



B&R Enclosures

ROAD AND TUNNEL INFRASTRUCTURE PROJECTS

brenclosures.com.au

OUR BUSINESS

Since 1955, B&R Enclosures has built a reputation for excellence in the design and manufacture of electrical enclosures and integration services.

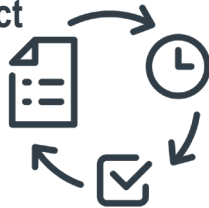
As an independent, 100% Australian family owned and operated business, we champion the virtues of quality, innovation, service and value.

B&R's knowledge, precision, quality and unwavering commitment to creating repeatable solutions for our clients supports our position as preferred manufacturer for many private, government and commercial projects in some of Australia's harshest environments.

Solutions range from off-the-shelf standard manufactured products to customised and assembled-to-order solutions, electrical equipment integration, project management and supply chain management services. B&R's team of designers work with clients on unique engineering challenges to provide innovative, efficient solutions delivered to complex project specifications.



Complete project
management



Built for Australian
environments



100%

Australian family owned
and operated.

OUR CLIENTS



Transport
Roads & Maritime
Services



**WE ARE AUSTRALIA'S
LARGEST MANUFACTURER
OF ENCLOSURES, RACKS
AND CABINETS.**

OUR CAPABILITIES

Road and tunnel infrastructure projects throughout Australia have become increasingly technically complex. They require advanced electrical and telecommunications systems designed to ensure that optimum traffic flows are achieved in a safe manner.

B&R Enclosures has successfully delivered multiple road and tunnel infrastructure projects nationally. Our scope of work typically relates to the design, manufacture, testing and supply of electro-technology systems. These systems are designed to enable the construction and operation of the projects to be delivered safely and efficiently.

Typical road and tunnel product solutions which B&R manufactures include:

- Low Voltage Distribution Boards (LVDB)
- Intelligent Traffic System Control Panels (ITS)
- Information and Communication Technology Panels (ICT)
- Plant Management Control Systems Panels (PMCS)

B&R collaborates closely with the client to ensure our integrated systems are designed to meet regulatory compliance and are delivered on time and on budget. Our qualified engineers and designers develop systems to provide our clients with a 100% fit-for-purpose solution, ready to be installed once delivered to site. Our clients regularly turn to B&R because of our proven responsiveness, reliability and dependability. When a client requires detailed, well-resolved solutions for dependable rollout and deployment, B&R is the partner of choice.

Current and past road infrastructure projects include:

Westconnex 3A - NSW
Westconnex 3B - NSW
Rozelle Interchange - NSW
M6 stage 1 motorway - NSW
Cross River Rail - QLD



LVDB

LOW VOLTAGE DISTRIBUTION BOARDS

B&R offers robust, functional, fully integrated, wired and tested LVDB systems capable of delivering years of safe performance for complex modern road infrastructure projects.

Key considerations taken into account when designing these systems include:

- Incoming supply cable sizing
- Sub mains sizing
- ELV requirements
- Heat rise issues relating to active and passive equipment
- Project location
- Environmental factors

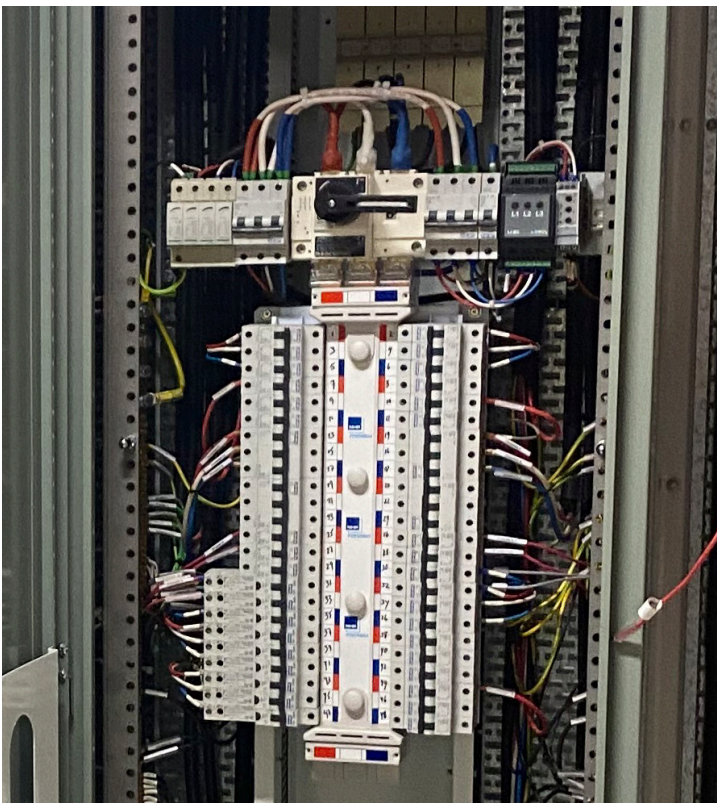
B&R is committed to understanding our client's project requirements and providing complete solutions to ensure efficiency and safety.

