

Case Study: GG6 Expansion Project - Substation Buildings

Client: Exxaro

Location: Lephalale, Limpopo

Project Duration: August 2017 - July 2018

Sector: Mining Infrastructure - Electrical Infrastructure

Project Overview

Stefanutti Stocks Civils and Axsys Projects formed a joint venture through the Voluntary Rebuild Programme (VRP) to deliver critical electrical infrastructure for Exxaro's Grooteegeluk Coal Mine expansion. The project encompassed multiple electrical infrastructure facilities supporting expanded mining operations.

This project demonstrated expertise in specialised electrical infrastructure construction within an active mining environment.

Key Deliverables

- **Pump station construction** for mining operations support
- **Small coal substations** for distributed power infrastructure
- **Free-standing transformer bay structure** for electrical distribution
- **Complete building services** including HVAC and fire protection systems
- **Commissioning and testing** of all electrical infrastructure

Technical Scope

Construction Works:

- **Earthworks and foundations** for electrical infrastructure
- **Concrete and masonry structures** designed for electrical equipment
- **Building works** including weather protection and access systems
- **Wet trades and finishing** appropriate for electrical environments

Electrical Infrastructure:

- **Small power and lighting** systems throughout facilities
- **Distribution boards** and electrical distribution infrastructure
- **HVAC systems** for equipment cooling and environmental control
- **Fire protection systems** appropriate for electrical infrastructure

Project Completion:

- **Signage erection** and facility identification
- **System commissioning** and performance testing
- **Handover and training** for operational staff

Mining Environment Expertise

The project required:

- **Coordination with active mining operations** to maintain production continuity
- **Compliance with mining safety regulations** and electrical safety standards
- **Integration with existing mine infrastructure** and electrical systems
- **Durability design** for harsh mining environmental conditions

Joint Venture Success

VRP Partnership Benefits:

- **Skills transfer** and local contractor development
- **Combined technical expertise** for complex electrical infrastructure
- **Resource optimisation** and risk management
- **Community development** through local participation

Electrical Infrastructure Excellence

The project delivered:

- **Reliable electrical infrastructure** supporting expanded mining operations
- **Modern substation facilities** with advanced control and protection systems
- **Enhanced operational capability** through improved electrical distribution
- **Long-term infrastructure** supporting mine expansion objectives

Safety and Compliance

- **Stringent electrical safety** protocols throughout construction
- **Mining industry compliance** with all relevant regulations
- **Environmental management** appropriate for mining operations
- **Quality assurance** ensuring long-term reliability and performance

Project Classification: Electrical Infrastructure

Contract Type: Joint Venture - Specialised Construction

Programme: Voluntary Rebuild Programme (VRP)