

# A GREAT FIRST IMPRESSION

DEVELOPER : Main Roads WA  
PROJECT VALUE : \$1 billion



The \$1B Gateway WA Perth Airport and Freight Access Project saw upgrades to one of the states busiest transport hubs. The project included road and bridge improvements, more than 21km of shared pedestrian/cyclist paths, noise walls and landscaping.

Providing an iconic gateway to the state, Gateway WA is one of Western Australia's largest road projects. It was jointly funded by the Federal Government (\$676 million) and the State Government (\$310 million). The project caters for the expected doubling of passenger air travel within the next decade and anticipated doubling of freight and container transport within the Kewdale Industrial Precinct by 2030.

Completed ahead of schedule and under budget, work on the infrastructure project began in 2013. The project incorporates road and bridge improvements, local road modifications and facilities, and connections for pedestrians and cyclists. Noise walls, landscaping and the use of Intelligent Transport System (ITS) Technology has also been integrated.

There has been a number of upgrades to the road network, including the widening of Tonkin Highway to six lanes (between Great Eastern

Highway and Roe Highway). Leach Highway has also been upgraded to expressway standard (between Orrong Road and the Perth Airport). New grade separated interchanges were constructed at Tonkin Highway/Leach Highway, Tonkin Highway/Horrie Miller Drive/Kewdale Road, Leach Highway/Abernethy Road and Tonkin Highway/Dunreath Drive. Additionally, the Tonkin Highway/Roe Highway interchange was upgraded.

Other works include the construction of an on-ramp at Abernethy Road to Tonkin Highway (southbound), installation of improved pedestrian and cyclist facilities and local road improvements through the Kewdale Industrial Precinct.

Several upgrades and modifications took place on the local road network, including the Abernethy Road/Noble Street intersection and intersections along Kewdale Road. Bell Street was extended (providing a direct connection between Miles Road and Orrong Road)

and existing driveway access on Leach Highway and its intersection with Belmont Avenue closed. Traffic access measures (left-in and left-out turns) were also implemented at Abernethy Road/Glassford Road, Kewdale Road/Aitken Way, Leach Highway/Miles road and Leach Highway/Acton Avenue.

It was important to create a gateway to the city, that left a lasting impression for road users, residents and visitors to Western Australia. With this in mind, the project has a "Ribbons through the landscape" themed journey which includes coloured way-finding indicators pointing to Perth landmarks.

The theme draws from the natural landscape, representing earth, sky and vegetation. The functional aspects of the road, such as noise/screen walls (around 7km of new noise/screen walls were constructed), bridge retaining walls and abutments, highway lighting and landscaping, were incorporated into the theme to create public art pieces.

Gateway WA worked to minimise any harmful impacts on the environment during the works. Where possible, the project conserved vegetation and established trees, protected native flora and fauna

habitats, and salvaged plant material for re-use following project completion. Around 55,000m<sup>3</sup> of waste was diverted from the landfill.

Extensive community engagement with stakeholders and community members was a priority during the project's master plan, the project team also worked with Main Roads, the City of Belmont, Shire of Kalamunda and Perth Airport, to ensure all expectations for the project were met.

The project was delivered on behalf of the Federal and State Governments by Gateway WA – the alliance partner of the state's roads authority Main Roads. The Alliance consisted of CPB Contractors (formerly Leighton), Georgiou, GHD, AECOM and BG&E.

For more information contact Gateway WA, 651 Abernethy Road, Forrestfield WA 6058, phone 08 9263 8300, email enquiries@mainroads.wa.gov.au, website www.gatewaywa.com.au

Below Westforce Construction completed all aspects of civil and structural construction on Gateway WA.

Below EXP Resources completed grading and trimming of road base coarse materials for the new road surfaces.



A multi-disciplined construction company focusing on major construction, infrastructure and resource projects across metropolitan and remote Australia, Westforce Construction aims to deliver projects using the most cost-effective and safety-conscious methods. The extent of the company's work and its abilities is further highlighted by its engagement on the Gateway WA project.

"Westforce Construction completed all aspects of civil and structural construction," Westforce's Paddy Kearns explains. "This involved completing the concrete, formwork, earthwork, steel fixing and noise wall installation."

The company's quality of work on the development was acknowledged through its winning of a project award. "We won the Gateway WA Quarterly Alliance Director Award in early 2015 for the January to March quarter, for the high standard of work delivered," says Paddy.

Given the overall project saw more than 100 contractors on site and only one award per quarter, the recognition was a significant reflection on Westforce Construction's crew, the overall attitude of the company and its ability to perform.

Having been around since 2007, Westforce has 100 staff, 25 of whom worked on the Gateway WA project. Westforce sees its staff as the company's number one asset and firmly believes that "a safe workforce is a happy workforce".

Its management team have more than 50 years experience in the construction industry, 15 of which are from the mining and resource sector. Having both construction and labour, and plant hire division enables Westforce to offer its clients a range of options, from a design and construct lump sum project, to once off trade and plant placements.

Contracting to all aspects of the construction, infrastructure and resource sectors, the company continues to expand and adapt to suit the industry – evidenced by its extensive project portfolio. Westforce is also working on projects for Roy Hill, BHP, Water Corporation, Perth Transit Authority and Defence Forces.