PROJECT PROFILE

Rozelle Interchange - NSW

The Rozelle Interchange is a new underground motorway interchange which provides connectivity to the M4-M5 Link Tunnels and the City West Link, and underground bypass of Victoria Road between Iron Cove Bridge and Anzac Bridge.

B&R successfully designed, manufactured, tested, and delivered in excess of 200 LVDB's for this project over a 12 month period. Across multiple delivery dates, B&R co-ordinated FAT (factory acceptance testing) and delivery with our client to achieve agreed contract delivery milestones.



B&R provides comprehensive, flexible ITS systems for multiple road projects throughout Australia. These advanced systems provide innovative services relating to different modes of transport and traffic management, enabling road users to make safe, coordinated and smarter use of transport networks.

Road ITS projects require advanced technologies that deliver operational functionality for the safe and efficient management of the road system. These systems can include, but are not limited to - contacting emergency services when an accident occurs, CCTV systems to enforce traffic laws, variable message signs and traffic loop control.

B&R's range of approved and certified roadside ITS cabinets can be configured to include low voltage (LV) and extra low voltage (ELV) sections to support specific project requirements.

PROJECT PROFILE

WestConnex 3A & 3B - NSW

WestConnex is Australia's largest road project and is part of an integrated transport plan to keep Sydney moving.

B&R delivered an integrated solution specifically designed to deal with the environmental and scalable challenges of this major Sydney infrastructure project. All systems were manufactured and integrated at B&R's facility and delivered to the WestConnex site for installation.



ICT forms a critical component of modern road project requirements due to the vast volume of data that is generated through the road network system. Quality ICT racks that can manage the network's cabling and active equipment requirements are essential to successful project delivery.

B&R's ICT rack range provides premium panels that deliver superior value to support the ICT requirements of road projects. When designing our ICT racks, B&R considers requirements such as:

- Thermal issues relating to ventilation
- Top, bottom and rear cable entry and exit
- Bending radius limitations of both copper and fibre optic cables
- Horizontal and vertical cable management
- Active equipment security and installation

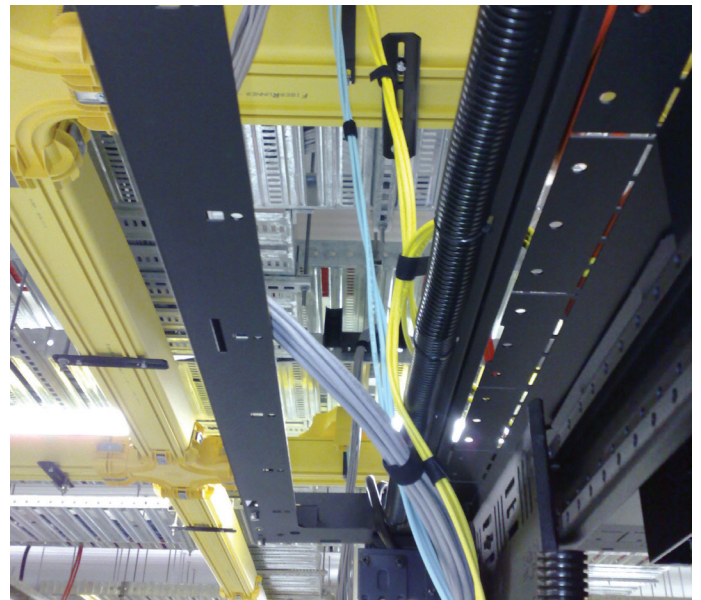
Particular design thought is given to ensure B&R provides an ICT system compliant to relevant standard that can support not only today's technical requirement but any future addition to the network which the ICT cabinet will need to support.

PROJECT PROFILE

Gold Coast University Hospital (GCUH) - QLD

With a proven track record for delivering data ICT projects, B&R was commissioned to deliver a custom solution to the GCUH.

