TheScottish
Rural & Islands
Transport Community

Foundation for
Integrated Transport



# Future of UK Water Transport

## Final Report - June 2026


**Scottish Rural & Islands
Transport Community CIC**

Published June 2026

**Authors:** Alex Reid & James Gleave

**Contributor**: Jenny Milne

© Scottish Rural & Islands Transport Community CIC 2026

## Funding

The grant to undertake this project has been kindly provided by the Foundation for Integrated Transport, a charity that promotes research into sustainable and transformational transport solutions.

## Acknowledgements

SRITC would like to acknowledge all of the individuals and organisations from across the UK and Europe who have freely contributed their time and offered valuable insights that have shaped the key findings and recommendations put forward in this report. A complete list of the contributors is available to view in Annex 2.

## Further Information

Please direct enquires about this report to sritc@ruralmobility.scot

# Table of Contents


| | |
|---|---|
| **Abbreviations** | **4** |
| **About SRITC** | **6** |
| **Executive Summary** | **7** |
| **Section 1**<br>1. Introduction | **9** |
| **Section 2**<br>2. Project Scope, Objectives, and Methodology<br>2.1 Project Scope<br>2.2 Project Objectives<br>2.3 Project Methodology | **13**<br>**13**<br>**13**<br>**14** |
| **Section 3**<br>3. Literature Review - Quantitative Data<br>3.1 Key Statistics<br>3.2 Operator Ecosystem<br>3.3 Passenger & Vehicle Journeys<br>3.4 Funding & Subsidy Levels<br>3.5 Fares<br>3.6 Carbon Emission Levels<br>3.7 Route Network Profiles<br>3.8 Vessel Profiles | **17**<br>**17**<br>**18**<br>**22**<br>**24**<br>**25**<br>**27**<br>**31**<br>**32** |
| **Section 4**<br>4. Literature Review – Qualitative Data<br>4.1 Policy Environment<br>4.2 Progress Towards Decarbonising Vessels and Harbours<br>4.3 Integration Between Ferries and the Wider Public Transport Network<br>4.4 Vessel and Port Accessibility Levels<br>4.5 Operator Social Value & Community Benefit Programmes | **35**<br>**35**<br>**38**<br>**45**<br>**51**<br>**55** |
| **Section 5**<br>5. International Perspectives<br>5.1 Scope & Methodology<br>5.2 Norway<br>5.3 Denmark<br>5.4 Greece<br>5.5. Canada<br>5.6 USA<br>5.7 Germany | <br>**60**<br>**60**<br>**62**<br>**64**<br>**67**<br>**70**<br>**74** |
| **Section 6**<br>6. Key Findings | **77** |
| **Section 7**<br>7. Conclusions | **85** |

| | |
|---|---|
| **Section 8**<br>8. Recommendations | **86** |
| **Section 9**<br>9. Next Steps | **88** |
| **Annex 1** – Stakeholder Consultation Map | **89** |
| **Annex 2** – Research Contributors | **90** |
| **Annex 3** – Route Criticality Index | **91** |
| **Annex 4** – Vessel Classification Index | **93** |
| **Annex 5** - Ferry & Rail Integration - Route Analysis | **98** |
| **Annex 6** - Operator Passenger Accessibility Support Evaluation | **99** |
| **Annex 7** - Comparison of International Water Transport Markets | **100** |
| **Annex 8** – Key Findings Infographic | **101** |
| **Annex 9** - Sources & Evidence Base | **102** |

# Abbreviations

| Abbreviation | Meaning |
|---|---|
| **A/S** | Aktieselskab (Danish public limited company) |
| **AFC** | Alternative Fuel Corridor |
| **AG** | Aktiengesellschaft (German public limited company) |
| **AI** | Artificial Intelligence |
| **AIS** | Automatic Identification System |
| **ATS** | Active Travel Strategy |
| **AutoPASS** | Norwegian automatic tolling and ferry ticketing system |
| **BC** | British Columbia |
| **CA** | Combined Authority / Combined Authorities (England) |
| **CAD** | Canadian dollars |
| **CCC** | Climate Change Committee |
| **CMAL** | Caledonian Maritime Assets Ltd |
| **CMDC** | Clean Maritime Demonstration Competition |
| **$CO_2$** | Carbon dioxide |
| **$CO_2e$** | Carbon dioxide equivalent |
| **CoS** | Chamber of Shipping |
| **COVID-19** | Coronavirus disease 2019 |
| **CPT** | Confederation of Passenger Transport |
| **CSR** | Corporate Social Responsibility |
| **DB** | Deutsche Bahn |
| **DESNZ** | Department for Energy Security and Net Zero |
| **DfI** | Department for Infrastructure (Northern Ireland) |
| **DfT** | Department for Transport |
| **DPSSC** | Domestic Passenger Ship Safety Code |
| **DPTAC** | Disabled Persons Transport Advisory Committee |
| **DUKES** | Digest of UK Energy Statistics |
| **ELSTAT** | Hellenic Statistical Authority |
| **ETS** | Emissions Trading Scheme |
| **EU** | European Union |
| **EV** | Electric Vehicle |
| **FAQ** | Frequently Asked Questions |
| **FOI** | Freedom of Information |
| **FTE** | Full-Time Equivalent |
| **GDP** | Gross Domestic Product |
| **GT** | Gross Tonnage |
| **GTP** | Greek Travel Pages |
| **HADAG** | HADAG Seetouristik und Fährdienst AG (Hamburg public ferry operator) |
| **HGV** | Heavy Goods Vehicle |
| **HGV (Hamburg)** | HGV Hamburger Gesellschaft für Vermögens- und Beteiligungsmanagement mbH |
| **HOCHBAHN** | Hamburger Hochbahn AG |
| **HVO** | Hydrotreated Vegetable Oil |
| **hvv** | Hamburger Verkehrsverbund |
| **IA** | Impact Assessment |
| **ICG** | Irish Continental Group |
| **ICIA** | Island Communities Impact Assessment (Scotland) |
| **ICP** | Islands Connectivity Plan (Scotland) |
| **IMO** | International Maritime Organization |
| **ISM Code** | International Safety Management Code |
| **IST** | IDEMIA Secure Transactions |
| **KPI** | Key Performance Indicator |
| **LHA** | Local Highway Authority |
| **LNG** | Liquefied Natural Gas |
| **LTA** | Local Transport Authority |
| **LTP** | Local Transport Plan (England) |
| **MACS** | Mobility and Access Committee for Scotland |
| **MCA** | Maritime and Coastguard Agency |
| **MF** | Motor Ferry |
| **MGO** | Marine Gas Oil |
| **MP** | Member of Parliament |
| **$MtCO_2$** | Million tonnes of carbon dioxide |

# Abbreviations

| Abbreviation | Meaning |
|---|---|
| **$MtCO_2e$** | Million tonnes of carbon dioxide equivalent |
| **MV** | Motor Vessel |
| **MVA** | Megavolt ampere |
| **NAEI** | National Atmospheric Emissions Inventory |
| **NAO** | National Audit Office |
| **NEB** | National Enforcement Body |
| **Nestrans** | North East Scotland Transport Partnership |
| **NHS** | National Health Service |
| **NI** | Northern Ireland |
| **NIFL** | Northern Isles Ferry Link |
| **NTS2** | National Transport Strategy 2 (Scotland) |
| **OPS** | Onshore Power Supply |
| **ORCA** | One Regional Card for All |
| **ORR** | Office of Rail and Road |
| **PDF** | Portable Document Format |
| **PE** | Private Equity |
| **PMSC** | Port Marine Safety Code |
| **PPN** | Procurement Policy Note |
| **PRM** | Person with Reduced Mobility |
| **PSC** | Public Service Contract |
| **PSO** | Public Service Obligation |
| **PSVAR** | Public Service Vehicle Accessibility Regulations |
| **RET** | Road Equivalent Tariff |
| **RNLI** | Royal National Lifeboat Institution |
| **RoPax** | Roll-on/Roll-off Passenger Ferry |
| **RoRo** | Roll-on/Roll-off Ferry |
| **RTP** | Regional Transport Partnership / Regional Transport Plan |
| **S-Bahn** | Suburban rapid rail network |
| **SCOTS** | Society of Chief Officers of Transportation in Scotland |
| **SECA** | Sulphur Emission Control Area |
| **SG** | Scottish Government |
| **SHORE** | UK Shipping Office for Reducing Emissions |
| **SME** | Small and Medium-sized Enterprise |
| **SPAS** | Sea Passenger Statistics |
| **SRITC** | Scottish Rural and Islands Transport Community |
| **SROI** | Social Return on Investment |
| **SSS** | Short Sea Shipping |
| **STB** | Sub-national Transport Body (England) |
| **STPR2** | Strategic Transport Projects Review 2 (Scotland) |
| **STS** | Scottish Transport Statistics |
| **TfL** | Transport for London |
| **TS** | Transport Scotland |
| **TTI** | Travel Time Index |
| **TtW** | Tank-to-wake |
| **TW** | Transport for Wales |
| **U-Bahn** | Underground railway / metro network |
| **UK** | United Kingdom |
| **UKSPF** | UK Shared Prosperity Fund |
| **US** | United States |
| **USA** | United States of America |
| **UTC** | Utilities and Transportation Commission (Washington State) |
| **V2G** | Vehicle-to-Grid |
| **VRDP** | Vessel Replacement and Deployment Plan |
| **VTMS** | Vessel Traffic Management System |
| **WCML** | West Coast Main Line |
| **WNMP** | Welsh National Marine Plan |
| **WSDOT** | Washington State Department of Transportation |
| **WSF** | Washington State Ferries |
| **ZEVI** | Zero Emission Vessels and Infrastructure |

# About SRITC

This report has been produced by the Scottish Rural and Islands Transport Community as part of its wider work to improve understanding of the role that transport plays in supporting resilient, inclusive and low-carbon rural, island and coastal communities.

SRITC's mission is to create a space to share insights, collaborate and support members in addressing rural and island transport and mobility challenges. We connect, support, and facilitate stakeholders from individuals to national bodies, shaping rural and island transport policy by contributing to Government consultations and parliamentary committees.

Although SRITC's roots are in Scotland, the issues explored in this report are UK-wide. Island communities, ferry-dependent towns, river users, coastal businesses, operators, public bodies and passengers all have a stake in whether water transport is planned as essential infrastructure or left to drift between disconnected policy silos.

## SRITC Team

### Management Team



Dr. Jenny Milne – Founder & Director



Alex Reid, Director



Dr. Alastair McInroy, Director

### Support Team



James Gleave, Mobility Consultant



Sheila Gilmour, CEO, Visit Arran



Doug Blackie, Consultant



Nikki Brown, Impact Officer

# Executive Summary

## Futureproofing UK Water Transport

**Future-proofing UK water transport requires a shift to long-term, system-wide funding and planning that positions it as critical national infrastructure, supporting economic resilience, social connectivity, and modal shift, rather than as a collection of fragmented regional contracts.**

If decisions on funding, fleet renewal, fares, accessibility, integration and decarbonisation are guided by the social and economic role each route performs, the UK can make better use of existing services, strengthen resilience for ferry-dependent communities, and accelerate the transition to a more sustainable water transport system.

## Water Transport – A sector that is significant, exposed, ageing, and under-recognised

Ferry services in the UK remain a critical yet often under-examined component of the national transport system, performing functions that no other mode of transport can fully substitute.

The network has evolved over two centuries from fragmented, privately operated routes into a mixed system of publicly supported lifeline services and commercially operated routes.

