

HQJOC

LEIGHTON CONTRACTORS
BUNGENDORE, NSW

AUSTRALIAN DEFENCE FORCE NERVE CENTRE

The \$318 Million Headquarters Joint Operations Command (HQJOC) project to be completed this year, will house the operational military headquarters of the Chief of Joint Operations, strategic and civilian support staff and will bring together operations command elements as far flung as Sydney, Melbourne and Canberra. The Project is the first Public Private Partnership (PPP) to be established between the federal government and the private sector, with the Praeco consortium winning the tender for the project. Praeco is a partnership established between Leighton Contractors and ABN AMRO to facilitate the construction of the buildings, infrastructure and service requirements of the development. The Australian Defence Force has taken responsibility

for the information and communications technology elements of the HQJOC site.

Leighton Contractors worked tirelessly to deliver the project on schedule, and engaged with sub-contractors with whom it had an existing relationship. The demanding schedule that Leighton Contractors outlaid for the completion of the project has made certain that the Defence Force will be able to move its operations into the facility at the end of the year as planned, with virtually all of the building, wiring and physical protection now completed.

Work began on the HQJOC site near Bungendore in October 2006, with an extensive survey

conducted to gauge the archaeological significance of the area.

As a result of the survey and subsequent and salvage operation conducted by Archaeo Analysis during the Environment Impact Statement phase, several sites of Aboriginal significance were discovered. Of particular interest, an Aboriginal stone-axe quarry was unearthed and 20,000 artefacts were recovered, as well as evidence of early European settlement including nineteenth century pocket watches and a dolls head.

The HQJOC site is one of the most heavily secured facilities in Australia. Two rings of fencing separate the site into two distinctive areas, the military and

facility support precinct within the external fence, and the operations building inside the internal fence. The military support facility combines the mess areas, a café and fitness centre on the main pedestrian thoroughfare, allowing staff to congregate together in a communal area while increasing overall cost effectiveness.

Most of the inner workings of the 220 hectare HQJOC development remain highly confidential due to the sensitive nature of the facility as the nations defence nerve centre. The entire facility will also operate in entire self-sufficiency in water supply and site sewage treatment, which has contributed to the sites five star Australian Building Greenhouse Rating.

Leighton Contractors are one of the largest contractors in Australia and have the ability to be involved across a multitude of sectors. Not limited to construction, Leighton Contractors have divisions for mining, telecommunications and engineering and currently employs over 6000 people with \$6 billion of contracts in hand.

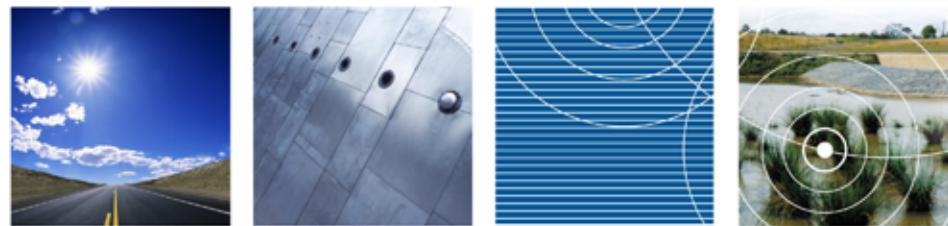
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and establish the display of a selection of the discoveries. PRAECO, in resourcing the archaeological study through the experience and expertise of Archaeo Analysis, has made an invaluable contribution to the understanding of local Indigenous lifestyles and the characteristics of early European occupation of the area.

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Maunsell and Bassett are proud providers of integrated building and civil engineering design services for the Australian Defence Force's new Headquarters for Joint Operations Command (HQJOC).

Our team of professionals have incorporated 5 Star building services and sustainable civil engineering initiatives into the new headquarters' design, including stormwater harvesting and water recycling to maximise on-site water conservation.

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GROUND BREAKERS

With over 20 years of experience and knowledge of the civil construction industry, Hannas Civil Engineering were appointed as the civil engineering contractor, for the Headquarters Joint Operations Command (HQJOC) development contract. The team was responsible for constructing the dry weather site access road, completing the design and construction of the Operations Building piling, and the bulk excavation of the sites for the Operations, Military Support and Facilities Support Buildings.

