

Corran Ferry New Electric Vessel



New Electric Corran Ferry

- Electric propulsion is a central feature of the new Corran Ferry vessel design. Given the high frequency of crossings on this busy route, the daily energy demand is substantial making clean, efficient power a key priority.
- In the event of shore power failure, the vessel will operate using its built-in backup diesel generators, ensuring that daily operations can proceed without interruption. The back-up diesel generator will also be used to assist for longer transits to dry-dock.
- The new Corran Ferry will use new slipways and follow a revised route through calmer waters near Nether Lochaber, helping reduce tidal impacts and improve reliability. These changes will not affect the frequency of service, and the ferry will continue to run as regularly as it does now.
- The new vessel will have a capacity for 32 cars and feature a drive-through, roll-on/roll-off (Ro-Ro) design, consistent with CalMac-operated ferries, enhancing service resilience and operational efficiency.

Electric Propulsion - Summary

Lithium-Ion Batteries

- Approximately 5MWh of batteries (split into 4 x 1.25MWh banks for redundancy)
- Batteries have been sized to cover all operating days throughout the year

Electric Propulsors

- 4 x 187kW propulsors (azimuth thrusters or cycloidal propellers) with premium efficiency propulsion motors
- Both offer high levels of manoeuvrability, high levels of reverse thrust and low response time from ahead to full astern
- 4 propulsors instead of 2 will improve course keeping and provide added redundancy

Back Up Diesel Generator

- Diesel Generator using low Sulphur Marine Gas Oil (<0.1%)
- Will only be used in the case of emergencies or for extending the vessels range (i.e., transit to and from dry-dock or extended sailing day)
- The back up diesel generator will be capable of lasting for the full timetable

Shore Supply Connections

- 1000A (415V, 3 Phase, 50Hz) connections to allow vessel to plug in overnight and charge batteries
- Charging is planned during an 8-hour overnight window

Shore Power Works

- It is essential that shore power is provided at the new overnight berth to charge the batteries onboard the vessel overnight.
- This will allow the vessel to achieve zero emission operation during the day for the full timetable.
- A shore power supply of 1250kVA will be required at the overnight berth at Ardgour to charge the batteries onboard the vessel overnight.
- Feasibility studies have already been carried out by the electricity suppliers to provide the required power at the overnight berth.



