

CASE STUDY

Toorale Bridge



Overview

Toorale is located approximately 80 kilometres southwest of Bourke, where the Darling and Warrego rivers meet. The land has significant cultural and eco-logical value to the Kurnu-Baakandji people.

- Semi-integral bridge
- Dimensions: 3-span of 9.1 x 12.1 +9.1m wide
- Client: Department of Planning and Environment (DPIE) and National Parks and Wildlife Services (NPWS).
- Contractor: Pensar

About

The national park is home to a diverse range of wildlife and vegetation, including several rare and endangered species. Visitors to the park can enjoy a range of activities, such as camping, hiking, fishing, and birdwatching, while also learning about the area's rich cultural and natural history. The park is managed by the New South Wales National Parks and Wildlife Service, with a focus on preserving its unique ecosystems and he-ritage values for future generations.

How we helped

The Toorale Bridge project is a remarkable feat of engineering.

The three-span bridge uses Redcor® weathering steel formwork, which not only provides protection from external elements like fire, water ingress, and chloride ion attack, but also gives a beautiful reddish-brown finish that blends seamlessly with the surrounding red coloured earth.

Results

We are immensely proud of the Toorale Bridge project and all those involved in its success, as it represents a commitment to both the environment and the Kurnu-Baakandji community. The final design of the bridge, weir, and fishway was developed with input from the Toorale Aboriginal Joint Management Committee, National Parks and Wildlife Service, NSW Fisheries, and NSW Public Works Advisory to ensure that cultural and historic heritage values were reflected in the finished product.

Key Points

- An environmentally friendly project for the Kurnu-Baakandji community.
- Installation of the abutment, headstock and deck set was completed quickly within four working days by Pensar’s five-man crew. Full installation including foundations was completed in 28 days.
- Largest crane used was 100 tonnes for decks and smaller cranes used for other components.
- Design utilises weathering steel (Redcor®), that blends in well with the surrounding environment.
- Over 98% of the steel used in the bridge was sourced from Australia.
- Winner of the Excellence in Innovation award at the Austroads Bridge Awards 2022.

Challenges

The project was managed by the NSW Planning, Industry & Environment department, with a focus on ensuring that the construction activities did not have a negative impact on the local environment or cultural heritage. This included implementing measures such as fish passage and environmental flows to protect the surrounding ecosystems. The construction of the bridge was in a remote location, under Covid restrictions and required careful planning and coordination to ensure that it met the needs of all stakeholders.

The local Indigenous landholders were particularly invested in the project and eagerly anticipated the completion of the “red bridge”.

