

UNDERWATER WORK BRINGS FLOOD RELIEF FOR SOUTH GIPPSLAND COMMUTERS

The \$30 million Cox Bridge Upgrade on the South Gippsland Highway at Sale required Cut & Fill to construct a new 3 kilometre elevated road platform and two bridges almost entirely on swamp and flood-plain.

PRINCIPAL CONTRACTOR : Cut & Fill Pty Ltd
PROJECT END VALUE : \$30 Million
COMPLETION : Jan 2013
SURVEYOR : Austec Surveying



Cut & Fill Pty Ltd have a depth of experience in the project management and construction of civil infrastructure works which deliver substantial improvements to the end user.

Their latest project is no different, with the Cox's Bridge Upgrade on the South Gippsland Highway - at Sale, shaping up as a new benchmark in road and bridge engineering.

Contracting to Vic Roads, Cut & Fill enthusiastically took on the technical and engineering challenges of a scope of works which required them to construct 3 kilometres of elevated road pavements and two bridges almost entirely on and over swamp and flood-plains. Even for one of Australia's largest construction companies, Cut & Fill were faced with multiple challenges.

The \$30 million project became necessary due to the existing alignment being susceptible to flooding, resulting in local motorists having to take a 60 kilometre detour in their commute between the towns of Longford and Sale just to get to and from work.

The frequency of the flooding was having a major impact on long-haul road freight costs through the area. Local industries found the impact on productivity difficult to maintain and the local workforce and community were fed up and very disgruntled with the continual and annual delays caused by the flooding.

"The single and most significant issue the project team faced," says Cut & Fill Project Manager, David Strelec, "was the fact that the site is almost entirely below the water table." A fact that proved a major challenge for us as the site flooded three times during the three year construction period.

"The worst site flood was the third one, in June of last year," Strelec said. "We were part way through lifting the 32m beams into place, when we were confronted with about a metre of floodwater across the entire site. We had a 200 tonne capacity crawler crane that had to be moved a kilometre to the end of the project and then we couldn't do anything except wait for 2 weeks."

The frustration of idle cranes and related downtime costs served to underline the local urgency to complete this Vic Roads project and gave Cut & Fill first hand experience of just how costly these local conditions have been for the region.

The engineering statistics on this project are mind-boggling. The new Cox's Bridge includes 30 spans (22 max. spans) with an overall length of 450 metres long. Where as The Thomson River Bridge includes 35 spans (32m max span) with an overall length of 670 metres long, and was constructed entirely in swamp.

The real engineering magic happens underneath the concrete beams, and below the waterline. Each span requires two 16 tonne crossheads that were pre-cast, then craned and propped using an 80 tonne crane. The piers and pile cap were cast on site and rest on pre-cast concrete foundation piles that had earlier been driven into the swamp-bed, all work being completed under the water table and flood conditions.

Once the above-and-below-waterline support was in place, the 58 tonne concrete beams were hauled from the pre-cast yard (300 kilometres away in Kilmore), and then lifted into place at night. All this has been achieved while working around the logistics of not just

the frequent minor and major flood interruptions but also working in the vicinity of relocated utilities (HV electricity and high pressure gas transmission line).

While most of the numbers on this project are large, the entire on-site building task was completed by a workforce totalling a mere 30 construction personnel.

This three year construction represents stage 3 in the upgrade of South Gippsland Highway, and will result in a truly 'A' standard connection between Longford and Sale, minimising sharp bends, higher driver safety and far less propensity to flood.

The South Gippsland Highway upgrade is scheduled to be completed in January and opened by around February 2013.

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OUTSTANDING FIRST TIME, EVERY TIME

It's the behind the scenes companies like Allied Bearings and Industrial, that make the wheels turn on any project.

When considering a large project it's easy to get caught up in the design firms, construction companies and organisations that fund them. But what about those behind the scenes companies that make everything function like clockwork?

When there's a big amount of money on the line and a lot of stakeholders in play, you can't afford to have any downtime on the job, which is why it's important that all of your contractors have equipment that works first time, every time. Allied Bearings and Industrial were commissioned by the Directors at Cut and Fill to provide consultation across the entire operation in terms of equipment maintenance and scheduling, particularly where trucks and larger machines were concerned.

Rohan Lay, General Manager at Allied Bearings and Industrial, told us the project was a big undertaking, but was always within the company's capabilities. "These trucks and machines were operating extended hours, as there was over 3000 metres of road to be built," Mr Lay said. "It was absolutely vital that regular services and inspections of all moving parts across the entire inventory were undertaken to keep on schedule and on budget. At the end of the day, time is money. Particularly when dealing with a project as big as this one."

