

GHD - THINKING BEYOND TOMORROW



GHD was engaged by the Department of Defence to deliver the Enhanced Landforce (ELF) Stage 1, ELF Stage 1 Deferred Works and ELF Stage 2.

PROJECT MANAGEMENT AND CONTRACT ADMINISTRATION : GHD
CLIENT : Department of Defence (Capital Facilities and Infrastructure Branch)
DESIGN ARCHITECTS : SKM
SURVEYOR : Davis Langdon
COMPLETION : December 2012
PROJECT VALUE : \$115 Million



Combining technical skills, innovation and extensive knowledge, GHD provides services that cover the entire life cycle of projects across a range of sectors including infrastructure, mining and industry, defence, building and construction, roads, water and environment.

Established in 1928, the company has successfully completed thousands of projects around the world and has more than 6000 employees in 100-plus locations throughout Australia, New Zealand, Asia, the Middle East, Americas and Europe.

Embracing its values of teamwork, respect and integrity, GHD offers a range of multi-disciplinary professional services including engineers, architects, planners, scientists, drafters, project managers, economists and supporting staff.

The company's client-focused approach, technical knowledge and dedication to understanding and assisting their clients to achieve their goals, has seen GHD become ranked as one of the world's leading engineering, architecture and environmental consultancy companies.

GHD also has a long-standing working relationship with the Department of Defence and has been engaged by Defence across a variety of projects. This includes project management and contract administrators for the delivery of the Enhanced Land Force (ELF) Stage 1, ELF Stage 1 Deferred Works and ELF Stage 2. These works delivered facilities and infrastructure at Defence locations in Queensland, New South Wales, Victoria, South Australia and the Australian Capital Territory, with a total value of \$1.4 billion.

The delivery of the ELF Stage 2 works also encompasses the ELF Stage 2 Singleton project, which saw the upgrade of the infantry training facilities at the Lone Pine barracks. The project required the construction of a number of buildings and facilities at the site, including accommodation, training facilities, battle simulation centre and an infantry museum.

As project managers and contract administrators, GHD oversaw the entire ELF Stage 2 Singleton project, from its

inception, design, tendering, construction and delivery of the infrastructure works.

In addition to engaging the John Holland Group to deliver the construction side of the new infrastructure, GHD's employees were also on the ground throughout the project, including working with the design architects SKM on the infantry museum and bringing in specialists for the design and delivery of the site's training facilities.

One of the highlights of the ELF Stage 2 Singleton project has been the construction and relocation of the Infantry Museum. Originally located in a number of 1940's buildings, the museum is now housed in a state-of-the-art facility, providing an exceptional visitors' experience showcasing the history of the infantry and their stories.

GHD has also worked on a number of large projects with the Department of Defence, including the development of an operations centre, accommodation and specialist training facilities at the HMAS Stirling Naval Base in Western Australia, facilities at HMAS Cairns Naval Base, and bare bases at RAAF Scherger and RAAF Townsville in Queensland, and RAAF Tindal in the Northern Territory.

GHD was also the technical advisor to Defence for the Headquarters Joint Operations Command (HQJOC) facility near Bungendore in New South Wales. This major project which included a high-tech command and control centre, had a total capital works cost of approximately \$250 million, plus a further \$50 million for commence, control, communications, computers and intelligence (C4I) equipment and systems.

Whether its project management, procurement and contract management, engineering, integrated logistic support or individual studies, GHD has the experience and an integrated team of professional around the world to meet your requirements.

To find out more about GHD and the extensive range of services the company offers, please visit their website at www.ghd.com



THIRTY YEARS OF PERIMETER SECURITY EXPERTISE

Having been involved in the perimeter security industry for 30 years, Magnetic Automation is a leader when it comes to the quality and reliability of its products, competence, customer service and innovation.

Offering a range of perimeter security products including boom gates, pivot barriers, sliding gates, swing gates, turnstiles, control pillars, speed gates, security bollards and rising step barriers, Magnetic Automation has extensive experience within the industrial and commercial sectors, and can provide customised, stylish solutions to meet their customers' needs.

