

Improving every journey



Strategic Asset Management Plan for Vessels

Joint Strategy of Caledonian
MacBrayne and Caledonian Maritime
Assets Limited

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Strategic Asset Management Plan for Vessels –

Joint Strategy of Caledonian MacBrayne and Caledonian Maritime Assets Limited

Executive summary

Caledonian MacBrayne (CalMac) and Caledonian Maritime Assets Limited (CMAL) share a responsibility to provide safe, reliable and resilient ferry services that connect island and coastal communities across Scotland's west coast. Together, we recognise the vital and critical role ferry services play in supporting daily life, economic activity, public services, tourism and social wellbeing.

This Strategic Asset Management Plan explains how vessel assets are managed throughout their lifecycle, from design and procurement through operation, maintenance, upgrade and eventual disposal. The Plan supports the priorities established by Transport Scotland through the Islands Connectivity Plan and provides transparency on how decisions are made regarding vessel investment, maintenance and renewal.

Many vessels currently serving Scotland's ferry network are operating beyond the age at which they would typically be replaced. While significant investment is now being made in new vessels, managing an ageing fleet alongside the introduction of new technologies remains a major challenge. This strategy sets out how CalMac and CMAL will work together to maximise safety, reliability and value from existing assets while supporting fleet renewal over the coming decades.

The strategy describes how we will:

- Maintain vessels to recognised maritime safety and regulatory standards.
- Improve reliability and resilience for customers and communities.
- Monitor vessel condition and asset performance.
- Manage ageing assets and equipment obsolescence.
- Introduce new vessels into service effectively.
- Deliver value from public investment.
- Support long-term fleet renewal planning.
- Work collaboratively with Transport Scotland and stakeholders to strengthen island connectivity.

Through this approach, CalMac and CMAL aim to ensure ferry services continue to meet the needs of Scotland's island and coastal communities both now and in the future.

1. Introduction

CalMac and CMAL work together on behalf of Transport Scotland to deliver lifeline ferry services across Scotland's west coast. These services provide essential connections for residents, businesses, visitors and public services – and support the economic, social and cultural wellbeing of island and coastal communities.

The fleet currently comprises 36 vessels, the majority of which are owned by CMAL, with one vessel, MV Chieftain, operating under a long-term charter arrangement. Together, these vessels connect communities to employment, education, healthcare and other essential services while supporting tourism and local economies.

This Strategic Asset Management Plan explains how CalMac and CMAL work together to manage the ferry fleet throughout its lifecycle, from vessel acquisition and introduction into service through operation, maintenance, renewal, life extension and eventual replacement. The Plan sets out the long-term approach to ensuring vessels remain safe, reliable and available to support customers and communities across the Clyde and Hebrides network.

Scotland's ferry network operates in a challenging environment, with vessels providing year-round services in often demanding weather conditions. Many vessels within the current fleet are significantly older than those operated by comparable ferry operators elsewhere, reflecting historical periods where vessel replacement has not kept pace with fleet ageing. As vessels age, maintaining reliable services requires increasing levels of maintenance, engineering expertise and investment.

Recent investment in new vessels marks an important step towards modernising the fleet and improving service resilience. These new vessels will bring enhanced reliability, improved accessibility, greater environmental performance and a better customer experience. However, the fleet overall will continue to comprise a mix of newer and older vessels for some time, requiring careful planning and management to ensure services remain dependable during the transition.

Through this Plan, CalMac and CMAL set out how they will work together to make the best use of existing assets, prioritise investment and support the delivery of safe, reliable and resilient ferry services for communities now and in the future. The Plan supports the ambitions of Transport Scotland's Islands Connectivity Plan and complements the Fleet Interoperability Strategy and CMAL's Harbour Asset Management Strategy, providing a clear framework for how vessel assets are managed to meet the needs of customers and communities across the network.

2. Strategic context

This strategy forms part of a wider framework that governs the planning, investment, management and operation of the Clyde and Hebridean ferry network. Delivery of ferry services involves close collaboration between Transport Scotland, CMAL and CalMac, each of whom has distinct but complementary responsibilities within the overall framework.

Transport Scotland establishes long-term policy objectives and funding arrangements. CMAL owns most vessels and port infrastructure and is responsible for long-term asset investment and procurement. CalMac operates the services and manages the day-to-day maintenance and operation of the fleet. Together, these organisations work to deliver outcomes for customers and communities.

