



HUME HIGHWAY UPGRADE

SOUTHERN ALLIANCE
NSW

32KM SHARED PROJECT

The Southern Hume Alliance (SHA), consisting of the RTA, Abigroup and Sinclair Knight Mertz, was formed in December 2006. The SHA is responsible for upgrading the Hume Highway from Table Top to Woomargama. Construction of the Hume Highway duplication project from Table Top to Woomargama is due for completion by the end of 2009, with the alliance partners then moving on to other projects.

The 32 kilometre duplication of the Hume Highway from Woomargama to Table Top is a key element of the Australian Government's

commitment to upgrade the entire length of the Hume Highway to a four lane divided carriageway by 2012. The Hume Highway duplication will reflect the highway's role as the primary movement corridor between NSW and Victoria, with the duplication also complementing the natural, historic and cultural qualities and features of the region. SKM Chief Executive, Paul Douglas says: "SKM is delighted to have been selected to play a part in the delivery of this important piece of road infrastructure." Echoing his alliance partner is Abigroup's Managing Director Peter Brecht, "Abigroup is very proud to be a step closer to being part of one of the largest major infrastructure Alliances in NSW to date," he says.

The RTA has chosen an alliance in order to meet the complex challenges of the Hume Highway duplication project. In using the alliance contracting approach, the RTA has established a core alignment between itself and its construction partners, Abigroup and SKM, breeding a culture of dedicated behaviour and zeal to achieve outstanding results. So what is an alliance? Further examination shows distinct differences from traditional approaches to construction contracting.

According to an RTA spokesperson, for major road infrastructure projects the benefits of an alliance include shared responsibility of project risks to ensure completion in line with RTA and community requirements. This sees unanimous decision-making and a holistic project focus in which problems are not shifted to "other people's domains".

Another benefit is greater flexibility to handle ongoing changes during construction and enhanced management of development constraints. Alliances generally work best on projects where there are a high number of unknowns or a high degree of complexity. Typically, they could involve radical or rapidly developing technology, short or flexible timeframes, an intention to engineer value (through delivery innovations) and a need to reduce capital costs to become viable. The relatively simple contractual basis of alliances is well suited to achieving a quick start on projects.

Following on from this, alliances also allow for additional opportunity for innovation to improve results. Intrinsic to alliances are the potential gains or losses incurred by all partners. These will follow some guiding principles including using strong supporting incentives to achieve exceptional outcomes, with the only way to increase profit margin being through outstanding performance on the project. In alliance contracts there must also be links between separate elements eliminating the incentive to play one party off against another.

The final benefit of an alliance is performance-based contracts that reward partners where project targets have been exceeded. It is important that alliance contracts are highly transparent and that the costs associated with project delivery, and its expected profit or loss, are clear to all relevant parties. Performance-based contracts enable results to be driven to the highest possible levels, which has obvious benefits for the project and its community.

"Alliances are a relatively new delivery method but they offer benefit for all stakeholders – including the public – who receive a high quality piece of infrastructure in an efficient and cost-effective manner," says Abigroup managing director Peter Brecht.



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BREAKING NEW GROUND

MAAS Contracting Pty Ltd was formed by Wes Maas in 2002. It was founded to pool a vast range of business ideas where each business segment could support and compliment each other.

Based in Dubbo, NSW, the MAAS Group is well placed to service NSW and Victoria, and is currently expanding into Queensland to become further involved in Brisbane's large scale infrastructure projects. Dubbo's central location also facilitates easy access to the extensive mining industries of the Central West.

With a comprehensive fleet of plant and equipment, MAAS Group has the ability to fulfill contracts that few others have the resources to undertake. An impressive file of past and current projects demonstrates the group's ability to deliver versatile and high quality solutions to a varied client base in a range of situations. Works conducted span the civil, commercial, industrial, mining and farming industries and include clients such as Thiess, Leightons, and John Holland, as well as smaller civil contractors and local governments.