Magnetic Automation is also part of the Magnetic Autocontrol Group, a global leading producer of security solutions including barriers, security gates and turnstiles, parking systems and pedestrian access control solutions. This global strength enables Magnetic Automation to offer its customers both standard and custom-made, user-specific solutions.

Established in 1983, Magnetic Automation employs more than 40 people and has branches around Australia, including its head office in Tullamarine, Victoria as well as key offices in Western Australia, Queensland and New South Wales.

The company has also provided its perimeter security solutions for a number of large projects, including the Cessnock Correctional Centre and the Nowra Correctional Centre in New South Wales. The company also supplied and installed a high-end security cantilevered

side gate for the Enhanced Land Force Stage 2 Singleton construction, along with four boom gates.

According to its Managing Director David Thomas, "it is Magnetic Automation's knowledge of motor and drive engineering and their concept and project activities that drive the company's underlying, highly-skilled abilities."

"Magnetic's products find applications within mining, rail, corporate, government infrastructure and military and industrial sites. All products are supported by a comprehensive preventative maintenance, service and spare parts programs."

One of Magnetic Automation's highest-selling products are its boom gates, providing complete and cost-effective parking solutions for both private and public companies throughout the nation.

From its base model through to the Magnetic Parking Pro model (for higher traffic flows), these magnetic parking access barrier systems are a familiar concept to drivers across Australia and the world. The boom gates are suitable for most functions, including access to public parking facilities and company sites. Magnetic Automation also provides other boom gates for traffic control and can offer specific tailored solutions, including large barrier arms of up to 10 metres.

Another well-recognised security system among pedestrians at train stations, airports, company foyers and sports and entertainment

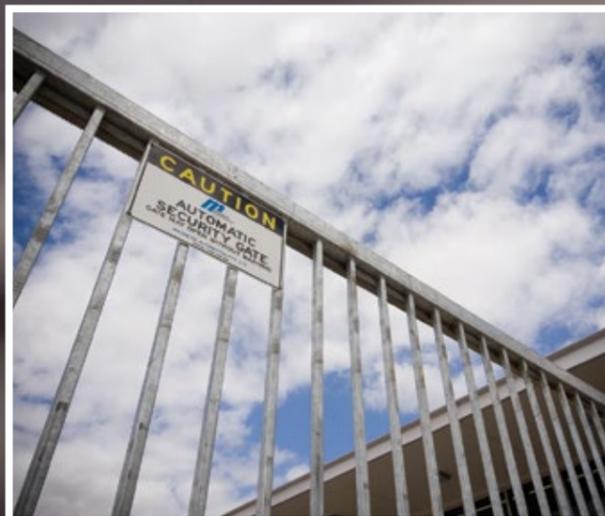
stadiums, are retractable barriers, which are designed to control people entering or exiting restricted areas. Magnetic Automation has a range of retractable barriers for pedestrian traffic control, be it for fare collection or to limit access to an organisation's secure areas. The company can also provide various options for these barriers, including card readers.

Magnetic Automation also specialises in rising step barriers, which are an added security feature designed to prevent unauthorised vehicles from breaking through secure entry and exit points. Made from heavy gauge steel, the barriers are able to withstand high-impact loads and are particularly ideal for high-security areas including prisons, defence facilities and security centres.

Magnetic Automation also offers a number of other security solutions including bollards, domestic and light commercial automatic swing and slide gates and turnstiles. Its cantilevered, light weight track gates are a particularly affordable security option for small factories and other sites, which require only occasional use.

Whatever your perimeter security needs, Magnetic Automation has the solution for your company.