In 2024, scheduled ferry services supported around 53.5 million passenger journeys across 86 routes, from cross channel to inter-island, operated by 32 operators who collectively produced carbon emissions of 5.2 $MtCO_2$.

For many communities, ferries are not part of the transport system, they are the transport system providing lifeline infrastructure that link homes, schools, hospitals, and workplaces.

However, lifeline routes remain heavily dependent on public support, with average annual subsidy levels of around £290 million. The average vessel age has risen to around 22 years with many operating well beyond their intended lifespan.

Decades of under-investment, fragmented governance, and limited data transparency now threaten the sector's reliability and public trust. This is compounded by growing pressure on operators to decarbonise their fleets without disrupting services or materially increasing fares.

In simple terms, the sector is more valuable than its policy profile suggests, yet faces rising asset, affordability and decarbonisation pressures.

## Research Objectives

In recognition of these pressures, the objective of this research project was to understand in detail how UK water transport services are currently planned, funded, operated and governed, and what needs to change to ensure that the sector can successfully meet future challenges.

# Executive Summary

## Research Scope

The scope of research undertaken in this project is limited to services that carry passengers, vehicles and, where relevant, freight, to places within the UK, between the UK's nations, and between the UK and nearby international destinations.

The report does not examine long-haul international shipping, cruise liners, canal boats, pleasure craft, or freight-only logistics in detail. These sectors matter, but they have different operating models, markets and policy challenges. Freight is considered only where it interacts directly with ferry services, island supply chains, port access, lifeline connectivity or short-sea passenger routes.

## Methodology

The project used a mixed-method approach, combining UK-wide policy and literature review, analysis of published transport and operator data, Freedom of Information responses, stakeholder engagement, and international comparison with ferry systems in Norway, Denmark, Greece, Canada, the USA and Germany.

Limitations in the availability of route and operator data, and differences in reporting standards mean that this report is best understood as a UK wide strategic assessment rather than a route-by-route operational audit.

## Key Research Findings

Eight connected findings emerge from the research that has been completed which information the future-proofing actions that need to be taken.

1. Water transport is critical infrastructure, but public policy recognition is uneven.
2. Different routes - or groups of routes - need different policy responses.
3. Funding, ownership and fare models are not keeping pace with asset risk.
4. Ageing assets and limited spare capacity are turning reliability into a resilience risk.
5. Data transparency and operator performance reporting are too weak.
6. Ferries are not sufficiently integrated with the wider public transport network.
7. Accessibility support for passengers is improving, but still too static and reactive.
8. Decarbonisation requires whole-system planning across vessels, ports, energy infrastructure, skills, finance and regulation.

## Conclusion & Primary Recommendation

These findings lead to the conclusion that UK water transport is more important, more fragmented and more exposed to future risk than is currently reflected in policy, funding and governance arrangements.

To be fit for the decades ahead, our primary recommendation is that water transport needs to be fully brought into mainstream transport, infrastructure, energy and community-resilience planning **through the establishment of a UK-wide transition framework**. This wouldn't replace devolved responsibilities or local decision making but would provide a shared structure for setting future priorities and policies.

# Section 1: Introduction

Water transport is one of the oldest parts of the UK's transport system, but it is rarely treated as one of the most important. Ferries, river crossings and harbour services are too often seen as peripheral, seasonal or local concerns. This report outlines why this is a view that is increasingly difficult to defend.

Across the UK, ferries and other waterborne services connect island, coastal, river and estuary communities to the rest of the country. They carry residents to work, education, healthcare and family life. They move visitors into local economies. They carry food, fuel, parcels, freight, livestock, tradespeople, emergency workers and care staff. On some routes, they provide useful additional connectivity. On others, they are the only realistic connection available.

For communities that depend on them, ferries are not an optional extra within the transport system. They are the road, the bridge, the bus route, the delivery corridor and, in some cases, the emergency access route.

When these services fail, the consequences are not trivial. Medical appointments are missed. School and college journeys are disrupted. Local businesses lose bookings, staff time and supplies. Older and disabled people face greater isolation. Families change plans not because they want to, but because the timetable, the weather, the vessel or the fare has made the decision for them.

This report starts from a simple premise: water transport should be planned, funded and governed according to the role it performs, not according to how visible it is in national transport debate. A major international ferry route, a privately operated island crossing, a publicly subsidised lifeline ferry and a short urban river service may all involve boats carrying people across water. Beyond that, their social, economic and public-policy functions can be very different. Treating them as a single market risks missing what matters most.

The UK's water transport system is diverse. It includes lifeline island ferry services in Scotland, Northern Ireland, England and Wales; domestic routes serving islands, peninsulas and coastal communities; international ferry services to Ireland, France, Spain, the Netherlands and other European destinations; and inland river, harbour and estuary crossings in both urban and rural places.

Some routes benefit from long-term public support, while others depend almost entirely on commercial fare income. In some places, ferry users are protected by public-service obligations, regulated fares or concessionary travel. In others, communities rely on privately owned operators whose investment decisions, pricing structures and service levels are shaped by commercial priorities

That diversity is a strength, but it also creates a policy problem. Responsibility for water transport is spread across different governments, agencies, local authorities, harbour bodies, operators and regulators. Data is inconsistent. Funding models vary widely.

# Section 1: Introduction

Demands on the sector are growing. Many ferry networks are expected to provide reliable lifeline connectivity while operating ageing vessels and constrained ports.

Operators face pressure to decarbonise fleets and harbour infrastructure at a time when low-carbon vessels, shore power, grid upgrades and alternative fuels all require significant upfront investment.

Passengers increasingly expect accessible, real-time, integrated travel information while communities require services that are affordable and dependable.

These expectations are reasonable. The difficulty is that current policy and funding arrangements are not yet strong enough to meet them consistently.

In parts of the UK, particularly on Scotland's west coast and northern isles, ferry services are recognised as lifeline infrastructure and supported accordingly, albeit with continuing challenges around vessel age, reliability, capacity and long-term investment.

Elsewhere, important ferry routes sit in a more ambiguous space.

The Isle of Wight provides the clearest example. Its cross-Solent ferry services are essential to residents and businesses, yet they are largely operated as commercial services in a market where users often feel they have limited power and few alternatives.

Short river crossings such as the Corran Ferry, the Shields Ferry, the Woolwich Ferry and the former Gravesend to Tilbury service show another dimension: relatively short routes can create very large social, economic and environmental consequences when they fail, close or are underfunded.

The same policy, funding, regulation or decarbonisation approach will not work across all routes. Treating water transport as one market may be administratively tidy, but it hides the real question: what role does each route perform, who depends on it, and what happens if it becomes unaffordable, unreliable or disappears altogether?

The central challenge, therefore, is not simply whether the UK has enough ferry services. It is whether the country has a clear enough understanding of which routes are critical, where there are gaps in the network that need to be filled, what level of service they require, who should pay for them, how performance should be measured, and how future investment should be prioritised.

To make sense of these distinctions, this report uses a route criticality framework. The framework does not rank routes by size, revenue or passenger volume alone.

Instead, it groups routes based on criticality. This meaning how critical they are to the economic and social fabric of the communities they connect. The more dependent a community is on the ferry service, the more critical it is.

It's important to note that a route may straddle more than one level or move between them depending on season, user group, disruption duration, weather conditions, vessel availability or wider transport network performance. A route that appears discretionary for some passengers may be essential for others.

# Section 1: Introduction

## Route criticality framework

**Figure 1: Route Criticality Framework**

| Route Criticality Level | Description |
|---|---|
| Level 1: Essential lifeline route | A route where the ferry is the only realistic means of regular access for residents, businesses and essential services. |
| Level 2: High-dependency route | A route where alternatives exist but are significantly longer, more expensive, less accessible or less resilient. |
| Level 3: Strategic economic route | A route that supports major flows of passengers, vehicles, freight or tourism, but where users may have other travel choices. |
| Level 4: Local connectivity route | A route that improves local accessibility, reduces road journeys or connects communities across rivers, harbours or estuaries. |
| Level 5: Tourism oriented route | A route primarily serving leisure, tourism or seasonal demand, with lower dependency for essential daily access. |

## How the route criticality lens shapes the report

The framework is used throughout the report to test whether current approaches to funding, governance, reliability, accessibility, integration and decarbonisation are proportionate to the role each route performs. In simple terms, the more critical the route, the stronger the case for long-term planning, transparent performance standards, public-interest protections and resilient investment.

## The seven themes examined in the report

The report examines the UK water transport system through seven connected themes.

**Figure 2: 7 Research Themes**

| Theme | What this report examines |
|---|---|
| Policy Environment | How the international and national policy environment shapes the passenger experience. |
| Funding & Investment Models | How services are funded, how fares are set, and whether current models protect the public interest. |
| Route, Operator, and Ownership Models | Who are the public and private sector ferry operators? What is their ownership model, and what routes do they operate? |
| Decarbonising Vessels and Harbours | How vessel replacement, port upgrades, shore power, alternative fuels, grid capacity and funding need to align to reduce emissions. |
| Integrating Ferries with the Wider Public Transport Network. | Whether ferries connect properly with buses, trains, active travel routes, ticketing systems and passenger information. |
| Vessel and Harbour Accessibility | How well ferry services support disabled passengers, older people, foot passengers, cyclists, low-income users and others who may face barriers to travel. |
| How Ferry Operators Create Social Value & Community Benefits | The contribution that operators are making to the communities they serve beyond service provision. |

# Section 1: Introduction

These themes were selected because they shape whether water transport services are affordable, reliable, accessible, resilient and capable of decarbonising.

The research also draws upon international examples from countries with significant ferry networks, including Norway, Denmark, Greece, Canada and the USA. These comparisons are not treated as ready-made solutions for the UK. Geography, ownership, public finance and political culture all matter

They are used instead to show where other countries have been more explicit about the public-interest role of ferry services, the use of contracts to shape outcomes, and the need to align vessel investment with wider transport and energy planning.

In summary, this report makes the case that future-proofing UK water transport requires clearer governance, better data, long-term funding, stronger community voice, integrated public transport planning, accessible passenger systems, skilled maritime workers and coordinated investment in ports, power and low-carbon technology.

There are no quick fixes, but the status quo of communities left carrying the cost of decisions made elsewhere is not a credible future for a country surrounded by water.

# Section 2: Project Scope, Objectives and Methodology

## 2.1 Project Scope

This report examines the role, performance and future development of UK water transport services that carry passengers, vehicles and, where relevant, freight as part of regular ferry and waterborne transport networks.

The focus is on services that connect people and places within the UK, between the UK's nations, and between the UK and nearby international destinations. These include lifeline island ferry services, domestic ferry routes, international short-sea ferry services, and river, estuary and harbour crossings that function as part of local or regional transport systems.

For the purposes of this report, water transport includes:

- ferry services operating within or between the UK's nations and islands;
- ferry services operating between the UK mainland, Northern Ireland, the Republic of Ireland, the Isle of Man and nearby continental European destinations, including France, Spain and the Netherlands;
- river, harbour and estuary passenger services in metropolitan, rural and coastal areas;
- associated port, harbour, pier and terminal infrastructure where it directly supports passenger and vehicle ferry movements.

The report does not examine **long-haul international shipping**, **cruise liners**, **canal boats, pleasure craft**, or **freight-only logistics** in detail. These sectors matter, but they have different operating models, markets and policy challenges. Freight is considered only where it interacts directly with ferry services, island supply chains, port access, lifeline connectivity or short-sea passenger routes.

