

BRIDGE IT NZ

We Build Bridges

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Aratu Forests Limited bridge project highlights the value of understanding client needs in-depth.

Time sensitive harvest operations and restricted road access were key factors in the decision of Aratu Forests to engage Bridge It NZ to deliver a customised bridging solution for their Gisborne site. The proposed site for the bridge necessitated engagement and approval from several stakeholders including Kiwirail, New Zealand Transport Authority (NZTA), and Gisborne District Council. Bridge It NZ's collaborative can-do approach and exclusive specialisation in bridge design, construction and installation resulted in the timely delivery of a unique, cost effective bridge solution.

A high priority bridge crossing required for a complex site

Transporting forestry harvest off-site is a business as usual activity. However, accessing the site of Aratu Forests was anything but usual. Restricted line of sight upon exiting the main forestry access road onto the state highway created potential traffic safety hazards, necessitating the creation of an alternate access. The only viable solution was to access the State Highway network by crossing over a nearby railway line. Bridge It NZ were engaged by Aratu Forests Limited to design, project manage, construct and install a bridge crossing that was cost effectively designed for longevity while meeting all stakeholder approval requirements.

Expertise and collaboration combine to deliver a unique bridge design

Bridge It NZ worked closely with Tiaki Engineering Consultants to complete the design requirements. Thereafter, Bridge It NZ's fabrication and precast concrete teams designed and constructed a 21m x 4.5m Steel Beam Concrete Deck Bridge using a modular design to enable smooth transport to, and installation onsite. Andy Costello, the key stakeholder from Aratu played a critical role in the smooth approval by Kiwirail, and Gisborne District Council – all of whom had specific regulatory and safety requirements for the design and installation.

This project highlights the vital role of understanding client needs and depth of expertise in creating a long lasting, cost effective bridge solution.

Understanding client needs:

By working closely with Aratu Forests Limited to understand their requirements, Bridge It NZ recommended a solution that fully assessed and accommodated bridge loading requirements, after investigating and discounting an alternate solution to strengthen an existing bridge. Aratu Forests Ltd and Bridge It NZ worked collaboratively to meet Kiwirail requirements and incorporate all approach works and site installation requirements up-front. Additionally, Tiaki Engineering Consultants suggested valuable design enhancements such as guardrails to speed up design approval with Kiwirail. The result was an expedited bridge design approval and elimination of installation delays.

Unique design

The weight of the bridge, overhead powerlines and a Kiwirail rail track were all important factors that drove the unique modular design of the bridge. This ensured the bridge could be transported by road and installed using excavators to avoid overhead lines. As the bridge needed to sit five metres above the railway line, high approaches were needed. Bridge It NZ designed and created abutments to also act as retaining for the approach. This allowed a wider turning circle to enable trucks to enter and exit the bridge in a single movement – critical when turning on and off a State Highway.

"I'm really proud of how our team responded to the unique site and stakeholder challenges this project presented. Right from design through to installation, our team worked collaboratively with the client to ensure the solution really met their needs. And in terms of the finished product, the team produced an outstanding bridge which we are really proud of." – Kim Bevins, General Manager Bridge It NZ.

"Thanks to the efforts of people like you who have supported us through this project we have been able to provide safe access to the forest for the dozens of people whose workplace it will be over the coming years." - Andy Costello, Harvesting Manager, Aratu Forests Ltd



BEFORE



AFTER