TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

# Islay Vessels Project

## Final Business Case (FBC)
## Version 1.3
## February 2022

## Version Control

To ensure changes to this document can be tracked and queries can be directed to the appropriate person, the table below will be completed by the project manager each time a revised draft of the document is circulated.

| Version | Name | Date Completed | Comments |
|---|---|---|---|
| 1.0 | [redacted] | 01/12/21 | |
| 1.1 | | 06/01/22 | Strategic Case inserted |
| 1.2 | | 01/02/22 | Updated to include Network Strategy |
| 1.3 | | 23/02/22 | Full Update |
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NOTE: - The following version control will be followed:

- V1.0 for the first published version
- V1.1 for the next minor revision (v1.2, v1.3 as necessary)
- V2.0 for the next major revision etc. (the latest minor version will become the next major version)

## Approvals

This document requires the following approvals.

| Name | Signature | Title | Date of Issue | Version |
|---|---|---|---|---|
| [redacted] | | Head of Ferries Unit | 23/02/2022 | 1.3 |

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# 1 EXECUTIVE SUMMARY

## OVERVIEW

### Introduction

The Islay vessel project was initiated to consider options for replacing one of the two vessels currently serving Islay, namely the life expired MV Hebridean Isles. The key challenges for communities served by the Islay routes are reliability and capacity of vessels.

The project team included Transport Scotland Ferries Unit, Caledonian Maritime Assets Ltd and CalMac Ferries Limited.

The Outline Business Case, recommending one new 98.4 metre vessel and associated port infrastructure, was approved by TS IDMB in June 2021. Further to consideration of network wide resilience and fleet replacement pressures, the project team presented updated information on costs, potential benefits and longer-term implications for the CHFS network of confirming one or two vessels within the Invitation to Tender (ITT). In September 2021 TS IDMB and Ministers agreed that CMAL should continue with the procurement process, confirming two vessels within the ITT.

### Strategic Case

The strategic context of the project, in terms of problems and opportunities, has changed since the SBC and OBC were initially completed, with the rationale for intervention becoming more acute due to continued deterioration of the network reliability and resilience and increasing costs of repairs to existing vessels. While the Covid pandemic has temporarily reduced demand on the routes, the future forecasts continue to show significant potential growth in ferry trips on the routes. The objectives identified remain valid but have been expanded to consider the wider fleet replacement benefits of a two vessel option, rather than focus on replacing an individual vessel (MV Hebridean Isles) on the Islay routes.

The preferred option of purchasing two new vessels will satisfy the objectives of the original study as well as provide further benefit to the overall objectives of the Scottish Government. Key stakeholders, including the local communities served by the routes have been kept informed of progress since the extensive engagement undertaken as art of the SBC and maintain a strong positive support for the preferred option.

### Socio- Economic Case

Revisiting the appraisal of STAG and wider socioeconomic criteria as part of the FBC work has confirmed that the identified problems still exist and that the preferred option will offer a suitable solution and value for money. The preferred option of purchasing two new 98.4 metre vessels under the one contract and progressing related port enabling work has been identified as the optimum means of improving the Islay routes and contributing more to the SG’s Purpose and Objectives by providing wider network benefits around reliability and resilience.

The improved reliability, additional vehicle capacity, greater efficiency and improved customer experience which will be provided by the new vessels and the related cascades meets the objectives of the original study and the consideration of wider benefits.

**Commercial Case**
CMAL, as procuring authority, have undertaken a robust procurement in line with relevant legislation and guidance. The robust tendering and assessment process included appropriate advice from specialist legal, commercial and technical advisors and has led to the identification of preferred shipyard. For the Shipbuilding Contract, the Baltic and International Maritime Council (BIMCO) “NEWBUILDCON” International Standard Shipbuilding contract will be used.

**Financial Case**
A full financial appraisal of the preferred option has been carried out, based on resource accounting and budgeting principles, including information on funding, budgeting over the life of the project and scheme cash flow. The project’s affordability has been considered against capital budgets and short, medium and longer term resource implications.

Subject to agreement with IDM and Ministers, voted loans of up to £105M to cover all costs relating to procurement of vessels would be made from TS to CMAL in the normal manner. CMAL will include a full refund guarantee in the contract with the appointed shipyard and make robust arrangements to protect the investment over the course of the construction and delivery phase.

Subject to completion of appropriate design and planning, capital grants of £25M, including appropriate optimism bias, will be made for the enabling port works and these will be closely managed by CMAL as the works progress.

**Management Case**
The vessel element of the project has been progressed to award of contract stage and management plans, outlining the framework for managing risk, benefit realisation, post-project evaluation and the project as a whole have been developed. Within the risk management framework all options available for risk mitigation throughout the course of construction and delivery will be considered. Suitable allowances have been made for remote and on site supervision.

A risk register for the vessels element and each of the port works will be drawn up to identify which party is responsible for each risk and these will also be combined to understand and manage the overall programme as a whole. A Benefits Realisation approach will also be developed as the projects progress to maximise positive outcomes and so that lessons learnt can be recorded and used on future vessel and port projects of this kind.

**Summary Recommendations**
The project team considers that a robust case has been made for purchase of two new vessels for the Islay routes and that a contract should be placed with the preferred tenderer in March 2022**.**

## 2 INTRODUCTION

### Purpose

2.1 The Final Business Case:

- Revisits the rationale for intervention
- Identifies the preferred bidder which offers optimum value for money
- Presents the commercial and management arrangements
- Sets out the financial implications

### Structure and Content of the Document

2.2 This FBC is structured around the Five Case Model, which comprises the following key components:

- Strategic case section: This sets out the strategic context and the case for change, together with the supporting investment objectives for the project.
- Socio-Economic case section: This demonstrates that the project has selected a preferred option, which best meets the existing and future needs of the service and is likely to optimise value for money (VFM).
- Commercial case section: This outlines the procurement strategy
- Financial case section: This highlights likely funding and affordability issues.
- Management case section: This demonstrates that the project is achievable and can be delivered.

### ISLAY VESSEL PROGRAMME - SUMMARY

2.3 The Islay vessel project was initiated to consider options for replacing one of the two vessels currently serving Islay, namely the life expired MV Hebridean Isles. The key challenges for communities served by the Islay routes are reliability and capacity of vessels.

2.4 Caledonian Maritime Assets Ltd. (CMAL) are undertaking the procurement process. The Outline Business Case, recommending one new 98.4 metre vessel and associated port infrastructure, was approved by TS IDMB in June 2021. Further to consideration of network wide resilience and fleet replacement pressures, the project team presented updated information on costs, potential benefits and longer-term implications for the CHFS network of confirming one or two vessels within the Invitation to Tender (ITT). In September 2021 TS IDMB and Ministers agreed that CMAL should continue with the procurement process, confirming two vessels within the ITT.

2.5 Therefore, the Business Case process for the project has two distinct phases:

- **Phase 1:** provide a new 94.8m vessel for the Islay route which will increase capacity, reliability and network resilience. (preferred option at OBC)
- **Phase 2:** acceleration of fleet replacement and opportunity of cost efficiencies by ordering two vessels as part of the same contract to improve overall fleet resilience and increase route capacity.

2.6 The first phase focused solely on the Islay routes and resulted in approval of the OBC for a single new vessel to replace MV Hebridean Isles and progress to expressions of interest from shipyards around the world. The second phase saw further consideration of issues around the wider network (such as issues due to the aging fleet and associated breakdowns) this resulted in the invitation to tender being expanded to include two new 'Islay Class' vessels due to wider network benefits, potential financial efficiency and accelerated delivery of new tonnage into the fleet.

# 3 THE STRATEGIC CASE

3.1 Some sections below have been taken from the Outline Business Case with updates as required. Additional sections have been inserted as appropriate to support the Final Business Case and to appraise the change from a single vessel procurement to the procurement of two new vessels.

## INTRODUCTION

3.2 This section explains how the scope of the proposed project fits within the existing business strategies of Transport Scotland and provides the case for change, in terms of the existing and future operational needs of the ferry service and its associated harbour infrastructure, as part of the national transport network.

## PART A: THE STRATEGIC CONTEXT

### Organisational Overview

3.3 Transport Scotland (TS) is the national transport agency for Scotland. Its purpose is to help deliver the Scottish Government's vision for transport and to help achieve the Government's Purpose of increasing sustainable economic growth. Overall policy responsibility for the continued and sustainable provision of lifeline ferry services in Scotland rests with Transport Scotland.

3.4 The Aviation Maritime Freights Canals (AMFC) Directorate of Transport Scotland retains overall budgetary authority for the award of Capital Grant in support of major ports projects, with the authority to pay grants allocated to the Ferries Unit. In addition, AMFC provides funding via voted loans to Caledonian Maritime Assets Ltd (CMAL) for vessels, there is a commitment to invest £280.8m in vessels over the current CSR period (2021/22 – 2025/26).

3.5 The procurement and deployment of new vessels to support the Clyde and Hebridean Ferry Services (CHFS) is delivered by the tri-partite Network Strategy Programme Steering Group comprising senior representatives of TS, CalMac Ferries Limited (CalMac) and Caledonian Maritime Assets Limited (CMAL). It was recognised in the Vessel Replacement and Deployment Plan (VRDP) 2016, published 2018, Annual Report that Islay was experiencing significant capacity constraints, which are expected to increase in future years.

3.6 Caledonian Maritime Assets Ltd (CMAL) is a private company wholly owned by the Scottish Ministers and classified as a public corporation by HMT/ONS. CMAL owns 36 ferries and 26 harbours on behalf of the Scottish Ministers. CMAL are the statutory harbour owner of Port Ellen, Kennacraig and Colonsay, two of the ports which will be served by the new vessel, CMAL lead the design process for the new vessel and are managing the project.

3.7 CalMac Ferries Ltd (CFL) is the incumbent operator of ferry services to Islay under the Clyde and Hebrides Ferry Services (CHFS) contract with the Scottish Ministers, managed by the TS Ferries Unit. CFL is the operating subsidiary of

David MacBrayne Ltd (DML), a private company wholly owned by the Scottish Ministers and classified as a non-departmental public body by HMT/ONS.

3.8 Argyll & Bute Council (A&BC) are the statutory harbour authority and owner at Port Askaig, which is one of the main ports for Islay and who are also the relevant local authority. Transport Scotland and A&BC are the relevant roads authorities which directly links to ferry services within the wider transport network.

## ALIGNMENT WITH STRATEGY

3.9 Scotland's ferry network has a wide-ranging impact on National Outcomes: from connecting individuals to employment opportunities; supporting business and freight movements; facilitating access to essential public services and transporting tourists to/from the islands. In particular, directly contributing to National Outcomes for Economy, Communities, Health, Poverty and Fair Work & Business.

