

CASE STUDY

KOOMBOOLOOMBA DAM BRIDGE

TULLY RIVER, QLD

**HUMEDECK™ MODULAR
BRIDGE SOLUTION**



ISSUED BY HUMES



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HumeDeck™ Bridges the Gap for a World Heritage Listed Site

Project Background

The upgrade of the old single-lane timber girder and corrugated steel deck bridge across the Tully River required a highly sensitive design approach. The project had two key requirements: the new design needed to utilise the existing bridge substructure, and installation had to minimise disturbance to the surrounding World Heritage Listed environment. Humes' HumeDeck™ modular bridging system was the ideal solution to meet these critical project needs.

Key Challenge

Beyond the environmental considerations and substructure constraints, the project also required addressing variations in the height of the existing bridge piers, raising the level of the bridge and adjoining road approaches, and incorporating a fall in the deck units to allow for drainage once installed.

Manufacture and Installation

The HumeDeck™ system is a modular bridging solution suitable for installation on existing substructures or as a complete bridge system with precast concrete piles, decks, abutments, and headstocks.

Choosing HumeDeck™ delivered significant benefits for this project:

- No concrete pouring on site, minimising environmental disturbance and reducing equipment and logistics requirements.
- Deck units were lifted onto the headstocks using an on-site gantry system built on the existing bridge structure, which was also used to remove the old timber girders.
- A wide deck design and one-piece deck and girder units reduced site work and enabled installation of two spans in a single day.

Humes also developed a custom-made headstock design to address the varying pier heights and ensure the decks were installed accurately. Precision manufacturing ensured the finished surface level of all headstocks was within a 3mm height tolerance once installed.

Innovation and Outcome

The new 91 metre long bridge spans the Tully River just downstream of Koombooloomba Dam, owned by Stanwell Corporation. HumeDeck™ units are designed in accordance with AS 5100 using W80, A160, SM 1600 (and HLP 320 and 400) load regimes and can be produced in spans from 6 to 12 metres and widths up to 2.7 metres.



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PROJECT INFORMATION



PROJECT

Bridge over Tully River at Koombooloomba Dam, QLD



PRINCIPAL

Stanwell Corporation



PRODUCT SUPPLIED

20 HumeDeck™ Units
9 Headstocks
2 Abutments

