

BRIDGING THE GAP

MAIN CONTRACTOR : VSL-Brady Joint Venture
DESIGN ENGINEER : ARUP
SURVEYOR : Auspat
PROJECT VALUE : \$40 million

The Homebush Bay Bridge, constructed by VSL-Brady Joint Venture, connects two of Sydney's newest communities, Rhodes and Wentworth Point. Reaching 320m across Homebush Bay the bridge is designed for pedestrians, cyclists, public buses and emergency vehicles.

VSL has been established in Australia for over 50 years and operates worldwide in a network of some 50 locations. The company has a wealth of experience in the construction of complex structures allowing it to offer its customers high added-value technical solutions. Their expertise in bridge construction methods includes launching gantries, balanced cantilever form travellers, full span precast beam erection, cable stays and precast segmental erection. Prestigious and complex bridge projects that VSL have

been involved with include the M7 long span bridges, Gateway, Windsor Flood Evacuation Route, Newmarket Viaduct (NZ), Hunter Expressway Alliance, Gautrain in South Africa, Emigrant Creek Bridges Stage 1 and 2.

"We're focused on complex structures, long span bridge construction and heavy lifting," says Homebush Bay Bridge Project Manager, David O'Donnell. "We also have a ground engineering division, centralised expert technical centres, and research and development teams that provide modern and cost-effective

construction technologies. We offer not only post-tensioning solutions but also innovative construction techniques, designed to increase site safety, save time, improve durability and reduce costs."

Brady Marine & Civil are a Brisbane based marine infrastructure specialist with core capabilities in the construction of wharves, jetties, offshore pipelines, bridges over water and other marine based complex structures. Their involvement in bridges over water over the past decade stretches north from Sydney to Brisbane including marine works for Tarban Creek bridge remediation, bridges over the Hastings, Wilson and Kalang rivers in NSW, the Nerang river light rail and

pedestrian bridges on the Gold Coast and the Kurilpa bridge superstructure in Brisbane.

The combination of VSL's bridge superstructure expertise and Brady's marine substructure skills and resources produced a joint venture with complimentary skills perfectly matched to the requirements of Homebush Bay. Sydney's first privately funded bridge.

This bridge connects the communities of Wentworth Point and Rhodes and is a new landmark in Sydney's inner west. This sets a new benchmark in environmentally sustainable transport and service infrastructure in Sydney, playing a major role in the NSW government's Urban Activation Precinct.

The bridge is funded by Wentworth Point landowners, Billbergia Group, Sekisui House, Homebush Bay Holdings and Homebush Bay Properties.

VSL-Brady JV are responsible for the design and construction of the entire 520m bus-way bridge connection, from Shoreline Drive in Rhodes to the adjacent high rise building structure at Wentworth Point.

"We bring the long span bridge construction to the partnership and Brady Marine bring the marine works and foundations expertise," David adds. "Although the structure is relatively complex, it's what we do best. The key challenge has been to manage the needs of many stakeholders involved, ensuring their many requirements are met and can be integrated together into an efficient and cost effective end product."

"Another significant challenge was the contamination of this stretch of water due to chemical plants in the area 50 years ago. These contaminants are still in the riverbed. Therefore construction techniques had to minimise riverbed disturbance and minimise excavation. We chose a long span structure spans requiring less piers."

"The piles were driven steel tubes with a short pile plug detail, instead of the traditional, excavated, long pile plug. The short pile plugs, although requiring painstaking welding works in a confined space, achieved the 'excavation free' target."

Around Australia VSL have also recently completed the Tarban Creek Bridge Repair Project, and are working on the Inpex LNG Tanks Darwin, Post-Tensioning for the Berry Bypass Bridges, Slab on Grade projects throughout Victoria and Post-tensioning buildings in Tasmania.

"It is our hope that with the ever growing focus on the aesthetics and environmental impact of road and rail bridge construction projects, more and more clients and stakeholders look towards longer spans as the preferred solution in both urban and rural environments."

For more information contact VSL Australia, 6 Pioneer Avenue, Thornleigh NSW 2120, phone 02 9484 5944, email info.australia@vsl.com, website www.vsl-australia.com.au



Below Constructive Workforce provided professional contract staff for The Homebush Bay Bridge construction.

Constructive Workforce provides contract staff, labour hire and recruitment services to the Australian construction industry. We worked from the beginning of the Homebush Bay Bridge project with the site management of Brady/VSL JV to understand the exact requirements of each role. Their goal was to build a team of experienced, enthusiastic, high skill level multitaskers who would be useful for the whole project, this would also provide solid income for our workers and reliability for the bridge project.

“CWF provided barge supervisors, barge team, land works team, segment assembling team, the safety team, and site cleaners” informs Millie Booth, Constructive Workforce’s Managing Director. “We have developed a close working relationship with everyone on this project. They were a great group. CWF worked really hard for the entire project and we are very proud of our contribution to this great asset and landmark to the area.”

By providing the right staff for the job CWF improves productivity. The workers’ satisfaction, welfare and development is also elevated. They achieved this on the Homebush Bay Bridge Project and as a result the rate of worker turnover was very low.

CWF employees move from project to project, and their skills and career aspirations are also considered and they help with further training. We monitor the performance of our workers to ensure quality of service and satisfaction, meeting and even exceeding a client’s expectations.

“At CWF we have a team of quality workers who take pride in their work and have a strong desire to do the right thing

for themselves, their fellow workers and our clients.”