3.10 The Islands (Scotland) Act 2018 introduced several measures ensuring that there is a sustained focus across Government and the public sector to meet the needs of island communities now and in the future. As required by the Act, the Scottish Government developed the National Islands Plan (December 2019), which states that the Scottish Government will:

*Ensure that existing and future transport-related policies, strategies, and services are fully island proofed so that they truly meet the needs of island communities. Produce a long-term plan and investment programme for new ferries and development at ports to improve resilience, reliability, capacity and reduce emissions to give confidence to island communities on our ongoing commitment.*

National Transport Strategy

3.11 The Islay Vessels project is also aligned with the vision of the National Transport Strategy, a Strategy for the whole transport system. It is a Strategy for all users: those travelling to, from and within Scotland. It sets out the strategic framework for investment decisions and the Vision for Scotland's transport system over the next 20 years, which is: We will have a sustainable, inclusive, safe, and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses, and visitors.

3.12 This is underpinned by four interconnected Priorities. A summary of the contribution of this project to each Priority is set out below.

*Reduce Inequalities*

3.13 Transport reliability and resilience can impact on peoples' decisions to live and work on islands. The CHFS network provides lifeline services to isolated island and rural communities, replacement of the ferry fleet with modern, efficient, clean vessels could increase connectivity and help address the depopulation of our islands and remote communities.

3.14 Fleet replacement will help to ensure that those living in rural, remote or island communities will be well connected and have as equitable access to services as those living in the rest of the country, therefore making a positive contribution to maintaining and growing the populations in these areas.

3.15 New vessels will be more accessible than the current vessels (vessels replaced) contributing to the outcome “Will be easy to use for all”.

3.16 Transport in rural areas is particularly important as many businesses in these areas are predominantly small scale which can lead to more reliance on good transport infrastructure to support deliveries and suppliers, access to business hubs, travel to customers and distance to market.

3.17 The NTS sets out the policy to “Minimise the connectivity and cost disadvantages faced by island communities and those in remote rural and rural areas, including safeguarding of lifeline services.” Fleet renewal and improvement of ferry infrastructure contributes to this.

*Takes Climate Action*

3.18 The provision of additional vehicle capacity for lifeline services is likely to add to the total emissions from the CalMac ferry fleet. However, there is a balance between providing additional capacity and the environmental impact of services. The NTS recognises the need to balance the provision of essential services for the islands and the potential for low carbon fuels for vessels.

3.19 The Islay Class vessels have been developed to have optimal hull form to lower emissions plus they have the potential to be retrofitted for new fuels e.g. hydrogen. There is currently no low emission solution available for the Major Vessel fleet on the market. However, the ability to retrofit vessels for future technologies has been a consideration of the design process.

3.20 Reducing greenhouse gas emissions and air pollutants are key considerations of the new Islay Class vessel design. The provision of shore power at the 3 ports (Port Ellen, Port Askaig and Kennacraig) will reduce emissions for the new vessels and reduced “in port” and overnight noise. Compared to MV Finlaggan the emissions reduction of the new vessel is estimated at 31% less overall, of which, approximately 90% is attributable to the vessel design and 10% to the provision of shore power at ports.

3.21 MV Finlaggan emits 11,635 tonnes of CO2 per annum, the proposed new vessel (94.8m) will emit 8,031 tonnes of CO2 per annum, a reduction of 31% compared to a new Finlaggan (the “Do Minimum” for the project”). It will also improve air quality through its improved hull design and propulsion system compared to another Finlaggan. Estimated CO2/car space/year: MV Finlaggan 154.8 tonnes, MV Hebridean Isles 83.5 tonnes, New 94.8m Vessel 80.0 tonnes.

*Helps Deliver Inclusive Economic Growth*

3.22 The Islay Vessel Project will aim to deliver on the vision to realise sustainable economic growth and social inclusion through connectivity with the Scottish mainland for this island community, whilst maintaining the high level of safety delivered on lifeline ferry services.

3.23 Islay has the traditional economic activities around fishing, manufacturing, agriculture, as well as malt whisky distillation and tourism, which has resulted in successes with increased tourism and high-quality food and drink. The additional capacity, particularly for HGVs on the new Islay Class vessels, will help get people and goods where they need to get to supporting distillers on Islay and the wider Scottish economy via the whisky (and gin) tourism and export markets.

3.24 The reliability, resilience, capacity and quality of the ferry services to Islay are fundamental to the survival of these island populations, communities and businesses and the realisation of their sustainable economic development.

*Improves Our Health and Wellbeing*

3.25 The NTS set out that the transport system needs to be safe and secure and give users trust and confidence that they will reach their destinations without threat.

3.26 Social isolation and loneliness are major public health issues that can have significant impacts on a person's physical and mental wellbeing. We know that a substantial proportion of ferry journeys are to visit friends and family. Improving accessibility and reliability should therefor contribute to this Priority.

3.27 Ferry services provide transport to access health facilities, improvements in reliability and resilience should reduce the likelihood of missed appointments and the associated costs of this to the individual and the health service.

3.28 NTS highlights the resilience issues of ferries and the ageing fleet. Disruption to services can occur or a number of reasons e.g. weather, vessel overhaul but there is a perception that the ageing fleet and causing additional disruption for island communities.

3.29 Although primarily driven by asset life expiry, and representing continuity of service rather than significant change, the project therefore provides opportunities to address objectives set out in the National Transport Strategy and is aligned to its 4 key themes.

3.30 In particular, this project will:

- ensure that capacity can be provided to get people and goods where they need to get to, contributing to the vision for economic growth and equality.

- facilitate the realisation of additional vehicle ferry capacity enabling business growth and ensures business can access suppliers and customers.

- improve accessibility and facilities for passengers and crew thus, minimising the barriers of travel and enabling individuals to access the services they need.

- consider how to maintain and improve safety thus contributing to the outcome of a safe transport system enabling a healthy, active and fit nation.

Strategic Transport Projects Review 2 (STPR2)

3.31 The CHFS network is considered to be part of Scotland's strategic transport network. The STPR2 has recently been published for consultation and Recommendation 24 suggests 'Ferry vessel renewal and replacement and progressive decarbonisation' to address the needs of rural and island communities by improving the resilience, reliability, capacity and accessibility of ferries.

3.32 Continued investment in ferry renewals would address the needs of rural and island communities by improving the resilience, reliability, capacity and accessibility of ferries. If this investment is focused on progressive decarbonisation of ferry networks, it will reduce emissions and help Scotland achieve its net zero carbon emission targets. The STPR2 also recommends "Investment in port infrastructure to support vessel renewal and replacement and progressive decarbonisation."

National Islands Plan

3.33 Published on 27 December 2019[1], the Plan states that in order to improve transport services, the Scottish Government will (specifically of relevance for ferries):

- Ensure that existing and future transport-related policies, strategies and services are fully island proofed so that they truly meet the needs of island communities.

- Produce a long-term plan and investment programme for new ferries and development at ports to improve resilience, reliability, capacity and reduce emissions to give confidence to island communities on our ongoing commitment.

- Develop a new Ferries Plan that will meaningfully contribute to delivering the outcomes of wider Scottish Government strategies as set out in the National Transport Strategy and this National Islands Plan.

- Also, as part of the Ferries Plan, review and promote integration between ferries and other modes of transport on the mainland and islands, with a view to better facilitating use of active, public or shared transport for all or part of journeys to and from islands in an affordable and accessible manner.

Vessel Replacement and Deployment Plan (VRDP)

3.34 The VRDP gives an overview of how existing, planned and prospective vessels could be deployed across the Clyde and Hebrides ferry service network to deliver

the Government's Ferries Plan commitments and better meet forecast demand. The VRDP informs consideration of new vessel and harbour investments. The latest published VRDP report (January 2018) noted for the Islay route that: Services to Islay were highlighted in a case study in the 2015 Report and successive VRDP Reports have highlighted services to Islay as being in need of additional capacity. Freight demand has increased substantially on the route and that is forecast to continue. Work commissioned by HIE, SWA and ABC has assessed this in more detail. The report[3] advocated dedicated freight sailings, or a dedicated freight service and vessel, an option which has attracted some potential commercial operator interest.

3.35 Further consideration is being given to opportunities to increase capacity on the route once the new vessels are in service. Specifically, these are: fitting a second mezzanine deck (though its use would have implications for marshalling in ports); and futureproofing for an overnight freight-only service on a scheduled or unscheduled basis. In the case of overnight service, the vessel will have appropriate sound proofing and insulation and ability to undertake maintenance, including the provision of a night crew rest area. Either of these measures would, if implemented, provide additional vehicle carrying capacity on the route and further address constrained demand.

3.36 The current marshalling area at Port Ellen is undersized for the existing vessels, until works to extend the marshalling area is delivered as per CMAL's Port Ellen Terminal Development plan, CalMac will likely have to limit vehicle capacity on the new vessel and MV Finlaggan to reflect the marshalling area available to ensure safe management of traffic. The current marshalling area at Port Askaig has space for 91 PCUs and is undersized for the larger capacity vessels (100 PCUs), until works to extend the marshalling area is delivered by the Argyll & Bute Council, CalMac will also have to limit vehicle capacity on the new vessel at this port to reflect the marshalling area currently available, to ensure safe management of traffic. Timelines and scope of work at Port Askaig are still being developed and will be finalised in due course.

3.37 Port Ellen timelines and scope of works are now established and are managed under the Port Ellen Terminal Development project. This will support the realisation of the benefit of additional capacity for the new vessels and for the current vessel MV Finlaggan. Design details have been shaped through consultation with the community. Engagement has been undertaken and will continue with trades unions on crew accommodation and ratings training berths in the design of the new vessels. CMAL are also assessing the costs and benefits of modifications to the infrastructure at Kennacraig and Port Ellen that would enable optimisation of the vessel design. The infrastructure works will result in disruptions at the ports, ongoing details have been shared with the community. The New Islay Vessels will therefore deliver one of the key commitments of the VRDP.

Clyde and Hebrides Ferry Services Contract (CHFS) 2016-2024

3.38 The current CHFS contract was awarded to CalMac Ferries Ltd and commenced 1 October 2016. The contract specifies the routes and timetables to be operated, the ports to be served and the fleet of vessels to be chartered by the operator from CMAL (decisions on the deployment of individual vessels to meet the timetable are for the operator).

3.39 The CHFS contract includes a contractual requirement for CFL to provide a ferry service between the mainland to Islay, including Kennacraig, Port Ellen, Port Askaig and Colonsay. Jura is served by a separate A&BC ferry from Port Askaig. The current timetables are outlined in Appendix A of the OBC.

The Strategic Context – Conclusion

3.40 Ferries investment is guided by a series of strategic and sectoral policies and by the requirements of the CHFS contract. The Islay Vessel Project is aligned with, and will contribute towards, the objectives of each of these Ministerial policies.

Scottish Government Budget 2020-21 STPR, ICP, IIP, CSR

3.41 The Scottish Government Budget approved by Parliament on 10 February 2022 noted[4], for the Net Zero, Energy and Transport (NZET) portfolio, that:

- The Net Zero, Energy and Transport (NZET) portfolio is responsible for achieving a Net Zero carbon emission Scottish economy in line with the Scottish Government Climate Change Plan which requires all portfolios to respond to the global climate emergency.

