Improving every journey

Delivery plan
Scheduled maintenance plan

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Executive Summary

We at Caledonian MacBrayne are committed to delivering a safe, reliable and resilient ferry service across Scotland's west coast. Central to this commitment is the implementation of a robust Scheduled Maintenance Plan that ensures the operational readiness, longevity and compliance of our fleet.

This delivery plan outlines how we will maintain a scheduled maintenance system in accordance with the International Safety Management (ISM) Code. It sets out our approach to vessel-specific maintenance planning, risk-based scheduling, condition-based monitoring, and regulatory compliance. It also details our transition to a modern Enterprise Asset Management System, designed to replace legacy tools and improve the efficiency, transparency and consistency of maintenance operations.

The plan reflects our strategic priorities under the Clyde and Hebridean Ferry Services (CHFS3) contract and supports the wider objectives of the Islands Connectivity Plan. It includes a comprehensive overview of our maintenance governance framework, survey and inspection programme, spare parts optimisation strategy, and reporting mechanisms to CMAL.

By embedding continuous improvement, investing in digital transformation, and aligning our maintenance practices with industry standards, we will ensure our vessels remain safe, seaworthy and fully equipped to meet the needs of the communities we serve. This plan also supports better forecasting, improved asset resilience, and enhanced customer experience — delivering value for money and operational excellence across the fleet.

1. Introduction

We operate a fleet of vessels that provide lifeline ferry services across Scotland's west coast. Ensuring the safety, reliability and operational readiness of these vessels is a core responsibility — one that is supported by a structured and compliant maintenance regime.

This Scheduled Maintenance Plan Delivery Plan sets out how we will deliver planned maintenance across its fleet in accordance with international maritime standards, national regulatory requirements and contractual obligations under the Clyde and Hebridean Ferry Services (CHFS3) contract.

The plan outlines the governance framework that underpins maintenance delivery, including compliance with the International Safety Management (ISM) Code, Classification Society survey cycles and Maritime and Coastguard Agency (MCA) inspections. It also details the operational strategy for vessel-specific maintenance planning, risk-based scheduling, and condition-based monitoring.

In addition, the plan describes the transition to a modern Enterprise Asset Management System, which will replace legacy tools and improve the efficiency, transparency and consistency of maintenance operations. It covers spare parts optimisation, defect management, technical reporting, and the continuous improvement processes that support long-term asset resilience.

By setting out this approach in full, the delivery plan provides clarity on how we will maintain our fleet to the highest standards — ensuring safe, reliable and customer-focused ferry services for the communities it serves.

2. Governance, compliance and inspection programme

We operate within a robust governance and compliance framework to ensure that all vessels are maintained to the highest standards of safety, reliability and regulatory conformity. This framework is underpinned by international maritime legislation, national regulatory oversight, and a structured programme of inspections and surveys.

International Safety Management (ISM) code

The Scheduled Maintenance Plan is fully aligned with the International Safety Management (ISM) Code, which sets out the global standard for the safe management and operation of ships. The Code requires Company to:

> ***"establish procedures to ensure that the ship is maintained in conformity with the provisions of the relevant rules and regulations and with any additional requirements, which may be established by the Company."***

This means ensuring:

– Vessels are maintained in accordance with relevant rules and regulations;

– Inspections are conducted at appropriate intervals;

– Non-conformities are reported and investigated;

– Corrective actions are implemented;

– Maintenance records are retained and reviewed.

Our safety management system also identifies critical equipment and systems whose failure could result in hazardous situations. Specific measures are in place to promote the reliability of these systems, including regular testing of standby equipment and systems not in continuous use.

Classification society compliance

All vessels we operate are registered with Lloyds Register of Shipping (LRS), with the exception of MV Argyll Flyer, which is classified by Bureau Veritas (BV). Classification is maintained through a formal programme of inspections and surveys that confirm vessels are:

– Properly constructed and maintained;

– Seaworthy and fit for their intended service;

– Fully equipped in accordance with international standards.

Lloyds Register of Shipping surveyors conduct inspections through a five-year rotating cycle known as the Continuous Machinery Survey. This includes detailed assessments of vessel structure, machinery and systems. Survey requirements are tracked using the Lloyds Class Direct platform, which supports long-term maintenance planning and ensures timely compliance.

Maritime and Coastguard Agency (MCA) oversight

The Maritime and Coastguard Agency (MCA) is the UK Government authority responsible for ensuring vessel safety, environmental protection and regulatory compliance. MCA inspections focus on:

– Life-saving and fire-fighting equipment;
– Pollution prevention systems;
– Crew qualifications and living standards;
– Compliance with international maritime regulations.