The project was UK-wide in scope, but it recognises that water transport is not evenly distributed across the country. Scotland has the largest number of publicly supported lifeline ferry routes across the Clyde and Hebrides, and Orkney and Shetland Isles networks.

England has a larger number of privately operated domestic and international ferry services, including cross-Solent, cross-Channel, river and estuary routes. Wales and Northern Ireland have fewer ferry routes, but these include strategically important links such as Irish Sea services, the Strangford-Portaferry crossing and services connecting island and coastal communities

## 2.2 Project Objectives

This research sets out to understand how UK water transport services are currently planned, funded, operated and governed, and what needs to change if they are to become more reliable, affordable, accessible, integrated and sustainable.

The research was guided by four core questions:

- How are ferry and water transport services currently funded, operated and regulated across the UK's four nations?
- What barriers prevent these services from realising their full potential as

sustainable, inclusive and resilient transport infrastructure?
- How well do current policies, funding mechanisms and innovation programmes align with the practical challenges facing operators, passengers and communities?
- What interventions are needed to improve reliability, affordability, accessibility, public transport integration and decarbonisation across different types of water transport route?

These questions were deliberately practical. The aim was not to produce a technical maritime study for specialists alone, or another transport document that rearranges familiar problems into fresh headings. The aim was to identify where current arrangements are working, where they are falling short, and what action would make the greatest difference for passengers, communities, operators and policymakers.

## 2.3 Project Methodology

The project used a mixed-method approach, combining policy review, data analysis, source review, stakeholder engagement and international comparison. This allowed the research to draw on both formal evidence and lived experience.

### Policy and Literature Review

The research reviewed UK, devolved, regional and local policy documents relevant to ferries, ports, maritime decarbonisation, public transport integration, accessibility, island connectivity, freight, economic development and regional transport planning. This included documents published by the UK Government, devolved governments, Transport Scotland, local authorities, combined authorities, regional transport partnerships, transport bodies, regulators and ferry-related organisations. International sources, including material from the International Maritime Organization, the European Union and comparator countries, were also reviewed where relevant.

The purpose of this review was to identify how water transport is currently recognised in policy, where responsibilities sit, and where gaps exist between national ambitions and route-level delivery.

### Data Synthesis

The project drew together publicly available data from national transport statistics, operator reports, government publications, local authority accounts, funding announcements and responses to Freedom of Information (FOI) requests.

This evidence was used to establish baseline insights on:

- passenger volumes
- route types and ferry networks
- vessel fleets and route profiles
- public funding and subsidy levels
- fare and affordability issues
- vessel and port decarbonisation activity
- accessibility information and passenger support
- operational resilience, reliability and disruption
- social value and community benefit programmes.

# Section 2: Project Scope, Objectives and Methodology

Where available, the research used official sources and operator-published data. However, one of the findings of the project is that UK ferry and water transport data is inconsistent, fragmented and difficult to compare across operators, routes and nations. This means some figures should be treated as best available estimates rather than complete national totals.

### Freedom of Information requests

Freedom of Information requests were used to fill gaps where public data was incomplete or not clearly published. These requests focused mainly on public funding, route support, subsidy arrangements, vessel and port investment, annual fuel consumption, and local authority involvement in ferry services.

FOI responses were used alongside published accounts and policy documents to improve the accuracy of the funding and operational analysis. Where responses were incomplete, unavailable or difficult to compare, this is reflected in the report's wider conclusions on data transparency.

### Stakeholder Consultation

The research was informed by direct engagement with people and organisations involved in operating, funding, using, studying and campaigning around ferry and water transport services.

Stakeholders included representatives from ferry operators, public bodies, local authorities, community organisations, user groups, consultants, academics and people living in ferry-dependent communities.

Annex 1 provides a map of the stakeholders groups engaged in the research.

Engagement took place through one-to-one interviews, informal conversations and three virtual roundtables held between September 2025 and May 2026. These conversations helped test whether the evidence gathered from published sources reflected real-world experience. They also provided insight into the everyday consequences of service disruption, poor integration, accessibility barriers, uncertain funding and long-term underinvestment.

The stakeholder engagement was not designed as a formal statistically representative survey. Its purpose was to bring practical experience and community insight into the analysis, and to make sure the report did not treat ferry services as abstract infrastructure rather than services used by people with actual lives.

### Comparative Analysis – International Networks

The project also reviewed water transport policy, funding and operating models in a selection of comparator countries with significant ferry networks. These being Norway, Denmark, Greece, Canada, the USA, and Germany.

The purpose of the international comparison was not to suggest that the UK can copy another country's model wholesale. Ferry systems are shaped by geography, constitutional arrangements, ownership models, public finance, procurement culture, climate, population distribution and energy infrastructure.

Still, international examples are useful because they show how other countries define lifeline services, structure public contracts, support fleet renewal, regulate affordability, integrate ferry routes into wider public transport, and use public procurement to accelerate decarbonisation.

The evidence was then organised around the seven thematic research areas:

- Policy Environment
- Funding & Investment Models
- Route, Operator, and Ownership Models
- Decarbonising Vessels and Harbours
- Integrating Ferries with the Wider Public Transport Network.
- Vessel and Harbour Accessibility
- Social Value & Community Benefits

These themes were used to identify patterns across different types of route and operator. They also helped expose where the same problem appears in different forms across the UK: fragmented governance, inconsistent data, ageing vessels, weak public transport integration, variable accessibility information, and decarbonisation plans that depend on investment decisions outside the direct control of ferry operators.

### Evidence limitations

This report draws on a wide evidence base, but it is not a complete audit of every ferry route, vessel, harbour, operator or funding stream in the UK. There are important limitations.

First, data availability varies significantly between public and private operators. Publicly funded services are usually subject to more scrutiny and reporting, while commercial operators are not always required to publish comparable information on passenger volumes, fares, profitability, investment plans, social value or emissions.

Second, different public bodies record ferry-related spending in different ways. Some costs are reported as operating subsidy, some as harbour expenditure, some as capital investment, and some are embedded within wider transport or infrastructure budgets. This creates a risk of both under-counting and double-counting.

Third, not all forms of public support are easy to isolate. Concessionary travel, discounted fares, port investment, road access improvements and wider regeneration funding may all benefit ferry users, but they are not always recorded as ferry-specific support.

Fourth, the social and economic value of ferry services is not measured consistently. The impact of missed medical appointments, business disruption, longer road journeys, social isolation, reduced tourism confidence or delayed freight is often visible to communities long before it appears in formal datasets.

For these reasons, the report is best understood as a strategic assessment rather than a route-by-route operational audit that identifies the main patterns, risks, gaps and opportunities shaping the future of UK water transport.

# Section 3: Literature Review – Quantitative Data

How is the UK water transport sector currently performing? That's the question that this section addresses through a review of quantitative data across the following areas published by government bodies and ferry operators.

- Operator Ecosystem
- Passenger & Vehicle Journeys
- Funding & Subsidy Levels
- Fare Revenues
- Carbon Emissions Levels
- Route Networks

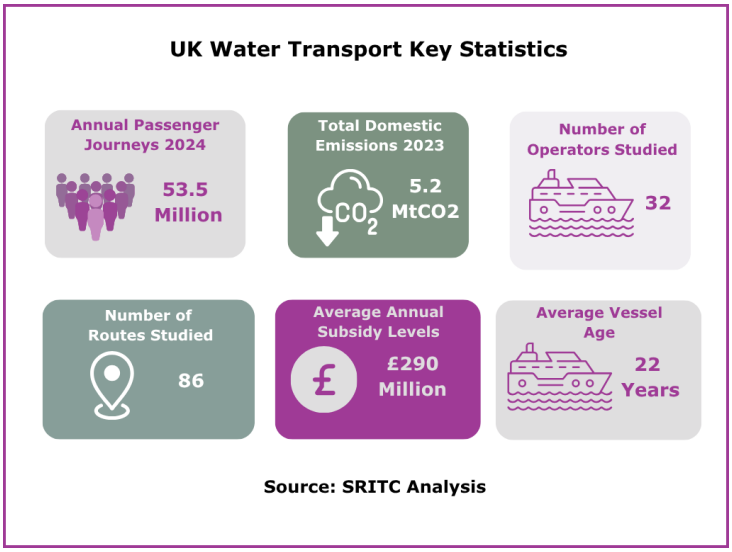
It must be stressed that water transport data is geographically, sectoraly, and operationally fragmented. Public sector reporting is much stronger for some publicly supported services than for privately operated routes. Therefore, the data presented should be read as the best available baseline rather than a complete national audit.

## 3.1 Key Statistics

Figure 3 presents a snapshot of the UK water transport sector. In 2024, scheduled ferry services supported around 53.5 million passenger journeys across 86 routes serviced by 32 operators. At the same time, lifeline routes remain heavily dependent on public support, with average annual subsidy levels of around £290 million.

The operational and environmental challenges are also clear. Delays in vessel replacement across the operator ecosystem means the average age of those that are currently in service has increased to 22 years. Meanwhile, total $CO_2$ emissions were estimated at 5.2 $MtCO_2$ in 2023. Taken together, the data points to a sector that is economically significant and socially important, but also asset-intensive, publicly exposed and facing a sizeable decarbonisation challenge.

**Figure 3: UK Water Transport Key Statistics**




While these are worrying trends, there are grounds for quiet optimism. Demand for water transport services is recovering – albeit slowly - after the COVID-19 pandemic across most routes.

In Scotland this is driven by tourism and underpinned by commercial traffic. To address its ageing fleet, CalMac has placed an order to procure 8 electric ferries to serve on some of it's shorter routes while Transport Scotland are funding studies that explore the feasibility of building tunnels that connect small isles in the Shetland.

In England, progress towards decarbonisation is most visible through recent launches of hybrid cross channel ferries, and the electrification of infrastructure at major ports, most notably Portsmouth.

# Section 3: Literature Review – Quantitative Data

## 3.2 Operator Ecosystem

Over the last century, the UK water transport operator ecosystem has shifted from a more varied landscape of regional steamship companies, railway-linked ferry services, municipal crossings and small private operators into a smaller, more route-specific and capital-intensive sector.

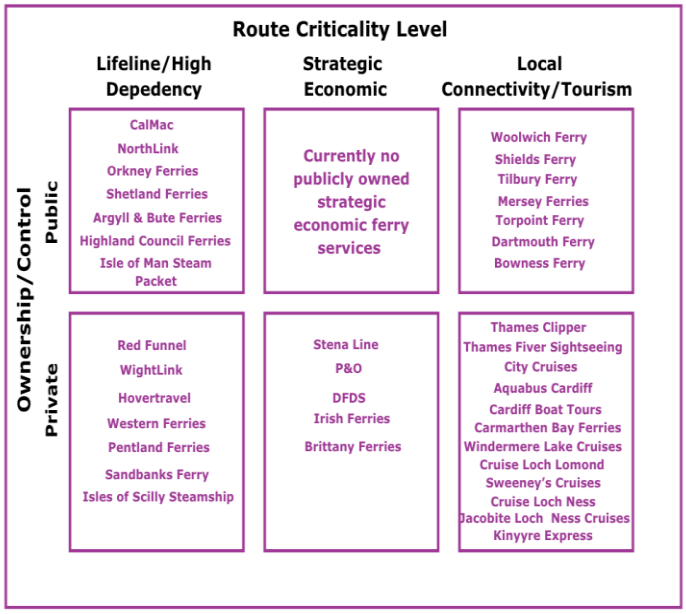
Lifeline and high-dependency services are now concentrated around a limited number of public, publicly owned or publicly contracted operators, particularly in Scotland, the Northern Isles and local authority areas where ferry links make a particularly important social contribution. They all illustrate how operators can function as part transport provider, part economic anchor and part social infrastructure.