By working from their multi-site operation Allied Bearings and Industrial are able to work with not just commercial customers but

retail customers as well. "It's important to offer a wide enough product range that everyone is kept happy," Mr Lay said. "Backed up with expert after sales service, you really can't go wrong."

The combination of small business service and large business access to parts has led to Allied Bearings and Industrial working with some prominent private enterprise construction companies, ensuring they really do have all the knowledge required to take on any bearing, hose or tool related job.

For more information contact Allied Bearings and Industrial, 302 York Street Sale VIC 3850 Australia, phone 03 5144 5633, website: www.abindustrial.com.au



THE COMPLETE PACKAGE IN TRAINING

Safety was of paramount concern in the South Gippsland Highway Upgrade and Australian Pacific Training Solutions took care of it.

When it comes to construction sites, safety is of absolutely paramount importance. Not only will you have regulators on you as fast as lightning if you're operating unsafely, but you risk the lives of your employees, contractors and the general public surrounding the project.

Cut and Fill knew this going into the Gippsland Highway upgrade, so they engaged the services of Australian Pacific Training Solutions to design a first aid course for all employees, and then train them in it.

Joanne Smith, Managing Director of Australian Pacific Training Solutions, said that corporate training for groups such as those working on the Gippsland Highway project is not uncommon.

"We designed a course that would train staff for any obstacles that may have been specific to that work environment," Ms Smith said. "Every work environment is different, and every job should be assessed prior to the delivery of the training to ensure it matches exactly to what is required."

Australian Pacific Training Solutions are also licensed agents for three different types of defibrillators, as well as everything you could ever need in terms of first aid. "We're happy to deliver a full set of first aid gear and follow up with regular services to make sure everything is stocked and functioning as it should," Ms Smith said.

Not only do Australian Pacific Training Solutions cater for first aid requirements, but they also offer training in OH&S, defibrillators, oxygen resuscitation and manual handling techniques.

"We're currently developing a complete package that trains staff in everything they need to know," Ms Smith said. This all-encompassing approach to safety ensures your job site will never pose a risk to a staff member again.

For more information contact Australian Pacific Training Solutions, Level 1 - 273 Boundary Road Mordialloc VIC 3195, phone 1300 325 001, fax 03 9580 1164, email: info@auspactraining.com.au, website: www.auspactraining.com.au



DELIVERING A FIT FOR PURPOSE SURFACE

You can't just lay any old asphalt on a major road - it has to meet the applicable standards. So when the Gippsland Highway Cox Bridge Upgrade project required a small amount of VicRoads approved asphalt fast, they turned to Gippsland Asphalt for assistance.

Gippsland Asphalt have an on-site NATA-Accredited lab, and a 600 tonne a day production capacity, so they were able to provide the precise mix of asphalt required. "We can provide most asphalt mixes, and all are VicRoads approved designs," said Gippsland Asphalt spokesperson, Stacey Fowler.

"We have a great range of local suppliers, and we only use the best raw materials. Our rock and dust is from local quarry K & R.J Matthews Quarries, and our sand is obtained from LV Sands. The advantage for clients of us having a NATA-accredited lab on-site is a guarantee that our mix is always up to the highest standards, as we are always testing our products. Also, if one of our clients has a VicRoads contract, we can do compaction tests to ensure compliance.

"We can output up to 600 tonnes per day, with varying timeframes depending on the job size. This is all thanks to our wonderful staff putting in substantial effort to maintain deadlines and quality. We can also deliver to any site - our cartage rates are competitive, and our drivers are all equally experienced. All our people work well together to get the job completed on time."

Gippsland Asphalt have four staff, including Plant Manager Chris Lansdown, who has 19 years experience in managing the plant's operations, and Laboratory technician Ivan Page, who maintains the lab to NATA Standards and ensures all testing is done in a timely and accurate manner. Several of the staff are NATA signatories, and able to provide test certificates.

Gippsland Asphalt took over the plant from Downer EDI Works in 2009, and has since doubled the plant's production tonnage and improved environmental management by installing a new Bag House. "Our Bag House upgrade was a major upgrade. This new Bag House is much more energy-efficient and environmentally friendly, and allows our plant to run more quickly and produce more tonnes per hour," said Stacey.

In addition to bulk asphalt for local councils such as Latrobe City Council, VicRoads and contractors including Fowlers Asphalting and Ron Morrison Constructions, Gippsland Asphalt also produces coldmix asphalt, in either bulk or small quantities down to 20Kg bags and buckets. This product is especially useful for pot hole patching, trench filling, and minor repairs.

As the leading provider of asphalt products and services within the Gippsland and Latrobe Valley areas, Gippsland Asphalt take pride in ensuring certified quality products and timely, client-responsive service.