3.42 The portfolio is also charged with protecting and enhancing our natural environment and resources and physical connectivity and infrastructure. While there are significant challenges in this space, there are also significant opportunities to diversify our economy, create good, green jobs, and to lead the world in a just transition to Net Zero.

3.43 The overarching aim is to protect and promote Scotland's environment and to build strong and sustainable Net Zero economy through:

- tackling climate change;
- decarbonising Scotland's public transport network and improving the use of green;
- energy, enhancing active and sustainable travel opportunities;
- protecting our iconic species and landscapes;
- investing in biodiversity and nature restoration;
- developing a blue economy action plan;
- improving the quality of our air, land, seas and fresh water;
- developing a circular economy;
- empowering communities and improving the way land is owned, used and managed; and
- investing in the research base.

3.44 The 'Infrastructure Investment Plan' (IIP) will produce and maintain a long-term plan and investment programme for new ferries and development at ports to improve resilience, reliability, capacity, and accessibility, increase standardisation, and reduce emissions to meet the needs of island communities, supported by investment of £580 million over the 5 year period to 2025-26. Estimated costs for the Islay project have been included and these cost estimates reflect detailed analysis/technical feasibility studies. Financial monitoring of this project will continue, and difficult decisions may be required regarding any potential savings options which need to be considered to ensure value for money and future budget allocation.

3.45 Capital Spending Review - The long-term financial plan denotes that of the £580 million included in the capital spending review the Islay project is estimated to cost around £130m. Exact figures will be established as part of the normal budget setting process. The budget for 2022/23 has been published and future draft budgets will be released at the relevant point of the financial year and in line with Government guidelines.

Other Organisational Strategies – Regional Transport Partnerships

3.46 The Highlands and Islands Transport Partnership (HITRANS) is the statutory regional transport partnership covering the Outer Hebrides, Orkney, Highland, Moray and most of the Argyll and Bute area.

3.47 Regional transport partnerships were established to strengthen the planning and delivery of regional transport so that it better serves the needs of people and businesses. HITRANS bring together local authorities and other key stakeholders to take a strategic approach to transport in their area and to improve transport services and infrastructure.

3.48 Ongoing work with HITRANS, along with the port authorities and CalMac, will continue the planning of integrated transport for communities and users of the ferry services and other transport services.

## PART B: THE CASE FOR CHANGE

3.49 The primary objective of the project was to provide a new vessel for the Islay route to increase capacity, reliability and network resilience. The OBC was completed on this basis and resulted in the decision to approve the recommendation of the OBC for a single new 94.8m vessel to replace MV Hebridean Isles.

3.50 The Islay ferry service is an integral part of the island supply-chain and provides lifeline services to island residents on Islay, Colonsay and Jura. Islay has the traditional economic activities around fishing, manufacturing, agriculture, as well as malt whisky distillation and tourism, which has resulted in successes with increased tourism along with high-quality food and drink exportation.

3.51 The ferry services to Islay providing integration and interchange with other modes is fundamental to the survival of these island populations, communities and businesses and the realisation of their sustainable economic development.

3.52 In 2019, the Kennacraig to Islay ferry service carried over 230,000 passengers, 81,000 cars and over 12,000 commercial vehicles (CVs)[1]. The number of CVs was the second highest of the CalMac ferry services. The share of commercial vehicles is high on the route with passenger and car numbers ranking 9th and 7th respectively.

3.53 The opportunity to purchase a second Islay Class vessel, at reduced cost, arose post OBC decision. This would accelerate the investment programme to replace a number of life expired or near life expired vessels in the fleet, with six major vessels required within the next ten years. Accelerated deployment on the network, provides the prospect of improving the resilience of the ferry network as a whole at a time when there is an urgent need for additional tonnage. However, the deeper draft of the new vessels required for emissions saving limits the vessels being deployed on some routes.

3.54 The increasing age of the major fleet and obsolescence of major vessel components is leading to increasing maintenance and operational costs, increasing breakdowns, putting pressure on resource budgets with lengthier and more disruptive service outages affecting communities and industries that rely on lifeline ferry services.

3.55 Although, the case for a second Islay Class vessel is primarily driven by asset life expiry, a second vessel of the same class, for the major vessel fleet would provide a number of benefits at the network level and would contribute to meeting a number of the objectives of the IIP, particularly:

- improving resilience
- improving capacity
- standardisation (Islay Vessels)

<u>Network Reliability, Resilience and Investment</u>

3.56 Scotland's ferry networks provide essential connections to our island and other remote communities. The Scottish Government's five-year Infrastructure Investment Plan (IIP), published in February 2021 set out:

> *Building on our successive Vessel Replacement and Deployment Plans (VRDP) we will produce and maintain a long-term plan and investment programme for new ferries and development at ports to improve resilience, reliability, capacity, and accessibility, increase standardisation, and reduce emissions to meet the needs of island communities supported by investment of at least £580 million during the next five years as well as completing two new ferries for the Isle of Arran and the Uig Triangle.*

3.57 Full deployment of the fleet during peak summer periods since 2016, growing demands across the year and an ageing vessel profile are increasing the risk

and impact of breakdowns on residents, services and businesses in these fragile areas.

3.58 Eight of the ten major vessels, serving the busiest and most demanding routes on the Clyde and Hebrides Ferry Service (CHFS) network, have reached or will reach normal life expiry (around 30 years depending on vessel design and type of use) within the next ten years. This is leading to increasing maintenance and operational costs, increased breakdowns and lengthier, more disruptive vessel outages.

3.59 The situation has been further compounded by the delayed delivery of replacement vessels 801 (Glen Sannox) and 802 which were originally due to be delivered in 2018. The Turnaround Director of Ferguson's submitted a fourth quarterly update to Parliament on 23 December 2021. At that time, the cost to complete the vessels remained between £110.3m - £114.3m. In the December 2021 report the delivery of 801 was still planned for between July 2022 to September 2022. The delivery of 802 was planned for between April 2023 to July 2023. After further analysis has been undertaken regarding the recently discovered legacy cabling issue, the new Ferguson Marine Chief Executive will outline the revised schedule for vessels 801 and 802, in his quarterly update to the Net Zero, Energy and Transport Committee at the end of March 2022. We continue to work with the yard to do everything we can to ensure that the new vessels enter service as quickly as possible, to deliver the further service improvements our island communities deserve.

3.60 In CHFS contract year five (October 2020 to September 2021) 538 scheduled major vessel sailings were cancelled as a result of technical issues. 69 of these cancellations were on the Islay route with MV Hebridean Isles accounting for 58 of these. Over 12% of MV Hebridean Isles' 813 scheduled sailings were cancelled in total (all reasons including weather, port and Covid) with significant impacts on connectivity for the communities and businesses served. An additional budget allocation of £4 million CDEL is currently provided annually, over and above the subsidy provided to operate the CHFS contract to CalMac/CMAL. This has been agreed to mitigate against major breakdowns and service disruption caused by technical/obsolescence issues with the aging fleet.

3.61 As set out in VRDP reports, the MV Isle of Arran (39 years) and the MV Hebridean Isles (37 years) are expected to become surplus to requirement for scheduled CHFS services once 801, 802 and the new Islay Class vessel have been delivered.

3.62 Consideration regarding disposal of assets across the network is on-going. Beyond that, six major vessels are scheduled for replacement due to normal working life expiry. A sustained investment programme in the coming decade to replace these major vessels, is underway. It will bring with it significant resilience benefits to the network as well as individual routes. Also, the full commitment of the major vessel fleet has left the network vulnerable to any single vessel failure. This vulnerability is compounded by the age of the fleet, with a high level of risk of breakdown of an increasing number of the 10 major vessels.

3.63 Submission from the Islay Community Council Ferry Committee to the Islay Ferry Summit in September 2019 highlighted existing problems with ferry routes serving the island – it noted that delays to the procurement of new vessels "have severely weakened resilience, with no spare vessel capacity in the network. In the case of Kennacraig–Islay service this has meant that one of the two designated and timetabled vessels has on frequent occasions been removed from the service, either to provide relief elsewhere or during repairs, without compensating capacity being provided".

3.64 The procurement of two Islay Class vessels would accelerate the ferry investment programme to replace a number of life expired or near life expired vessels in the fleet with accelerated deployment on the network, providing the prospect of improved the resilience of the ferry network as a whole at a time when there is an urgent need for additional tonnage whilst also improving the ferry service for Islay.

## Existing Arrangements

### Islay Ferry Services

3.65 Islay is the southernmost island of the Inner Hebrides of Scotland; and it lies in Argyll just south west of Jura. Port Askaig and Port Ellen are the main ports.

3.66 Both ports are served by the CalMac ferry services from the mainland port of Kennacraig, which is accessed by the A832 trunk road and has public transport connections directly to Glasgow provided by Citylink. The Islay route is served by a two-vessel service in both summer and winter, except for specific weeks during the annual overhaul relief periods in the winter timetable. The average passage time is between two and two and a half hours, depending on the vessel and intended island port.

3.67 The Islay ferry service is currently serviced by the MV Finlaggan and MV Hebridean Isles. MV Finlaggan operates 18 return sailings per week between the mainland and Islay with the MV Hebridean Isles operating 15 return sailings to Islay and provides 2 return sailings between Colonsay and Oban during the Summer timetable. For the Winter timetable MV Finlaggan operates 14 returns during a two-vessel service and 19 returns during single vessel service. MV Hebridean Isles operates 11 returns including one return sailing to Colonsay per week. Jura is also served by ferries to Islay, with a short connecting ferry service from Port Askaig to Jura provided by Argyll and Bute Council. Transport Scotland and the council also support a direct passenger-only summer service from mainland Kintyre to Jura.

3.68 The reliability, resilience, capacity and quality of the ferry services to Islay as well as port infrastructure in supporting ferry services and providing integration and interchange with other modes are therefore fundamental to the survival of these island populations, communities and businesses and the realisation of their sustainable economic development.

3.69 The Islay vessel project was initiated primarily on the basis of the MV Hebridean Isles reaching life expiry (currently 37 years old) and requiring replacement. There are no 'spare' vessels available to take over from the MV Hebridean Isles. The other two vessels in the CMAL fleet capable of operating the route are old (33 years and 28 years), therefore, new vessel investment is required to ensure the sustainability and continuity of a two vessel service to Islay. This was the case for Phase 1 of the project.

Phase 1: Islay Routes

3.70 The Scottish Government has come under pressure due to concerns around the lack of investment in vessels within the ferry network. The VRDP 2016, published January 2018 concluded that a new vessel was required for Islay to manage the vehicle deck capacity constraints on the route and to provide added resilience.

3.71 This rationale was based on background data on forecasts of sustained growth of all traffic types with particularly strong growth in cars and commercial vehicles. As a result, the trend of capacity utilisation levels was forecast to continue to increase.

