

CASE STUDY

Brooklyn substation civil works

LOCATION: Brooklyn, Victoria
CLIENT: Zinfra
DATE: April 2023 - September 2023



Introduction

Global Rail Australia's internal division - GRA Networks - and their Power Infrastructure team, has been successfully delivering a complex civil, structural, and building contract to support a vital new substation project for valued client Zinfra, who build, operate, and maintain energy infrastructure assets in Australia, and are one of a number of valued clients of Global Rail Australia, whereby our teams support their projects through a comprehensive range of engineering, project management, construction, operation and maintenance delivery services.

The project commenced in April 2023, in order to supply customer - energy asset owner and operator, Jemena Electricity Networks - with a new substation in Brooklyn. The new substation is located at 598 Geelong Rd, Brooklyn, VIC 3012 and will be staged with the initial load supply expected to be supplied by August 2023, with project commissioning due in September 2023.

Jemena has been working to establish a power supply at the Brooklyn site, which falls within their distribution service area boundary. The customer has requested capacity to support a

33MVA maximum demand initially, with an ultimate capacity to support a maximum demand of 99MVA, both with N-1 redundancy.

GRA Networks has delivered all civil, structural, and building works at the substation on time, meeting all safety and quality requirements in accordance with the relevant project standards, including the selection of all equipment and materials. All components have been supplied new and are of a proven quality and suitability for this project.

All aspects of the civil and structural works have been constructed to provide a low maintenance durable end product, suitable for the purpose intended and taking cognisance of the environmental impacts of all elements of work in the substation area.

Deliverables

GRA Networks has delivered this significant \$3m project by investing their power and infrastructure expertise, progressing works on time, with no safety incidents or concerns. The full scope of works included the following elements:

- ① Construction of underground trench routes with electrical conduits for all transformers and other structures
- ① Construction of underground stormwater drainage
- ① Supply and installation of a Humeceptor

Benefits

Global Rail Australia Pty Limited offer design and build infrastructure contracting services in the rail and transportation, utility, commercial and industrial sectors working on multi-disciplinary projects to meet the needs of our clients and provide cost-effective solutions to complex problems.

Led by experienced professionals with in-depth knowledge of these sectors and supported by skilled and dedicated in house teams, we offer a fully integrated solution, allowing us to provide clients with a unique turnkey offering that is value adding.

This inclusive approach allows our clients to benefit from our expertise in a number of sectors and ensures they receive the most appropriate advice and solution for their schemes.

About us

Global Rail Australia Pty Limited's civil and structural engineering capabilities take full project responsibility and offer a fully managed service for clients within the built environment.

We provide civil and structural engineering solutions from initial project planning and design, to enabling works covering site surveys, hazard and environmental assessments, procurement, onsite construction, and equipment installation, through to final commissioning.

We are flexible in our approach and can undertake civil engineering projects on a turnkey, consultancy, main contract, sub-contract, or resource supply basis to meet each individual client's requirement.

- ① Construction of concrete foundations
- ① Construction of concrete footings for lighting masts
- ① Construction of transformer enclosures
- ① Supply and installation of precast wall panels
- ① Construction of a substation access road
- ① Construction of concrete kerbing

With a skilled, multi-disciplinary workforce providing a broad range of services and operating in tandem with a highly experienced management team, our teams are geared to meet our clients exacting demands.

Bespoke solutions for individual client requirements are central to the company's offering.

We offer a fully planned and managed design and construct service, which includes materials procurement and logistics management.

We apply our skills to new build, refurbishment and maintenance projects, our activities include:

- ① Design including temporary works
- ① Condition and dilapidation surveys
- ① Demolition and remediation
- ① Combined service routes
- ① Services enabling and diversion works
- ① Bridge replacement and refurbishment
- ① Ground and site investigation
- ① New build and refurbishment
- ① Road construction
- ① Embankment works and retaining structures