MAAS Group is currently lending its equipment and expertise to the Hume Highway Southern Alliance. Formed by the RTA, Abigroup

and SKM, this progressive Alliance was selected to help fulfill the commitment of the Australian and New South Wales governments to upgrade the entire length of the Hume Highway to a four lane divided carriageway by 2012.

Since late 2007, MAAS Contracting has been involved on various parts of the 32 kilometre duplication under the management of the Southern Alliance. This stretch of road runs north from Table Top (just north of Albury) to Woomargama, south of Holbrook.

By providing three new HAMM rollers, a CAT 140H grader and 7 or 8 excavators with experienced operators, MAAS has been making a significant contribution to the project. MAAS Group has a fleet of 25 Komatsu excavators, ranging from 4.5 to 85 tonne. The Group has a range of attachments including Hammers, Grabs and nearly all are fitted with tilt hitches.

By choosing MAAS, the Southern Alliance has been able to utilize the capacity of MAAS services to increase efficiency of major road building processes. Fitted with GPS technology, MAAS' excavators and graders can be loaded up with electronic formats of engineering plans,

allowing operators to carry out more detailed and accurate excavation. It also minimizes the time, expense and risks of on the ground labour, such as the surveying of pegs and points, as these requirements can be accommodated by the in cabin systems. MAAS' experienced operators can cut, level, and execute a final trim in the one operation. The GPS technology is also very useful in the creation of retention basins and drainage channels, and on challenging sites. Additionally, the excavators' tilt hitches are making lighter work of excavating difficult angles.

At various sites along the Hume upgrade route, machinery has met with very abrasive material, providing plenty of wear and tear on buckets and teeth. MAAS has specialist field service technicians who ensure equipment is maintained at peak performance on every project.

MAAS can meet virtually any hire requirement, with wet and dry hire making up a huge 50 per cent of all business. The company offers a range of bulldozers, graders, excavators, articulated dump trucks, compacting equipment and water trucks. The newest aspect of the business is the heavy haulage facet. Having recently acquired a fleet of prime movers and floats, MAAS is able to carry almost anything to wherever it is needed.

The MAAS group applies the core aims of reliability, integrity and honesty with a dedication to high quality workmanship and customer service. This combination has seen the family owned business develop a solid and trusted reputation and a steady growth of business. MAAS is proud to be working with the Southern Alliance on the improvement of such critical infrastructure as Australia's Hume Highway.



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INFRASTRUCTURE EXPERTISE

Glenmore Building was established in 1998 to meet the growing demand for skilled expertise in the formwork and concrete industry on major infrastructure projects. Glenmore Building has expanded rapidly and now employs a large skilled workforce completing contracts and supplying resources Australia wide.

The company has previously worked on major infrastructure projects including:

- Eastern Distributor Motorway / Leighton Contractors
- Fox Studios / Daracon Group
- Sydney Olympic site / Daracon Group
- Rouse Hill Infrastructure / ABI Group
- M7 Motorway / Abigroup Leighton JV
- Lane Cove Tunnel Project / Thiess John Holland JV
- Chatswood-Epping Rail link / ThiessHochtief JV
- Bondi RIAMP / Sydney Water / United KG JV
- Albury Wodonga Bypass / ABI Group
- Millennium Coal Mine (Qld) / EXCEL Coal
- Liverpool STP / United Group Infrastructure
- EASTLINK – Melbourne / Thiess John Holland
- North Ballarat Water Plant / United Group Infrastructure
- North South Bypass Tunnel / Leighton Baulderstone JV
- River City Motorway Brisbane
- Macdonaldtown Stabling Project / Leighton Contractors

The multitude of contracts completed by the company on these projects include concrete bridgeworks, pile capping beams, water treatment plant structures, concrete pavement works, coal washdown plants, sewage pumping station structures and concrete tunnel works.

One of its recent projects – a Water Treatment Plant in Victoria included 11000m² of formwork and 3000m³ of concrete.