3.72 As demand continues to grow in the medium to long term vehicle capacity constraints could begin to reach levels where a significant number of users will be unable to travel. Islay faces a particular challenge with the existing harbour arrangements at Port Askaig and Port Ellen as these can accommodate a vessel of up to 90 metres, the size of the current 'primary vessel', the MV Finlaggan. With port enabling works the capacity could be increased but there is an incurred cost for dredging and associated works that the board have previously been made aware of in the Strategic business case.

3.73 The new vessel is an enhancement upon a similar vessel; MV Finlaggan which is the primary vessel on this route and is a relatively modern ship having been introduced in 2011; although a modern vessel has extremely high fuel consumption and emissions for a ferry of its class and speed. The choice of MV Finlaggan's main parameters (length, beam and draught) are undesirable for her speed range. The new vessel according to her size will be capable to berth safely and reliably at all three primary ports plus the secondary port of Colonsay, however, enabling works involving dredging, fender replacement and pier strengthening works will be required to accommodate both vessels. Full details are explained in the OBC.

3.74 Appendix B of the OBC set out an overview of the route, demand, and disruption to services.

Phase 2: Acceleration of fleet replacement

3.75 A sustained investment programme is required to replace a large number of life expired or near life expired vessels in the ferry fleet, with six major vessels required within the next ten years. The increasing age of the major fleet and obsolescence of major vessel components is leading to increasing maintenance

and operational costs, increasing breakdowns, putting pressure on resource budgets with lengthier and more disruptive service outages affecting communities and industries that rely on lifeline services.

3.76 The opportunity to accelerating the procurement of a second "Islay Class" vessel at this point in time with the prospect of £3 million cost savings arose post approval of the OBC. The key benefits of procuring two vessels at this time are:

- allows a further Major Vessel into the fleet some 18 months earlier than starting from a new procurement (including consultation and design)
- This vessel needs to be procured anyway as part of the replacement programme
- This vessel is a developed concept that will bring some standardisation to the fleet and the associated benefits that brings (interoperability of vessel parts and crew).
- It will tackle the capacity pressures on Islay until the mid-2030s
- Allows Finlaggan to be cascaded elsewhere in the network and older tonnage to be removed earlier. MV Finlaggan should bring capacity and reliability improvements compared to the vessel she replaces. However, the options for vessel cascades are still being assessed.
- There would be the option to deploy the Islay Class vessels to other routes if required – although some routes may require dredging, but this would have to be tested operationally.
- It is possible the vessel specification and design will be used in future replacements (e.g. for Barra and Skye Triangle). CMAL will also review ramp / linkspan interface requirements.

3.77 Given the nature of this opportunity, it has not been possible to set out all of the detailed benefits and wider costs of permutations of procuring a second "Islay Class" vessel and the wider impacts on the overall network. For the purpose of this assessment it has been assumed that a second "Islay Class" vessel would be deployed on the Islay route.

**Rationale for Investment**

<u>Phase 1</u>

3.78 The rationale for this particular investment is bore out of the VRDP and has been approved by Scottish Minister to supplement the ferry network in Scotland. MV Hebridean Isles is over 37 years old. The new ferry will complement MV Finlaggan, until New Vessel 2 is operational. The New Vessels will be designed with a clear focus on freight, and sufficient passenger accommodation to meet anticipated demand.

<u>Phase 2</u>

3.79 The case for replacement of the CalMac Major Vessel fleet is known with an investment programme for the coming decade developed to allow replacement of a large number of the vessels. Vessel replacement is necessary to ensure the

continued provision of essential connections to island and remote communities. The main benefit of the purchase of two Islay Class vessels now is the opportunity to accelerate fleet replacement and benefit from potential cost savings on procurement and design costs of a second vessel.

**Objectives**

3.80 The objectives for the project were set out in the SBC. These are:

1. Economy
2. Resilience
3. Environmental
4. Performance

| Scheme Objective | Description |
|---|---|
| 1. Economy:<br>Maintain lifeline ferry services to Islay at current levels of safety, frequency and reliability thus maintaining ferry services essential to continued sustainable economic growth. | • In order to foster economic growth and sustain these island populations, communities and businesses, it is essential to maintain connectivity between the Scottish mainland and communities of Islay: Kennacraig, Port Ellen and Port Askaig and Jura. This will mitigate against the potential risk of decline of these island economies, against a strong demand-driven economic growth in the whisky and tourism sectors.<br>• The lifeline nature of these services was recognised in the Ferries Plan and again in the specification for the CHFS contract. In order to maintain these ferry services at their current level, it is essential to replace life expired vessels. |
| 2. Resilience:<br>Increase the number of ferries in the CalMac major vessel fleet to improve resilience and capacity. | • CalMac operate a major fleet of 10 vessels between 18 ports. Historically, vessels and ports have been developed around the needs of individual routes rather than network wide.<br>• We have a policy objective of increasing resilience by enabling more vessels to access more ports, particularly on an unscheduled basis in the event of vessel breakdown (an increasing risk due to the ageing fleet). |
| 3. Environmental:<br>Reduce carbon emissions | • Improved Hull form compared to previous vessel designs/requirements can reduce emissions from the vessel.<br>• Port upgrades: dredging, fenders, mooring arrangements allow for improved vessel hull forms<br>• The provision of shoreside electric power to a vessel can mitigate local air quality and noise pollution.<br>• The provision of on-board energy storage systems such as batteries can reduce emissions from the vessel and mitigate local air quality and noise pollution. |

| | |
|---|---|
| 4. Performance: Continuation of a two-vessel service for the route, meeting user needs, regulatory requirements and good practice guidelines. | • Continuation of a two-vessel service will ensure demand is met on this route.<br>• The introduction of a new vessel will reduce cancellations due to technical issues as there will be improved reliability due to design, power and windage.<br>• Maintain and, where feasible and affordable, provide sufficient capacity in ports for passengers, vehicles and freight informed by long-term demand forecasts.<br>• Meet and where practical exceed accessibility standards for passengers on-board, onshore and in the interface between the two. |

***Table 1: Investment Objectives***

3.81 See item 2 above 'Resilience'. The increased draught of the new vessel will reduce network resilience as the number of ports which can currently accept the new vessel will be reduced, limiting vessel deployment options and the resilience of the network, particularly if 2 new vessels are introduced to the route.

3.82 The deeper draught allows benefits to be realised, particularly regarding carbon footprint, emissions, fuel consumption and vessel performance as outlined in the OBC.

3.83 See item 4 above 'Performance'. MV Hebridean Isles is a vessel with proven simplistic technology and a good technical record. A new vessel will introduce new technology to the fleet and as such is a risk for all new vessels.

## Assumptions

3.84 The assumptions made at the commencement of the vessel and ports feasibility studies are those changed during the studies are set out in the OBC.

## Constraints

3.85 Islay faces a particular challenge with the existing harbour arrangements at Port Askaig and Port Ellen as these are able to accommodate a vessel of up to 90 metres, the size of the current 'primary vessel', MV Finlaggan. With port enabling works the capacity could be increased but there is an incurred cost for dredging and associated works.

3.86 The current marshalling area at Port Ellen is undersized for the existing vessels, which imposes an operational constraints and health & safety risks. CalMac will have to limit vehicle capacity on the new vessel to reflect the marshalling area available to ensure safe management of traffic. Significant upgrades are required at Port Ellen to enable an increase in the marshalling area. The Port Ellen Terminal Development project will run independently of the New Islay vessel project and will be completed in around 5 years' time (2 years after the first new vessel is delivered). This project will be required regardless of the new vessel or chosen vessel option.

3.87 In order to provide additional vehicle capacity a larger vessel than the MV Hebridean Isles is required since it is not operationally feasible to operate 2 smaller vessels to achieve the timetable required to provide additional capacity on the route.

## Dependencies

3.88 The vessel replacement project is focused on the particular needs and constraints of the Islay route, notably the shoreside infrastructure and the relatively high level of freight traffic. This route has among the highest levels of commercial vehicle traffic on the CHFS network with approximately 40% of route Passenger Car Units (PCUs) on average from commercial vehicles (increasing to 50% on busier legs) – the CHFS average is 14%.[i]

3.89 The project has a number of dependencies:

- Delivery of port enabling works
- Sourcing operationally feasible mooring aid solution at Port Askaig
- Marshalling area extensions at Port Ellen and Port Askaig to prevent new vessel capacity being restricted, for the lifetime of the vessel.
- Provision of shore power to achieve environmental benefits (estimated 10% of emissions benefit compared to Finlaggan with 90% of emissions reduction due to hull design).
- Infrastructure work at Oban berth 1 (Covered under another project).

<u>Port restrictions and vessel capacity</u>

3.90 There are longstanding marshalling area capacity issues at Port Ellen and Port Askaig. The marshalling areas at Port Askaig and Port Ellen are undersized for larger capacity vessels e.g. 100 PCUs (Port Askaig 91 PCUs and Port Ellen is currently operating at 77 PCU but currently under review to ensure safe management of traffic). At present it is estimated that the additional Port Ellen marshalling capacity will be available 2 years after the introduction of the first new vessel. Although the Port Askaig marshalling capacity is suitable for the current vessels additional work will be required by Argyll and Bute council to fully utilise any additional capacity provided by a larger vessel, the timeline for these works are still to be established. The impact of this is excluded from the options appraisal.

## Risks

3.91 Current anticipated strategic risks associated with this project with their current risk controls can be viewed in the Risk register document which is regularly reviewed and updated at working group meetings. The group has identified 18 main risks for this project along with relevant risk control counter measure. **Appendix A – eRDM link to Risk Register.**

**Benefit Realisation and Measurement**

3.92 The Working Group is responsible for the identification of the benefits, their measures and recording them in the Benefits Register. **Appendix B – eRMD link to Benefits Register.**

3.93 It is envisaged that the project for the new vessels and port enabling works will provide increased capacity, and benefits to island communities. We expect capacity to increase overall due to increased car spaces (PCU's) per sailing, plus additional deck space for HGVs and overall deadweight capacity; the indirect benefits will be the fostering of better relationships between local industries thus encouraging growth and tourism.

3.94 Responsibility for managing the realisation of the benefits will be transferred to the contracting authority; CMAL alongside the transition from contract award to contract delivery.

**Phase 2**

**Major Fleet Replacement Strategy / Future Vessel Strategy**

3.95 As set out earlier a sustained investment programme is required in the coming decade to replace a number of major vessels at or reaching life expiry, this has been drawn up.

3.96 Further feasibility studies will be carried out by CMAL to investigate the potential to have commonality of future major vessel designs based on the new Islay vessel design. For example, the Mull ferry does not have the same cargo carrying requirements as the Islay Ferry but has much greater passenger carrying requirements. CMAL will carry out feasibility studies considering the possibility to have a common displacement hull for major vessels, where the increase in the ship construction weight to accommodate an additional passenger deck and associated facilities for greater passenger numbers can be balanced against a decrease in required cargo deadweight and the associated weight savings in vessel construction, e.g. fitted with only one hoistable car deck. Increase in windage and stability to be considered as well as commonality of bridge and engine room systems, lifesaving equipment, and general layout, that would allow for easier deployment of crew and reduced stock of spares. The studies will also need to consider the challenges/constraints and upgrades required at a number of ports.