B&R supplied 70 Ausrack Plus cabinets complete with vertical brush inserts, custom air duct system and PDU brackets. Airflow and security were major considerations of the data centre design, which the addition of blanking panels addressed. Furthermore, custom lockable cable zone covers were designed and manufactured to increase access security. By integrating cable zones into the rack design, the install was clean and efficient, with the ability to quickly create cable looms and cross cabinet cabling. The decision to pursue B&R's lockable cable zones in health care projects is becoming more common, with a desire to maximise centre security and mitigate the risk of operational failure.



Plant management control systems are designed to provide monitoring, control, recording and reporting of various electrical and communications systems within road tunnels and passageways.

Types of systems controlled by the PMCS panel include:

- PMCS communication network
- Tunnel ventilation
- Pressurisation
- Air quality monitoring
- Fire safety
- Tunnel emergency equipment
- Drainage and water treatment
- Electrical power supply
- Lighting in tunnel and egress passages
- Egress signage, including directional and exit signs
- Public Address (PA) System

Creating a collaborative relationship with clients, the B&R project team designs, supplies and tests PMCS panels to project specifications. Where our clients free issue equipment such as PLC's, power supplies, IO modules and network switches, B&R has a comprehensive management system in place to manage and track these materials to ensure project delivery is completed in accordance with agreed contract terms.

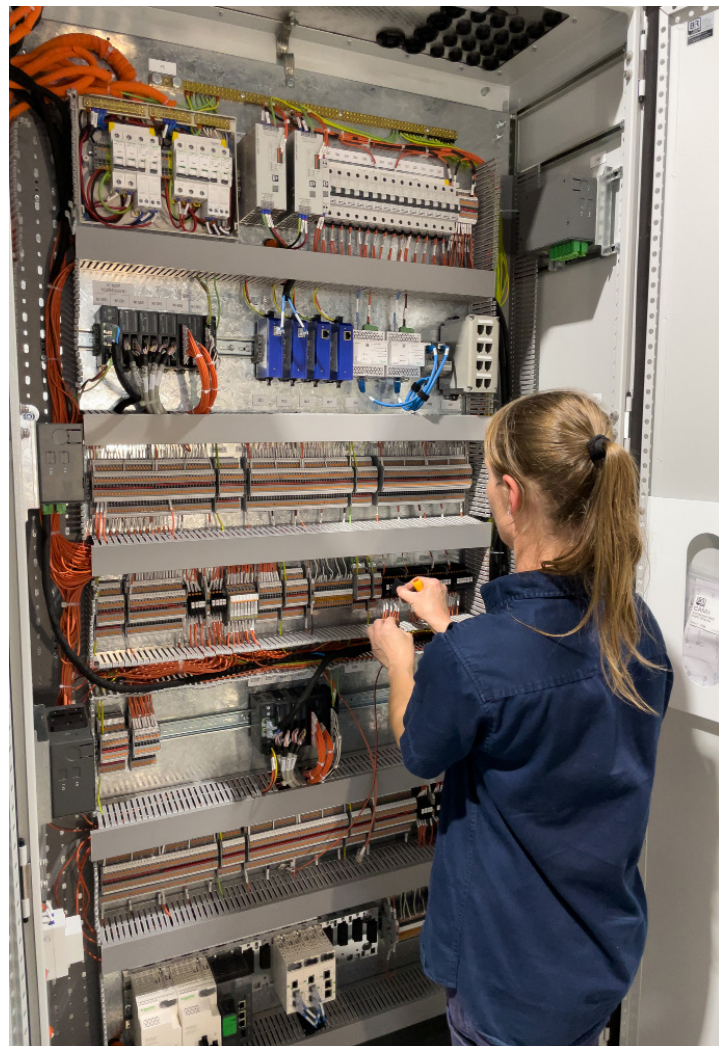
PROJECT PROFILE

Cross River Rail - QLD

Cross River Rail is a new 10.2 kilometre rail line from Dutton Park to Bowen Hills, which includes 5.9km of twin tunnels under the Brisbane River and CBD.

In addition to supplying 173 LVDB's for this major infrastructure project, B&R have also been contracted to supply Control and Communications Cabinets.

Our project scope includes -
Design, manufacture and test a range of control cabinets for the management of
Tunnel Ventilation & Control Systems (TVCS)
Plant Monitoring & Control Systems (PMCS) and
Passenger Monitoring Systems (PMS)
This also includes Fibre Optic Data Racks for the interconnection of these systems across the project. All cabinets require stringent Factory Acceptance Test procedures to be carried out at B&R's premises prior to release for delivery. These cabinets are being delivered in multiple batches to fit with the customers construction programme and there is a total of 137 cabinets for this project.



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