MCA certification is essential for passenger operations and is maintained through regular inspection and adherence to standards. MCA survey schedules are integrated into the Annual Maintenance Period planning process.

Annual maintenance periods and dry-docking

Each vessel undergoes an Annual Maintenance Period, during which scheduled maintenance, inspections and surveys are completed. Larger vessels are dry-docked at contracted shipyards, while smaller vessels are slipped using appropriate facilities.

We have long-term contracts in place with selected shipyards to deliver these maintenance periods. These contracts offer fixed tariff rates and are awarded based on:

– Safety record and operational processes;
– Quality of workmanship and technical capability;
– Availability of resources and facilities;
– Price competitiveness;
– Community benefit and local economic impact.

Joint inspections and reporting with CMAL

We maintain a collaborative inspection and reporting programme with Caledonian Maritime Assets Limited (CMAL), which includes:

– Twice-yearly vessel inspections — one in-service and one during dry-dock;
– Participation by CMAL, Technical Superintendents and Marine Superintendents;
– Identification of issues and improvement opportunities;
– Submission of detailed condition reports within 28 days of Annual Maintenance Period completion.

In the event of a technical issue that results in service disruption or issuance of a Condition of Class, we undertake a root cause analysis and reports findings directly to CMAL. Reports clearly distinguish between owner-led upgrades, major refits and obsolescence concerns.

Integrated compliance and continuous improvement

Survey and inspection findings are used to inform maintenance planning, defect resolution and technical reporting. Compliance with survey schedules is essential to maintaining vessel certification, operational readiness and customer confidence.

We will ensure that all regulatory requirements are met in full and on time, with oversight from Fleet Management and coordination across engineering, procurement and operations teams. This

integrated approach supports continuous improvement, transparency and alignment with public service objectives.

3. Fleet-Wide Maintenance Strategy

We operate a diverse fleet of vessels across the Clyde and Hebridean network, each with unique operational profiles, technical specifications and maintenance requirements. To ensure the continued safety, reliability and longevity of these assets, a structured and risk-informed maintenance strategy is applied across the fleet.

Vessel-specific maintenance planning

A comprehensive Scheduled Maintenance Plan is maintained for each vessel, categorised to reflect the specific systems, components and operational demands of the fleet. This vessel-level approach ensures that maintenance activities are tailored, timely and aligned with both manufacturer recommendations and regulatory requirements.

Maintenance schedules are developed using data from Original Equipment Manufacturers (OEMs), Classification Societies and historical performance records. These schedules are reviewed regularly to incorporate lessons learned, emerging risks and changes in operational context.

Risk-based maintenance strategy

we apply a risk-based approach to maintenance planning, prioritising activities that directly impact safety, service continuity and asset integrity. This strategy enables the organisation to:

– Identify and mitigate high-risk failure modes;

– Allocate resources efficiently across the fleet;

– Extend asset life through targeted interventions;

– Reduce unplanned downtime and associated disruption.

Risk assessment is embedded into the maintenance planning process and is informed by defect reports, root cause analysis, audit findings and operational experience.

Annual maintenance periods and dry-docking

Each vessel undergoes an Annual Maintenance Period, during which scheduled maintenance, inspections and surveys are carried out. For larger vessels, this includes dry-docking at contracted shipyards; for smaller vessels, slipping arrangements are used.

We have established long-term contracts with selected shipyards to deliver these maintenance periods. These contracts offer fixed tariff rates for core services and are awarded based on:

– Safety record and robust operational processes;

– Quality of workmanship and technical capability;

– Availability of resources and facilities;

– Price competitiveness;

– Community benefit and local economic impact.

This approach ensures value for money, consistency of delivery and alignment with public service objectives.

Survey compliance and reporting

Survey and inspection findings are used to inform maintenance planning, defect resolution and technical reporting. Compliance with survey schedules is essential to maintaining vessel certification, operational readiness and customer confidence.

We ensure that all survey requirements are met in full and on time, with oversight from Fleet Management and coordination across engineering, procurement and operations teams.

Maintenance oversight and delivery

The Fleet Management department is responsible for overseeing all maintenance activities, ensuring that work is completed to specification, on schedule and in compliance with regulatory standards. Maintenance delivery is supported by:

- Planned Maintenance System (PMS) tracking;
- Integration with survey schedules from Lloyds Register and the Maritime and Coastguard Agency;
- Coordination with CMAL for joint inspections and reporting;
- Dissemination of technical updates via Fleet Bulletins.