Strategic economic and international services have similarly consolidated around a small group of major private operators serving the Channel, Irish Sea and North Sea, while local connectivity services remain a mixed patchwork of council, public transport authority and private provision.

Tourist-focused water transport is the least consolidated part of the ecosystem, with a long tail of seasonal cruise, excursion, heritage and leisure operators continuing to serve lochs, rivers, harbours, islands and coastal destinations.

The most notable changes have not been a simple reduction in the number of ferry operators, but a reshaping of ownership and control. Some historic and railway-linked services were absorbed into larger private ferry groups, while major international operators have changed hands through mergers, acquisitions and infrastructure-investor ownership.

**Figure 4: Current UK Water Transport Operator Ecosystem**




Compared with the bus and rail sector, the water transport ecosystem has been structurally more stable but operationally more fragile. It's seen fewer whole-system reforms because services are tied to specific geographies, ports, vessels, harbour assets and captive local markets.

While it's less fluid, when something fails - a vessel, a harbour, a crewing model, a contract or an owner's investment strategy - the impacts can be immediate and severe for communities, businesses and freight users with few or no alternatives.

# Section 3: Literature Review – Quantitative Data

### Publicly Owned/Controlled Services

The evolution of publicly controlled water transport services shows a gradual shift from rail-linked state ownership towards more specialised public-service models.

In the immediate post-war period, many ferry and harbour assets sat within the nationalised rail system, reflecting the historic role of ferries as extensions of the railway network. In Scotland, the consolidation of David MacBrayne and Caledonian Steam Packet interests into Caledonian MacBrayne created a more integrated public operator for west coast and island services.

In England, Sealink British Ferries was the major ferry arm of British Rail with its origins lying in the ferry services inherited by the nationalised railway system after 1948. By the early 1980s, Sealink was one of Europe's largest ferry companies, operating around 40 ships on 23 cross channel routes, and owning major harbour assets at Folkestone, Heysham, Holyhead, Newhaven, Parkeston Quay/Harwich, Stranraer and Fishguard.

Since the 1980s, the public-sector role has become more selective but also more strategically important. Some services, most notably Sealink, moved into private ownership, while others were retained, restructured or brought back under stronger public control where they were considered essential to island resilience, economic continuity or social connectivity.

The creation of CMAL and CalMac Ferries Ltd in 2006 formalised Scotland's asset-owner/operator split that continues today in spite of calls for a restructuring of the tri-partite operating model that includes Transport Scotland.

Council controlled ferry, river and pen services

On the Isle of Man, the move of the Steam Packet Company into public ownership in 2018 demonstrates the active role that Government needs to play in supporting services that are essential to residents, visitors, freight and the wider Manx economy.

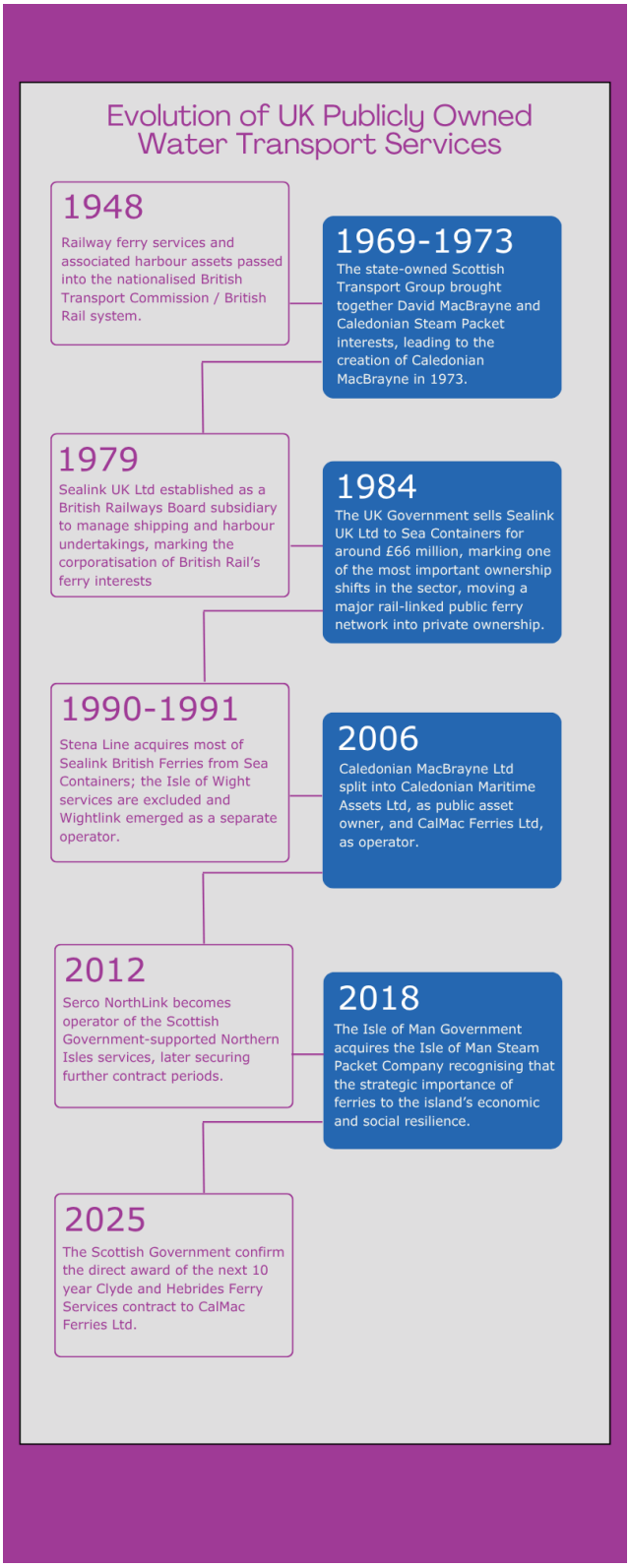
The path to public ownership begins back in the 1990s, when the Isle of Man Government used linkspan ownership and a User Agreement to exert more control over service levels, fares and reliability while the company remained privately owned.

Over time, concern grew that the value created by monopoly access to the Island's main sea links was being captured by external owners, while the Island still carried the strategic risk if services, vessels or investment plans failed to meet local needs.

In practical terms, the move to public ownership converted the Steam Packet company from a privately owned monopoly provider operating under government agreement into a publicly owned strategic transport asset, with the Government better placed to align fares, service levels, freight capacity, vessel renewal and harbour infrastructure with the Island's long-term social and economic needs.

# Section 3: Literature Review – Quantitative Data

**Figure 5: Evolution of Publicly Owned Water Transport Services**




## Privately Owned Services

The privately operated water transport sector has evolved through repeated waves of consolidation, acquisition and infrastructure-investor ownership.

The sale of publicly owned Sealink to Sea Containers in 1984 marked a decisive break from the rail-integrated public ferry model, opening the way for major ferry businesses to be treated as commercial transport and logistics assets.

The Government's stated rationale for privatisation was that Sealink needed commercial freedom and access to private capital, while British Rail wanted to concentrate financial and management resources on the main railway business. Hansard records show that Sealink had returned to profit in 1983 and was planning investment of more than £20 million per year.

Subsequent acquisitions by P&O, Stena Line, DFDS and DP World reshaped the Channel, Irish Sea and North Sea markets around larger, better-capitalised operators with the scale to manage vessel investment, freight demand, fuel volatility and competition from aviation, rail and the Channel Tunnel.

More recent changes show how private ferry operators have increasingly become part of wider logistics, infrastructure and investment portfolios. Wightlink and Red Funnel illustrate the attraction of stable, route-specific demand to infrastructure investors, while Brittany Ferries' majority ownership of Condor points to further consolidation around stronger regional ferry groups.

# Section 3: Literature Review – Quantitative Data

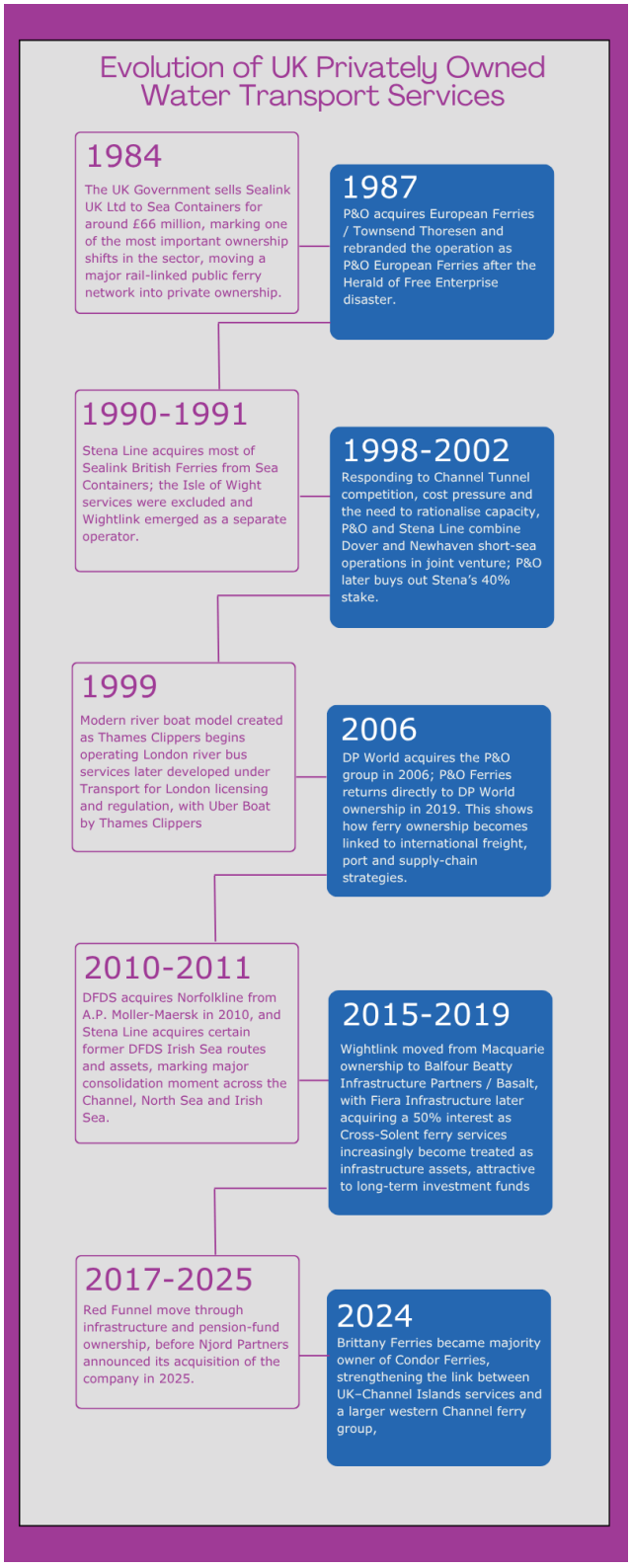
At the same time, the Thames Clippers model shows how private operation can sit within a publicly regulated urban transport framework. The private sector is therefore not a single market, but a mix of freight-led ferry groups, local monopoly routes, investor-owned infrastructure businesses and regulated urban passenger services

The value of privately owned operators lies not only in ticket sales, but in sustaining local employment, tourism flows, logistics resilience, export and import routes, and supply chains that depend on reliable short-sea and river crossings.

