

edison

Arapuni Southend Floor Strengthening

INDUSTRY SECTOR:	Generation - Stations
EDISON SERVICE:	Project Management
CLIENT:	Mighty River Power



Project Overview:

Constructed in the 1920's and 30's, Arapuni Power Station is a listed heritage building. The original transformers were single phase units each weighing approximately 15 tonne. In 1999 these transformers were replaced with 3 phase units with an in service weight of approximately 50 tonne. Extensive foundation modifications were carried out at the time to accommodate them.

With ongoing transformer fleet replacements Mighty River Power have adopted an interchangeable universal spare strategy; resulting in the need to accommodate heavier units up to 70 tonnes to cover the existing transformers at Arapuni.

Consequently this increase in weight resulted in the need to provide a strengthened area in the south end unloading bay within the powerhouse and a cross bay strengthening of the transformer platform.

Edison Delivery:

Edison was engaged by Mighty River Power to manage and deliver the construction and commissioning stages of the project including:

- Scope and concept development
- Management of the detailed design contract.
- Tendering the construction contract
- Construction management
- Stakeholder management
- Operation handover
- Completing all close out activities

The construction works comprised strengthening of the existing unloading bay and traverser track areas.

Strengthening of the existing unloading bay area was carried out from the underside of the existing slab using self-compacting concrete (SCC) pumped from the top through the existing slab via a 100mm diameter cored central hole and a 100mm diameter pipe. Four other penetrations were made at the corners for bleed holes. There were 3 bays; each bay is approximately 2.5m x 4m. Strengthening of the existing traverser track area approximately 55m long x 3m wide was carried out from the top using normal concrete.

Client Feedback:

“Edison’s project management skills ensured a quality delivery in relation to Health and Safety and within budget and time constraints.”

Magnus Adlam, Station Manager