

## **What is special about Searoad Mersey II?**

Searoad Mersey II will be the first coastal ship in Australia to use clean, green LNG fuel-and-power technology and the first pure dry cargo ship in the world to use a roll-on roll-off LNG supply system. All of the ship's principal engines are dual-fuel, burning LNG as the primary source of energy to give significantly reduced emissions, minimal risk of oil pollution, greater operational efficiencies and sustainable future environmental benefits. In regular service Searoad Mersey II will use diesel for less than 1% of ship operations.

It is anticipated the use of LNG will mean a massive reduction in greenhouse gas pollution: CO2 will be cut by 30%, NOx by 95%, particulate matter also by 95%, and SOx is completely eliminated. The innovative design anticipates strict marine air pollution regulations that already apply in parts of Europe and North America and which are likely to be enacted in Australia in the future.

## **What does the new ship mean for Tasmanian and mainland shippers?**

Searoad Mersey II brings significantly more space and speed to Bass Strait [see comparison table below]. A larger ship will mean 62% greater capacity for SeaRoad Shipping all-year-round – especially important at times of export and import peak demand – while the extra speed will offer the potential for later cargo receipt and earlier discharge, and recovery of any weather or other delays.

## **What was the construction timeline?**

The official naming ceremony and launch of Searoad Mersey II took place on June 3, 2016 when the hull slid down the slipway of builder Flensburger Schiffbau-Gesellschaft in northern Germany near the Danish border. The ship's superstructure was lifted aboard soon afterwards for the continuation of fitting out work, including installation of navigation and other equipment, and completion of wiring, painting and furnishing. In mid-September the ship was drydocked in Odense, Denmark for painting of underwater areas of the hull and, subsequently, commissioning of the LNG supply system. Following sea trials in the Baltic Sea in October and completion work at the shipyard Searoad Mersey II was delivered to SeaRoad on 1 November and soon afterwards left Germany for Tasmania.

## **How did Searoad Mersey II get to Tasmania?**

The ship sailed under its own power via the Cape of Good Hope on a voyage that took a little over a month. It stopped for bunkers (fuel) in Las Palmas (Canary Islands), Cape Town (South Africa) and Fremantle and arrived in Devonport on December 11. (The delivery voyage was undertaken using diesel and Searoad Mersey II will not begin full LNG operations until 1Q 2017.)

## **How much is the ship costing?**

The total investment in the new ship plus its unique fuelling infrastructure, berth improvements and additional cargo-handling equipment is in excess of \$110 million.

## **Will freight rates rise to pay for this ship?**

Bass Strait is a fiercely competitive market, with two other overnight service providers and other weekly and monthly alternatives for shippers. Commercial rivalry ensures stable freight rates.

## **Is LNG safe?**

Liquefied natural gas has been used by certain types of ships for over 30 years and its use and handling is well understood. LNG is the low-pollution maritime fuel of the future and SeaRoad is pioneering its use in this region and in this type of ship. SeaRoad has worked closely with shipbuilder Flensburger Schiffbau-Gesellschaft (an acknowledged world leader in the design and construction of roll-on roll-off vessels), classification society DNV GL, the Australian Maritime Safety Authority and other regulatory bodies to devise systems that meet and exceed all safety requirements.

## **Why choose LNG?**

Given Australia's readily-available gas resources the company was attracted to LNG use as enhancing the state of Tasmania's credentials as a place of natural beauty and supplier of "clean, green" produce to domestic and international markets.

SeaRoad Holdings' chairman Chas Kelly's own (separate) transport operations have been pioneers of the use of liquefied gas for trucks on the island state, complete with purpose-built refuelling infrastructure. The addition of LNG-fuelled vessels to the sea leg of Tasmania's supply chains brings unparalleled environmental advantages.

### **What are the details of the LNG bunkering system?**

Dedicated in-port LNG supply facilities such as specialist bunker barges and associated infrastructure are expensive and the costs must be borne, at least initially, by a limited number of users. SeaRoad's unique ro-ro LNG method overcomes these handicaps.

The complete LNG system is being supplied by Cryo AB of Sweden and features seven Type C portable fuel tanks manufactured at VRV of Milan, Italy.

The LNG tanks will be driven on and off as would be any ro-ro cargo. At any one time three of the purpose-built tanks will be positioned on the stern of the weather deck of the ship, where they will be secured to the special loading bays with multiple twist-locks.

Once in position the tanks will be "plumbed in" via special manifolds to the ship's fuel system, which is otherwise standard technology for any gas-burning installation: while the ship is at sea the liquid is converted in a gas-handling room situated below deck and fed to the dual-fuel engines.

When in port the tank trailers are simply removed via the vessel's stern ramp, driven away to be refilled, and returned. LNG capacity is more than adequate for Bass Strait crossings with a considerable safety margin, and there is always the fall-back of diesel if required.

### **What happens to the existing Searoad Mersey when the new ship enters service?**

Searoad Mersey II makes its first commercial sailing from Devonport to Melbourne on the night of December 14. During the busy pre-Christmas period Searoad Mersey II will operate in partnership with regular fleetmate Searoad Tamar until that vessel is drydocked in Western Australia for routine overhaul interstate. Meanwhile, the original Searoad Mersey will continue servicing King Island and will also operate between Devonport and Melbourne until Searoad Tamar returns.

### **Will Searoad Tamar also be replaced by a new ship?**

SeaRoad Shipping's need has been to introduce a larger vessel better matched to the capacity of the Searoad Tamar to accommodate the growing requirements of shippers out of and into Tasmania. It is our aim to commission a sister to Searoad Mersey II as soon as market conditions and shipyard availability permit.

### **Does the bigger ship mean a change of terminals?**

No, SeaRoad is continuing to use its existing terminals at East Devonport and Webb Dock, Port Melbourne.

### **Searoad Mersey II can carry 110 cars. Will it take passenger cars, caravans and motorhomes?**

Searoad Mersey II has no accommodation for passengers as it is a freight-only vessel and as such priority will be given to vital commercial cargo moving into and out of Tasmania. However, with the increased space there is the opportunity to carry private vehicles.

### **How many people will have jobs on Searoad Mersey II?**

The ship will have two crews, each of 14 people and led by experienced Bass Strait Masters, which alternate on board in four-weekly cycles. The SeaRoad Group has over 400 employees.

## Comparison

	SEAROAD MERSEY II	SEAROAD TAMAR	SEAROAD MERSEY
Cargo capacity	6,750 tonnes	3,750 tonnes	2,700 tonnes
Length x breadth x draught	182 x 26.60 x 6.35 m	149.5 x 23.0 x 6.6 m	118.8 x 18.5 x 5.5 m
Speed	20.5 knots	16 knots	16 knots
Freight decks/ramps	Three/two stern	Three/two stern	Three/two stern
Lane-metres	1,960 + cars	998 + cars	887 + cars
Trailers/cassettes/containers (as cargo mix demands)	80 / 70 / 455 TEU	46 / 35 / 265 TEU	32 / 22 / 185 TEU
Reefer points	150	60	68
Cars	110	45	30
Primary fuel	LNG	Heavy fuel oil	
In service			

### For additional background please also see:

<https://www.lloydslistaustralia.com.au/lla/market-sectors/vessel-trades/SPECIAL-REPORT-Coastal-Shipping---Firsts-add-up-for-SeaRoad-newbuild-527394.html>