Recent decades have seen increasing competition for foot passenger, vehicle and freight traffic from cross channel road and rail operators, and airlines. This is particularly visible on longer domestic and international services where operators must fill both passenger accommodation and vehicle decks, manage fuel and crewing costs, and compete with alternative modes that are often faster, cheaper, or both.

In response, larger operators have adapted through introducing larger Ro-Pax vessels, freight-focused sailings, differentiated fare products, online booking systems, yield management and a stronger emphasis on the onboard journey as part of the travel experience.

**Figure 6: Evolution of Privately Owned Water Transport Services**



# Section 3: Literature Review – Quantitative Data

## 3.3 Passenger & Vehicle Journeys

The Department for Transport is responsible for collecting and reporting on annualised passenger journeys across all domestic and international water transport operators. The completeness and accessibility of this data enables a confident assessment to be made on year on year changes in levels of passenger demand.

In contrast, reporting on the transportation of private and commercial vehicles is limited and fragmented. CalMac and NorthLink ferries who are both publicly owned, publish annual reports. In England, where all of the major RoPax operators are privately owned, they have no obligation to publish this data.

### Passenger Journeys – UK Wide

**Domestic passengers**: These journeys are inclusive of:

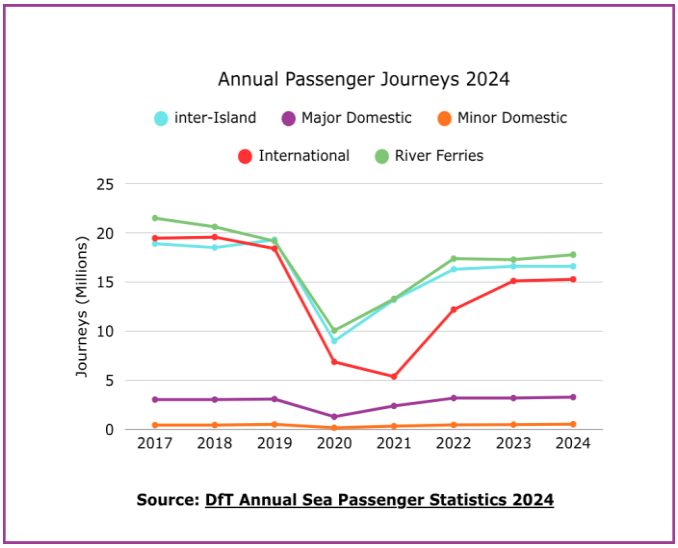
- Major domestic sea crossings from the UK mainland to Northen Ireland, the Isle of Man and the Channel Islands.
- Inter-island routes between the mainland and islands across the UK. It also covers internal ferry routes on lochs such as Strangford to Portaferry in Northern Ireland.
- River ferries that operate on major rivers including the Thames and Mersey.

**International passengers**: This covers travel on international routes from the UK. These are broken down into short sea (ferry) routes and passengers on cruises and long sea journeys. For the purposes of this report, we focus on short sea ferry routes.

The Department for Transport's annual Sea Passenger Statistics reporting confirms that in 2024, the UK recorded 38.3 million domestic and 18.4 million international passenger journeys.

International ferry passengers accounted for 15.3 million of the international total. Domestic passengers included 17.8 million river ferry passengers, 16.7 million inter-island passengers, and 3.9 million domestic sea crossing / domestic cruise passengers.

**Figure 7: Annual Passenger Journeys by Route Category – 2017 to 2024**




Source: DfT Annual Sea Passenger Statistics 2024

The number of passengers undertaking domestic sea crossings was relatively stable from 2010 to 2019. This dropped substantially from 3.5 million passengers in 2019 to 1.5 million in 2020 due to the coronavirus pandemic. Passenger numbers on domestic sea crossings have recovered from the pandemic and in 2024 they were 9% above 2019 levels

# Section 3: Literature Review – Quantitative Data

Cairnryan (Scotland) – Belfast (NI) is consistently the busiest domestic short sea route. In 2024, it saw 1.2 million passengers compared to Liverpool-Belfast and Cairnryan – Larne which are the next busiest routes with 0.4 million passengers each. This confirms the importance of the Scotland to Northern Ireland link as a strategic transport corridor.

## Passenger Journeys - Lifeline Routes

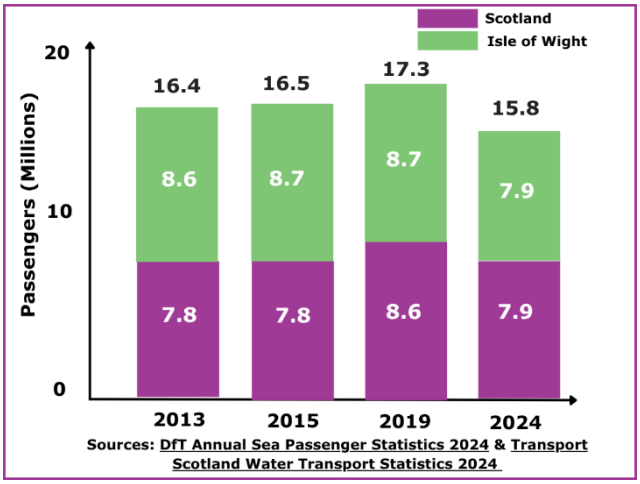
Understanding changes in the number of passengers travelling on lifeline routes is important as they are particularly sensitive to the effects of weather and mechanical disruptions. Regular cancellations and/or the deployment of smaller vessels onto busy routes will suppress volumes.

Lifeline routes fall into 2 broad categories. Firstly, those that connect the Scottish mainland to the west and north coast islands and the islands within the Orkney & Shetland Isles archipelagos, and secondly, routes that service the Isle of Wight.

Ove the period 2013 to 2019, passenger volumes on services to the Isle of Wight remained static while growing across Scottish routes. Emerging from COVID, passenger numbers across all lifeline routes have recovered but are still notably below 2019 levels.

Little reporting is available on the underlying reasons for the sluggishness in the recovery. It can however be inferred that with many of these routes being heavily used by tourists, the increasing unreliability of aging ferry fleets is pushing some towards spending their vacation time in other locations.

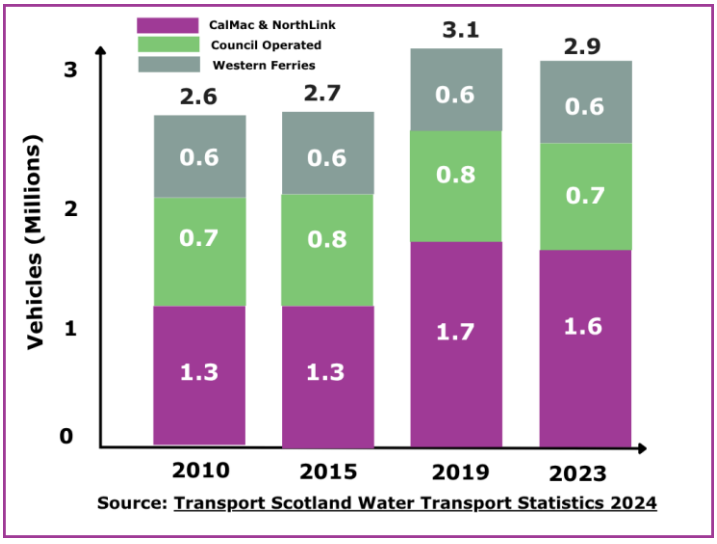
**Figure 8: Annual Passenger Journeys on UK Lifeline Routes**




## Vehicle Journeys – Scotland

Annual statistics on the volume of private and commercial vehicles carried on UK RoPax ferries is limited to reporting from Transport Scotland who collect data on all West and North coast lifeline routes. There is no mandate for private operators outside Scotland to publish this data

**Figure 9: Annual Vehicle Journeys on Scotland's Lifeline Routes**



# Section 3: Literature Review – Quantitative Data

The completion of the roll out of the Road Equivalent Tariff (RET) on CalMac's west coast routes in 2015 has played the most significant role in increasing vehicle volumes to the pre-COVID levels of 1.7 million. The unintended consequences created by RET fare reductions included lack of vehicle deck space on ferries during peak seasons as demand exceeds supply.

## 3.4 Funding & Subsidy Levels

### Commercial Viability versus Public Necessity

Funding and subsidies across UK water transport reflect a persistent tension between commercial viability and public necessity. Some routes can be operated commercially through fares, vehicle income, freight revenue, onboard spend and private investment. Others exist because communities need them, regardless of whether the market can sustain them. The UK therefore relies on a patchwork of public subsidy, local authority funding, private finance, commercial revenue and occasional one-off capital.

### Public Sector Funding

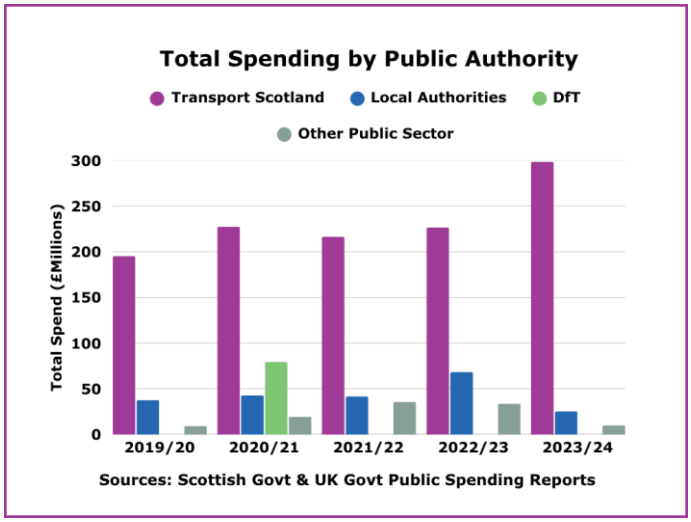
Public sector spending on ferries has increased over the last five financial years. In 2019/20, around £264 million was spent across the UK on ferry services and infrastructure, with most of this supporting day-to-day operations rather than capital renewal. Spending rose during the Covid-19 period and reached around £389 million in 2023/24, split between approximately £309 million in revenue support and £81 million in capital spending.

The Scottish Government is by far the largest public funder of ferry services in the UK. Between 2019/20 and 2023/24, it spent more on ferries than all other UK public bodies combined. This reflects the scale of Scotland's publicly supported lifeline network, including the Clyde and Hebrides, Northern Isles and local authority inter-island services.

The largest single item is operating support for Clyde and Hebrides Ferry Services and Northern Isles Ferry Services, which rose from around £178 million in 2019/20 to around £265 million in 2023/24.

Outside Scotland, public ferry funding is smaller and more fragmented. The Department for Transport does not generally subsidise ferry services through a Public Service Obligation model, although it provided emergency support during the pandemic. Local and regional bodies support services such as the Woolwich Ferry, Shields Ferry, Mersey Ferries and Strangford Ferry.

**Figure 10: Total Capital and Revenue Spend by Public Authority**



### Private Sector Funding

Private operators depend heavily on commercial revenue. This includes passenger fares, vehicle fares, freight income, onboard spending, tourism demand, retained earnings, debt, equity and shareholder investment.

Large RoPax operators serving routes to continental Europe, Ireland and Northern Ireland generally operate on this basis. Their routes are commercially significant because they carry passengers, vehicles and freight on major corridors. Investment in vessels and services is shaped by market demand, freight contracts, port arrangements, fuel costs, regulation and shareholder expectations.

Privately operated domestic routes also rely on commercial models. This includes cross-Solent services to the Isle of Wight, Western Ferries, Pentland Ferries, the Isles of Scilly Steamship Group and various harbour or river operators. Some of these routes are commercially viable because demand is strong, journey times are short, or users have a clear willingness to pay. Others provide essential connectivity but sit outside a formal public subsidy model.