Glenmore Building is currently completing a concrete works contract for Abigroup Contractors on the Hume Highway Duplication Project. This contract includes the completion of concrete culvert bases and associated concrete structures.

In addition to this project Glenmore is currently completing major concrete bridgeworks contracts on the North South Bypass Tunnel in Brisbane for the Leighton Contractors and Baulderstone Hornibrook Bilfinger Berger JV.

In NSW at North Head in Manly the company is currently constructing large concrete structures for the UGI/JohnHolland JV as part of the North Head STP renewals Program.

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HIGH RATING NETWORK

Network Geotechnics Pty Ltd has ten continuous years experience testing major infrastructure projects. Site based fully mechanised compaction testing, modular containerised laboratories, GPS vehicle messaging and self-funded productivity incentives were all innovations they brought to the Southern Hume Alliance.

“The Alliance’s culture of shared responsibilities to achieve common goals on the Southern Hume has been an exciting experience” as related by Network Geotechnics’ CEO Richard King. “Regular contact with seconded and external senior RTA staff has enabled us to further refine aspects of our project testing, while having an experienced RTA geotechnician working within our laboratory has been a rare and successful opportunity for cultural and technical exchange.”

Mechanised compaction testing was first introduced by Network Geotechnics on the Orbital M7 Motorway in Sydney during 2004/5 and the equipment and systems were subsequently refined in their Sydney Laboratory where high volume, rapid turnaround testing was carried out on infrastructure project samples.

Along the way there have been many unexpected benefits associated with developing mechanised compaction testing. Some of these include the flexibility to carry out standard and modified compactions, compaction pre-treatment and moulding CBR samples, as well as the ability to

configure systems along a continuum of cost verses turnaround time, with reported results in the range of typically three to 24 hours.

Additionally, the high productive output possible with mechanised compaction testing enables fewer geotechnicians to complete workloads more efficiently. This higher productive output of mechanised compaction testing allows a calmer workplace, more varied training and a greater range of more interesting work duties for many geotechnicians.

Network Geotechnics’ final synopsis on their involvement with The Southern Hume Alliance is that it has been their most successful infrastructure testing project to date, with the satisfaction of seeing innovations producing great outcomes. As Richard states, “Communication, co-operation and organisational focus on project goals by Abigroup and the RTA has made our role easier to perform. We look forward to the opportunity to use our developing expertise on similar and varied infrastructure projects in the future.”

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ASPHALT CLEAN-UP

Roadline Removal has been operating for six years in the business of removing both road line marking and pavement marking. This is the service that they performed on the Hume Highway Upgrade, specifically removing line marking on various sections of the highway between Albury and Coolac.

The removal of the line markings was achieved using the new Stripe Hog Water blasting removal system, of which Roadline Removals is the only business in Australia to operate. This system uses high-pressure waterblasting to remove marking materials from various surfaces including concrete and asphalt. This product has been designed around the Smart Vac® System and every unit comes standard with vacuum recovery, that makes the difficult task of figuring out how to deal with the paint and water slurry created by the removal process, a whole lot easier.

By utilising this system Roadline Removals are able to take off the lines, remove and clean all the line marking debris simultaneously. It is a very quick, relatively clean and efficient system, suitable for all types of surfaces, as well as able to remove all types of marking materials, including Thermoplastic, Epoxy, paint and all types of tape.

As well as removing all materials from any road surface, no matter how uneven, porous, or grooved the surface may be, another of the benefits of this process is that it causes almost no damage to the road surface, as opposed to the more physical grinding process, which basically strips the top layer of road surface. Due to this specific design feature the Stripe Hog Waterblasting System is the only environmentally friendly system available, giving Roadline Removals that extra advantage over any competitors.

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SAFE AND ENVIRO-FRIENDLY

Victorian Chemical Company is an Australian based manufacturer and marketer of speciality chemicals derived from animal and vegetable derivatives.