## 4 THE SOCIO-ECONOMIC CASE

4.1 This section sets out the procurement process and provides evidence that supports the award of contract to the tenderer who presented the most economically advantageous tender.

## THE OPTIONS

PHASE 1

4.2 The Outline Business Case for the improvement of the Islay / Jura routes considered a range of new vessel options. This included one new larger vessel, two new smaller vessels or two new larger vessels in combination with or in place of the existing vessels.

4.3 The 'Do Nothing' option was discounted at the start of appraisal work since it is inconsistent with the NTS, National Islands Plan, Ferries Plan, VRDP and the objectives of the project. A reduction in service to the islands would exacerbate inequalities and harm economic growth. Scottish Ministers have a responsibility and duty to implement and deliver on the strategic objectives set out in the Islands Plan. It would be inconsistent with the Islands Plan strategic objective to improve transport services for island communities and also the Plan's objectives for population and sustainable economic development. It would also contradict the Ferries Plan commitment to these services and not deliver the VRDP proposals for vessel replacement.

4.4 The OBC considered a number of vessel replacement options, these are set out in the table below.

| **OBC ISLAY VESSEL OPTIONS MARCH 2021** |
|---|
| Option 1 – A New Vessel Similar in Size and Speed as MV Finlaggan (89.8m) |
| Option 2 - A 94.8m Vessel, larger than MV Finlaggan |
| Option 3 - Two Smaller Vessels for Islay Route (Approximately 72 metres) |
| Option 4 - Two Similar 94.8m Vessels for Islay Route |
| Option 5 - Vessel over 100m |

4.5 The OBC concluded that the preferred option for the routes would be a single new large vessel (Option 2) replacing the MV Hebridean Isles and undertaking associated port works to enable deployment with the intention to retain MV Finlaggan as the second vessel on the routes. Procurement of the preferred option in the OBC was approved by IDM in June 2021.

PHASE 2

4.6 The OBC noted that Option 4 would only be considered further if Option 2 (preferred option) is selected and taken forward. This option allows for an additional vessel to be commissioned if required (e.g. to replace the MV Finlaggan and allow this to be cascaded to another route).

4.7 As part of the current procurement process for the new Islay vessel an opportunity arose to purchase a second Islay Class vessel, at reduced cost and with accelerated deployment on the network, providing the prospect of improving the resilience of the ferry network as a whole at a time when there is an urgent need for additional tonnage to replace a large number of life expired or near life expired vessels (six major vessels are required within the next ten years).

4.8 The increasing age of the major fleet and obsolescence of major vessel components is leading to increasing maintenance and operational costs, increasing breakdowns, putting pressure on resource budgets with lengthier and more disruptive service outages affecting communities and industries that rely on lifeline services.

4.9 The review of the first stage submissions and further consideration of network wide resilience and fleet replacement pressures, the project team presented updated information on costs, potential benefits and longer term implications for the CHFS network of confirming one or two vessels within the Invitation to Tender (ITT). In September 2021 TS IDMB and Ministers agreed that CMAL should continue with the procurement process, confirming two vessels within the ITT.

**ANALYSIS**

4.10 The table below uses a simple, seven-point scale to assess the relative positive and negative impacts of the two-vessel option against the STAG criteria. The scale works as follows:

| Rating | Impact Description |
|---|---|
| --- | Major negative |
| -- | Moderate negative |
| - | Minor negative |
| 0 | Neutral |
| + | Minor positive |
| ++ | Moderate positive |
| +++ | Major positive |

| Scottish Transport Appraisal Guidance (STAG) Criterion | High Level Appraisal | Impact Score |
|---|---|---|
| **Environment**<br>• Biodiversity and Habitats<br>• Geology and Soils<br>• Land Use (including Agriculture and Forestry)<br>• Water, Drainage and Flooding<br>• Air Quality<br>• Historic Environment<br>• Landscape<br>• Noise and Vibration | 1. Selective Catalytic Reactors (SCRs) for TIER III compliance with be installed on the new Vessel to reduce Nitrogen Oxide (NOx) emissions, improving air quality.<br>2. The batteries will provide at least 10% of the daily vessel energy requirements. The ship will have the possibility to operate in Zero Emission mode at the ports, with the added benefit of reduced noise at the ports and particularly important reduced overnight noise at the ports. Investigations are being carried to assess the possibility of operating in zero emissions mode in West Loch Tarbert. | + |

| | | |
|---|---|---|
| | 3. There is the ability to retro fit the vessel to accommodate any future technology and fuels to help reach the zero emissions target.<br>4. The provision of shore power at 3 ports will improve local air quality and reduce noise particularly overnight.<br>5. Vessels are already operating on the route impacting the environment. The new vessels reduce noise in port and also improve air quality compared to MV Finlaggan. Initial analysis found that overall, there should be a reduction in total emissions for the Islay route and possibly a reduction for the network, however, this is dependent on vessel cascade. | |
| **Climate Change**<br>• Greenhouse Gas Emissions<br>• Vulnerability to the Effects of Climate Change<br>• Potential to Adapt to the Effects of Climate Change | 1. Reducing greenhouse gas emissions and air pollutants are key considerations for the new vessel. MV Finlaggan emits 11,635 tonnes of CO2 per annum (if on MV Hebridean Isles timetable), the proposed new vessel (94.8m) will emit 8,031 tonnes of CO2 per annum, a reduction of 31% it will also improve air quality through its improved hull design and propulsion system.<br>2. Total route emissions for Islay are expected to be lower due to the emissions savings compared to MV Finlaggan. The estimated CO2/car space/year is lower (80 tonnes) than both MV Finlaggan (154.8 tonnes) and MV Hebridean Isles (83.5 tonnes).<br>3. The estimate is that the new vessels will have a lower carbon footprint and lower emissions, than MV Finlaggan by 31% through a diesel electrical propulsion.<br>4. Energy reduction, prediction is 28% less daily energy requirements than MV Finlaggan.<br>5. New vessels and port works should improve weather resilience maintaining connections in more adverse weather.<br>6. NTS highlights difficulty in options for reducing emissions and need to balance needs of island communities for capacity with environmental objectives. | **+** |
| **Health, Safety and Wellbeing**<br>• Accidents<br>• Security<br>• Health Outcomes<br>• Access to Health and Wellbeing Infrastructure<br>• Visual Amenity | 1. The new vessels will meet all required safety standards.<br>2. Additional traffic from increased vessel capacity may increase the risk of accidents, however, vessels and ports will be operated to strict safety guidelines.<br>3. Compliance with Environmental and Health & Safety legislation and best practice is required.<br>4. Vessel cascades are still to be decided, however, if total emissions from the fleet reduce this will have a positive impact on health.<br>5. Additional capacity and reliability of new vessels will provide capacity for social interaction and improved wellbeing as well as ensuring access to health facilities. | **+** |

| | | |
|---|---|---|
| | 6. Reliability improvements and accessibility improvements on vessels and at ports benefits older, disabled women and children. | |
| **Economy**<br>• Transport Economic Efficiency (TEE) - benefits ordinarily captured by standard cost-benefit analysis – including traffic volumes, journey times, driver frustration or travel time reliability<br>• Wider Economic Impacts (WEIs) refer to any economic impacts which are additional to transport user benefits. | 1. Addressing reliability, capacity and resilience has benefits for businesses from cost savings and efficiencies.<br>2. Improved connectivity for residents and visitors increases the attractiveness to live, work and visit Islay. Expansion of year-round capacity would safeguard population retention and growth.<br>3. The whisky sector is important in Scotland as an enabler for economic growth particularly in remote and island communities such as Islay. The Scottish Whisky Association have indicated further growth through the development of another three new distilleries. The additional deck space for HGVs will bring benefits to this sector particularly if growth is being restricted due to the current capacity issue. This may also apply to the tourism sector for Islay, although some tourist trips may be displaced to other areas when capacity is not available on the ferry. However, the realisation of the capacity benefits is dependent on the delivery of port works to provide increased marshalling capacity shoreside.<br>4. Increased deadweight also has benefits for freight customers.<br>5. Higher increased top speed and ability to make up time if required is a benefit to travellers, however, higher vehicle capacity will increase the turnaround time in port. Also, higher speeds have a greater emissions impact. Journey time saving (compared to other options) were considered at OBC.<br>6. Explore Islay and Jura recently conducted a survey of their tourism industry members, a key finding from which was that a 7-day period of disruption cost them £9,500 each on average.[1]<br>7. Reduced network resilience in short term due to increased draught but CMAL plan to increase number of ports new vessel can access increasing resilience of the network in the longer-term. | **++** |
| **Equality and Accessibility**<br>• Public Transport Network Coverage<br>• Active Travel Network Coverage<br>• Comparative Access by People Group<br>• Comparative Access by Geographic Location<br>• Affordability | • Accessibility has been an integral part of the requirements for the new Islay Vessel design. Wider side casings providing improved accessibility by providing larger passenger lifts and wider staircases and passageways.<br>• Would offer improved physical accessibility compared to MV Hebridean Isles.<br>• Cascading of MV Finlaggan to replace an older vessel may also offer accessibility improvements.<br>• Islay Class vessel deigned with wider side casings, for improved accessibility. | **+** |

[1] Source: https://www.calmac.co.uk/media/7797/CalMac-Ferries-socio-economic-impact-Phase-1-Qualitative-Assessment/pdf/CalMac_Socio-Economic_Impacts_Phase_1_Report_v2.pdf?m=1643903278707

| | | |
|---|---|---|
| | • Jura's primary route to the mainland is via Islay. In summer a passenger only service from Jura to the mainland is available, however, vehicle carryings must travel on the Islay route, and this is also the case for passengers in winter. | |

ASSESSMENT OF OPTIONS: PHASE 2

4.11 Reliability, capacity and resilience of the network are not the standard economic measures valued in transport appraisal. They are difficult to quantitatively assess in a cost-benefit study. The OBC considered the NPV of the short-list of vessel options (options 1-3 only) and recommended Option 2, the Islay Class Vessel. However, at this FBC stage, due to the change in focus to the two-vessel option (option 4), only a financial impact appraisal is presented. The case for ferry fleet replacement has been made and the case for change for Islay remains as set out at the OBC stage. The overall project is considered necessary to provide appropriate capacity for one of the busiest routes on the CHFS network and reduce the overall age of the fleet improving reliability by replacing vessels approaching 40 years' service with new tonnage. The socio-economic benefits of ferry services to island communities are known (if not quantified). The Infrastructure Investment Plan sets out network-wide objectives for vessel and harbour investment, these are to improve resilience, reliability, capacity, and accessibility, increase standardisation, and reduce emissions to meet the needs of island communities.

4.12 The Islay Vessel OBC set out the positive benefits of a 94.8m vessel (an "Islay Class" vessel). In general, the key positives are:

- Both propulsion system options provide improved resilience (although the specific option is still to be decided). The use of a hybrid propulsion system which in turn offers increased berthing availability and redundancy. Although the increased draft does reduce network resilience in the short-term at a number of ports.