For more information contact Magnetic Automation Pty Ltd, 14a Tullamarine Park Road Tullamarine VIC 3043, phone 1300 364 864 (national sales and service), email: info@magnetic-oz.com, website: www.magneticautomation.com.au





ALTERNATIVE STEEL SOLUTIONS WITH AUS-TRUSS



Specialising in light gauge steel framing, Aus-Truss Pty Ltd are the market leaders in small to low-rise buildings, including schools, hospitals, aged-care facilities and defence buildings.

Aus-Truss was established over 10 years ago when commercial builder Andrew Fowler built a house in a termite area and had difficulty finding a company to provide quality steel framing for their home. Seeing a gap in the market, Aus-Truss was formed.

Aus-Truss began by building bespoke houses and, through Andrew's commercial building experience, naturally progressed to bigger commercial buildings, before tendering and being awarded larger construction projects.

Aus-Truss Pty Ltd now employs 35 people, including 20 staff in its factory.

Offering design, manufacture, delivery, installation and certification, Aus-Truss Pty Ltd provides a complete package for its clients, reducing contracts administration and therefore saving their customers time and money.

"Everything is designed and engineered in-house and we also have our own transport and installation teams," Andrew said.

Using only Australian BlueScope Steel, Aus-Truss Pty Ltd aims to provide their clients value for money, including through their

redesign service converting heavy structural steel frames to light gauge steel frames, resulting in substantial savings for customers in time and money.

The company continues to work on major projects throughout Australia, including the Enhanced Land Force (ELF) Stage 2 Singleton project of which Aus-Truss provided over \$2m of trusses and light gauge steel frames. The company was awarded the project due to their alternative design.

As the frames were able to be pre-designed and fabricated on-site at the factory, the company was able to reduce construction time, resulting in their stage of the project coming in early and saving the development



valuable time. Furthermore, by using a light gauge product, Aus-Truss was able to reduce construction costs for the project.

Andrew said one of the challenges when working on the ELF project was the engineering of certain aspects of the development.

"For example, the construction of the steel roof sections with three to five-metre cantilevered built-in eaves outside of the buildings, without support beams, was a big feat," Andrew explained.

"However, we put a lot of engineering into the roof design, and as a result, we were able to make it work, which was a great achievement."

In addition to the ELF Stage 2 Singleton project, Aus-Truss Pty Ltd has worked on other significant projects, including a number of aged care facilities for the Salvation Army and Warrigal Care in New South Wales, Franklin Early Childhood School in Canberra and White Bay Passenger Terminal to name but a few.

Aus-Truss Pty Ltd is also looking towards the future of steel framing, including further innovations in the design and manufacturing of their products for clients.

"We are putting money into research and development for 3D modelling. This is where we see the future for steel framing going. You will be able to go on a virtual walk-through of a building and see every bolt and beam connection," Andrew said.

The company is also interested in taking on more unusual projects that will require further design and manufacturing challenges, such as curved building structures.

Aus-Truss Pty Ltd has also just moved into its new headquarters - a purpose-built facility which houses the business's factory and office, as well as a complete design team.

Andrew said the staff were thrilled to move into the new building and encouraged Aus-Truss' clients to come and see new facilities, and discuss alternative steel solutions with the team.

For more information contact Aus-Truss Pty Ltd, 22 Drapers Road Braemar NSW 2575, phone 02 4860 1400, fax 02 4872 1707, email: info@aus-truss.com.au, website: www.aus-truss.com.au

THE CONAGHAN GROUP - SPECIALISING IN PROJECT EXCELLENCE



Established between 2000 and 2002, The Conaghan Group is a locally-owned group of companies comprising three entities, Conaghan Pipe, Conaghan Civil and Concrush Pty Ltd.

Specialising in bulk earthworks, water and sewer main replacement, The Conaghan Group has a highly qualified and experienced management team as well as skilled field personnel. Together with clients, both management and onsite teams work together to ensure projects are completed on time and on budget.

The Conaghan Group has established a solid reputation in the industry for their quality and timely construction projects as well as their ability to develop strong relationships with their clients, including local government, construction companies and private developers.

