



Project Location

27 Riverside Road Emu heights NSW

Client

KBA Insurance Repairs

Commencement Date

May 2025

Completion Date

December 2025

Overview

SCE delivered the reconstruction of flood-damaged bridge infrastructure at Emu Heights. The civil works comprised site establishment, bored piers, structural foundations, blinding layers, in-situ wing walls and aprons, precast reinforced-concrete box culverts, bridging and transition layers, and granular backfill. Dewatering supported subgrade and foundation construction. SCE coordinated engineering supervision, labour, plant, concrete placement and lifting operations to deliver the structural works with controlled sequencing, quality checks and site safety.

Outcomes

Safety and Environment

The project adhered to all relevant safety regulations and standards to ensure the well-being of workers and occupants throughout the construction process. Environmental impact was minimised through responsible sourcing of materials, waste management practices, and adherence to environmentally friendly construction methods where possible.

Quality

SCE delivered bored piers, reinforced concrete foundations, in-situ wing walls and aprons, precast box culverts, bridging layers and compacted backfill. Engineering supervision and staged checks controlled setting-out, reinforcement, concrete placement and installation quality.

Project Scope

- ✓ Site Establishment included all initial preparation works such as set-out, equipment float-in (excavators and pozitack), and mobilisation of tools and machinery to the site.
- ✓ Bored Piers Construction consisted of drilling and forming 12 x 450mm diameter bored piers up to 2700mm deep. This included the supply and delivery of permanent casing, reinforcement cages, and N40 concrete, with installation supported by excavation equipment, concrete pumping, vibration, and finish works.
- ✓ Blinding Layer was prepared beneath foundation elements using stabilised sand, geofabric, and compressible filler materials. Plant hire and experienced operators ensured accurate placement and compaction.
- ✓ Structural Concrete Elements included the construction of a 250mm wing wall toe, apron, and integral beam using in-situ methods. Works involved reinforcement fixing, formwork installation, concrete pouring, and installation of 50mm UPVC weep holes to facilitate drainage.
- ✓ Precast Reinforce Concrete Box Culvert were manufactured placed using 25 tonne Franna.
- ✓ In-situ Wing Wall Construction (not precast) was executed with full steel reinforcement, on-site formwork, concrete placement, and finishing. All activities were supported by specialised tools including generators, rebar benders, cutters, and concrete vibrators.
- ✓ Bridging layer was constructed to bridge over the sloppy ground, also transition layer was constructed in accordance with the design.
- ✓ Backfill with Granular Fill was performed using up to 32 tonnes of material. Excavators and pozitack machinery placed and compacted material in layers to support the completed structural works.

Timeframe

SCE delivered the bridge reconstruction within the agreed timeframe, sequencing dewatering, bored piers, reinforced concrete, culvert placement and backfill with coordinated labour, plant and inspections.

Regular Progress Updates

Regular progress updates kept stakeholders informed of construction milestones, programme changes and the next stages of the bridge reconstruction.

Project Monitoring

Regular monitoring and updates on the project's progress were implemented to address any issues promptly and ensure that the project stayed on track.

- ✓ Dewatering System was active during bored pier construction, including diesel trash pump hire, sump system setup, hose and sump well installation, and gravel filter supply. This ensured groundwater was controlled during all subgrade activities.
- ✓ Labour and Supervision throughout the project included skilled spotters, foremen, and part-time allocation of a project engineer and operations director to ensure coordination, compliance, and quality control.