Examples of Shore Charging Devices

Main Particulars & Capacities



New Electric Corran Ferry



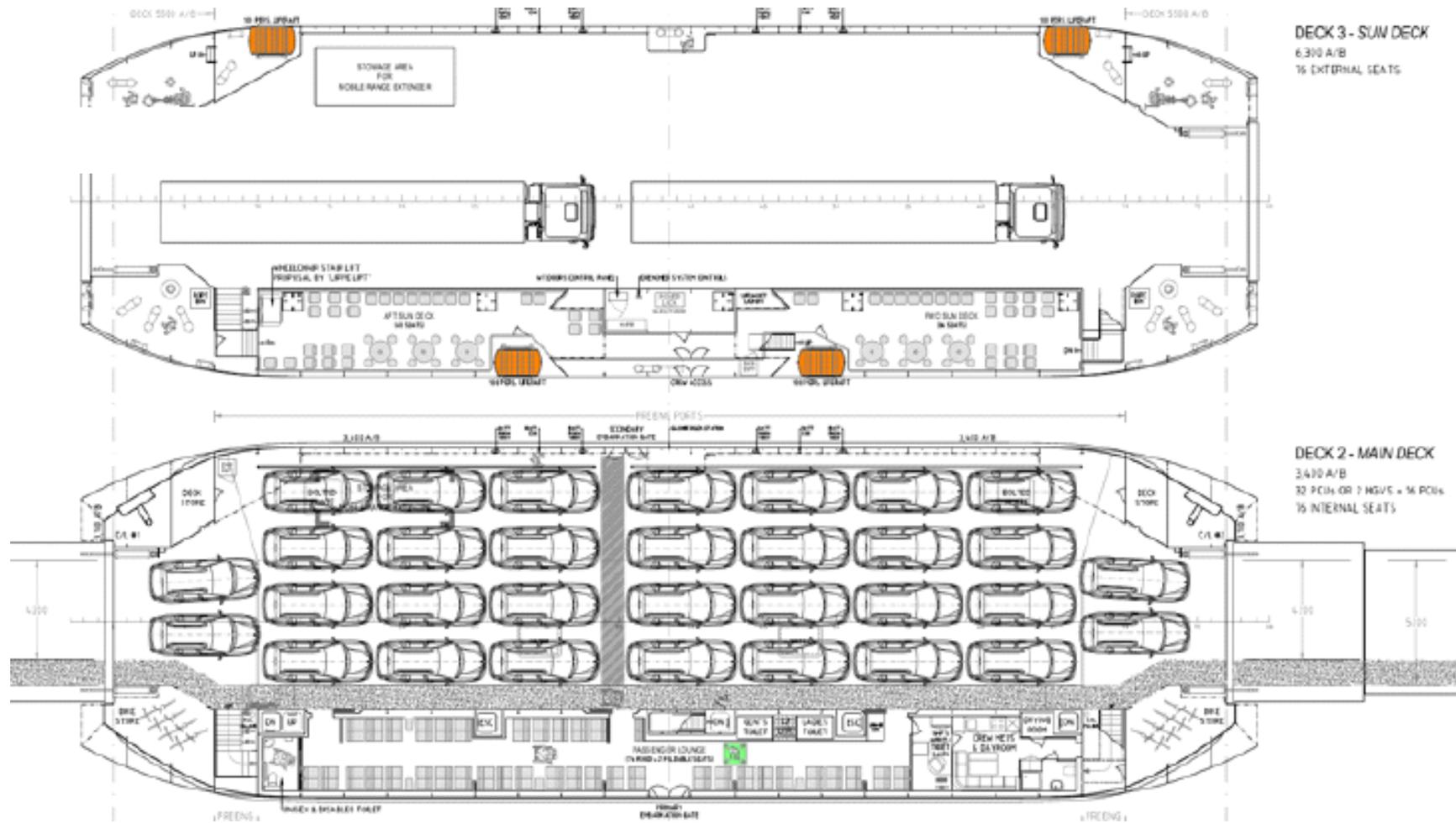
MV Corran



Maid of Glencoul

Main Particulars & Capacities	New Electric Corran Ferry	Maid of Glencoul (1975)	MV Corran (2000)
Length Overall	49.90m	32.00m	42.00m
Beam	14.96m	10.00m	13.40m
Draught (Max)	2.14m	1.2	1.80m
Design Speed	9.0 knots	8.0 knots	9.0 knots
PAX Capacity	150	116	150
PCU's	32	14	28
HGV's	2	0	2

Deck Layout - Capacity



The new electric vessel will have capacity to take 32 cars or 16 cars + 2 HGV's.

Environment and Efficiency Benefits

- Electric propulsion offers **near zero emissions operation**, not least thanks to very low grid emissions resulting from Scotland's high renewable energy share.
- This new Corran vessel will align with the Highland Council's **net zero strategy** and Scotland's national target to become Net Zero by 2045.
- Electric propulsion will provide very quick power availability all year round which will help to increase the **efficiency** during manoeuvring.
- **Energy efficiency** The new electric ferry will be more than twice as energy-efficient as the current diesel-powered MV Corran.
- Operations will be changed from quarter loading to straight drive-through loading (Ro-Ro) which will enable **faster** loading with better ramp alignment for large commercial vehicles (HGV).