- The vessel design will have a double and a single Hoistable Car Deck (HCD's) which will allow numerous loading patterns to ensure car and HGV capacity optimisation is achieved.

4.13 A new larger vessel for Islay will provide the increased vehicle capacity to support higher HGV carryings. The benefits and costs of the "Islay Class Vessel" have been set out at OBC and these remain. The key difference at FBC stage is that since OBC stage a decision to proceed to ITT for 2 vessels was made. The case for this has already been discussed above / below. The table below sets out how the one and two Islay vessel options meet the Investment Objectives.

4.14 A new vessel will have a greater environmental impact than the current vessel (MV Hebrides) but also higher capacity to meet island transport needs. The design of the vessels is improved so that emissions will be lower than MV Finlaggan the other vessel on the Islay route, but these will still be higher than any older vessel in the feet it replaces.

4.15 The same port enabling works is required irrespective of the number of vessels.

4.16 The table below set out how the two vessel options contributes to the investment objectives. The ITT issued does not allow for the procurement of a single vessel procurement.

| | One Islay Class Vessel | Two Islay Class Vessels |
|---|---|---|
| **Economy** | • Would bring additional vehicle capacity to the service compared to current vessel (MV Hebridean Isles)<br>• More deck space for HGVs with benefits to Islay economy (whisky, tourism) and for residents.<br>• Passage time is faster, however, higher capacity may result in increased turnaround time at port.<br>• Wider side casings, for improved accessibility. | • Additional vehicle capacity compared to only one new vessel. MV Finlaggan is 77PCU and MV Hebridean Isles is 68PCU. New Vessels will have 100 PCU each but benefit of this will not be realised until marshalling capacity is increased at Islay ports.<br>• Cascade of MV Finlaggan and additional capacity for Mull would bring benefits to businesses and people.<br>• Accessibility improvements |
| **Resilience** | • Increased draught will reduce network resilience in the short term. (CMAL plan in the longer term to increase the number of ports the where the new vessels can be accepted, increasing resilience of the CHFS network in the longer term).<br>• Higher maximum speed, beneficial for making up time when required. Propulsion system provides improved resilience. | • Although in the short-term resilience of the overall CHFS network is reduced, Islay specifically increases due to new vessel reliability and standardisation.<br>• Higher speed than MV Finlaggan beneficial for making up time when required.<br>• Propulsion system provides improved resilience. |
| **Environmental** | • Deeper draught allows lower carbon footprint emissions, fuel consumption and vessel performance compared to the MV Finlaggan (Option 1) and two smaller vessels (Option 3). However, total emissions will be higher than the vessel replaced. | • Compared to MV Finlaggan emissions lower, but higher than the life expired vessel replaced in network.<br>• Opportunity for MV Finlaggan emissions to be reduced dependant on cascade option. |
| **Performance** | • Improved reliability with vessel replacement.<br>• Garage height introduces greater range of vehicle access but creates increased windage. However, windage is countered through increased manoeuvrability through enhanced propulsion system and thrusters.<br>• Optimised operational speed for West Loch Tarbert/ Open Sea passage.<br>• Increased manoeuvrability. | • Improvement in [network] reliability – vessel cascade and replacement<br>• Increased redundancy<br>• Improved manoeuvrability. |

| | | |
|---|---|---|
| | • Improved speed means vessel may be able to recover some time when experiencing delays.<br>• Increased redundancy through propulsion system. | |

4.17 A specific aim of the Infrastructure Investment Plan (IIP) is to increase standardisation. Islay vessel 1 has been designed to be optimal for the Islay route and the Islay class design can be transferable to other Major Vessel routes on the network but not all. A balance is required between bespoke vessels to meet the requirements of specific routes on the network and ensuring a level of resilience for the network and the benefits of standardisation in terms of cost savings.

4.18 Standardisation can range through from bridge equipment, engine parts and replication of hull formation where possible. Standardisation will provide cost savings during the design and build process as well as an opportunity to improve operational and fleet resilience and reduce operational costs since crews can move between vessels without the need for further training and vessel familiarisation.

4.19 The impacts in terms of network emissions are dependent on deployment options and cascades. This requires further detailed consideration once options are refined, however, moving MV Finlaggan to a shorter route with reduced service speed such as Mull should reduce total fuel consumption, thus offsetting the higher emissions per km of MV Finlaggan compared to the MV Isle of Mull.

4.20 The overall project is considered necessary to provide appropriate capacity for one of the busiest routes on the CHFS network and reduce the overall age of the fleet and therefore improve reliability by replacing vessels approaching 40 years' service with new tonnage.

## ECONOMIC APPRAISAL

### Financial Cost Benefit Analysis

4.21 The tendering process for the new vessels and for the future port works is being undertaken through open procedure and in line with relevant legislation and guidance to ensure competitive prices and drive value for money.

4.22 On completion of the Stage 1 of the tender process, 4 organisations were invited to the tender stage. The four candidates invited to the tender stage were:

- Cemre Marin Endustri A.S
- Damen Shipyards Gorinchem B.V
- Remontowa Shipbuilding S.A.
- Sefine Denizcilik Tersanecilik Turizm San. Ve Tic. A.S

4.23 Due to ongoing tender clarifications to confirm details of the Guaranteed Refund requirements, the identity of the preferred bidder is not identified. Instead, the organisations are referred to as Shipyard 1, Shipyard 2 etc.

4.24 CMAL undertook the tender assessment process. Tenderers submitted detailed pricing proposals with the total price for the two vessels. A price for each propulsor option was required (primary option and alternative option) given that decision on the propulsor option has not yet been concluded.

4.25 Tenderers were evaluated and given a price score and a technical score. The weighted quality score and price score were added to give the scores and rankings. This resulted in Bidder 1 having the highest overall score for both the primary propulsor option and the alternative propulsor option. With a total price of £90,614,911 for the primary propulsor option and £88,810,775 with the alternative propulsor option. The commercial case of this FBC sets out the ranking, scores, and total price for all bidders.

4.26 The proposed contact length from the top ranked bidder is Vessel 1 Q3/Q4 2024 and vessel 2 Q4/2024 - Q1/2025.

**COST AND BENEFITS OF PROJECT**

[redacted]

[redacted]

[redacted]

[redacted]

4.36 In line with emerging thinking in TSA no Optimism Bias is included in the vessel cost estimates at the FBC stage. This is due to the contract being a fixed price over a fixed term. Payments will be made and staged over the fixed term against the delivery of key outputs with capital spread over the build period of the vessels. OB is however included in the cost estimates for port enabling works.

4.37 Recurring capital costs over the 30-year life of vessel to cover e.g., dry docking, equipment upgrades and obsolescence, lithium-ion battery replacement are not included as part of the funding sought for the FBC as these will be included within the ongoing capital programme.

# 5 THE COMMERCIAL CASE

## INTRODUCTION

5.1 As described in the OBC, the Contract will be for the supply of the detailed design, construction, testing, survey, equipping, completion, and delivery of 2 x Ro-Pax Vessels for Islay, on a fixed price basis and will be provided according to the contract Technical Specification, the contract General Arrangement (GA) drawing and the Shipbuilding Contract.

5.2 This project is for the design and build of two new ferries to service the routes to/from the Isle of Islay. The procurement strategy has been developed to:

- Deliver best value in terms of price, quality, and service
- Develop an attractive contract that will encourage suppliers to tender
- Provide an effective contract with a transparent and simple process
- Encourage innovation from sharing and comparing knowledge
- Provide sufficient scope and flexibility to meet CMAL, CalMac and the Island communities' needs
- Deliver sustainability and community benefits

5.3 CMAL provided the bidders with a design specification supported from feasibility studies, tank tests and 3D modelling, in the form of a Technical Specification and a General Arrangement drawing.

5.4 The bidders were required to explain how they will meet the minimum requirements. Equally, where a bidder detailed something that enhanced or improved the product this was evaluated and scored accordingly.

5.5 The Contract is being procured through a Restricted procedure as described in the Utilities Contracts (Scotland) Regulations 2016. A 2-Stage process:

- Stage 1 – Selection. A contract notice was published in Public Contract Scotland (PCS) website inviting interested parties to complete and submit a Single Procurement Document (Scotland) through the PCS-Tender e-tendering portal. As well as appearing on PCS, it also appeared on the new UK e-notification service called Find at Tender Service (FTS) which replaced the requirement to publish notices in the Official Journal of the European Union (via their TED) system.

- Following assessment of the SPD, shipyards were invited to participate in Stage 2 of the procurement. Stage 2 – Invitation to Tender (ITT), the ITT documents were published via the PCS-Tender e-tendering portal.

## PROCUREMENT METHOD

5.6 The procurement exercise was initiated in June 2021 for a design and build contract for the vessels required to service this route. This was a 2-stage tender process, with stage 1 identifying 4 candidates to progress to the tender stage. A report submitted to the CMAL board of Directors on 09 September 2021 detailed the qualification process used to shortlist the candidates, which was approved by the CMAL Board on 11 September 2021.

5.7 A total of 34 organisations expressed an interest in our requirement and responses were received from 11 organisations. These were checked for compliance and were subjected to a robust evaluation process. A number of minimum standards were applied to the SPD(S) under sections 4B Economic Standing, 4C Technical and Professional Ability and Section 4D Quality Assurance Scheme and Environmental Standards. Additionally, candidates were asked to provide responses to a number of questions which were assessed and scored.

5.8 On completion of the evaluation process, four organisations were recommended to the CMAL board to be invited to the tender stage.

**Invitation to Tender**

5.9 The four candidates invited to tender were:

- Cemre Marin Endustri A.S
- Damen Shipyards Gorinchem B.V
- Remontowa Shipbuilding S.A.
- Sefine Denizcilik Tersanecilik Turizm San. Ve Tic. A.S

5.10 Detailed Invitation to Tender documents were issued to the 4 tenderers via the PCS-Tender e-sourcing website with a response deadline of 06 December 2021.