This Strategic Asset Management Plan supports and aligns with a range of national transport, infrastructure and asset management policies including:

- Islands Connectivity Plan.
- Islands Connectivity Plan Strategic Approach.
- Vessels and Ports Plan.
- National Transport Strategy.
- National Islands Plan.
- Strategic Transport Projects Review 2.
- Public Service Reform Strategy.
- Public Value Framework.
- HM Treasury Green Book.

- ISO 55001 Asset Management Principles.
- Fleet Interoperability Strategy.
- Harbour Asset Management Strategy.

These documents collectively establish the policy environment within which fleet investment, maintenance and asset management decisions are made.

Transport Scotland's vision and strategic priorities

Transport Scotland's Islands Connectivity Plan provides the long-term strategic vision for island connectivity and establishes priorities that guide the management and development of ferry services. These priorities provide the basis upon which CalMac and CMAL plan and manage vessel assets.

The Strategic Asset Management Plan supports all Islands Connectivity Plan priorities, and is particularly focused on contributing to a reliable and resilient ferry network. Through effective maintenance, asset management, renewal planning and investment prioritisation, this strategy aims to maximise vessel availability and reduce disruption for customers and communities.

The actions described throughout this strategy are therefore intended not only to maintain vessels safely and efficiently, but also to support the broader objectives of strengthening island connectivity, improving customer experience and delivering value from public investment.

3. Roles and responsibilities

The delivery of reliable ferry services depends on a clear and effective partnership between CalMac and CMAL, as the owner of the majority of vessels and port infrastructure. Together, both organisations share a commitment to supporting island and coastal communities through the effective management of Scotland's ferry assets.

This section outlines how responsibilities are divided and how CalMac and CMAL work together to support the safe, efficient and sustainable operation of the fleet.

In broad terms:

Caledonian Maritime Assets Limited, as asset owner, is responsible for:

- Long-term vessel ownership and stewardship.
- Fleet renewal and vessel procurement.
- Major asset improvements and life-extension projects.
- Asset investment associated with vessel upgrades and obsolescence management.

Caledonian MacBrayne, as operator, is responsible for:

- The day-to-day operation of vessel services.
- Vessel maintenance and repairs.
- Regulatory compliance and certification.
- Delivery of engineering and operational activities required to support ferry services.
- Planning and delivering vessel upgrades and obsolescence projects.

This division of responsibilities helps ensure that vessels are managed effectively throughout their lifecycle while providing clear accountability for operational and investment decisions.

Many aspects of fleet management require close collaboration between CalMac and CMAL. Areas such as vessel maintenance planning, upgrades, inspections, fleet deployment, renewal planning and resilience arrangements all depend on effective communication and shared decision-making.

This partnership approach helps ensure decisions are taken in the best interests of customers, communities and the long-term sustainability of the ferry network.

As vessel owner, CMAL carries out inspections to monitor the condition of assets and assure itself that vessels are being maintained appropriately. Findings from inspections are shared between both organisations and incorporated into future maintenance and investment planning where appropriate.

A resilient fleet depends not only on vessels themselves but also on the availability of critical spare parts and specialist equipment. CalMac manages a range of operational and capital spares on behalf of the fleet, including some assets owned by CMAL.

This approach supports:

- Faster repair of vessel defects.
- Reduced downtime when failures occur.
- Better value from public investment.
- Improved operational resilience across the network.

As new vessels and technologies are introduced, CalMac and CMAL will continue to review spare parts strategies to ensure the fleet remains adequately supported throughout its lifecycle.

The successful management of our ferry fleet relies on strong partnership working between operator and owner. Through clear responsibilities, transparent communications and collaborative decision-making, CalMac and CMAL will continue to work together to maintain, improve and renew the fleet in support of safe, reliable and resilient ferry services. This partnership will remain central to delivering long-term value for customers, communities and the people of Scotland.

4. Status of the fleet

The fleet performs a wide range of functions, supporting both major ferry routes and smaller local services across the west coast network and includes major vessels, smaller vehicle ferry vessels and passenger-only vessels. Due to the historic development of the network, many vessels and ports were designed for specific routes and local operating conditions. As a result, flexibility to move vessels between routes can be limited, and not all vessels are compatible with all ports.

While the introduction of new vessel classes is beginning to improve interoperability and standardisation, the fleet remains the largest and most varied domestic ferry fleet operating in the UK. This diversity increases the complexity of maintenance, crewing, operational planning and resilience management.