For More information contact Gippsland Asphalt, 7-9 Janette St, Traralgon Vic 3844, phone 03 5174 0484, email: admin@gippslandasphalt.com.au



SOLID FOUNDATIONS

This company offers the entire South Gippsland Highway a firm footing.

Building a bridge of this calibre involves a lot of engineering, a lot of careful planning and a massive amount of concrete. Cut and Fill, the contractors who have been overseeing the project, knew from the outset that they needed to get contractors on board who were reliable and ready to take on a project as complex as this.

Although Summit Concrete was only established in 2006, the directors of the company have over 30 years of experience in projects of all shapes and sizes, which have led to them quickly securing larger contracts such as the Gippsland Highway Cox Bridge upgrade.

The company utilises two different divisions; concrete placement and concrete pump hire, in order to service the varying needs of clients. "We have found that some clients need an end to end service, whilst some only want to hire a component of our business," Mr Pinzana said. "This two-stage business model enables us to cater for everyone."

With an extremely long list of past and future business that includes such industry heavyweights as BMD, John Holland Group and Thiess Pty Ltd as well as the South Gippsland Highway Cox Bridge upgrade under their belt, things are looking good for Summit Concrete Pumping.

For more information contact Summit Concrete Pumping, PO Box 2108 Moorabin Victoria 3189, phone 0418 368 758, email: office@summitconcrete.com.au, website: www.summitconcrete.com.au



IN TRANSPORT, TIMING IS EVERYTHING

While Bruce Mclean from McLean Transport is first to recognise that his role on a project as huge as South Gippsland Highway, is peripheral, he is very aware just how critical it is to the principal construction companies, that the transportation of materials is done right.

“It’s a matter of timing,” he says. “If the transport stuffs up, is running late or turns up with the wrong quantities, the whole project is basically going nowhere until transport gets it right.”

So a project like the Longford-Sale VicRoad upgrade, and a principal construction company like Cut and Fill, absolutely rely on transport that never fails.

While being a transport company that prides itself on accurate on-time delivery to major construction projects, McLean Transport’s equally sought-after competency is as a network hub for multiple transporters.



“With me,” Bruce says, “a company like Cut and Fill can make one call. If I don’t have all the trucks they require, I just get onto the network and it’s sorted.”

It’s a strategy that has been working for McLean Transport for over 30 years, although Bruce is rather prone to self-deprecating humour. “I only got into large construction material transport because I was too stupid to know better.”

But, as any professional driver will tell you, to survive in the transport game as a semi-trailer owner on Australian roads for over 30 years, you have to be anything but stupid.

The relationship between McLean Transport and the major players in this country’s large construction industry, like Cut and Fill, has been key to delivering viable, safer and much needed infrastructure, like the South Gippsland Highway upgrade, to the Australian public.

So if you see Bruce McLean’s semi en route to one of his current projects like Parson’s Garden redevelopment in Canberra, or the Geelong Bypass, wave him through – timing is critical for all of us.

For more information contact B & A McLean, 475 Whitegate Road Pyalong VIC 3521, phone 0418 576 104, email: mclean475@westnet.com.au



SAFETY COMES FIRST WITH THIS COMPANY

In the construction industry it’s often the most important companies that receive the least recognition. At the end of the day, if your people aren’t safe, your entire project is at risk, so it pays to have all the Personal Protective Equipment (PPE) needed to keep your worksite safe on hand at all times.

TC Workwear were utilised by Cut and Fill to supply a range of PPE for the team that have been on site at the Gippsland project. Anthony, Sam and John at TC Workwear have the capacity to supply just about any piece of PPE required with the shortest possible lead times.

This was what drew Cut and Fill to the company in the first place, as ensuring their team was safe was top priority. The team at TC Workwear, explained that there are a lot of regulations on a job site that need to be considered.

“It’s not just a matter of personal safety, but also a matter of work efficiency and government regulations, proving that a small initial investment in proper PPE can save thousands of dollars in lost productivity or even legal fees down the track, not to mention care for the lives of your employees.”

With over 30 years of experience in the PPE industry, TC Workwear know how to service any demand. They also stock a range of safety signs and first aid equipment. “We also have a sister company, Allgipp Industrial Supplies, that offer material handling equipment such as ladders and anti-fatigue matting, so we really are a one stop shop.”

TC workwear is now part of the SWF group, enabling us to serve you better. Please email safety@tcworkwear.com.au for your new SWF group safety catalogue.

For more information contact TC Workwear, 427 Raymond Street Sale VIC 3850, phone 1800 134 463, fax 1800 447 804, website: www.tcworkwear.com.au