Hannas Civil Engineering commenced work on the HQJOC project in December 2006 with the construction of a 2.5km long dry weather site access road from the Kings Highway to the location of the temporary site facilities. The topsoil was stripped and stockpiled, followed by the placing and compaction of road base to produce a suitable site entry to facilitate further works. The access road not only enabled the bulk excavation of the Operations, Military

Support and Facilities Support Buildings by Hannas Civil Engineering but also site works undertaken by other contractors.

Further earthworks were undertaken between December 2007 and January 2008 to provide suitable platforms on which the Operation Building, Military Support Building and Facilities Support Building would be built. The earthworks included the topsoil stripping from areas of excavation and filling and stockpiling for later re-use (Approx. 14,500 m³), Foundation preparation (Approx. 24,000 m²), cut to fill work (Approx. 15,000 m³) and the trimming of sub-grade to a tolerance of 20mm (Approx. 48500 m²). Hannas were also responsible for managing the piling works for the Operations Building in January 2007 and completed the work in only two weeks. While the design requirements were altered several times, increasing the number of piles to 230 with average depth of 5 metres, Hannas Civil Engineering remained responsive to changes

and completed the work to program.

Hannas Civil Engineering has the proven ability to complete work on or ahead of schedule, while maintaining an impeccable safety record. For the HQJOC project, the contracted work was completed within the tight schedule outlined, through alterations to the initial design, which required increasing complexity.

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ALL FIRED UP

Premier Fire Services are specialists in the design, supply and installation of fire protection systems, including automated fire sprinklers, gas suppression and drenching systems, hydrants and hose reels. Premier Fire Services have forged a strong relationship with Leighton over several years and have provided fire services for a number of developments initiated by Leighton. Little wonder that Premier Fire Services were once again mandated with the task of providing their fire protection expertise for the Headquarters Joint Operations Command, which required the highest standards of workmanship, given the nature of the project as the headquarters for the Australian Defense Force.

Working within the restrictive environment provided by a defense force site with unique security demands, Premier Fire Services

developed the intricate fire protection systems around the existing security setup, while ensuring that the development abided by the relevant fire safety codes and standards. Premier Fire Services was required to completely re-engineer their approach to the implementation of their own systems, and had to work to a program that would combine security and fire prevention. Premier Fire Services worked a number of their services into the design for the HQJOC, including the emergency warning and intercommunication systems, sprinklers, fire pumps and VESDA smoke detectors (an active smoke detector that draws ambient air into the detector).

Premier Fire Services has provided paramount fire prevention and detection services for over twenty years and has built their reputation for excellence on high quality products and

installation. Premier Fire Services also offer ongoing support to their clients including an after hours emergency service. Their impressive client list includes Hilton Hotels, Sydney Airport, the Queen Victoria Building in Sydney, Woolworths and other department of defense projects.

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STOWE DELIVERS MAJOR DEFENCE PROJECT IN REMOTE REGION

Nearing 100 years of excellence, Stowe Australia is Australia's leading privately owned Electrical and Communications Contractor with a pre-eminent industry reputation for performance, quality and reliability turning over in excess of \$300M per annum and employing 1300 direct staff.

The ownership and helm of the company has been retained through three generations (75 years) of the Madson family with David Madson the current Executive Chairman and Chris Madson the current Managing Director. Underpinning and

driving the success of the company over this time are two fundamental business objectives:

“To build and maintain a satisfied customer base through superior quality service with fair dealings based on trust and respect.”

“To create long term relationships with customers, suppliers and most importantly its employees”

These primary objectives have instilled a company team culture and loyalty amongst the company's long serving employees and established a solid

long term customer base built on repeat business. The company operates from 14 offices covering the eastern seaboard of Australia and delivers specialist electrical and communications services to the following market sectors:

Private and Public Building / Defence / Urban Infrastructure / Mining and Industrial

With the continued dynamic leadership, investment in its employees, dedication to be the industry's best and to be proactive and innovatively responsive to it's customer's needs, Stowe Australia will remain a

leader in the electrical and communications industry for many years to come.

