

OXLEY HIGHWAY UPGRADE

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PROJECT MANAGER FOR BMD CONSTRUCTIONS, JUSTIN DEVANTIER



HIGHWAYMEN

Constructing 5.35km dual carriageway from Port Macquarie to the Pacific Highway

OXLEY HIGHWAY UPGRADE / **BMD CONSTRUCTIONS**



In November 2009 BMD Constructions Pty Ltd was awarded the RTA contract for the construction and delivery of 6km of greenfield realignment and upgrade of the Oxley Highway in Port Macquarie NSW. The project will provide a 5.35km dual carriageway from Port Macquarie to the Pacific Highway. The upgrade crosses Lindfield Park Road before passing over the existing Oxley Highway just west of Phillip Charley Drive and rejoins the existing highway at the roundabout near the Pacific Highway. The upgrade will improve road safety and provide faster travel times for motorists travelling from Wauchope and surrounding areas into Port Macquarie.

As a large privately owned company, BMD Constructions provides civil, industrial and building construction services to public and private sector clients for the development of urban communities and major infrastructure. Established in 1979, BMD Constructions is well known for a deliberately different approach to business where every project is its own unique opportunity to establish the enduring relationships that have become the hallmark of the BMD brand.

By March this year the \$60m Oxley Highway project was 60% complete with earthworks and bridge structures nearing completion and concrete paving works currently underway. To complete the paving works for the project, BMD installed a mobile concrete batching plant on site, which will operate until August this year.

BMD is the principal contractor performing the works with the help of specialist subcontractors and plant hire. Major quantities to deliver the scope include 400,000m³ of earthworks, 40,000m³ of concrete paving, 200,000t of imported rock bridging layer material and a typical project team of 20 hard working people.

Challenges on the project included obtaining environmental approvals associated with setting up, as well as operating the onsite concrete batching plant.

“Wet weather has also been a constant challenge,” says Project Manager for BMD Constructions, Justin Devantier. “The project in the past 12 months has lost just under 50% of available days to wet weather. The challenge has been to maintain project morale and commercial viability whilst still meeting the

client’s completion expectations. The 90-week program has been extended to February 2012.

“Getting out of the ground in embankment sections was a challenge. The project imported 200,000t of rock to bridge over wet low-lying areas and upper reaches of wetlands. Supply of this quantity of material in a relatively short timeframe from existing local sources needed to be well managed,” he says.

“Positive environmental outcomes are of great significance for projects constructed in this region, and this project is no exception with the alignment traversing a floodplain, swamps and heavy growth forests; of the 28 threatened species known in this area the project has 23 along or near the works. Our management and commitment to achieving environmental outcomes is a major focus, while also progressing construction works.”

“The main pavement design consists of Continuously Reinforced Concrete Pavement overlaying a lean mix concrete sub base. The challenge has been engaging specialist subcontractors and upskilling our staff to manage and control this process. To date, the clients’ quality expectations are being met,” Justin adds.

“The project has required the design and construction of 1.6km of concrete noise barrier. BMD used internal design resources to value engineer possible solutions to take to the market and leverage off, to obtain the best value solution whilst still maintaining client functionality. To our knowledge it’s the first time that thin pre-stressed concrete panels have been used in this application in NSW.”

BMD Constructions is also working on other RTA projects including Herons Creek to Stills Road, Pacific Highway, south of Port Macquarie; two projects on the Camden Valley Way in Sydney’s South West; and Barton Highway-Gounyan Curves Realignment. The company is also working on other projects including Lynwood Quarry, Marulan NSW for Holcim Pty Ltd.

For more information contact, BMD Constructions Pty Ltd, Level 3, 3 The Crescent Homebush Bay NSW 2127, phone 02 9745 6900, website: www.bmdconstructions.com.au

Below BCP Precast manufactured the concrete culverts over a large number of hollows.

Below Negri supplied the Oxley Highway Upgrade project with machine control systems



The Oxley Highway upgrade project required a significant number of precast culverts to be designed, manufactured and delivered to the project in a critical time frame. Cue BCP Precast, which has been supplying precast concrete products to the east coast of Australia for over 35 years and is the only Australian-owned manufacturer capable of supplying precast culverts to such major road projects.

The company’s growing product range and concrete solutions include the modular bridge system, SMARTspan™, environmental products StreamClean™ Gross Pollutant Traps, recreational products from The Skate Ramp Company, and building systems from Precast Solutions. BCP Precast is quality assured to ISO 9001:2008 by BSI Management Systems.

For the Oxley Highway project, BCP worked with BMD Constructions in order to complete the design to the standards required, designing and manufacturing concrete culverts for the project to varying fill depths to allow the construction over a large number of hollows. The manufacturing and scheduling process was critical as the culverts were required early in the critical path and any slippage would have affected the project schedule.

Challenges included the timing of product manufacture in order to meet the exacting needs of the construction, ensuring that the project was allowed to progress on time and on budget. Additionally, transport co-ordination was key to the success of this project with BCP working closely with the site team to meet their needs, regardless of weather conditions.

Other projects BCP is currently working on include: Sapphire to Woolgoolga; F3 Hunter extension stages 1 & 2; M2 expansion; Glenfield Junction rail, and Enoggera Army Barracks.

“For the Oxley Highway upgrade project, the BCP team used its expertise and experience to ensure the design to delivery process was in accordance with client expectations,” says BCP’s Gary Massie

“This was an example of another successful large-scale project with tight deadlines where the critical path product was manufactured on time and on budget.”