This structured and proactive strategy ensures that our fleet remains operationally ready, compliant and resilient — supporting the delivery of safe and reliable ferry services across Scotland's west coast.

4. Maintenance systems

We are undertaking a significant digital transformation of our maintenance systems to improve operational efficiency, compliance and asset resilience across the fleet. This section outlines the current system in use, its limitations, and the strategic transition to a modern Enterprise Asset Management System.

Current system: CPS overview

Maintenance activities are currently managed through an integrated module within the Company Procurement, Maintenance and Stock Control System (CPS). This computer-based system replaced legacy paper-based processes and provides a link between vessels and shore-based managers.

CPS has supported the delivery of planned maintenance for many years and has contributed to the high technical availability of the fleet. However, recent analysis by Braemar, KPMG and Unipart has identified critical limitations that impact its effectiveness and long-term viability. While CPS meets the minimum ISM Code requirements for planned maintenance, it is not approved by Classification Societies and lacks key functionality required by a modern fleet operator.

We will therefore replace CPS with a Classification Society-approved Enterprise Asset Management System. This new system will deliver a fully integrated platform for managing assets,

maintenance, inventory and defect reporting — supporting a more consistent, transparent and risk-managed approach to engineering operations.

Key features of the new system will include:

– Asset management and lifecycle tracking;
– Planned and unplanned maintenance scheduling;
– Defect reporting and resolution workflows;
– Inventory and spare parts optimisation;
– Predictive analytics and condition monitoring;
– Annual maintenance period planning;
– Comprehensive reporting and performance dashboards.

The system will be fully populated with asset and maintenance data and supported by a structured training and change management programme to ensure a smooth transition with minimal disruption to operations.

The specification for the new system is being developed in collaboration with Caledonian Maritime Assets Limited (CMAL) and Scottish Ministers (SM), ensuring alignment with strategic priorities and regulatory requirements. This partnership approach supports transparency, shared ownership and long-term value for money.

This digital transformation marks a step change in how we manage our fleet — embedding best practice, improving safety and delivering a more efficient and accountable public service.

5. Condition-based monitoring (CBM)

We apply a proactive maintenance strategy known as Condition-Based Monitoring (CBM) to enhance the reliability, safety and cost-effectiveness of our fleet operations. CBM enables maintenance decisions to be based on the actual condition of equipment, rather than fixed schedules, allowing for more targeted interventions and reduced operational disruption.

Condition-based monitoring strategy and principles

Condition-Based Monitoring involves the continuous or periodic assessment of machinery and systems to detect early signs of wear, misalignment or failure. Maintenance is only performed when indicators show a decline in performance or an increased risk of failure — reducing unnecessary downtime and extending the life of critical components.

Key elements of our CBM strategy include:

– Vibration analysis to detect mechanical faults;
– Monitoring of pressure, temperature and electrical performance;
– Use of alarm thresholds tailored to individual machinery;
– Integration with planned maintenance and defect reporting processes.

This approach supports safer operations, improved asset resilience and more efficient use of maintenance resources.

Operational benefits

The implementation of CBM across the fleet has delivered measurable benefits, including:

- Extended component life: Early detection of faults allows for repair rather than replacement, reducing costs and waste.
- Reduced unscheduled downtime: Maintenance can be planned during non-service hours, minimising disruption.
- Improved repair efficiency: Targeted maintenance reduces time and labour requirements.
- Enhanced safety: Monitoring of electrical systems helps prevent overheating and fire risk.
- Increased machine life: Well-maintained equipment performs better and lasts longer.
- Lower maintenance costs: Fewer breakdowns and longer service intervals reduce overall expenditure.
- Improved data for decision-making: Trend analysis supports supplier performance reviews and operational planning.

Case study: MV Loch Tarbert

A notable example of CBM in action occurred during vibration analysis on MV Loch Tarbert. The monitoring identified abnormal vibration levels, prompting immediate withdrawal from service for further inspection.

Investigations revealed misalignment between the main engines and gearboxes, as well as structural cracking in engine room support pillars and frames. The early detection prevented machinery failure, avoided extended downtime and mitigated reputational and financial risk.

Investment and implementation

Over the previous contract period, we invested in portable CBM equipment through a phased approach. This investment has enabled fleet-wide deployment of vibration analysis and other monitoring techniques, supporting the delivery of safer and more reliable services.