The Conaghan Group's Directors Tony Conaghan and Kevin Thompson have more than 25 years of civil engineering, construction and management experience and have successfully developed the group's businesses, Conaghan Pipe, Conaghan Civil and the Concrush recycling facility.

Employing 22 staff as well as numerous subcontractors, The Conaghan Group's directors consider their staff to be one of the group's greatest assets. They are fully committed to ensuring all their employees have the necessary skills and expertise to perform their roles to the highest standard. To achieve this, the group provides continual professional development and targeted training courses.

The rest of the group's key personnel all have extensive experience in their industries including Conaghan Group Civil Supervisor Ken Peddie, Conaghan Group Business Manager Helen Milne, Conaghan Pipe General Manager Scott Wells and Yard Manager of Concrush David Cross.

The Conaghan Group has worked on a number of significant construction projects, including the Enhanced Land Force (ELF) Stage 2 Singleton project.

In addition to the four staff who worked on ELF Stage 2 construction, The Conaghan Group employed a number of subcontractors for the project, which involved the completion of bulk/detailed excavation, storm water drainage, road construction and car park construction.

Works are also currently being undertaken on a number of large projects including Hunter Water's Aberglasslyn wastewater system

upgrade Stage 2 and detailed excavation and stormwater construction for a unit development at Mount Hutton.

Conaghan Civil has also completed a number of major construction projects during the past year including bulk earthworks for Enhanced Land Force Stage 1, the Cessnock Correctional Centre (valued at \$1.84 million), the Western Grandstand upgrade at Ausgrid Stadium, Callaghan College and Belmont High School.

Under the Federal Government's Building the Education Revolution program, Conaghan Civil completed a number of bulk earthworks at schools for halls, libraries, classrooms and covered outdoor learning areas. These projects required extensive co-ordination and consultation, particularly in regard to procedures and movement around the site, as construction took place during school terms.

In addition to the Aberglasslyn wastewater upgrade for Hunter Water, Conaghan Pipe has completed a number of large projects, including the Branxton Irrigation Scheme for Hunter Water/Ausgrid as well as water main relocations at Lambton and Millers Forest for the New South Wales Roads and Maritime Services.

The Conaghan Group is extremely conscious of the potential effects of construction projects on the environment, and takes their environmental responsibilities seriously. The group constantly reviews their work to ensure practices meet environmental protection standards and impact as little as possible on the surrounding environment.

With their years of expertise, experience and comprehensive knowledge, The Conaghan Group are the team to call when it comes to infrastructure, earthworks and recycling needs.



For more information contact The Conaghan Group, PO Box 362 Merewether NSW 2291, phone 02 4956 1066, fax 02 4957 8181, website: www.conaghan.com.au



Photos by John Gollings

INSPIRATION THROUGH THE VISITOR EXPERIENCE

A multi-disciplinary company specialising in exhibition design, interpretive planning and content development, Freeman Ryan Design (FRD) creates exhibition and visitor experiences that set new standards in innovation and design excellence.

Since 1997, FRD has been engaging and inspiring audiences through their design solutions for the museum and cultural tourism industries both within Australia and internationally.

Offering a comprehensive service embracing all stages of a project's development, it was a natural choice to commission FRD's experienced team to bring together the objects, stories and history of the Australian Army Infantry for exhibition in the Infantry's museum as part of the Enhanced Land Force Stage 2 Singleton project.

In consultation and collaboration with the Infantry museum's curatorial team, FRD reviewed the collection to develop themes and storylines for the exhibition, recording the history and personal stories related to objects in the collection.

FRD photographed and measured objects within the museum's collection including weapons, uniforms, equipment and documents, and determined the most effective way to support and interpret the objects within the showcases and on open display.

The company wrote all the text for the exhibition, designed the graphics, specialist lighting, multimedia and showcase displays, and working together with the building contractor, was responsible for the final production and installation.