For more information contact, BCP Precast Contact: Gary Massie, David Lenihan or Glenn Adams,t, phone 1800 804 134 email: sales@bcp.com.au

Established for over 60 years, the Negri Construction Group was contracted by BMD Constructions for work on the Oxley Highway Upgrade. The company is well respected in the industry Australia wide for its civil engineering construction as well as being specialists in plant hire and final pavement construction.

“Our company has a long history in the industry since 1955,” says Manager of Projects, Richard Negri. “We have been involved in developing Australia’s infrastructure projects such as Hume and Pacific Highways and Gas and Power Plants.

“Currently we have 65 employees, 10 of whom worked specifically on the Oxley Highway Upgrade project,” he says.

For the project Negri Construction performed the majority of the civil engineering works including the earthworks and final trim pavements. The Negri team deployed machine control systems using cutting edge technology from Trimble and Topcon.

“We used a combination of scrapers, compactors, graders and GPS machine control systems to deliver successful outcomes on site,” Richard says. The project, however, was not without its challenges.

Negri are fully compliant and meets the Federal Governments strict industrial and safety regulations in today's market.

Other projects that the Negri Construction Group is working on include the Kempsey Bypass Alliance, Mortlake Power Station and the Buladelah Bypass and Herons Creek overpass with BMD.



For more information contact, NEGRI CONSTRUCTION GROUP, Level 2, 689 Burke Road (PO Box 644) Hawthorn East VIC 3122, phone 03 9882 6744, NSW branch: 14 Pacific Street Crescent Head NSW 2440, website: www.eanegri.com

Below On the Oxley Highway upgrade project South East Concreting did all the concrete paving along the 5km dual carriageway



Specialising in hand placed and machine placed pavement and walls, South East Concreting Pty Ltd has 10 years in the construction industry, around 100 employees and a wealth of experience. The company has a well-earned reputation for excellence in subcontracting to major civil projects in NSW and Queensland.

With fully equipped concreting crews for all types of machine and hand placed work including bridges, the company boasts cutting edge equipment including four Gomaco Commander 3 pavers (including moulds for all types of wall and drains along with two XY Frames and moulds for flat-line paving up to 6 metres wide). They can also manufacture a mould to client's requirements.

For the Oxley Highway upgrade project the company completed all the concrete paving along the 5km dual carriageway. The South East Concreting team began the project in October 2010 and work is almost complete.

Construction Manager for South East Concreting, Dennis Rogers says the highly efficient team used a paving machine that covered half a kilometre per day. The project, however, was not without it challenges.

"We had quite a bit of rain unfortunately which slowed us down a bit," he says. "However, we were able to deliver successful outcomes for the client."

Headed by Director Daniel Ingold who began his career 20 years ago, together with Dennis Rogers and fellow Construction Manager Paul Shorter, South East Concreting has evolved from one that only provided hand placed concrete to its current operation which includes all types of machine placed pavements as well as all types of hand placed pavements and provision of day works.

Other projects South East Concreting is working on include the Tarcutta Hume Alliance, Banora Point upgrade Alliance, Eastern Busway Alliance, Alford's Point in Sydney, M2 Motorway upgrade, the Great Western Highway in the Blue Mountains NSW and many others.

For more information contact, South East Concreting Pty Ltd, PO Box 283 Tweed Heads NSW 2485, phone 07 5599 1716, fax 07 5599 1720, email: Jackie@seconcreting.com.au

Below Coastwide Concrete Pumping Pty Ltd used its new 48-metre boom pump with a capacity to pump 150 cubic metres of concrete per hour

Coastwide Concrete Pumping Pty Ltd offers an on time reliable concrete pumping service covering the Mid North Coast, NSW. With a modern, up-to-date fleet, the company specialises in concrete pumping for high-rise, industrial, commercial, and domestic projects. Justin Loveday (26) and Matthew Loveday (23) are two brothers working together as a management team managing the Coastwide team of operators to meet the needs of the construction and infrastructure industry in the region.

Working on the Oxley Highway upgrade project for Coastwide Concrete Pumping Pty Ltd were Justin Loveday, Matthew Loveday, Wayne Towler, Matthew Smith, Matthew Collins, Mitchell Peterson, Damien Rafter and Jeff Rakete. "Coastwide Concrete Pumping Pty Ltd is well known for its expertise in supplying mobile concrete pumping services for the building and construction industry, for example for bridges, culverts, pavements and drainage," says Justin Loveday.

"Basically, the process involves pumping concrete from the concrete agitator delivery vehicle to the where the concreters want it on the building site."

"During the Oxley Highway upgrade project the weather was very changeable with many wet days. Concrete pumping is always a challenge

as the pumping has to be reliable and on time. Setting concrete waits for no-one," he says.

On the project, the company used its new 48-metre boom pump with a capacity to pump 150 cubic metres of concrete per hour. The boom length is the longest reach available between Newcastle and the Gold Coast.

"Our slogan is size matters, because having the right size boom can save a project time and money in the long run," Justin says. "Ours is a professional organisation with a range of pumping and spraying options. We are geared for large infrastructure projects such as roads, bridges, and treatment plants. We work on commercial, high rise, office blocks and are fully code compliant, work cover approved and have fully audited OHS systems."

Other projects Coastwide Concrete Pumping Pty Ltd is working on include: Pacific Highway Kempsey Bypass, Pacific Highway Sapphire Woolgoolga Project, Pacific Highway Glenugie Upgrade, Coles Supermarket Port Macquarie, Port Macquarie Public Housing Project, and Coffs Harbour Hospital.

For more information contact, Coastwide Concrete Pumping Pty Ltd, Contact: Justin Loveday, mobile 0438864219.




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