5.11 Tenderers were required to submit their response in the format of 22 project specific documents. These documents all relate to the evaluation criteria. The documents requested were:

| Document Number | Title |
|---|---|
| 1 | Draft Contract Shipyard Technical Specification |
| 2 | Draft Contract Shipyard General Arrangement drawing |
| 3 | The completed Shipyard Maker's List |
| 4 | Skills and resources plan |
| 5 | Project management plan |
| 6 | Risk assessment plan |
| 7 | Shipyard installation standards |
| 8 | Contact details for referees |
| 9 | Speed – Power calculations |
| 10 | Station holding capability diagrams |
| 11 | Sea keeping evaluations |
| 12 | Preliminary damage and intact stability analysis |
| 13 | Preliminary displacement, lightship weight, and deadweight figures and make up. |
| 14 | Preliminary mid ship section |
| 15 | Preliminary lines plan |
| 16 | Electrical single line diagram |
| 17 | Electrical load balance |
| 18 | Comments on draft shipbuilding contract |
| 19 | Build and delivery schedule |

| | |
|---|---|
| 20 | Document number removed from final tender |
| 21 | The completed Tender Form (see Schedule 6) |
| 22 | The completed Tender Price Proposal (see Schedule 7) |
| 23 | The completed Certificate of non-collusion (see Schedule 8) |

5.12 All four tenderers submitted their tender before the deadline. All were checked and found to be complete.

**Tender Assessment**

5.13 Tender assessment was undertaken by the following:

- Lead/Responsible Officer: Kevin Hobbs, CMAL CEO
- Technical Evaluation Lead: [redacted], CMAL Director of Vessels
- Technical Evaluator: [redacted], CMAL Technical Superintendent
- Independent Technical Evaluator: [redacted], [redacted]
- Fair Working Evaluator: [redacted], CMAL Head of Business Support
- Financial Evaluation Lead: [redacted], CMAL Director of Finance
- Market Intelligence: [redacted]
- Specialist Financial Advisor: [redacted]
- Specialist Technical Advisors: [redacted], NaValue GmbH
- Specialist Technical Advisors: [redacted] NaValue GmbH
- Specialist Technical Advisors: [redacted], NaValue GmbH
- Specialist Technical Advisors: [redacted], NaValue GmbH
- Specialist Technical Advisors: [redacted], NaValue GmbH

5.14 Legal advice provided by [redacted]

**Financial Assessment**

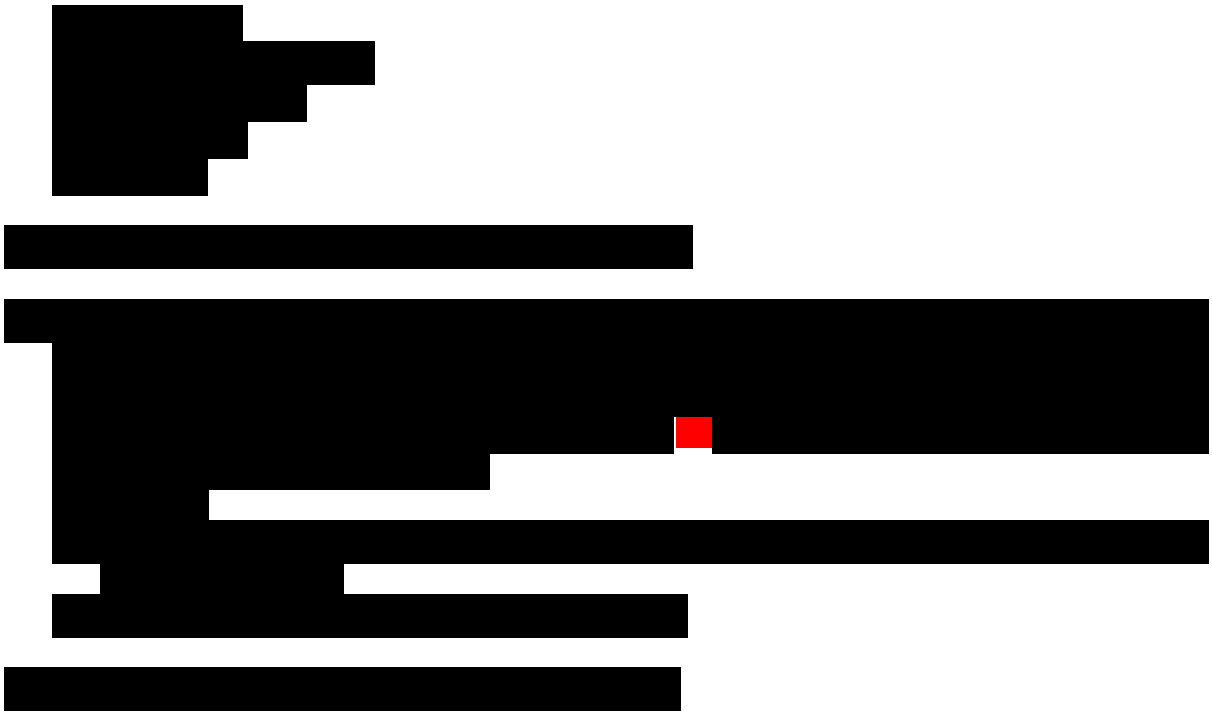
5.15 Tenderers were required to submit a detailed pricing proposal document showing their total price for the two vessels.

5.16 The tender technical specification at section 0012 included a primary propulsor option and alternative propulsor option. Tenders were required to provide a complete pricing schedule with the fee that will be charged to supply the vessel(s) with each of the primary propulsor option and alternative propulsor option.

5.17 The financial assessment was based on the overall cost to the buyer with the lowest overall bid receiving 40 points and all other bids awarded on a pro-rata basis in relation to the lowest bid.

5.18 All bidders were required to provide details of the banks who would provide the Builders' refund guarantee:

1. Cemre returned in their submission



**Technical Assessment**

5.19 Tenderers were required to submit detailed proposals based on a number of questions asked within the tender pack. The assessors marked the responses independently of each other and submitted their unweighted scores to CMAL's procurement team for collating. The question weighting was added to the average score for each question, which then gave the total technical score to take forward to the evaluation summary.

5.20 The tender responses were generally to a very high standard with similar scoring being given by all assessors.

**Shipyard Visits**

5.21 A team of CMAL representatives visited each of the 4 shipyards in early February 2022 to meet with the shipyard senior team and heads of departments, to see the premises and fabrication facilities and to see any vessels they had under construction. The visit did not discuss any commercial or technical aspects of the proposals.

5.22 The visits enabled a better understanding of the tender submissions and allowed the shipyards to demonstrate their capabilities first-hand. No concerns were highlighted during the visits.

**Technical Summary**

[redacted]

**Mechanism for payment, bonding, and warranties**

[redacted]

**Tender Evaluation Conclusions**

5.25 The weighted quality score was added to the price score to give the overall scores and rankings. The overall costs, financial and technical scores are noted in Tables 1 and 2 below:

| Bidder | Total Price | Price Score | Quality Score | Overall score | Ranking |
|---|---|---|---|---|---|
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 1 |
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 2 |
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 3 |
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 4 |

***Table 1: Summary of Price Proposals with Primary Propulsor***

| Bidder | Total Price | Price Score | Quality Score | Overall score | Ranking |
|---|---|---|---|---|---|
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 1 |
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 2 |
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 3 |
| Shipyard | [redacted] | [redacted] | [redacted] | [redacted] | 4 |

***Table 2: Summary of Price Proposals with Alternative Propulsor***

5.26 The decision on whether the primary or alternative propulsor option will be taken forward has not yet been concluded, however, the overall rankings remain the same for both options.

5.27 The refund guarantee will be provided by a correspondent bank acceptable to CMAL and the Shipyard's bank. Market indication from [redacted] is up to 2.0% of the total contract price above.

**Proposed Contract Lengths**

5.28 Contract durations will be further discussed at the post tender negotiation stage. From information provided by the top ranked bidder in their tender:

- Vessel 1: Q3/Q4 2024
- Vessel 2: Q4/2024 – Q1/2025

**Post Tender Negotiations**

5.29 CMAL and external advisors will conduct post-tender technical negotiations with the top ranked Tenderer w/c 21 February 2022 in Bergen, Norway. These negotiations will be to finalise the contract technical specification, the contract general arrangement drawing and the shipbuilding contract. The finalisation of

the shipbuilding contract will take place on 28th February and 1st March 2022 in London.

5.30 If no agreement can be made, then CMAL will withdraw from the negotiations and commence similar negotiations with the 2nd ranked Tenderer.

5.31 On successful conclusion of the post tender negotiations:

1. CMAL will inform the CMAL Board of Directors of the tender outcome.
2. Once the CMAL Board approves the decision to proceed, CMAL will inform the Scottish Ministers via Transport Scotland of the tender outcome.
3. Once the Scottish Ministers/Transport Scotland approve the decision to proceed with contract award then:
4. CMAL will issue letters of intent to all parties advising the winning bidder.
5. CMAL will provide feedback to the unsuccessful Tenderers.

5.32 On successful conclusion of the standstill period:

1. CMAL award a contract to the winning bidder.
2. CMAL publish a contract award notice in Public Contracts Scotland and Find-a-Tender-Service.

**Form of Contract**

5.33 For the Shipbuilding Contract, the Baltic and International Maritime Council (BIMCO) “NEWBUILDCON” International Standard Shipbuilding contract will be used.

5.34 Some of the important issues that determine the fixed price are listed below:

- Contractual terms
- Delivery time
- Payment terms
- Currency
- Refund Guarantee
- Reliability of the shipyard in way of delivery and quality
- Flexibility of the shipyard for change orders
- Proposed makers list

5.35 The payment profile for the vessel build will be based on deliverables, not just timescales. This will be finalised at the post tender negotiation stage.

5.36 Variations to contract will be strictly managed through the variation management process in the Shipbuilding contract. These variations are measured in terms of cost, time, and quality against the contract specification.

## 6 THE FINANCIAL CASE

### INTRODUCTION

6.1 The purpose of this section is to set out the financial implications of the contract.

### Financial Summary

6.2 The financial appraisal identifies capital funding requirement of between £91million to £94million to procure the two vessels and £2.8million (3% of total contract price) of capitalised funding for variations to contract (total both vessels).

6.3 Cost of the two vessels will be finalised following post tender negotiations with bidder, which are being held w/c Monday 21st February 2022.

6.4 In addition, £500k spares/tools (total both vessels), £600k concept design, and £5.6million (total for both vessels) for: CalMac Crew familiarisation (overseas) training, and voyage costs to UK, CMAL project management, site supervision team (overseas) and other costs.

6.5 Capital funding for the Vessels is being sought in the form of a voted loan for £100.5million to £103.5 million. Costs will be finalised following post tender negotiations with bidder, which are being held w/c Monday 21st February 2022. Figures disclosed exclude VAT as input VAT will be reclaimed wherever appropriate/possible.

6.6 The financial appraisal identifies estimated capital funding requirement of £23.25 million to procure port works (inc. provision of shore power and 3% inflation for the preferred option vessel).

6.7 Associated with the Islay project and the wider network is the need to modify No.1 linkspan at Oban Ferry Terminal. £5 million allowed for in the CMAL master plan.

6.8 Capital funding for the port works is not included as part of this FBC, as this will be incorporated within a separate business case in line with CMAL's strategic plans.

### IMPACT ON THE ORGANISATION'S INCOME AND EXPENDITURE ACCOUNT

6.9 CMAL are the contracting authority for the new vessel(s).

6.10 The anticipated payment stream to CMAL is Voted Loan funding provided by Transport Scotland which will be repaid annually by CMAL to TS over a 25-year period.

6.11 The interest charges over the build period estimated at £1.94 million for Vessel No. 1 and £2.05 million Vessel No.2 are added to the voted loan payment at delivery.

6.12 CMAL will make an annuity-based repayment to Scottish Government which covers the principal and interest payments for the vessel construction.