At the time this strategy was prepared:

- The youngest vessel in the fleet was one year old.
- The oldest vessel was 49 years old.
- Approximately 42% of the fleet was aged 30 years or more.
- More than half of the fleet was aged 25 years or more.
- The average fleet age was approximately 27 years.

The age profile of the fleet presents significant challenges. As vessels age, engineering costs generally increase due to structural wear, equipment degradation and component obsolescence. Maintenance activities become more complex, spare parts become harder to source and systems require increasing levels of refurbishment or replacement.

These challenges are reflected in the increasing engineering effort required to sustain safe and reliable operations. They also reinforce the importance of continued fleet renewal and proactive investment in replacement vessels.

The introduction of new vessels over the coming years will reduce the average fleet age and improve overall resilience. However, many existing vessels will remain an important part of the network for some time, making robust maintenance, condition monitoring and asset management essential to maintaining service reliability.

5. Vessel maintenance strategy

Reliable ferry services depend on well-maintained vessels. CalMac as operator, and CMAL as vessel owner, work together to ensure the fleet is maintained safely, efficiently and in line with all maritime regulations.

Our maintenance approach is designed to:

- Keep vessels safe and legally compliant for passengers and crew.
- Maximise reliability and availability across the network.
- Reduce the risk of unexpected service disruption.
- Protect the long-term value of the fleet.
- Support the continued delivery of lifeline ferry services.

All vessels follow planned maintenance programmes based on manufacturer recommendations, regulatory requirements and operational experience. These programmes include inspections, servicing, testing and the replacement of equipment before failures occur. Alongside routine maintenance, CalMac uses condition monitoring and engineering data to identify emerging issues and prioritise work that supports safety, reliability and resilience.

Particular attention is given to equipment that is essential for vessel safety and operation. This includes systems whose failure could affect the safe operation of a vessel or its ability to deliver scheduled services. Maintenance resources and spare parts are prioritised accordingly.

Maintenance activities are managed through specialist asset management systems which record inspections, repairs, certification requirements and asset condition information. This helps ensure maintenance is planned effectively and supports informed investment decisions across the fleet. CalMac is introducing a modern Enterprise Asset Management System to further improve fleet monitoring, maintenance planning and long-term asset management.

Many maintenance activities can be carried out while vessels remain in service. However, some work requires dedicated maintenance periods as part of the published timetable when vessels are temporarily unavailable for operation. To reduce the likelihood of more significant technical failures, maintenance time is being built into vessel operating schedules. Although this can occasionally result in short, planned service interruptions, it helps reduce the risk of unplanned disruption and improves the overall resilience of the network.

Every vessel undergoes an annual maintenance period to complete statutory inspections, safety certification, essential maintenance and vessel improvements. These periods are a key part of maintaining a compliant, safe and reliable services. Annual maintenance periods are carefully planned to minimise impacts on customers and communities, while ensuring vessels remain compliant with regulatory requirements and fit for continued service.

As vessels age, the scale and complexity of maintenance requirements increase. CalMac continue to review maintenance programmes, fleet deployment and the use of relief vessels to improve resilience and reduce the risk of service disruption.

CalMac and CMAL work closely throughout the planning and delivery of vessel maintenance activities. This partnership approach ensures that maintenance decisions support both the day-to-day operation of ferry services and the long-term stewardship of Scotland's ferry assets.

6. Condition assessment and monitoring

Maintaining a reliable ferry service requires more than routine maintenance alone. CalMac and CMAL work together to monitor the condition of vessels across the fleet so that emerging issues can be identified early, investment can be targeted effectively, and future maintenance needs can be planned with confidence.

The fleet is supported by a Condition Assessment Programme (CAP), which provides a structured approach to understanding the condition of vessel structures, machinery and key systems. The programme complements routine maintenance and statutory inspections by providing a longer-term view of asset condition and future risks.

The programme helps to:

- Identify areas of deterioration before they affect service reliability.
- Support investment decisions and renewal planning.
- Manage the risks associated with ageing vessels.
- Improve fleet resilience by reducing the likelihood of unexpected failures.
- Provide evidence to support future upgrade or life-extension decisions.

The condition of vessel hulls, steelwork, coatings and other structural elements is regularly assessed to understand how assets are performing as they age. These surveys allow repairs and renewal work to be planned proactively, helping to preserve vessel integrity and extend operational life where appropriate. Particular attention is given to corrosion protection and coatings, as these play an important role in protecting vessels operating in a challenging marine environment.