The company has operated since 1933 and now services a wide range of industries including Construction, Resources Metal Manufacturing, Hygiene, Chemical formulation, and Agriculture, with their products providing a large array of functions including lubrication, emulsification, wetting and dewatering, solvency and dispersion.

These products are often used to replace petrochemicals used in industry such as solvents and lubricants, since they are typically classified as non-dangerous goods, they generally pose a lesser risk to personal health, and are renewable and generally less harmful to the environment.

The Victorian Chemical Company is also committed to research and development and continues to adopt new products and new end-use markets for environmentally responsible products. One of products the company has recently developed is **Detach™ 107 Bio-Release agent**, a sophisticated concrete mould release agent specifically designed to overcome the occupational health and safety issues associated with the uses of Diesel based materials.

Abigroup used this product on the Albury Wodonga bypass project (Hume Highway upgrade) to produce some of the Super-T's, as well

as being their product of choice for use when manufacturing bridge substructures and parapets. **Detach™ 107** is a uniquely balanced formulation of specialty non-hazardous oils and chemically reacted vegetable derivatives, that contains no harmful hydrocarbons and is therefore both safe to the operator and the environment. It is used in a wide variety of situations including the manufacture of Super-T's, pipes, poles, beams, girders, drainage units, roof tiles and many other miscellaneous pre-cast items in both steam and non steam situation using both wet and dry mix concrete.

The Victorian Chemical Company strives to provide products that perform to the highest standards while providing enhanced safety to the user and the environment, as well as meeting the requirements of the international quality system ISO 9000, which ensures a consistent and reliable product.



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CREATIVITY IN COMMERCIAL FURNITURE

Creative Business Furniture has been operating for 20 years as a complete custom furniture design and manufacture service.

Their involvement with the Hume Highway Upgrade project saw them furnishing all the site offices and headquarters with customised furniture. This basically involved the customised design, manufacture and associated joinery of the commercial furniture needed for these office spaces. With such a large project all nine employees worked on the Hume Highway upgrade project

The requirements of this project was to supply an easily demountable and re-locatable furniture design, that could then be transported and used at the next site office or at another completely separate project. Creative Business Furniture will design and construct to meet various budgets and needs.

The difference between Creative Business Furniture and other suppliers is the attention to detail when custom building the commercial furniture. Each job is customised to suit the application, so that it can be easily demounted and taken to the next site. A lesser quality product will not perform this function, as it will not survive the dismantling, transport and re-assembly process.

One of the new processes that came out of working on this project was a more price efficient screening system. With most screening systems,

they incorporate electrical and computer cabling, which makes the whole dismantling and re-assembly process more difficult. The basic design for these screening systems did not require inbuilt cabling as it is provided separately into the demountable cabins, so that the finished product would once again be easier to dismantle and transport.

As a market leader in the design, manufacture and installation of commercial office furniture, Creative Business Furniture have supplied to councils, Government departments, and universities and schools, as well as many large commercial projects. Although the manufacturing is based in Wagga, they are able to complete specific job requirements from all over Australia, as well as overseas if the client requires.

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ROAD MANAGEMENT SOLUTIONS

Road Management Solutions (RMS) enjoys over 35 years experience in the road safety and traffic control industry and has grown to become a market leader. With 150 employees nationally, RMS has modern manufacturing facilities in Sydney, Melbourne, Brisbane and Adelaide that are all quality certified to AS/NZS ISO 9001:2002.

Specialising in the manufacture and supply of road signs, and associated traffic control products involving the supply of permanent and temporary applications, RMS were contracted to supply, manufacture and install all the permanent signage on the NSW side, north of the Murray River on the Albury/Wodonga Bypass (Hume Highway Upgrade). This involved five people working on the project onsite, with around 40 employed in the manufacturing process.

