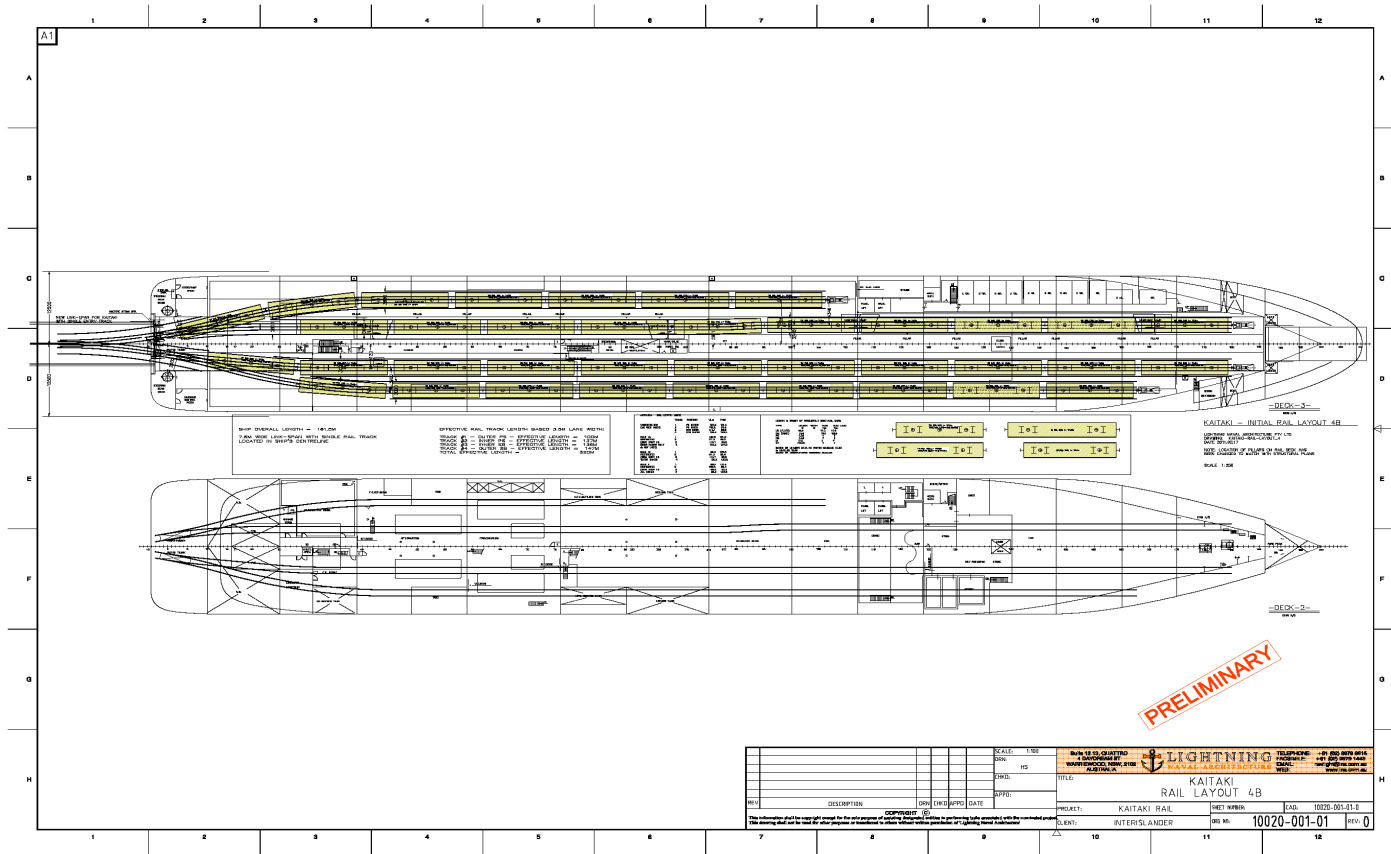


Kaitaki Rail Conversion



Length of rail - 516 meters
Cost - \$20 – 25million
Increase in mass - 200 tonnes

Estimated Costs

- | | |
|---|--------------|
| 1) Conversion of Vessel (Supplied by Sembawang Shipyard) | \$6,000,000 |
| <ul style="list-style-type: none">• Inserting of rail into deck• Installation of new stern door• Installation of buffers• Installation of heeling system | |
| 2) Shore based Rail infrastructure (Supplied by Ontrack) | \$2,600,000 |
| <ul style="list-style-type: none">• 4 turnouts Wellington, 1 turnout Picton• formation and ballast• Rail• Link span track | |
| 3) Link span (Supplied by TTS Sweden and Ontrack) | \$13,200,000 |
| <ul style="list-style-type: none">• Design, installation commissioning• Concrete foundations | |

