW, local councils, mine sites and major contractors such as Daracon and their previous work includes the Pacific Highway upgrades around Bulahdelah, Coffs Harbour and Dubbo, the Oxley and Golden Highways and guardrail installation at Mt Pleasant mine.

"It's wherever the road takes us," said Leigh.

For more information contact Guardrail Systems, 112 Hubbards Road, Mayers Flat NSW 2423, phone 0419 422 967, email [leigh@guardrailsystems.com.au](mailto:leigh@guardrailsystems.com.au), website [www.guardrailsystems.com.au](http://www.guardrailsystems.com.au)

## LIFE IN THE FAST LANE

Newcastle Hi-Tensile Bolt Company (NHTB) is a premier fastener specialist located in Newcastle, and is the preferred supplier to hundreds of companies spanning the construction, manufacturing, mining, heavy engineering, automotive and maritime industries.

Founded in the 1960s, NHTB is an Australian owned and operated family business.

The company supplied a range of required materials to the Scone Bypass, utilising their stock of 50,000 products, which they are able to dispatch quickly to site, due their strong commitment to stock holding. They also offer a manufacturing fastener service to perfectly suit customer requirements.

The team of 22 at NHTB strive to exceed expectations in offering helpful service and advice from their trained professionals to businesses throughout Australia, along with practical solutions to solve any problems.

With more than 50 years experience, they offer the best fastening and bolt knowledge, range, stock and service for small to large projects.

*For more information contact Newcastle Hi-Tensile Bolt Company, 3 Gipps Street, Carrington NSW 2294, phone 02 4968 9101, fax 02 4968 9110, website [www.nhtb.com.au](http://www.nhtb.com.au)*



## Rosebrook SAND & GRAVEL

Rosebrook Sand and Gravel have been proud suppliers of various quarry materials to the Daracon Group during construction of the Scone Bypass project.

Rosebrook Sand and Gravel specialise in the manufacture, supply and delivery of quarry products to the mining, civil, concrete, construction and landscape industries.

The company also offers contract material processing solutions for customer sites. Rosebrook Sand and Gravel's professional team can assist in all aspects of project management including material design, specification and time critical import schedules.

The company's quarries are conveniently located in the Hunter Valley region of New South Wales with the capability to deliver across the state.

*For more information contact Rosebrook Sand and Gravel, phone 02 4015 0990, email [sales@teamrsg.com.au](mailto:sales@teamrsg.com.au), website [www.teamrsg.com.au](http://www.teamrsg.com.au)*



## BRIDGING THE GAP

With a dedication to projects of any size, Trans Vent tackles jobs as diverse as air conditioning vents for offices, to industrial projects such as the Scone Bypass. Trans Vent were approached to supply bespoke steel tubing for the installation of pier liners as well as column formers to support the bridge work for the bypass.

"Daracon requested the tubing was made to order," said Trans Vent Sales Manager, Daniel Cronshaw. "We made around 35 column formers in total, 1100mm, 1300mm and 1500mm diameter column formers of varying lengths. They were big tubes; a person could almost stand up in one." Once the column formers were installed, secured and filled, they were then stripped to leave the remaining concrete support column.

With supply beginning in March 2019 and finishing up within a 12 month timeframe, the team manufactured everything at their Penrith office and delivered it to the bypass construction site using their own fleet of trucks. "We have a good relationship with Daracon, we've worked with them many times before. Prior to making the column formers and pier liners, we talked about what they needed; it was all very straight forward for us as we've been doing this for over 40 years," Daniel said.

Using Australian galvanised steel, Trans Vent has the ability to make tubes from 40mm up to 2400mm in diameter locally with the ability to make up to 7600mm diameter onsite, with the length only limited to the transport used to move it into place. Aside from concrete formwork solutions, they can manufacture spiral ducting and culvert

pipe, supply fittings and accessories, as well as offering sheet metal fabrication services.

Located in both New South Wales and Queensland, and with a sister company operating a mobile mill, Trans Vent is well equipped to undertake a wide range of projects.

Trans Vent supplies tubing for air movement at mining sites, air conditioning in shopping centres and schools, plus piping for projects such as the Gold Coast University Hospital, Sydney Airport and the Oxley Water Treatment Plant; as well as numerous civil jobs for bridges and roads. "At the moment, we have an order for the Barangaroo project. It's a huge job – there's over 1,000 lineal metres of void," Daniel said.

*For more information contact Trans Vent Spiral Tubing, 38 Peachtree Road, Penrith NSW 2750, phone 02 4731 6100, fax 02 4732 1604, website [www.transvent.com](http://www.transvent.com)*