RMS now offer a range of permanent traffic control products that are part of the long-term traffic solution, such as guideposts, signage, structures, and sign posting while the temporary applications are the water-filled barriers, variable message signs, and temporary work zone signs used during the construction process. Crash cushions are available as both permanent and temporary traffic control products.

With the future development of the Hume Highway between Tarcutta and Albury, RMS have been able to introduce a new product in the Absorb 350 Crash Cushion, comprising water-filled cartridges designed

to be used as an end treatment on a rigid barrier. It is able to absorb the impact and gradually slow the vehicle down, rather than employing a sudden impact stop.

RMS have provided both temporary and permanent signs and traffic safety solutions. Their success has been built around supplying the most comprehensive range of quality traffic products supported with first class service. With an innovative approach to product development and the commitment and skill of their people RMS are able to provide a total solution in road safety and traffic control products, supply, installation and maintenance.



ROAD MANAGEMENT SOLUTIONS

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CLEAR SIGNS FOR FAST LANE DRIVING

Established in 1929, DeNeeffe Signs has been involved and managed multiple signage supply contracts over their 79 year history. In 2005 they became a subsidiary company of Traffic Technologies Ltd, an ASX listed public company, and Australia's premier traffic solutions company.

DeNeeffe Signs commenced manufacturing and trading in 1930 as a sign writing company located in Melbourne, Victoria. Today, with a head office located in the north eastern suburb of Eltham, they have six interstate branches and 160 employees Australia wide with the main manufacturing and office complex of 10,000 sq ft located in Melbourne, Victoria.

Their involvement in the completion of the Albury/Wodonga Bypass (Hume Highway upgrade) consisted of the manufacture and installation of all Gantry, Cantilever, and Side Mount Signage on the Wodonga side of the Freeway. In addition their Traffic Management division was involved in providing traffic controls, traffic management plans, vehicles and equipment on the project for the full Bypass.

As the signage division of Traffic Technologies, DeNeeffe Signs works in conjunction with the other divisions of Traffic Technologies, to provide a 'one stop shop' for their customer's traffic requirements.

In addition, DeNeeffe Signs offers a wide range of traffic control products including signage, hardware (Brackets, posts), work zone products, including cones bollards, flashing arrow boards and variable message signs. As the largest supplier of fixed metal signage in Australia, as well as corporate signage to Government and Private sector clients, their signs are made to Australian Standards AS 1743 and certified with a AS/NZS 9001:2000 Quality Assurance system.

DeNeeffe Signs have a solid, stable management structure that has contributed to its growth and performance over the past 20 years. They pride themselves on being a forward thinking organisation, seeking the latest technology and systems to support their continued growth and success.

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When major traffic arteries like the busy Tullamarine Freeway and the Calder Highway undergo 'bypass surgery', meticulous planning and flawless execution are paramount.

The alliance team that breathed new life into the Tullamarine Calder Interchange achieved gamebreaking performances under the guidance of Alchimie. As a result, this project was completed six months ahead of schedule, under budget and achieved amazing safety and environmental outcomes. It was awarded the Alliance Contracting Excellence (ACE) Award as well as the Parsons Brinckhoff Award for Excellence in recognition of these attainments.

Alchimie is founded on transforming good performance into extraordinary performance by helping leaders and their teams transcend real and perceived limitations by creating a culture embodied with purpose, leadership development and committed results.

As one of the largest and most complete facilitation and coaching companies in Australasia, Alchimie is renowned for creating genuine step changes in both team and individual performance and profoundly impacting people's lives.

We lead focused teambuilding workshops, facilitate working sessions and meetings, lead inspirational personal development sessions and provide on-site management and leadership coaching. Our consultants coach leaders to develop the spirit and passion of their people and the systems and processes of their team.

Contact Alchimie to discuss how we can help make your next vision a reality sooner.

Recent Alchimie Projects



Sea Cliff Bridge NSW



Northern Gateway Alliance (Alpurt B2 Project) NZ



Lyell McEwen Hospital SA



Middleborough Road-Rail Separation Project VIC



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