A range of specialist techniques are used to assess the condition of machinery and critical systems. These include vibration analysis, thermal imaging and oil analysis, which help identify wear, deterioration or developing faults before equipment failures occur. This approach allows maintenance activity to be targeted more effectively and helps reduce the risk of unplanned service disruption.

As fleet data and asset management systems continue to improve, condition information will increasingly support a more proactive and predictive approach to maintenance. By understanding how equipment and structures perform over time, maintenance activities can be planned at the most appropriate intervals, balancing reliability, safety and value for money. This approach supports the long-term objective of reducing unplanned failures, improving vessel availability and ensuring investment is focused on where it delivers the greatest benefit to customers and communities.

Condition assessment and monitoring are key components of the long-term management of the fleet. Together, CalMac and CMAL will continue to develop these capabilities to support informed decision-making, strengthen fleet resilience and ensure ferry services remain reliable for the communities that depend on them.

7. Use of operational technology

Modern ferry operations increasingly rely on digital systems and technology to support the safe operation of vessels, improve reliability and providing better information for maintenance and decision-making. CalMac and CMAL are committed to making effective use of these technologies while ensuring they remain secure, reliable and fit for purpose.

Operational technology (OT) refers to the onboard systems that monitor, control and support the operation of vessels. These systems are used in areas such as navigation, propulsion, power management, safety systems and engineering performance monitoring. As vessels become more advanced, particularly with the introduction of hybrid, electric and low-emission technologies, the importance of operational technology continues to grow.

Operational technology provides access to valuable data that can help improve both operational performance and maintenance planning. By monitoring equipment and vessel systems in real time, potential issues can be identified earlier, helping to reduce the risk of failures and improve service reliability.

As technology becomes increasingly connected, it is important that systems are managed securely and effectively. CalMac will continue to develop policies, procedures and specialist expertise to ensure operational technology is managed throughout its lifecycle, from design and installation through operation, maintenance and eventual replacement.

The continued development of operational technology will play an important role in supporting the future of Scotland's ferry network. As new vessels enter service and technology evolves, these systems will help improve asset management, support the transition to lower-emission operations and contribute to more reliable services for customers and communities.

By using technology effectively and responsibly, CalMac and CMAL aim to improve the long-term performance, resilience and sustainability of the fleet.

8. Resilience and relief vessels

Providing reliable ferry services requires not only well-maintained vessels but also the ability to respond effectively when disruption occurs. As new vessels enter the fleet and planned vessel replacement programmes progress, opportunities will emerge to maintain dedicated resilience and relief vessels that can support service continuity during both planned and unplanned outages.

The availability of resilience and relief vessels is an important step towards improving the overall reliability of the network and reducing the impact of vessel unavailability on communities and customers.

Resilience vessels are intended to help reduce that impact by providing additional capacity that can be deployed when needed. Similarly, relief vessels can be used to maintain services during planned periods of vessel unavailability, such as annual maintenance periods, upgrades or major engineering works. Together, these vessels support the wider objective of delivering a more resilient and dependable ferry network.

The principles guiding the use of resilience vessels are focused on maximising benefits for customers and communities. Resilience vessels may be deployed to:

- Cover for vessels unexpectedly removed from service.
- Support routes experiencing short-term capacity pressures.
- Assist during periods of network disruption.
- Improve flexibility across the fleet when operational challenges arise.

To ensure readiness, resilience vessels will continue to undergo regular maintenance, inspections and operational testing in the same way as vessels providing scheduled services.

Relief vessels provide planned support to the network and may be used to:

- Maintain services while vessels undergo annual maintenance.
- Allow vessels to be withdrawn temporarily for repairs or inspections.
- Support vessel upgrade programmes.
- Enable major renewal or life-extension projects to be completed with reduced impact on customers.

The use of relief vessels provides greater flexibility in fleet management and can help create additional opportunities to undertake maintenance work that improves long-term reliability.

The availability of resilience and relief vessels is expected to become an increasingly important part of fleet management as new vessels enter service and the network continues to evolve. By providing additional flexibility and reducing reliance on a fully utilised fleet, resilience and relief vessels will help strengthen the reliability of ferry services and reduce the impact of disruption on customers and communities.

Through continued collaboration, CalMac and CMAL will seek to maximise the benefits these vessels provide and support the delivery of a more resilient ferry network for Scotland's island and coastal communities.