With CWF on the job, a client can be assured that all aspects of the labour recruitment have been handled by experts who will safeguard their project’s reputation. Their staff have an unwavering commitment to complying with relevant laws, regulations, policies and procedures.

“Constructive Workforce provided some key staff and labour to our bridge project at Homebush Bay. The personnel provided were of a high caliber and were very motivated throughout their placement here, providing a significant contribution to the success of the project. Constructive Workforce provided consistent support to us, and to the personnel they provided, and I would happily choose them again for future recruitment needs.” David O’Donnell, Project Manager, Homebush Bay Bridge.

“In my role as Project Engineer for the Homebush Bay Bridge Project I found that calling upon Constructive Workforce was a great choice. Constructive Workforce have the ability of supplying a wide range of skilled workers at very short notice. I found the workers to be very well mannered, always had a good attitude towards work and were of the skill level as described/required. I will certainly consider Constructive Workforce when recruiting for my next project/endeavour,” Kevin Toomey, Project Engineer, Brady Marine and Civil.

For more information contact Constructive Workforce, 8/1 Burroway Road, Wentworth Point NSW 2127, phone 02 8197 9560, fax 02 8197 9561, website www.constructiveworkforce.com.au





Below Cubic Pumping provided precast concrete segments for The Homebush Bay Bridge construction.

Below JC Butko provided the safety barrier rails and pedestrian balustrades for Homebush Bay Bridge.



Working in the construction industry since 1988 Silvano Ciaschetti established Cubic Pumping in 2003. In September 2014 Silvano, who operates the Zoomlion 33m boom pump and Steven Salem who operates the Flowcrete 28m boom pump for Cubic Pumping, began their pivotal work on the Homebush Bay Bridge.

A precast box cantilever construction, the bridge consists of two-lanes, 12m wide. Stretching 330m across Homebush Bay it sits on five major piers, with a maximum span of 68m between piers.

The Homebush Bay Bridge is constructed from precast concrete segments that Cubic Pumping produced onsite at Wentworth Point. Each concrete segment was loaded onto a barge, before being progressively lifted into position by a giant crane.

“We will have pumped a total of 100 precast panel segments for the bridge, each weighing about 75 tonnes,” informs Silvano. “We’ve also pumped all the foundations and piers for the bridge.”

The Homebush Bay Bridge was funded by four Wentworth Point landowners, headed by Billbergia Group. It’s designed for pedestrians, cyclists, emergency service vehicles, public transport

and a local shuttle bus service. It is not open to private vehicles, taxis, hire cars or motor bikes, but will have the capacity for a future light rail service.

“It’s rewarding to seeing the architect and engineers vision for this bridge come to life stage by stage and know that Cubic Pumping’s expertise will provide an important link between Rhodes and Wentworth Point and reduce the travel distance from 8km to less than 500m,” beams Silvano.

Cubic Pumping’s strengths are also evident in the Darling Harbor Convention Center, Abercrombie Central Park in Sydney, new sub-division developments at Marsden Park, Rouse Hill and Leppington.

For more information contact Cubic Pumping Pty Ltd, PO Box 64, West Ryde NSW 1685, mobile 0400 762 266, email cubicpumping@gmail.com

Established in 1976 by John and Carolyn Butko, JC Butko Engineering specialise in providing quality stainless steel and mild steel fabrication, safety screens, barrier rails, balustrading and handrails, tanks, pressure vessels, pipework, stainless steel storage tanks, conveyors and material handling, total project engineering and management, drafting and design services, onsite installation and labour hire.

“Spread over three hectares our workshop is the region’s largest general engineering company,” said Paul Butko, Butko’s Commercial Manager. “Our fully equipped machine shop has the capacity to manufacture tanks and large structures in excess of 20 tonnes. Silos with a volume of 300m³ have been fabricated, delivered and installed in one piece, or site assembled depending on the customer’s preference.”

This family owned business now employees 110 locals. Twenty four staff worked on the Homebush Bay Bridge project from fabricators, stainless steel pipe welders, design engineer, draftsman, workshop foreman, QA manager, project managers to the Butko truck driver. JC Butko Engineering prepared the drawings, fabricated and installed 830m of safety barrier rails, 420m of pedestrian balustrade and 840m of stainless steel handrail.

“Our biggest challenge was the design and fabrication of the unique jigs we created to ensure efficiency and accuracy of the various sizes and configurations of barrier rails and balustrade,” added Paul.

JC Butko’s success is due to the ongoing hard work and commitment of all their employees and the strong relationships they’ve forged with clients and suppliers. “We’ve trained over 170 apprentices over the years,” informed Paul. “This is our first project for VSL and Brady and it’s been stimulating working with such a professional team to successfully deliver this exciting project.” JC Butko Engineering has also worked on the Barham Bridge and Carrathool Bridge Projects. Other major clients include Mars Corporation, Lend Lease, Grain Corp, Visy and Nestlé.

“We’re proud of our business, our quality certification and being a major employer in the region,” concluded Paul. “Our skilled work force, share our commitment to providing the best possible engineering solutions in full, safely on time and within budget.”

For more information contact JC Butko Engineering Pty Ltd, 7 Moloney Drive, Wodonga VIC 3690, phone 02 6024 4799, fax 02 6024 4075, email enquiries@butko.com.au, website www.butko.com.au