This experience was tested during the work completed on the Headquarters Joint Operations Command (HQJOC) development at Bungendore, where Stowe Australia was instrumental in delivering the Design and Construct for the Electrical Services on-site, including wiring, switchboards, power generation, high and low voltage power systems and uninterruptible power supply (UPS) systems. Considering the scale and significance of the HQJOC scope, the contract was no small undertaking and required intense planning and in excess of 130,000 man-hours to complete the project successfully.

Stowe Australia was involved in the HQJOC project through an existing relationship with Leighton Contractors and worked exclusively as an electrical partner providing design and value engineering services during the pre-bid phase. Stowe Australia began work on the design for the

electrical services in 2006 and commenced work on site in early 2007 and was mandated to fulfil many challenging objectives.

At the peak of the installation phase of Stowe Australia's involvement in the HQJOC project, 120 of their total 1300 employees were on-site in Bungendore. The large proportion of their national workforce onsite demonstrated Stowe Australia's commitment to maintaining scheduling restrictions outlined for the project.

Stowe Australia have worked on a number of major developments including defence installations at Project Wedgetail, Newcastle, Oakey in Brisbane and Twofold Bay on the NSW South Coast. Recent large commercial projects have included Brisbane Square, Westfield Doncaster, the Gold Coast Convention Centre and Westpac Place in Sydney.

Stowe Australia recognises that its main asset is its people and therefore invests heavily in the

development and retention of employees. Stowe Australia is considered by the industry as an employer of choice. This is evident from Stowe's continued ability to attract and retain quality people in the business. The company has in excess of 100 employees with more than 15 years of continued service with the company

We invite you to review our capability statement at www.stoweaustralia.com.au/pdf/capability_statement.pdf

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A TOTAL SPATIAL PACKAGE

The locally owned surveying company, Landdata Surveys has been in operation for two years. Landdata surveyors have been operating in the Canberra region for over fifteen years and their involvement in the construction of the HQJOC Defence Headquarters site near Bungendore has continued its tradition of quality surveying services to the construction industry. Landdata surveyors have been involved in a wide range of aspects associated with a project of this nature, including:

- Preparation of Pre Acquisition Declaration documents which included written descriptions of three sites.
- The use of very old cadastral plans including the ACT- NSW boundary survey (1915) and the original plan of the Sydney to Canberra railway line.
- A stratum survey of the underpass at the railway.

We have prepared information on title related matters regarding parcels involved with the proposed site. Investigations included encumbrances, the nature of leases/licenses in the ACT, ownership of parcels, investigation of Molonglo River boundaries and Native Title issues.

A number of hard copy maps were prepared for use in community consultation processes and the “promotion” of the acquisition. In addition we were able to offer to arrange for the preparation of a computer generated simulated “fly-over” and “drive through”. This facility helped greatly in illustrating the likely visual impacts of the site on nearby land and settlements.

Cadastral surveys have included:

- The preparation of three deposited plans in New South Wales and the ACT.

We have been engaged by the building contractor to undertake survey works for the construction of the site. Our involvement has included:

- Establishment of a control network
- Set out of grids and other aspects of the construction project
- Checking of work of sub-contractors.

Land Data Surveys is proud to have been able to provide a complete spatial package to this significant project in the Canberra region.



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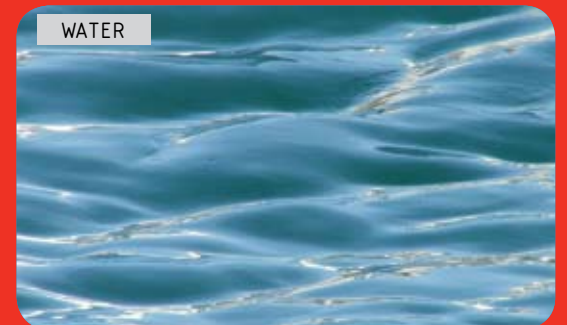


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PROTECTING THE DEFENDERS

Australian Security Fencing Pty Ltd have been in the business of providing tailored fencing solutions to clients since 1988, and through two decades of business have developed systems of asset protection with the deterrence and security of impenetrable fencing. Australian Security Fencing Pty Ltd specialises in adapting to client need, particularly in the high security market and has worked on protection and deterrence for prisons, Defence Force sites, Government buildings and commercial entities.