9. Introduction of new vessels and disposal of existing vessels

Fleet renewal is essential to delivering safe, reliable and resilient ferry services for our island and coastal communities. New vessels provide opportunities to improve service reliability, increase capacity, enhance accessibility, reduce environmental impact and strengthen long-term network resilience. At the same time, older vessels must be retired in a planned and responsible manner when they are no longer required or are replaced by newer assets.

CalMac and CMAL work closely together throughout the lifecycle of fleet renewal, from the development of requirements for new vessels through to their introduction into service and the eventual disposal of vessels leaving the fleet.

CMAL leads the procurement, design and delivery of new vessels on behalf of the Scottish Government, while CalMac contributes operational expertise to ensure vessels are designed around the needs of the routes, communities and customers they will serve.

This collaborative approach helps ensure that new vessels:

- Meet operational and route requirements.

- Support accessibility and customer needs.
- Deliver appropriate capacity and operational flexibility.
- Incorporate lessons learned from existing operations.
- Support future sustainability and environmental objectives.

By combining asset ownership expertise with operational knowledge, CalMac and CMAL aim to ensure that new vessels are fit for purpose and capable of supporting communities for decades to come.

Introducing a new vessel is a significant undertaking that extends beyond construction and delivery. Before entering passenger service, vessels must undergo extensive preparation, testing and certification to ensure they are safe, compliant and operationally ready.

This includes:

- Crew recruitment, familiarisation and training.
- Safety certification and regulatory approvals.
- Operational trials and testing.
- Confirmation of integration with ports and infrastructure (on main and resilience routes).
- Installation of operational systems and equipment.
- Final readiness checks before service entry.

These activities help ensure that new vessels enter service smoothly and can provide the expected benefits to customers and communities as quickly as possible.

Following delivery, new vessels are subject to guarantee arrangements that provide protection against defects relating to design, construction or equipment supplied during the build process. CalMac and CMAL work together to identify, manage and resolve any issues identified during the guarantee period, helping to ensure vessels achieve the required standards of performance and reliability.

The approach provides assurance that any issues arising following delivery are addressed effectively and that lessons learned can be applied to future vessel procurements.

As new vessels enter service, some existing vessels may become surplus to operational requirements. The retirement and disposal of vessels is managed through long-term fleet planning, ensuring changes are aligned with network needs and community requirements.

Fleet disposal planning considers:

- The introduction of replacement vessels.
- Future service requirements.
- Fleet resilience needs.
- Maintenance and investment commitments.
- Opportunities for sale, transfer or recycling.

Advance planning is important to ensure we minimise operational disruption and ensure public assets are managed responsibly and efficiently.

The successful introduction of new vessels and the planned retirement of older assets will play a vital role in improving the reliability, resilience and sustainability of the ferry network. Through ongoing collaboration, CalMac and CMAL will continue to support fleet renewal programmes that

deliver long-term value for communities and help create a modern ferry network capable of meeting future needs.

10. Conclusion

Our ferry network plays a vital role in supporting island and coastal communities, connecting people to employment, education, healthcare, goods, services and social opportunities. Maintaining these connections requires continued investment, careful planning and effective stewardship of the vessels that deliver these services every day.

This Strategic Asset Management Plan sets out the joint approach of CalMac and CMAL to managing vessel assets throughout their lifecycle, from procurement and introduction into service through maintenance, improvement, renewal and eventual disposal.

The strategy recognises both the opportunities and challenges facing the fleet. Significant investment in new vessels will improve reliability, resilience and sustainability across the network. At the same time, many existing vessels will continue to play an important role in supporting communities and must be carefully maintained and managed to maximise their safe and effective operational life.

Through the actions outlined in this plan, CalMac and CMAL will continue to:

- Prioritise regulatory compliance and the safety of passengers, crew and vessels.
- Improve fleet reliability and service resilience.
- Support the introduction of new vessels and technologies.
- Deliver value from public investment in ferry infrastructure and assets.
- Support the long-term sustainability of the ferry network.

Successful delivery of this strategy depends on continued collaboration between CalMac, CMAL and Transport Scotland, together with ongoing engagement with the communities and stakeholders who rely on ferry services. By working in partnership, we will seek to ensure that Scotland's ferry fleet remains safe, reliable and fit for the future.

Ultimately, the purpose of this strategy is to support better outcomes for customers and communities. Through effective asset management, informed investment and a shared commitment to continuous improvement, CalMac and CMAL will continue to strengthen the resilience of the network and help maintain the lifeline services upon which so many people depend.