Six of FRD's 15 employees worked on the display including Project Director Stephen Ryan, Project Manager Denise Parrague, Graphic Designer Kate Fennell, Exhibition Designer Cassandra Cameron and writers Jennifer Blunden and Nina Stromqvist.

The company is currently working on a number of projects, including the Moorebank Units Relocation at the Military Engineering Heritage Learning Centre in Holsworthy and the Western Australian Institute for Medical Research in Perth.

FRD has recently completed an exhibition at the World Heritage Interpretive Centre in Katoomba and a visitor experience regarding US Airways Flight 1549 - Miracle on the Hudson for the Carolinas Aviation Museum in North Carolina, United States.

For more information contact FRD, 105 Reservoir Street Surry Hills NSW 2010, phone 02 9281 6488, fax 02 9281 6071, email: office@frd.com.au, website: www.frd.com.au



THE COMPLETE FFE PACKAGE

With more than 30 years experience in the commercial furniture industry, Iken is a complete furniture, fittings and equipment (FFE) provider.

Originating as a second-hand dealership in 1973, the family-owned and operated Iken (which is Japanese for "ideas") has evolved to become a complete workplace solutions and furniture provider.

General Manager Matthew Power, whose father founded the original second-hand store, said Iken employs 15 direct staff and around 300 people indirectly through contracts.

"For example, for the Enhanced Land Force Stage 2 construction we had 110 people working on the project," Mr Power explained.

From café furniture and appliances, beds and wardrobes, office furniture and handrails through to projectors and pinboards, Mr Power estimates Iken sourced, delivered and installed around 27,000 items for the Enhanced Land Force (ELF) Stage 2 project.

The company even installed a seven-metre by five-metre projector screen, suspended two floors above the ground, for the site's museum.

"We did everything in the buildings that weren't walls, ceilings or carpets," Mr Power said.

The company has extensive experience in large multi-stage projects around Australia, including airforce and army bases (the company also worked on ELF Stage 1 in Wagga Wagga), TAFEs and universities, schools, government offices and private companies.

Iken is also an approved workstation systems supplier for the New South Wales Government.

The company recently acquired further FFE projects including a \$1 million contract for a BHP Billiton administrative headquarters, a 750-bed accommodation project for a mining site in Gladstone and the Riverina Juvenile Justice Centre building refurbishment and development.

The company always works closely with clients, contractors and architects, and has offices and manufacturing plants located throughout Australia. "We are also able to source, supply, deliver and install to multiple locations over multiple stages, specialising in regional areas," Mr Power added.

"We would love to talk to anyone about their complete FFE needs."

For more information contact Iken Commercial Interiors
phone: 1300 554 748
email: sales@iken.com.au
website: www.iken.com.au



EXPERIENCE, EXPERTISE AND COMMITMENT TO QUALITY

Specialising in modern structural steel fabrication and with more than 35 years experience in the industry, Gonzalez Steel Pty Ltd are your experts for all types of structural steel drafting, manufacturing and erection. With 35 employees, Gonzalez Steel is highly committed to the quality of their steel fabrication and works closely with clients to ensure projects meet their goals, including budgets and tight schedules.

Gonzalez Steel has worked on a number of significant projects including the Oki Jubilee Stadiums, shopping centres, hospitals, the 480-tonne Mangoola Mine workshops and over 100 schools from Tamworth to Nowra. The company also worked on the construction of more than 33 buildings for the Enhanced Land Force Stage 2 Singleton project, requiring approximately 1000 tonnes of steel. Current construction projects include an indoor sports centre and auditorium development for the Australian Defence Force Academy at Canberra (Duntroon) of around 500 tonnes, works on the Ravensworth power station and a new Bunnings store at Balgowlah.

Whether for small or large steel fabrication projects, give the team at Gonzalez Steel a call on (02) 4966 8949 or visit www.gonzalezsteel.com.

