

CASE STUDY



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| Customer | University of the Sunshine Coast |
| Product | Custom K1103 Steel I-Beam Condamine Pedestrian Bridge |
| Project | Dilli Village Research Centre |
| Location | Dilli Village, Fraser Island, Queensland |
| Designer | Landmark Products Pty Ltd |
| Installer | Landmark Products, 2015 |
| Ref No | 24064 |

Landmark Products Case Study:

Customer University of the Sunshine Coast

Product Custom K1103 Steel I-Beam Condamine Pedestrian Bridge

Overview:

The University of the Sunshine Coast manages the Fraser Island Research and Learning Centre at Dilli Village, approximately 24 kilometres north from the bottom point of the eastern side of the island. Dilli Village provides accommodation for students and staff who conduct research on the Island.

As Dilli village sees many students, staff and visitors each year it was decided by the University to install a pedestrian bridge for direct beach access.

Design:

The bridge needed to be 19m in length with a clearance width of 1.5m.

A steel I-beam design was chosen, it was hot dipped galvanised and 2 pac epoxy coated for structural longevity.

The decking and balustrade was pre-manufactured and bolted on-site separately to the whole bridge to allow for easier delivery by 4WD truck via. the eastern sand beach.

Decking:

The decking used is Einwood wood plastic composite (WPC).

Einwood decking alleviates the maintenance required with foot traffic over hardwood, but has a beautiful natural grain that blends seamlessly into this pristine environment.

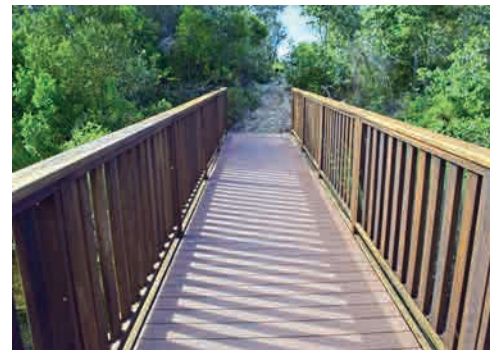
As sand would be continuously carried on the decking surface the Einwood is more suitable for lower maintenance.

Balustrade:

Hardwood timber posts, coverboards, cap rails and balustrade is used. This gives the bridge a perfect natural fit into this World Heritage Island.

The natural timber hides the steel structure that lays beneath, providing an extremely robust structure.

Maintenance will be required, but unlike the decking it will not have the sand grinding by foot traffic.



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Before:

The site initially had a sand track leading to a creek that has natural spring water filtering up through the sand and forming a creek.

Students, staff and visitors were required to wade through the creek in order to get to the beach.

This meant that if they didn't want to get wet they would have to drive to the beach, thus adding time and reducing the flexibility of the areas in use.

Installation:

The site was prepared by widening the beach access track and removing the stairs of the eastern side.

Screw piles were then installed into the surveyed position and headstocks bolted to them.

The balustrade and coverboards were assembled on-site.

The bridge was then craned into position and bolted to the headstocks, ready for decking.

Crane:

We used a 100 tonne capacity 8 wheel drive crane and driver for lifting the bridge into place.

The 30 tonne crane drove to Bullock Point and took the vehicular barge across to Coolooloi Camp Rd then continued up Hook Point Bypass Rd and then onto 75 Mile Beach to get to Dilli Village.

Result:

The whole project was installed and project managed by our Brisbane office.

The whole installation of the bridge was completed in weeks and the end result is a structure that seamlessly blends into its environment and will provide patrons easy, direct access to the beach.



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Design:

This pedestrian bridge design was based on our K1103 Steel I-Beam Condamine, then adding customised coverboards to give the whole aesthetic a natural appeal and blend into this World Heritage environment.

Site:

The site was sandy and had a steep access point toward the beach front. The natural vegetation on the sand dunes was taken in to consideration to reduce any site disturbance.

Installation:

Installation of all Landmark items were completed by Landmark Products Brisbane operation.

Outcome:

The University staff were delighted with the bridge, which is providing patrons safe and easy entry to the beach side.

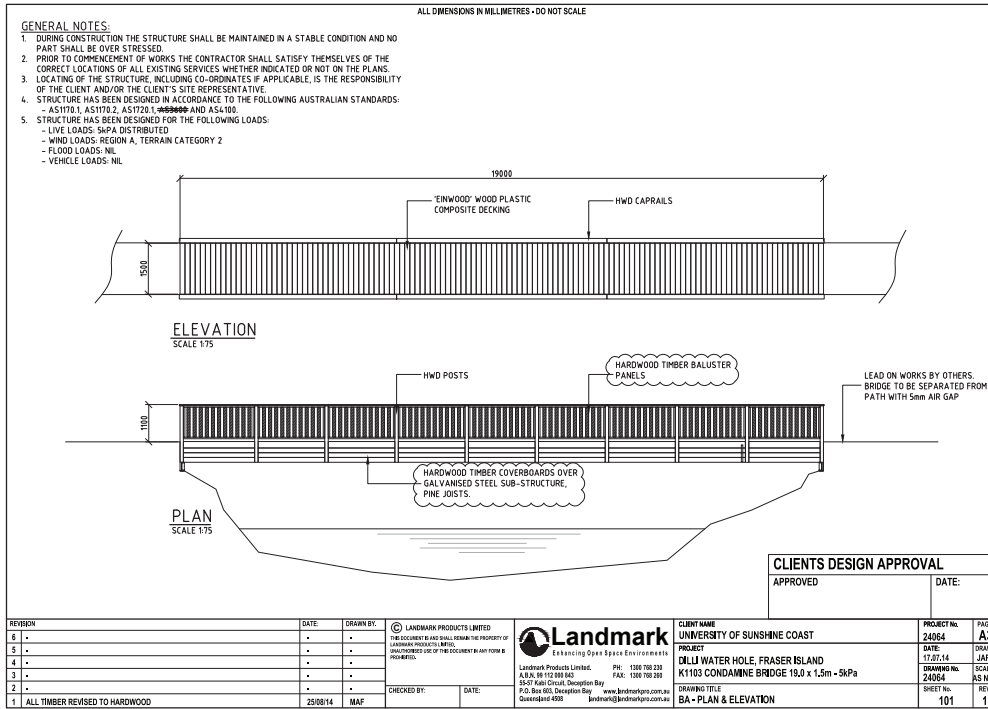


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Floor Layouts:

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