

Kiwi ferry heads for lengthening

Rugby World Cup triggers need to expand ferry capacity.

The New Zealand ferry *Aratere*, owned and operated by Interislander, a division of KiwiRail, is to undergo a major refit in Singapore to 'jumboise' the vessel to increase passenger, rail and road vehicle capacity. The 150m long ferry is being lengthened by the addition of a 29.25m parallel mid-body section, while the bow

is also being replaced at the same time to reduce wave slamming.

As a result of this work, the ferry's passenger numbers will increase from the current capacity of 350 to around 600 post-conversion. Vehicle capacity will also be increased by 30% and rail capacity by 27%.

The rail-vehicle ferry left New Zealand

in April for Singapore, where it will be cut in half and the new mid-body installed as well as the new bow. The five-month refit is expected to be finished in time for the start of the Rugby World Cup in September. *Aratere* will provide increased rail, road and passenger capacity between the North and South Islands, in time for this major event.

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Interislander considered purchasing a new ship to achieve the required capacity. However, its two existing rail ferries, *Arahura* and *Aratere*, have ship-to-shore infrastructure specifically designed to suit the current rail facilities. A new vessel designed to meet the current regulations would be larger and have more freeboard, thus requiring extensive and expensive modifications to the shore-side rail configurations.

Lightning Naval Architecture (LNA), a Sydney-based firm, is part of the technical team working on this complex task. “It is an exciting project,” said Jennifer Knox, managing director of LNA, “The extension is quite long relative to the ship’s length and the vessel was not designed to be lengthened. This presents structural and damage stability challenges.”

LNA is providing general naval architecture support and ship design services, hydraulic calculations for sprinkler and drencher system modifications, marine interior design and materials schedules. The company also has responsibility for meeting SOLAS requirements for all safety issues, including fire and damage control.



One of the new mid-ship sections: the first block (of twenty five) being moved during work in progress at Sembawang Shipyard (photo courtesy of Ray Newall).

The new midship blocks and bow structure are currently under construction at Singapore’s Sembawang Shipyard. “Due to the Christchurch earthquake and the need for the *Aratere* to support the reconstruction efforts, departure

was delayed by one month. This makes the conversion timeline quite tight, but Sembawang is very experienced with ship conversions and we are confident that the *Aratere* will be home in time for the kick off in September!” said Ms Knox. **SCRT**