The experienced team at Australian Security Fencing Pty Ltd won the tender to design, manufacture, supply and install its Securemax® 358 high security fencing at the Headquarters Joint Operations Command (HQJOC) site, which will house the headquarters for Australia's defence network. This was predominately based on the teams work with Leighton and the Defence Force to produce a design allowing maximum defence capabilities, balanced with a cost effective approach. The finished product, which resulted in multiple fences to 5.8km, took a team of between three and six workers, almost six months to complete.

Australian Security Fencing Pty Ltd were highly aware of the particular demands of the HQJOC site, which required their security fencing to repel both pedestrian and vehicle penetration.

To provide adequate protection from attack, Australian Security Fencing Pty Ltd have designed the barrier fence to minimise any gaps between the concrete base and the Securemax fence, while ensuring that the fence itself provided a smooth flat surface with small apertures to avoid any chance of finger holds for climbing.

The fence is topped with Australian Security Fencings' own 900mm dia. Ripper Blade Razar Tape® giving a robust anti climb topping to this extremely formidable barrier.

Based in Windsor in Sydney's North West, Australian Security Fencing Pty Ltd, has built on their long industry experience in security in all key areas of perimeter protection and detection.

The ASF team has developed their own extensive range of Perimeter Electronic

Detection including 'Forcefield' and 'Electronic Detection System' (EDS) which provide a visible deterrent, an anti touch electronic pulse and an alarm system for back to base monitoring.

To ensure the stringent requirements of the Australian Standards are met, Australian Security Fencing Pty Ltd provides extensive testing, warranties and full back up service on all their products. The ability for in house design and their off the shelf electronic products give Australian Security Fencing Pty Ltd the edge in today's perimeter barrier / detection market.

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CREATING WATERTIGHT NETWORKS

Enhanced by a company culture of learning and innovation, Visionstream are at the forefront of the delivery of telecommunication networks on a national scale. Established in 1994 as a subsidiary of Telstra, the company pioneered efficient installation techniques for cable TV and broadband networks. In 1996 the company became a wholly owned subsidiary of Leighton Holdings. Visionstream offers the latest in wireline, wireless and intelligent infrastructure networks.

This background in both telecommunications and construction gives Visionstream exceptional capabilities to deliver mission critical networks in extraordinary conditions. Visionstream deliver robust and customised quality systems ranging from FM & GSM repeater systems in Sydney's underground railway system and motorway tunnels, for example, to groundbreaking, terabit fibre optic communication networks that span the breadth of this massive country.

The expertise of Visionstream to supply quality Carrier Grade networks is evident in the

company's work with high profile clients such as Telstra, AARNET and IBM. Visionstream could be depended upon to design and install a secure, reliable, commercial Fibre Optic Network for the Headquarters Joint Operation Command (HQJOC) project, located between Bungendore and Queanbeyan.

The primary aim of the HQJOC Project is to create a new integrated centre for defence operations. Co-location of various sections of the Australian Defence Force (ADF) will allow the chief of the Defence Force to have a more effective means of commanding operations within the ADF. With communication playing such a vital role within the project, Visionstream's in-house knowledge and operational precision were indispensable.

For HQJOC, Visionstream created a secure fibre optic communication network with a high band width as part of its work with Praeco on the project. The lack of pre-existing infrastructure in the area required the creation of an entirely new network. Approximately 56km of cabling was laid over two routes,

which has been tested and is ready for commissioning, ahead of schedule.

Visionstream followed comprehensive security practices in the design and installation of this network, such as ensuring the infrastructure locations are not identifiable by above ground markers.

Visionstream
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