This creates a policy tension. Commercial finance can support innovation and investment where revenue is strong. But where a route is essential and users have limited alternatives, purely commercial fare-setting and investment decisions can create public-interest concerns. A route can be privately owned and still function as critical infrastructure.

### Capital investment: the exposed part of the system

The most significant long-term funding challenge is capital investment. Ferry systems need recurring revenue support, but they also need periodic major investment in vessels, terminals, harbours, piers, linkspans, shore power and grid connections.

The challenge is that ferry assets are long-life, high-cost infrastructure. A vessel replacement programme cannot be managed effectively through short-term funding cycles. Nor can decarbonisation be delivered if vessel procurement, port upgrades and grid reinforcement are funded separately, slowly or after the operational need has already become urgent.

The Isles of Scilly Sea Link project illustrates the uncertainty that can surround major capital schemes. The project secured Levelling Up funding for ferry and port upgrades, but that funding was later withdrawn after the private operator secured private finance for new vessels. This shows that public and private investment can interact in complex ways, especially where a privately operated service has a clear public-interest role.

## 3.5 Fares

There are important differences in the level of annual fare box revenue that publicly and privately owned operators can generate. Where operations are state funded, there are strict controls in place to ensure that as a public service, journeys are affordable to everyone. This is less the case with private operators.

# Section 3: Literature Review – Quantitative Data

## Public Operators

The role of Government is most visible in Scotland where CalMac reports that over the period 2019-2022, passenger revenues accounted for between 21% and 35% of total revenues. In other words, the remaining 65%-79% of revenues are in the form of subsidies from the Scottish Government. This enabling CalMac to fulfil their role as a lifeline service provider.

Staying in Scotland, the completion of the roll out of the Road Equivalent Tariff (RET) by CalMac in 2015 is estimated to cost £25 million in lost vehicle fare revenues each year based on analysis by Transport Scotland. The objective of RET is to support islanders by equalising the per mile cost of using roads and ferries and measured on deck space utilisation (the percentage of a ferry's vehicle deck that is occupied on each sailing), it's succeeded. Utilisation rates have increased across the network, to the point on some routes where capacity pressures are felt.

## Private Operators

In England where most domestic and international routes are privately operated, the picture is markedly different. Similar to air and rail travel, fares can be dynamically adjusted based on levels of demand.

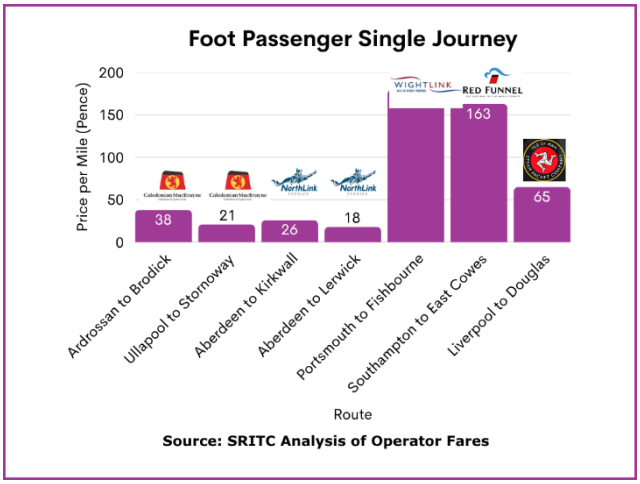
More pointedly, driven by a focus on short-term profit, private equity (PE) firms can lever significant debt onto the ferry companies and seek to resell at a profit, leading to fare revenue being siphoned to debt payments and dividends instead of reinvested in vessel replacements and service improvements.

A detailed analysis of foot passenger and vehicle fares across all of English based operators is outside the scope of this project. However, to help inform the wider discussion about the role of subsidies in shaping passenger travel behaviours, we analysed a sample of publicly and privately operated routes from across the UK.

## Public versus Privately Set Fares

As outlined in figure x, on a pence per mile basis, foot passengers travelling on heavily subsidised routes in Scotland pay significantly less than journeys to the Isle of Wight on privately operated Red Funnel or Wightlink ferries.

**Figure 11 Sample Pence Per Mile Fares**




Fares will become an increasingly sensitive issue as all operators – public and private, large and small – evaluate how they will fund the decarbonisation of their vessels over the next 15-20 years and navigate an inflationary environment of fluctuating fuel prices.

The pain is most likely to fall on the users of privately operated vessels where the owners are highly leveraged and don't have access to government funding. Particular attention should, moving forward, be paid to the Isle of Wight. As a ferry dependent island, vessel decarbonisation decisions made by Red Funnel and WightLink - the main service providers – may feed through into fare increases.

The operators of international services such as P&O, DFDS and Stena Line may be better positioned to absorb more of their vessel decarbonisation costs due to the size of their network and ownership models.

### River Ferry Operators

At the other end of the private sector scale are river and peninsula operators such as the Sandbanks chain ferry in Dorset that connects Sandbanks peninsula in Poole with Shell Bay in Studland

They provide a useful case study on how smaller operators balance fare increases against the need to support the local community and visitor economy while investing in vessel upgrades.

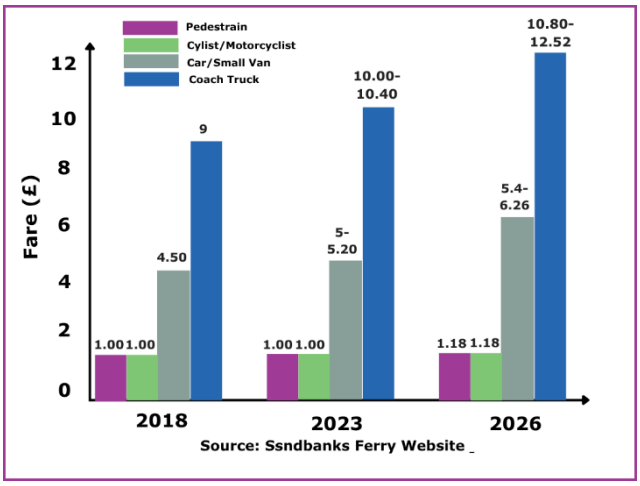
The Bournemouth-Swanage Motor Road & Ferry Company who operate the Sandbanks ferry are obliged to apply to the DfT to increase fares because under a historical 1923 Act of Parliament, it functions as a statutory monopoly.

The DfT's responsibility is to ensure that any fares increases are genuinely required to meet operating costs and vessel upgrades, with the process allowing for local communities, councils, and commuters to provide feedback and object before any changes are approved.

This process can on one hand by viewed as an example of how local democracy should work. However, on the other, it can involve painful compromises to be made on the journey to agreeing "fair fare" increases.

Figure x illustrates how over the period 2018 to 2026 fares have increased on this route, confirming that until 2026, the brunt of fare increases was borne by vehicle drivers.

**Figure 11 Sandbanks Ferry Fare Increases**




The 2026 fare increases are notable for their jump from previous years reflecting the requirement for the Bournemouth-Swanage Motor Road & Ferry Company to secure the funds needed to replace their current vessel.

## 3.6 Carbon Emission Levels

### Water Transport's Contribution to Transport Emissions

Domestic water transport emissions remain a relatively small but strategically important part of the UK's transport emissions profile. They are generated by a diverse mix of activity,

including lifeline island ferries, river crossings, coastal freight, passenger vessels, fishing vessels, inland waterways, leisure craft and larger Ro-Pax services operating between UK ports. In broad terms, depending on the scope and methodology used, UK domestic maritime emissions in 2023 are reported at around 5.2 $MtCO_2e$ per year, down from 8.5 $MtCO_2e$ in 1990.

This places domestic water transport well below 2023 road transport emissions (99.8 $MtCO_2e$) in absolute terms, but it is a harder-to-abate sector because vessels are long-lived assets, route requirements vary sharply, and replacement decisions are often tied to port infrastructure, grid capacity, fuel availability, regulatory certainty and public funding cycles.

For ferry operators in particular, emissions are not simply a technical issue. They are tied directly to service resilience, fare levels, vessel renewal, public subsidy, community connectivity and, in some cases, statutory lifeline service obligations.

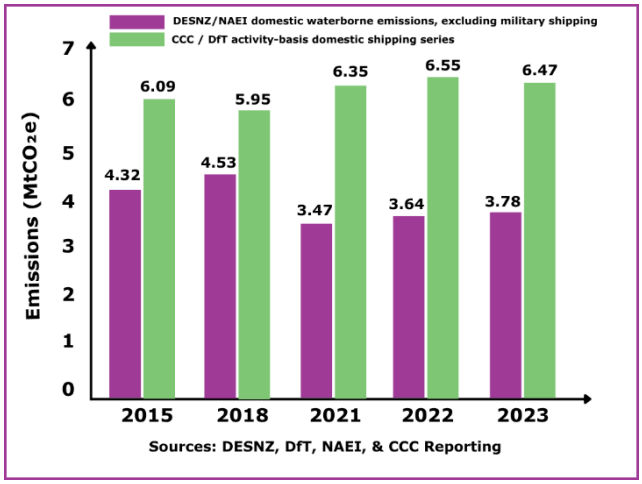
### Reporting Landscape

The reporting landscape is complicated because different organisations use different data sources for different purposes. The UK's formal greenhouse gas inventory, reported through DESNZ and the NAEI, is designed for national emissions accounting and is anchored to fuel-sales and energy statistics, with shipping activity reconciled to DUKES data. The Department for Transport's Maritime Emissions Model takes a more bottom-up approach, using AIS vessel movement data, fleet characteristics and operating assumptions to estimate emissions by vessel type, route, location and operating phase (at sea or berthed at port).

The Climate Change Committee's Seventh Carbon Budget analysis published in 2025 uses inventory data up to 2018 but switches from 2019 to DfT activity-based maritime model estimates for key shipping categories, while retaining inventory-based data for some activities such as naval shipping and inland waterways/leisure craft.

As a result, the CCC's domestic water transport figures are not always directly comparable with published DESNZ/NAEI inventory totals, especially where the DfT model attributes higher emissions to vessels at berth.

**Figure 12 Domestic Shipping CO2e emissions**




Differences between domestic emissions figures is less about one organisation being "right" and another being "wrong", and more about each using data for a different purpose. The DESNZ/NAEI greenhouse gas inventory is the most appropriate source for tracking the UK's official annual emissions trend, because

it is designed for national carbon accounting and is reconciled to UK energy and fuel-use statistics.

By contrast, the DfT's Maritime activity based modelling provides a granular estimate on how emissions are changing by vessel type, route, location and operating phase.

For policymakers, the safest approach is therefore to use DESNZ/NAEI data when describing how UK domestic shipping emissions are changing year by year, but to use the DfT and CCC modelling when deciding where interventions are needed, such as vessel replacement, shore power, alternative fuels, port upgrades or route-specific support.

### Operator Reporting

Carbon-emissions reporting at an operator level is uneven, fragmented and difficult to compare across the sector. Analysis of 32 lifeline, international, and river ferry operators confirms that none of them freely publish route by route or vessel by vessel emissions data.

#### International Operators

Multi-national operators such as DFDS, P&O, Brittany Ferries, Stena Line, and Irish Ferries provide aggregated emissions data across their vessels and ports within their annual reports. However, this isn't segmented by country of operation, and type of vessel (i.e. Ro-Pax versus freight only) so they don't cleanly isolate UK domestic ferry emissions.