For more information contact Gonzalez Steel Pty Ltd, 4/6 Babilla Close Beresfield NSW 2322, phone 02 4966 8949, fax 02 4966 8424, email: tenders@gonzalezsteel.com.au, website: www.gonzalezsteel.com



THE VERY BEST IN ALL THINGS FLOORS

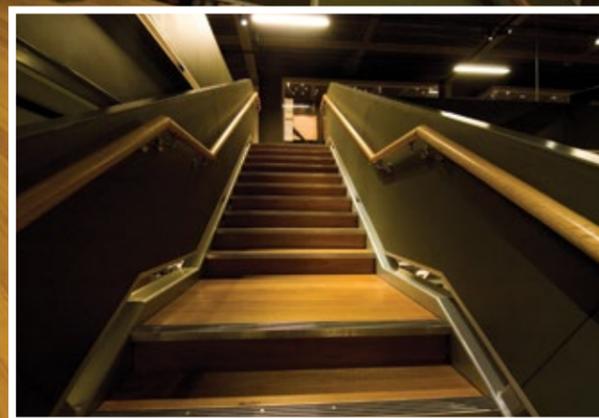
Specialising in commercial carpet, carpet tile, vinyl, rubber as well as floating and solid timber floors, JAG Floors has the expertise and experience when it comes to all flooring requirements.

Starting in Newcastle in 1999 JAG Floors' professional team has the comprehensive knowledge and experience to cater to your specific flooring needs.

JAG Floors has worked on a number of major construction projects for both government and private industry, including the Enhanced Land Force (ELF) Stage 1 project, the award-winning Cessnock Correctional Centre and ELF Stage 2 Singleton.

The company also provided floor coverings for the Hunter Medical Research Institute building in Newcastle, which involved the installation of carpet tiles and vinyl over four levels. In addition to the supply and installation of flooring, JAG Floors also offers commercial floor care, including cleaning, maintenance and repairs.

For more information contact JAG Floors, Unit 4, 339 Hillsborough Road Warners Bay, NSW 2282, phone 1300 729 524, fax 02 4953 7400, email: admin@jagfloors.com.au, website: www.jagfloors.com.au



THE EXPERTS IN COMMERCIAL BRICKLAYING

Established 15 years ago, Masonry Constructions (NSW) Pty Ltd are the experts when it comes to commercial bricklaying and block work.

Owned and operated by Chris Baldwin, a qualified, licensed and experienced bricklayer of 20 years, Masonry Constructions has extensive experience in unit and residential developments, government infrastructure, commercial shopping centres and mining industry construction.

Starting out as a sole trader with four staff, Chris expanded his business to become Masonry Constructions (NSW) Pty Ltd and now has 25 employees.

The company's philosophy is to deliver a first-class service to all building contractors and developers, and is committed to providing quality, safety and completing works to schedule.

Masonry Constructions has worked on a number of major infrastructure projects including the Enhanced Land Force (ELF) Stage 2 Singleton construction, completing the brick and block work for all the buildings at the site.

In addition to ELF Stage 2, the company worked on ELF Stage 1 and a number of large commercial developments in New South Wales,

including the Kurri-Kurri Hospital sub-acute care facility, Kurri-Kurri Aldi, the Bradken building project at Steel River Park in Mayfield and Lee Wharf Apartments, Honey'suckle.

Masonry Constructions has also worked on mining construction projects including the Mt Arthur Coal Mine, the Liddell Mine and is currently completing works with the Ravensworth North Coal Mine expansion project.

The company is extremely dedicated to ensuring the health and safety of its staff, clients and subcontractors, and believes that safety is as important as providing outstanding service to its clients.

Masonry Constructions also covers a large area including Newcastle, Hunter Valley, the Central Coast and Sydney. They provide competitive rates and can supply and install at a lump sum price.

For more information contact Masonry Constructions (NSW) Pty Ltd, PO Box 77 Nelson Bay NSW 2315, 1/41 Shearwater Drive Taylors Beach NSW 2316, phone 02 4919 0255, fax 02 4919 0266 email: chris@masonryconstructions.com, website: www.masonryconstructions.com