Infrastructure Improvement Scheme to Support the New Electric Ferry

➤ **Ardgour Side:**

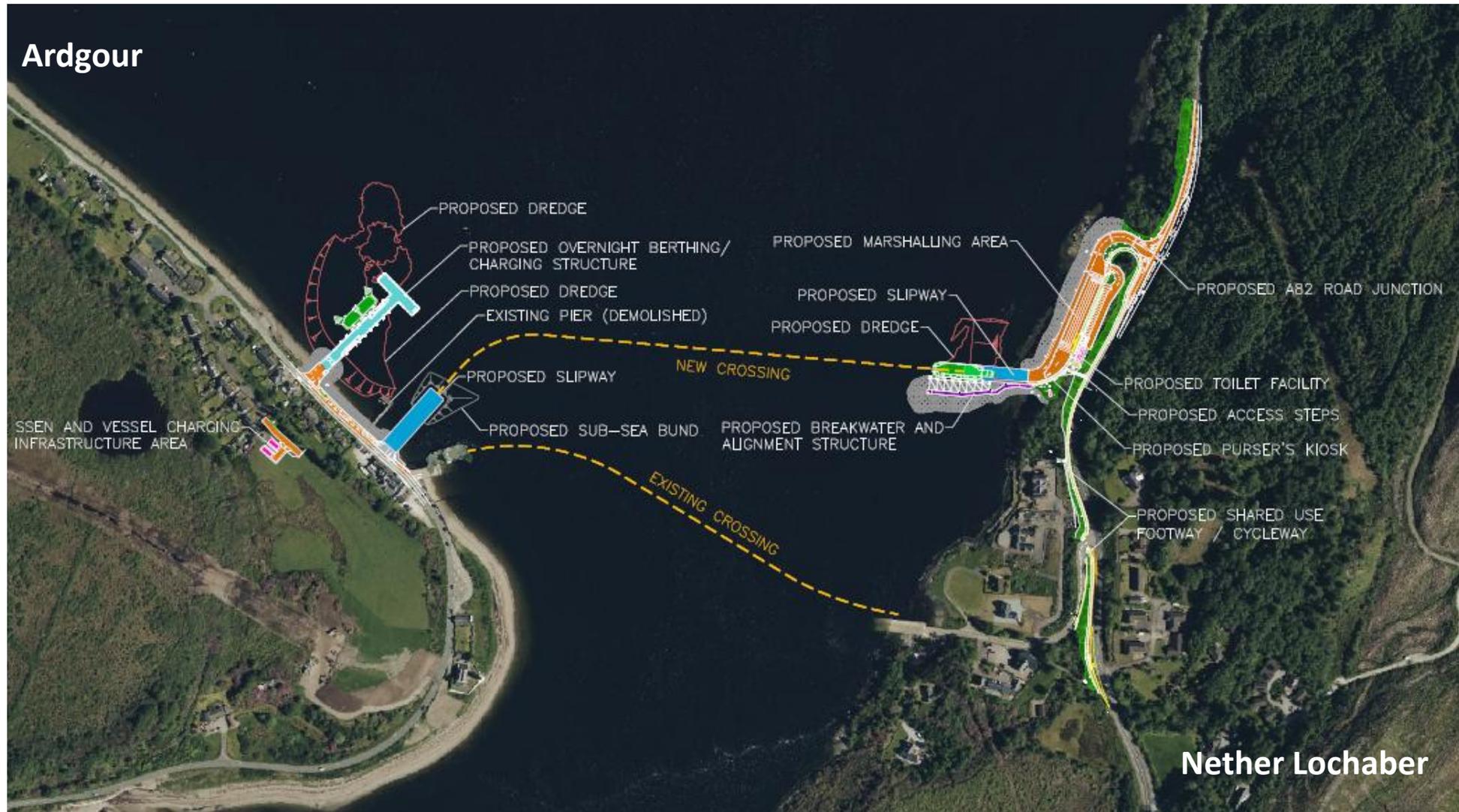
- Construction of a new slipway
- Addition of an overnight berthing pier

➤ **Nether Lochaber Side (north of Corran):**

- New slipway and breakwater
- Marshalling area for vehicles
- Parking facilities
- Cycle path
- Public toilet amenities
- EV Charging

➤ These improvements will ensure efficient and sustainable operation of the new electric ferry service.