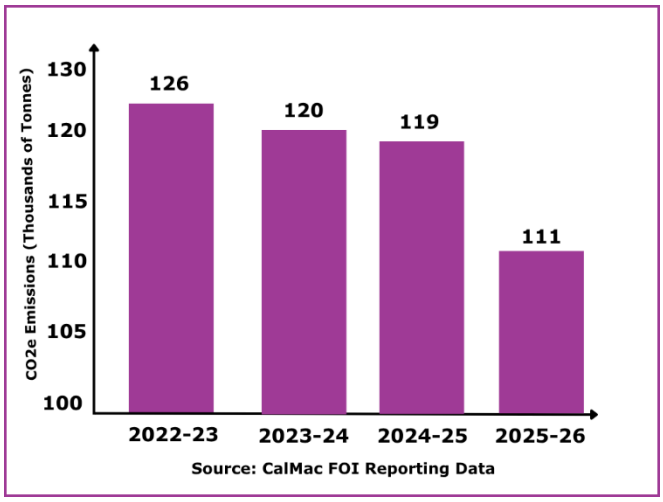
#### Major Lifeline Operators

Across UK lifeline services, transparency varies between privately and publicly owned operators. Privately owned WightLink and Red Funnel publish high level statistics on their success in reducing emissions and their plans to fully decarbonise through electrification, shore power and renewable energy. There is, however, an absence of vessel and route level reporting and crucially no regulatory mandate for them to do so.

In Scotland, CalMac's public facing content focuses on network wide service, fleet and environmental commitments, omitting vessel level annual $CO_2e$ data. As a publicly owned body they are obliged to respond to Freedom of Information (FOI) requests which, to support this project, we utilised to obtain vessel level emissions data.

Using this data, we calculated total CO2e emissions for the entire CalMac fleet across their reporting years 2022-23 to 2025-26.

**Figure 13: CalMac Total Fleet CO2e emissions**



At first glance, this chart indicates that CalMac are making positive progress in reducing fleet emissions. However, analysis of individual vessel data, cross referenced against their operational performance highlights that the increasing prevalence of mechanical and weather related disruptions is reducing the total number of annual sailings across the network. This in turn reveals why during 2025-26, total annual emissions were significantly lower than the previous reporting period.

Our analysis indicates that other Scottish based lifeline service providers such as NorthLink Ferries, Orkney Ferries, and Shetland Isles Ferries don't publish vessel level emissions data. They are all however, committed to improving the energy efficiency of their current fleet and with support from the Scottish Government, undertaking modernisation programmes to introduce low/zero emission vessels.

### River Ferry Operators

Public reporting of carbon emissions by UK river ferry operators is patchy. From our analysis of Thames, Mersey and Tyne operators, the Liverpool City Region Combined Authority provides the clearest ferry-specific disclosure, reporting 1,248 tonnes $CO_2e$ from Mersey Ferry vessel fuel consumption in its 2019/20 carbon baseline (most recent available data.

Nexus provides partial disclosure for the Shields Ferry on the river Tyne, stating that ferry services account for 3.2% of its direct $CO_2$ emissions, but does not appear to publish a standalone annual tonnes $CO_2e$ figure for the service.

On the Thames, TfL publishes organisation-wide operational carbon emissions, while Uber Boat by Thames Clippers publishes decarbonisation claims and vessel-level reduction percentages linked to hybrid and electric ferries, but from our analysis, neither appears to provide a comprehensive annual ferry-specific carbon inventory.

### What Carbon Emission Reporting Gaps mean for Policy Makers & Operators

The wide variations in the transparency of emissions reporting across UK operators is mostly caused by scale, ownership and reporting incentives. Smaller lifeline and river ferry operators may be constrained by resource, whereas larger private operators don't disclose vessel and route data for reasons of commercial sensitivity.

For policymakers, this creates a serious evidence gap: national models can estimate the sector's emissions, but they cannot easily show which routes, vessels or operating practices should be prioritised for investment. For operators, weak disclosure also makes it harder to justify funding for vessel renewal, shore power and alternative fuels.

A consistent emissions reporting standard across all public and private operators based on their annual fuel use, number of sailings, berthing time, passenger numbers and vehicle/passenger-kilometres would significantly improve long-term national fleet and port infrastructure decarbonisation planning.

# Section 3: Literature Review – Quantitative Data

## 3.7 Route Profiles

Analysis of published route data and operator maps identified between 115 and 129 active "point to point" scheduled passenger carrying ferry routes across the UK, including domestic island services, river and estuary crossings, and UK-international ferry links. Not included in this total are excursion services provided by river boat operators. They are excluded largely because there is very little published data from authoritative sources on the number of routes they operate.

The data in figure x should be treated as a working estimate rather than an official national total. DfT publishes robust passenger statistics by route type and international ferry route, but there is no single UK-wide live route register that classifies all services by nation, ownership, funding model, lifeline status, vessel type and route criticality. The absence of such a dataset is key finding of this report.

**Figure 14: Number of Point to Point UK Ferry Routes - 2025**

| Nation | Total Routes | % Lifeline Routes |
|---|---|---|
| **Scotland** | c 61-63 | c 90% |
| **England** | c 45-55 | c 18% |
| **Wales** | c 5-7 | c 14% |
| **Northern Ireland** | c 3-4 | 50% |

**Source: SRITC Analysis of Operator Routes**

A more detailed route criticality analysis is available in Annex 3. This breaks down every route by operator and the level criticality of as outlined in the route criticality matrix.

**An interactive map of most of these routes can be viewed here.**

### Scotland

The Scottish total is the strongest part of the estimate because the networks are more clearly documented. CalMac reports 38 vessels operating across 29 routes to 55 ports and harbours. Figure 15 illustrates the diversity of their route network, ranging from 5 minute "hop-on, hop-off" commuter links across the Cowal Peninsula to Bute, to journeys of over 5 hours from the mainland port of Oban to the outer isles of Barra and South Uist. This route diversity coupled with the seasonality of demand creates significant challenges for CalMac in fulfilling their role as a lifeline service provider.

**Figure 15: CalMac Route Network**




NorthLink operates three main passenger routes serving Orkney and Shetland from Aberdeen on the north east coast and Scrabster on the far north coast. With levels of vehicle and freight traffic growing annually, two new "freight flex" vessels have been commissioned which will feature additional

capacity for vehicles, freight, and up to 200 passengers in busy periods.

On the Orkney Isles, the council operates routes connecting it's capital Kirkwall to 13 of its smaller islands island destinations while analysis of Shetland Islands Council's published timetables confirms that they operate eight routes to their outer islands.

### England

The English network is characterised by routes on the English and Irish Channels that support international trade to urban river crossings that are commuter and tourist orientated.

While a relatively small percentage of these routes can confidently be classified as lifeline due to the availability of alternative modes of transport, collectively, they are a critical part of the UK's transport network depended on by thousands of businesses and millions of passengers.

This includes the Isle of Wight which has six core cross-Solent passenger routes operated by Wightlink, Red Funnel and Hovertravel. Inland, London's River Bus network runs from 24 piers, while the Woolwich Ferry, Gosport Ferry and Torpoint Ferry are examples of individual local ferry crossings that function as everyday transport infrastructure.

### Wales

For Wales, the clearest current scheduled international routes are the three Ireland-facing routes: Holyhead-Dublin, Fishguard-Rosslare and Pembroke-Rosslare. StatsWales reports sea passenger traffic between Wales and the Republic of Ireland by route, and the operator pages confirm the active Fishguard-Rosslare and Pembroke-Rosslare services.

### Northern Ireland

In Northern Ireland, the key domestic/local routes are Rathlin Island and Strangford-Portaferry. The Department for Infrastructure confirms the Rathlin ferry service and Strangford Lough ferry service, while the Lough Foyle Ferry operates seasonally between Magilligan and Greencastle, crossing between Northern Ireland and the Republic of Ireland.

## 3.8 Vessel Profiles

Analysis of the size, age and carrying capacity of 115 ferries operating across the UK water transport network provides valuable insights into the future decisions that operators will need to make about their replacement.

With an operating lifespan of 25 years or more, replacement planning needs to anticipate future route specific cargo/passenger volumes, the evolution of decarbonisation technologies, and scale of port infrastructure upgrades to support shore charging and refuelling.

### Size & Carrying Capacity

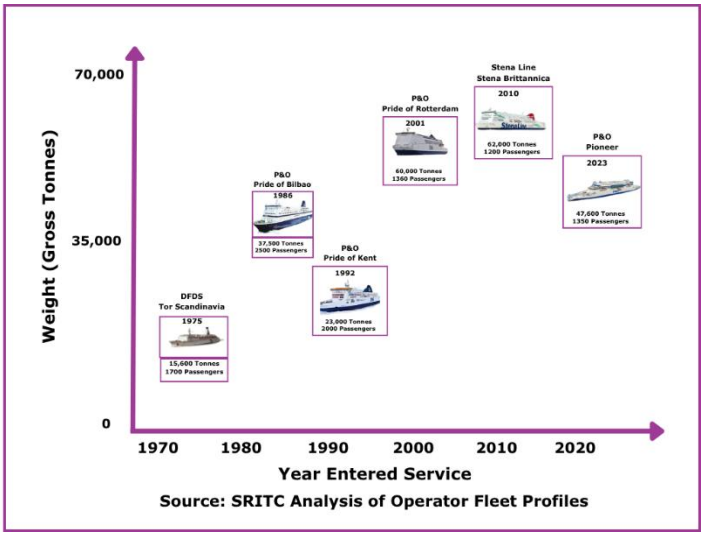
Analysis of 115 RoRo and RoPax vessels operating across the UK operating on domestic and international routes disproves the hypothesis that every decade sees the launch of larger vessels.

# Section 3: Literature Review – Quantitative Data

As figure 16 illustrates, the weight in gross tonnes (GT) and carrying capacity of new vessels needs to be carefully evaluated across interdependent variables that include.

- Forecast levels of demand from foot passengers, private and commercial vehicle drivers, and freight and logistics operators.
- Requirements to allocate deck space to cabins for longer duration sailings.
- Mandates to improve fuel efficiency and reduce carbon emissions.
- Requirements to support the welfare of seafarers/cabin crew who live on board.
- Requirements to supplement fare revenues through catering and on-board entertainment services.
- Requirements to minimise journey and loading and unloading times.
- Port/harbour berthing constraints.

**Figure 16 Evolution of Ferry Size & Capacity**



Source: SRITC Analysis of Operator Fleet Profiles

On the busiest international routes, with airlines and cross channel rail services offering faster and cheaper alternatives to ferries, operators are increasingly designing ferries with larger vehicle decks, faster loading arrangements and more space for commercial traffic.

Many channel ferries in service since the 1980s are over 35,000 GT in weight, between 150-200 metres long, and have capacity to carry 1500-2000 passengers and 250-600 vehicles.

The domestic coastal fleet is more varied. It includes large vessels on routes such as Cairnryan–Belfast, Cairnryan–Larne, Douglas–Heysham and the main CalMac island routes, but also many smaller lifeline ferries below 1,000 GT, often 25–50 metres long, carrying fewer than 300 passengers and between 10 and 50 vehicles.

River services sit at the other end of the scale: most river boats in the worksheet are below 1,000 GT, often under 50 metres, passenger-only, and generally carry between 50 and 300 passengers. The main exception is the Torpoint chain ferry service, where the vessels carry vehicles as well as passengers.

Moving forward, the challenge for international and domestic operators is to balance size and energy requirements. Older heavier vessels need to be replaced with lighter more sustainable models that are more energy efficient. This is the design challenge that operators, naval architects and ship builders are now tackling.