6.13 The contract will be a fixed price over a fixed term. Payments will be made and staged over the fixed term against the delivery of key outputs.

6.14 In the shipbuilding contract there will be stage payments over the period of the contract when the capital cost of the new vessel(s) will be drawn down. Payment Milestones will be finalised during post tender negotiations w/c 28th February 2022.

## OVERALL AFFORDABILITY

6.15 Future CDEL budget cover for financial year for 2021/2022 onwards will be required. In respect of 2021-22, the indicative CDEL Budget for Support for Ferry Services includes £76million, for subsequent years this will form part of the CDEL. Spending Review submission and reflect a contractual commitment if contract award has been achieved.

6.16 The capital cost is spread over the build period of the vessel from when the contract is awarded.

### Initial Capital Profile Vessel

| Estimated Financial Year Spend (Vessel) | |
|---|---|
| 2021/2022 | £31.5m |
| 2022/2023 | £21m |
| 2023/2024 | £31.5m |
| 2024/2025 | £21m |
| **Total** | **£105m** |

***Table 3: Initial Capital Profile Vessel***

### Recurring Capital

6.17 There will be ongoing capital requirements over the expected useful life of the new vessel, associated with dry docking costs, equipment upgrades & obsolescence, lithium-ion battery replacement over the 30-year plus expected operational life.

6.18 No funding is sought as part of the FBC as these will be incorporated within CalMac and CMAL's ongoing capital programme in the usual way and funded from Transport Scotland.

### Recurring Costs

6.19 We are aware of the current and forecast pressures on RDEL and although the picture may have changed by 2023, the need for robust management of recurring costs is unlikely to have gone away.

6.20 It is assumed, based on the information available to this business case, that the introduction of the new vessels will have a £4.3million per annum additional net operating cost (excluding additional Farebox income from normal growth and larger vessels). The wider deployment of MV Finlaggan to replace the MV Isle of Mull on the Oban - Craignure route will generate an additional net operating cost of £3.4million.

6.21 The new Vessels will be procured by CMAL and chartered to the CHFS2 service provider. The estimated charter fee per annum for Vessel No. 1 is £3,147,216 and for Vessel No.2 is £3,088,524.

6.22 Where RDEL will certainly rise under the current funding model is through increased grant payments (RDEL) to the Vessel Operator to pay a charter fee to CMAL for CMAL to repay their Voted Loans to TS – we receive those receipts as CDEL so, in effect, the current funding model converts RDEL to CDEL. Alternative modes could be explored – e.g., capital grants rather than loans – if that is desired.

6.23 The through life costs of operating the vessel are not part of the costs of the project. The operational costs are part of the Clyde and Hebridean Ferry Services Contract (CHFS).

**Maintenance**

6.24 A reduction in maintenance costs from current business as usual are expected due to new ‘young’ nature of the replacement vessel, alongside components and technology that are easily sourced in the marketplace enjoying a buoyant supply and demand. This is in direct comparison to MV Hebridean Isles whose components are becoming obsolete and require significant resource in market sourcing.

# 7 THE MANAGEMENT CASE

## INTRODUCTION

7.1 The Management Case demonstrates that the new vessel(s) project is capable of being delivered successfully, in accordance with recognised best practice. This section sets out the management arrangements required to deliver a success project, including:

- Management and reporting arrangements
- Project roles and responsibilities
- Benefits Realisation
- Risk Management
- Post Project Evaluation

7.2 Project Governance refers to the set of policies regulations, functions, processes, procedures, and responsibilities that define the establishment, management, and control of projects.

7.3 The benefits of good project governance include the optimisation of investment, avoidance of common reasons for failure, and motivation of staff through better communication.

7.4 The application of good governance minimises risks arising from change and maximises the benefits.

## PROJECT GOVERNANCE ARRANGEMENTS

### Capability and capacity of the Integrated Project Team

7.5 An integrated project team is in place, “the Working Group”, working collaboratively with stakeholders including suppliers in order to enhance whole life value. The working group, comprising; TS, CMAL and CalMac has been in place since May 2019 and meet on monthly basis and will continue to meet at all stages of the Project.

7.6 The Working Group is a group made up of specialist CMAL, TS and CalMac staff and others in the business who are Subject Matter Experts (SMEs) assigned a specific area of responsibility to deliver particular aspects of the project. The Working group is responsible to the Project Board. There is an outstanding action from the Gateway review 2 in June 2021 to establish a Project Board with agreed Terms of Reference, including Senior Supplier, Executive, and Senior User representation). While it is recognised that NSG should provide this function there is an outstanding action for the TOR to be refreshed and a new project board is being created.

7.7 The group are experienced at project management and have a mature project management process.

7.8 This approach is aimed at reducing cost, improving quality, whilst innovating and delivering a project far more effectively than traditional fragmented relationships that are not effective.

7.9 Expert Naval Architects and Marine Engineering Consultants Navalue GmbH were appointed to assist CMAL with the feasibility design analysis and tender technical specification. Other expert consultants providing technical advice at the pre-contact stage are:

- Hamburg Ship Model Basin HSVA, who are at the forefront of hydrodynamic research.
- Royal Haskoning DHV, who use state-of-the-art practices so that cost-effective solutions can be found to ensure the safe mooring of ships and to increase the efficiency of the berths. Modelling of the behaviour of moored ships, analysis of the effects of high wind speeds on mooring safety for ships and the effects of current and waves.
- Jacobs, port studies
- Arch Henderson, port studies

**Document Management**

7.10 The document management system will be CMAL'S OneDrive. A dedicated secure site has been established to hold all correspondence, plans, schedules registers etc. which is managed by the PMO. The site is divided into libraries which have appropriate access permissions dependent on the nature of the material held. Access will be available to all project team members and, where appropriate, external parties.

7.11 A series of independent gateway reviews will be carried out throughout the Project lifetime.

**Project Management Arrangements**

7.12 To deliver the Replacement Vessel Project, the wider project team, and Subject Matter Experts (SMEs) will be assembled as an Integrated Project Team (IPT) working collaboratively with stakeholders, including suppliers in order to enhance whole life value. This approach is aimed at reducing cost, improving quality, whilst innovating and delivering a project far more effectively than traditional fragmented relationships that are often adversarial.

7.13 This project team is typically cross-functional and will involve various organisations and may involve a mix of full-time and part-time resources. Putting this into practice through team working and partnering requires real commitment from all parties involved but will bring benefits that far outweigh the effort involved. This commitment and integrated working is reflected from the top-down project governance structure.

**Project Management Methodology**

7.14 The Project Management Methodology has a mixed style structure, extracting and delivering elements from tried and trusted techniques such as those

promoted by Association of Project Management (APM), Project Management Institute (PMI) and PRINCE2.

**Project Roles and Responsibilities**

7.15 The Project roles and responsibilities are defined in the Islay Vessel – Terms of Reference Document.

**Management of the Shipbuilding Contract**

**Contractor Responsibilities**

7.16 The contractor will be solely responsible for the fixed price and delivery of the contract. The contractor will provide monthly project reports, cardinal date programmes, project plans, risk assessment plans for the project detailing potential risks, likelihood, measures to reduce their likelihood and plans to deal with risks that do materialise.

**CMAL Responsibilities**

7.17 Ship building projects are highly detailed with high levels of difficulty. CMAL will appoint a Project Manager and project site team for the duration of the Project, to monitor progress, to ensure new build vessels are designed, constructed, and set to work according to the agreed contract operational and technical requirements and in accordance with classification society and MCA rules and regulations, and to ensure CMAL are legally covered should contract terms not be met.

7.18 CMAL will have an on-site team at the shipyard to oversee the design and build of the vessel, with every step being closely monitored to ensure the delivery of a quality vessel. The site team will consist of experienced supervisors covering all major areas such as steel, mechanical, outfitting, painting and electrical under the management of the Project Manager. The CMAL project team are responsible for the" Plan Approval" of design and drawings and approval of equipment technical specifications.

**CMAL Site Supervision Main Accountabilities**

- Produce weekly reports of all activities in the shipyard, with particular emphasis of having evidence if called on in case of contractual disputes
- Oversee vessel builds
- Attend shipyard project meetings
- Attend shipyard technical meetings
- Participation at meetings
- Raise Owner Observation Reports
- Plan approval of ships design, drawings, equipment specifications and technical specifications. Ensuring compliance with contract Drawings and Technical Specifications

- Acceptance of the commissioning of systems/equipment
- Harbour and sea trials and final vessel acceptance
- Generate reports of the equipment on-board and analyse how it will be tested and assist in the tests to ensure that all tests are carried out satisfactorily and meet the requirements of the agreed specification.
- Carry out visits to equipment suppliers, ensure orders have been put through in line with agreed specifications and witness factory acceptance tests to ensure the specification of ships is correct and the equipment performs as specified.
- Liaise with various groups and bodies such as Operators, Marine and Coastguard Agency, Classification Societies etc
- Assessment and Inspection of Works in Progress
- Checking Setting out
- Attendance at Inclining Tests
- Taking digital photographs of works in progress
- Auditing and reporting on quality management procedures
- Ensuring compliance with shipyard and statutory compliance with regard to Health, Safety and Welfare
- Ability to attend Factory acceptance tests as required throughout Europe
- Matching the working hours of the relevant shipyard, weekend work, late evenings and early mornings as required. Flexibility on hours as the project progresses and develops
- Ensure work is carried out in accordance with the contract specification, the approved construction drawings, and list of equipment.
- Ensure all recommendations by the Classification Surveyor or Flag State Authority are implemented, including attendance of tests and trials if required
- Monitor and report on status of all key and interim milestones are met

**CMAL Site Supervision Plan Approval**

7.19 Drawing, document, and calculation reviews (plan approval) to provide assurance prior to build. Primary design plans, comprising primary structure (for example Profile and Decks and main construction units) and main systems, and key documentation submitted to the Classification Society for approval.

7.20 Main statutory drawing and documents (for example Freeboard, Load Line, Lifesaving Arrangement and Fire-fighting Arrangement plans), submitted to the Flag Authority for approval; Specification of main machinery and equipment; and Main machinery and ship systems.

7.21 Following submission of any plans, drawings, main system specifications or documents, the project manager will draw on the experience of a principal naval architect and principal marine engineer, who will in turn draw on the wider expertise as required.

7.22 The review will examine and comment on the shipyard's calculations, designs, drawings, and equipment specifications to ensure:

- Proposals conform to the requirements of the Shipbuilding Contract and other specified requirements not being reviewed by Class or Statutory Authority.
- All relevant requirements of CMAL are incorporated in the plans/drawings.

- Proposals are in accordance with good engineering and shipbuilding practices.
- Ease of construction, which will reflect on the end quality and maintainability.
- Operability and maintainability of the vessel and its systems.
- Incorporation of comments from previous submissions; and,
- Relation, compatibility, and consistency to other plans submitted.

**RECOMMENDATION**

7.23 The IDM Board is invited to approve the Final Business Case allowing the programme to progress to contract award for two new Islay class vessels.

## LIST OF APPENDICES

eRDM Link to ADD