Infrastructure Improvement Scheme to Support the New Electric Ferry



Deployment Plan - 2028/29



New Electric Ferry (32 car)



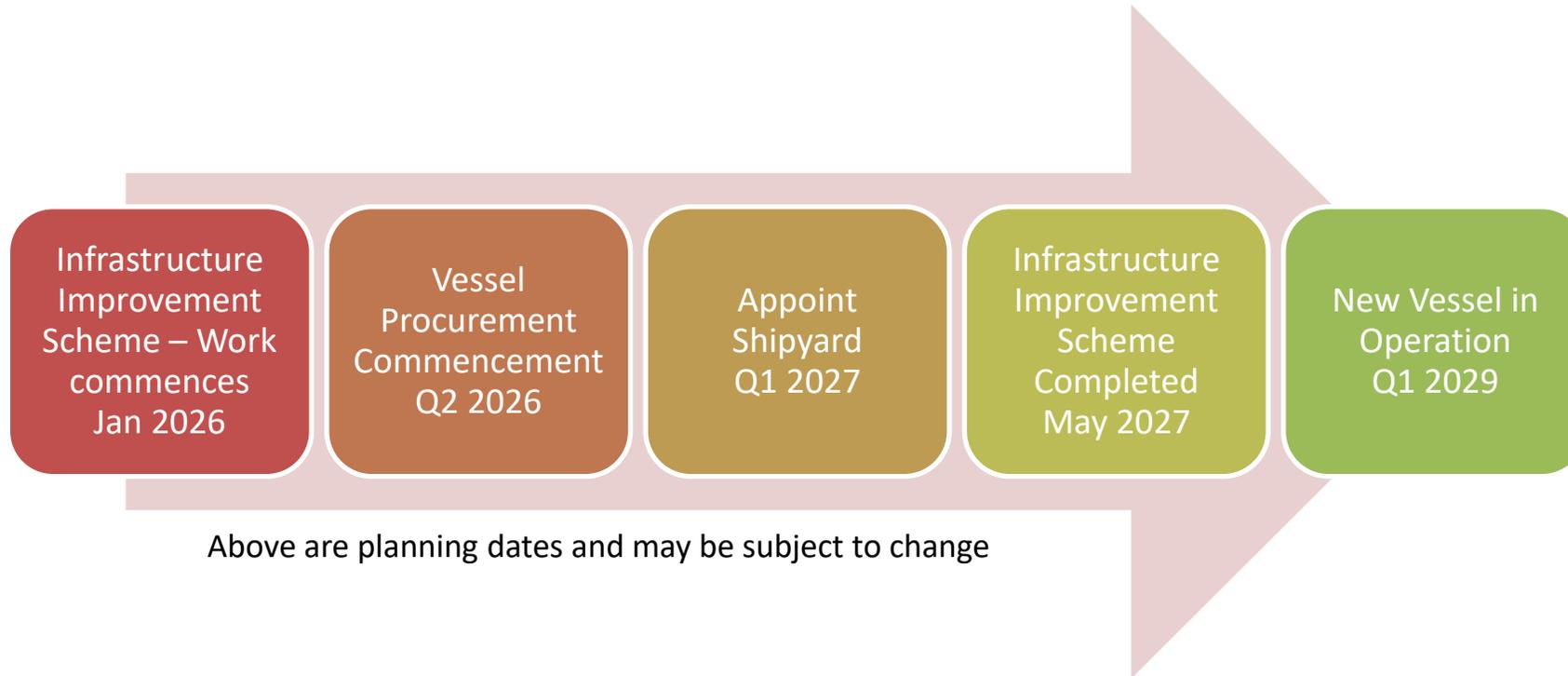
MV Corran (28 cars) - 24 years old



Maid of Glencoul (14 cars) - 50 years old

- The new electric ferry will be the main vessel, carrying:
 - Up to 32 cars (4 more than MV Corran)
 - Or 16 cars and 2 HGVs
- MV Corran (28 cars) will remain in service as a reliable relief vessel, ensuring flexibility until the Council is ready to introduce a second replacement ferry.
- With the larger MV Corran as a backup the service will no longer be limited to carrying shorter articulated lorries during the Winter months.
- Maid of Glencoul (14 cars, 50 years old) will be retired.

Planning Dates



Above are planning dates and may be subject to change



Thank you Mòran taining



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