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With more than 40 years combined experience in heavy haulage and earthmoving, EXP Resources has the equipment, ethics and knowledge to get the job done right, safely and on time. The company conducted the lane, on/off ramp and intersection roadworks grading for the entire Gateway WA project. It was also entrusted to complete heavy earthmoving equipment transportation to, from and within the Gateway Project itself.

"Using our fleet of modern GPS-guided graders, dozers, tracked loaders and water carts, EXP Resources successfully completed grading and trimming of road base coarse materials to beyond the expected standards," explains EXP Resources Business Development Manager, Steve Deane.

"EXP also provided road building works simultaneously across separate project areas including laydown and compound areas. It provided safe, secure and timely transportation of plant assets and mobile equipment, and engaged in several night works to ensure minimal interruptions to traffic."

For the first time, EXP used GPS-guided grader blade machinery attachments, fitted to John Deere E329 tracked loaders. The equipment

accurately graded materials in and around the existing services. "Our GPS/LPS-guided graders used millimetre GPS systems to consistently produce excellent quality grades under bridges and new road services," adds Steve.

"We also expanded our work portfolio by producing clear, level working pads for large cranes and elevated working platform contractors to install appropriate concrete bridge sections. Once completed, we reworked the area to prepare for the road to be constructed," said Steve. "Our grader operators were instrumental in completing a tear drop interchange at Tonkin Highway/Leach Highway to ensure free flow of traffic movements with no need to stop."

EXP Resources is proud to be part of the Gateway project's success.

EXP Resources is currently engaged on the Mitchell Freeway Northbound extension and Kwinana Southbound duplication works. This is in addition to many civil projects in Perth and regional WA.

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Below CGH Civil provided plant hire and drainage solutions on the Gateway WA project.

Below BGC Quarries supplied 850,000 tonnes of quarry materials for the Gateway WA project.



Specialising in earthworks and drainage, CGH Civil's extensive experience speaks for itself when it comes to works on major construction projects across Western Australia. It was this expertise that was contracted for the Gateway WA project.

"CGH installed more than 14km of storm water drainage, carried out final trim in various areas of earthworks with GPS excavators and supplied small plant for verge works," says CGH Civil's Glenn Hooton. "We also successfully trialled and used a pipe lifter and a rotating tilt hitch on an excavator during this project."

With the number of CGH Civil employees varying from project to project, 12 of its staff worked on the Gateway WA project.

Having been in business for 14 years, the company has a solid track record throughout this time, including the ability to specialise in more complex and difficult earthworks. The company continues to be in demand to construct earthworks and drainage for projects across road and rail transport, civil infrastructure, ports and major dam works.

All its employees are highly skilled operators and have years of experience in the civil construction industry. CGH Civil always carries

out its work with a steadfast commitment to accuracy, reliability and a high level of safety.

CGH Civil's substantial experience when it comes to civil construction and earthworks is demonstrated best by its comprehensive project portfolio. These projects include the Great Eastern Highway upgrade, Kwinana Freeway widening, Mandurah Entrance Road and Perth to Bunbury Highway.

As well as being contracted to work on the state's main roads, CGH Civil continues to undertake a range of other civil works. It previously worked on FMG Rail, Roy Hill Rail, expansion of Ord River Irrigation Stage 2 and Sampson Brook Dam remedial works.

CGH Civil is currently working on the Roe Highway Expansion.

For more information contact CGH Civil Pty Ltd, Unit 3, 70-72 Discovery Drive, Bibra Lakes WA 6163, email glenn@cghcivil.com.au

Supplying more than 850,000 tonnes of quarry materials for the Gateway WA project, BGC Quarries has again demonstrated why it is a major provider of aggregates for the manufacture of concrete and asphalt.

The product supplied by the company for the project was primarily used as a sub base in the road construction as part of Gateway WA's pavement design.

Specialising in the supply of quarry materials for commercial and private uses, BGC Quarries has been in business for just over 35 years and has 75 employees.

The operation of the company's own quarries highlights its integrated strengths and benefits when supplying crushed aggregate to the civil engineering industry and government sectors.

When it comes to quarry design, BGC Quarries' primary objective is to ensure safe, efficient and profitable extraction of the maximum usable material from the minimum area of land. Furthermore, this extraction should result in minimum environmental disturbance and result in beneficial final restoration and land uses.

An example is the company's BGC Voyager II Quarry which started production in 2010. The quarry produces more than one million tonnes of aggregates annually and is designed for low environmental and social impact.

BGC Quarries' products are designed to fulfil both local government and Main Roads WA requirements. Product testing is carried out by the BGC laboratory, which is accredited by Australia's National Association of Testing Authorities (NATA).

BGC Quarries also provides crucial raw materials for the BGC Group's ready-mix concrete, wall and paving products as well as for its road construction and maintenance divisions.

Prior to the Gateway WA project, BGC Quarries supplied more than 188,000 tonnes of product to the Great Eastern Highway Sawyers Valley to The Lakes project in Western Australia for the duplication and widening of the highway.

For more information contact BGC Quarries, 1881 Great Southern Highway, The Lakes WA 6556, phone 08 9442 2388, fax 08 9442 2389, website www.bgc.com.au