Not included are;

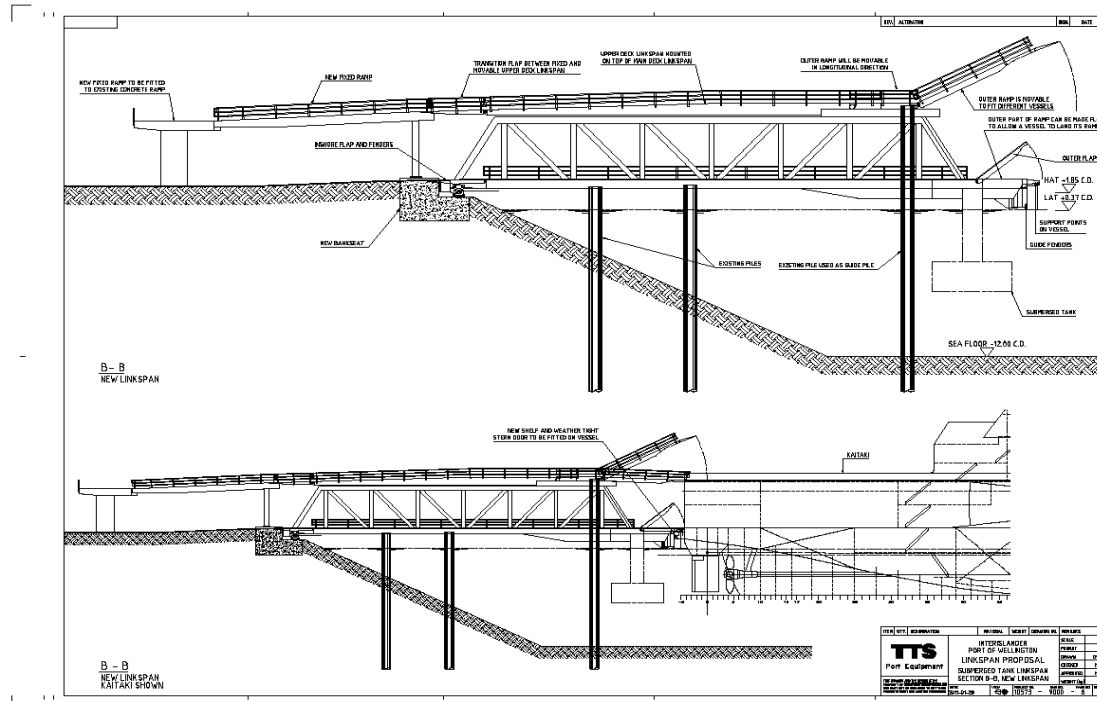
Stern door design and manufacture
Passenger gangway changes

Est \$500,000

Potential Issues

- 1) Loading/ Unloading Top Deck of Kaitaki by Stern door only
In the situation where Kaitaki loads and unloads via the stern at both sides of Cook Strait, trucks will be required to access the top deck off the lower deck via the tilt ramps. Trucks will be difficult to manoeuvre into position that they can unload at the other end off the same ramp. It is likely that loading of trucks will require more time and fewer trucks will be able to be loaded on the top deck in order to achieve this.
- 2) Vessel Bending Moments under load
Currently Kaitaki operates close to its maximum bending moment. Further work is required to confirm that when fully loaded with rail and trucks, the vessel's maximum bending moment will not be exceeded.
- 3) Passenger gangway redevelopment
Lengthening of the link span at both Wellington and Picton will require the passenger gangway to be lengthened by an equivalent amount. There are no structures that will allow this to be undertaken without setting new piles into the sea floor.
The linkspan has been designed to accommodate all 3 vessels however no costing or design work has been carried out for a passenger gangway that will accommodate all 3 vessels.
- 4) Impact of new rail lines on terminal operations
No work has been carried out on the impact of additional rail lines at both Picton and Wellington crossing vehicle marshalling areas.
- 5) Kaitaki loading/ unloading time
Work is required to determine the loading and unloading time where Kaitaki is loaded with rail and road vehicles.
- 6) Working area between internal ramp structure and rail
There will be limited space between the posts supporting the internal tilt ramps on Kaitaki and any rail wagons moving down the port side inner rake. Operating procedures will need to be established that prevent any crew or rail operators being present in this area while shunt operations are being undertaken

Linkspan Details



- Proposed link span future proofed to cover all 3 Interislander vessels, designed to be able to add a top deck and be transportable to a new berth if required
- Length of link span determined by meeting max allowable transition angles for rail (2.3 degrees)
- Transition angles determined by max/min tide variation and freeboard height of vessel(s)
- If link span designed to be Kaitaki capable only, then length reduces by approx 20m