Condition-Based Monitoring is now embedded as a core component of the maintenance strategy, complementing planned maintenance schedules and supporting the transition to a more predictive and data-driven maintenance model.

6. Spare parts and supply chain optimisation

Effective spare parts management is essential to maintaining the operational readiness and resilience of our fleet. We are committed to improving spare parts management by undertaking a strategic review of our supply chain arrangements. This includes:

- Evaluating supplier performance and reliability;
- Identifying opportunities for consolidation and cost savings;
- Exploring alternative sourcing options for critical components;
- Strengthening relationships with OEMs and specialist providers;

– Supporting local and regional suppliers where feasible.

When we implement our new Enterprise Asset Management System, we will also have a fully integrated platform for inventory control, enabling:

– Real-time visibility of stock levels across the fleet;

– Automated reordering based on usage trends and criticality;

– Accurate tracking of parts usage, location and condition;

– Integration with maintenance schedules to ensure timely availability;

– Enhanced reporting and forecasting capabilities.

This optimisation will reduce waste, improve cost control and support more consistent maintenance delivery across all vessels.

8. Performance monitoring and continuous improvement

We are committed to maintaining a high-performing, resilient and continuously improving maintenance operation. Performance monitoring is embedded across all aspects of the Scheduled Maintenance Plan to ensure that maintenance activities are effective, compliant and aligned with operational priorities.

Maintenance tracking and forecasting

Maintenance activities are tracked using the Planned Maintenance System (PMS), which provides visibility of completed, scheduled and overdue tasks across the fleet. This tracking is supported by:

– Integration with Lloyds Class Direct for survey planning;

– Alignment with OEM-recommended service intervals;

– Coordination with Annual Maintenance Periods and dry-docking schedules;

– Monitoring of condition-based indicators and defect reports.

This structured approach enables us to forecast maintenance demand over the short, medium and long term — supporting resource planning, budget control and service continuity.

Data-driven insights and reporting

Maintenance data is analysed to identify trends, assess performance and inform decision-making. Key metrics include:

– Completion rates for scheduled maintenance tasks;

– Frequency and severity of unplanned maintenance events;

– Root cause analysis outcomes;

– Spare parts usage and inventory turnover;

– Survey compliance and inspection findings.

These insights are used to refine maintenance strategies, improve asset reliability and reduce the risk of repeat failures.

The transition to a new Enterprise Asset Management System will further enhance reporting capabilities, providing real-time dashboards, predictive analytics and integrated performance indicators across maintenance, inventory and defect management.

Continuous improvement framework

We apply a continuous improvement approach to maintenance delivery, informed by:

- Lessons learned from incidents, audits and inspections;
- Feedback from vessel crews, technical teams and stakeholders;
- Updates to legislation, Classification Society rules and OEM guidance;
- Benchmarking against industry standards and best practice.

Improvement actions are implemented through updates to maintenance procedures, training programmes, system enhancements and technical bulletins. These actions are tracked and reviewed to ensure they deliver measurable benefits.

Governance and oversight

Performance monitoring is overseen by the Fleet Management department, with regular reporting to senior leadership and external stakeholders, including Caledonian Maritime Assets Limited (CMAL) and the Maritime and Coastguard Agency (MCA). This governance ensures accountability, transparency and alignment with public service objectives.

This commitment to continuous improvement ensures that the Scheduled Maintenance Plan remains dynamic, responsive and fit for purpose — supporting the long-term sustainability of ferry services across Scotland's west coast.

9. Conclusion

This Scheduled Maintenance Plan Delivery Plan sets out how we will deliver a structured, compliant and customer-focused approach to fleet maintenance under the Clyde and Hebridean Ferry Services (CHFS3) contract.

Through vessel-specific planning, risk-based scheduling, and the integration of condition-based monitoring, we ensure that our fleet remains safe, seaworthy and operationally ready. The transition to a modern Enterprise Asset Management System will further strengthen maintenance delivery — improving data accuracy, defect resolution, inventory control and reporting capability.

The plan reflects our commitment to continuous improvement, regulatory compliance and public service values. It supports collaboration with Caledonian Maritime Assets Limited (CMAL), the Maritime and Coastguard Agency (MCA), and Classification Societies, and aligns with the strategic priorities of the Islands Connectivity Plan and Scotland's wider transport objectives.

By embedding robust governance, transparent reporting and proactive asset management, we will continue to deliver a reliable ferry service that meets the needs of island and coastal communities — now and into the future.