# Section 3: Literature Review – Quantitative Data

## Age Profiles

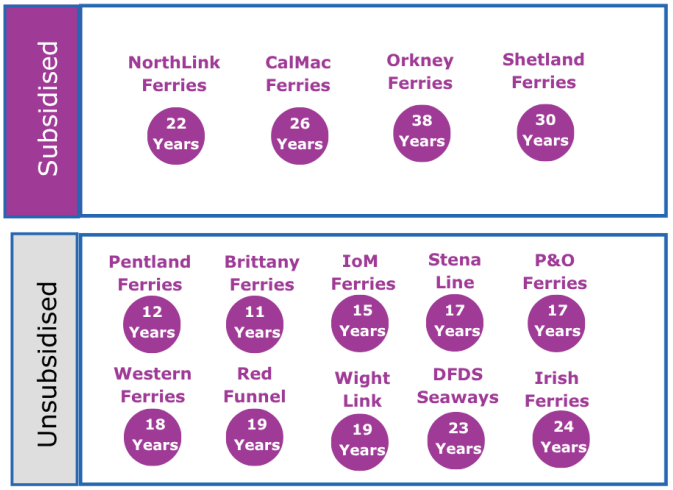
Age is the sharper dividing line between international and domestic operators. The international fleet contains several modern vessels launched since 2020 but many older ones too entering service from 2000–2003.

The domestic coastal fleet has a heavier concentration of older vessels, with many vessels launched in the 1980s, 1990s and early 2000s.

The river fleet is even more mixed: Thames Clippers includes modern hybrid vessels launched in 2023–24, but the wider river boat fleet includes heritage or long-serving vessels such as Yarmouth Belle, Royal Iris of the Mersey, Snowdrop, May Queen and Queen of Falmouth.

Figure 17 summarises the average age of vessels operated by subsided and unsubsidised operators, confirming that for many operators, the need to accelerate their fleet replacement programmes.

**Figure 17: Operator Average Vessel Age**




**Source: SRITC Analysis of Operator Fleet Profiles**

## The aging vessel reliability risk

The vessel reliability risk is most visible in the Scottish domestic network. CalMac has stated that its annual maintenance period has increased from 668 overhaul days in 2024-2025 to 768 days in 2025-26.

The 23 year old MV Caledonian Isles that serves CalMac's Ardrossan to Isle of Arran route has become the emblematic case, with more than £22m spent on repairs and the vessel out of service from January 2024 to October 2025. The winter 2025-26 period was particularly problematic for CalMac with up to 10 ferries out of service at the same time affecting virtually every island served by a major vessel.

Larger privately operated vessels are not immune to unreliability. Most notably, in recent years, Isle of Wight operators Red Funnel and Wightlink have both faced repeated public criticism over the reliability of their ageing fleet, limited spare capacity, and maintenance pinch-points. While many of these faults are quickly repaired, even short disruptions are painful for island residents who have no other practical alternatives of reaching the UK mainland.

River services face a different vulnerability: smaller vessels and low redundancy mean that infrastructure failure can close a route altogether, as shown by the Hythe Ferry entering voluntary liquidation after an 18-month failed rescue effort.

While these services are not usually lifeline routes, they can still help reduce road pressure and extend the visitor economy beyond major gateways.

# Section 4: Literature Review – Qualitative Analysis

## 4.1 Policy Environment

UK water transport sits within a layered policy environment. International rules set the baseline for safety, passenger rights, environmental standards and vessel operations. UK and devolved government strategies then shape how ferry services are planned, funded, regulated and decarbonised. Local and regional transport plans influence how ferry terminals connect with roads, rail, buses, active travel and port infrastructure.

At the international level, ferry policy is strongly shaped by safety. Many modern requirements emerged from major ferry disasters, including the Herald of Free Enterprise and Estonia. The International Maritime Organization's domestic ferry safety guidance reinforces the importance of competent authorities, transparent inspection, safe manning, accredited training and the master's overriding authority not to sail when conditions are unsafe.

European and retained UK frameworks also influence passenger counting, Ro-Ro vessel stability, security, accessibility, assistance, refunds and compensation.

**Figure 18: Policy Layers**

| Policy Layer | What it controls | Why it matters for ferry users |
|---|---|---|
| **International maritime rules** | Safety management, vessel standards, passenger counting, stability, environmental requirements | Sets minimum standards for safe and lawful operation |
| **Passenger rights and accessibility rules** | Assistance, refunds, re-routing, non-discrimination, information duties | Shapes the passenger experience during normal travel and disruption |
| **UK maritime policy** | Decarbonisation, innovation funding, port connectivity, workforce standards | Influences long-term investment and operating conditions |
| **Devolved transport and island policy** | Lifeline services, fares, contracts, community needs, vessel and port planning | Determines how strongly ferry connectivity is treated as public infrastructure |
| **Local and regional transport policy** | Terminal access, bus/rail integration, active travel, local ferry support | Determines whether ferry journeys work as part of door-to-door travel |

# Section 4: Literature Review – Qualitative Analysis

Within the UK, maritime policy increasingly focuses on decarbonisation, innovation, port connectivity and workforce standards. UK SHORE, CMDC, ZEVI and the Maritime Decarbonisation Strategy all point towards cleaner vessels, shore power and lower-emission port operations. Smaller, high-frequency ferry routes are especially relevant because they offer some of the clearest early opportunities for electrification. However, ferries are still not consistently treated as part of the everyday public transport network, which helps explain weak integration with rail, bus, active travel and digital ticketing systems.

### Scotland

Scotland has the clearest national framework for lifeline ferry services through the Islands Connectivity Plan, National Transport Strategy 2 and Islands (Scotland) Act 2018 that give ferry connectivity a clearer policy footing than exists elsewhere in the UK.

Community Needs Assessments, Island Communities Impact Assessments and long-term vessels and ports planning all reflect the fact that ferry services affect access to healthcare, education, employment, supplies and community life. Scotland's policy framework also recognises the need to balance affordability, capacity, reliability, accessibility and low-carbon transition.

This does not mean the Scottish model is free from problems. The west coast and island ferry networks continue to face challenges around ageing vessels, disruption, procurement delays, harbour constraints and public confidence. But from a policy standpoint, Scotland provides the clearest example of a government recognising that ferries are not peripheral transport assets. They are part of the social and economic infrastructure of island life.

### England

England has a different ferry policy profile because many ferry services are privately operated. Some are commercially strong while others sit in a more difficult position: privately operated, but important enough to communities that they raise public-interest questions.

The Isle of Wight is the clearest example. Cross-Solent services are essential to residents, businesses, public services and visitors, yet they operate largely as commercial services. That creates a different set of policy questions from Scotland's subsidised lifeline model.

The issue is not simply whether the routes are profitable or privately owned. It is whether users have enough protection around affordability, resilience, service standards and long-term investment when there is no fixed link and limited practical alternative.

At national level, the policy position on Isle of Wight ferry services remains unsettled. Parliamentary attention has increased, with the island's 2 MPs raising concerns about the lack of ferry regulation, high fares, reliability and the absence of equivalent public-interest protections to those found in bus and rail.

At the same time, the expansion of the UK Emissions Trading Scheme to domestic maritime from July 2026 will affect larger

ferries over 5000 tonnes in weight, including WightLink and Red Funnel vessels operating on Isle of Wight routes. This creates a difficult policy tension: the Island's ferry services are commercially operated, but they perform a lifeline function for residents, businesses and visitors, and new environmental costs may feed through into fares unless matched by clearer affordability, investment or decarbonisation support.

At a local authority level, operators of local connectivity river ferry services face a difficult policy position because they often sit outside the main national transport conversation yet perform an important public transport role by connecting communities across rivers, reducing road detours, and supporting people without cars.

The main policy challenge is that the public value of these services is not always matched by stable funding, clear accountability or consistent performance expectations. The closure of the Gravesend to Tilbury Ferry in 2024 illustrates the risk: a short river crossing that offered a practical alternative to longer road journeys was lost when a sustainable contract and funding package could not be secured.

Local authorities are also expected to respond to wider policy goals, including accessibility, decarbonisation, integration with bus and rail, public safety, active travel and local economic development. Yet they often lack the long-term capital funding needed to replace vessels, modernise terminals, introduce low-emission propulsion or provide the kind of real-time passenger information now expected across other modes.

### Wales & Northern Ireland

For Wales, the core policy issue is how to protect and modernise the Welsh-Irish ferry corridor while recognising that the Welsh Government does not control every lever. Holyhead, Fishguard and Pembroke Dock are strategically important to freight, tourism and passenger travel between Great Britain and Ireland.

The Welsh Government's own 5-point plan highlighted the vulnerability of Welsh ports to post-Brexit trade diversion, while Storm Darragh in December 2024 underlines that resilience, contingency planning and berth/terminal infrastructure are now live policy issues

In Northern Ireland, the Executive operates in a landscape where it must manage both strategic commercial connectivity and smaller but socially essential, subsidised ferry services at Rathlin Island and Strangford Lough.

For the high volume commercial routes between Belfast, Larne and Scotland and England, the priority is likely to be resilience and regulatory alignment, especially as carbon pricing, fuel rules, port infrastructure requirements and border arrangements evolve.

# Section 4: Literature Review – Qualitative Analysis

## 4.2 Progress Towards Decarbonising Vessels and Harbours

### Current Policy Position

The UK Government's current position is that domestic maritime must move from incremental emissions reduction to a managed transition towards zero-emission operation.

The Maritime Decarbonisation Strategy sets a clear direction: UK domestic maritime should aim for zero fuel lifecycle greenhouse gas emissions by 2050, with interim reductions of at least 30% by 2030 and 80% by 2040, relative to 2008 levels. For ferry operators, this makes decarbonisation a long-term operating requirement rather than a discretionary environmental improvement.

For ferry operators, the practical policy focus is on three areas:

- Zero-emission vessels for short and regular routes
- Shore power and port energy systems
- Alternative fuels for larger vessels where full electrification is more difficult

In Scotland, the Islands Connectivity Plan and Vessels and Ports Plan provide a more route-specific policy framework. The Scottish Government has committed to progressive decarbonisation of the publicly owned ferry fleet, including a target for 30% of the CMAL-owned fleet to be low or zero emission by 2032 and plans for small fully electric vessels on suitable inter-island routes.

This is important because Scotland's lifeline network contains many routes where public bodies have direct influence over vessel specification, ownership and long-term investment.

### Major Milestones Achieved

The milestones shown in Figure x illustrate how UK vessel and port decarbonisation has moved from policy ambition into early-stage implementation.

The publication of Maritime 2050 and the Clean Maritime Plan in 2019 established the first long-term policy framework for reducing maritime emissions, while the launch of the Clean Maritime Demonstration Competition in 2021 and UK SHORE in 2022 created a dedicated funding route for clean maritime innovation.

Since then, UK Government support has helped accelerate feasibility studies, technology trials and early deployment projects covering zero-emission vessels, alternative fuels, shore power, port energy systems and supporting infrastructure.

The publication of the Maritime Decarbonisation Strategy in 2025 strengthened this direction by setting clearer emissions-reduction milestones for domestic maritime through to 2050.

Alongside these policy and funding milestones, ferry operators and ports have begun to deliver visible changes.

- P&O Ferries has introduced hybrid vessels on Dover-Calais.
- DFDS has announced a major investment in battery-electric ships for Channel routes.

- Red Funnel has progressed plans for a zero-emission high-speed Solent ferry, and
- CMAL has started construction of seven new electric ferries for Scotland's small-vessel fleet.

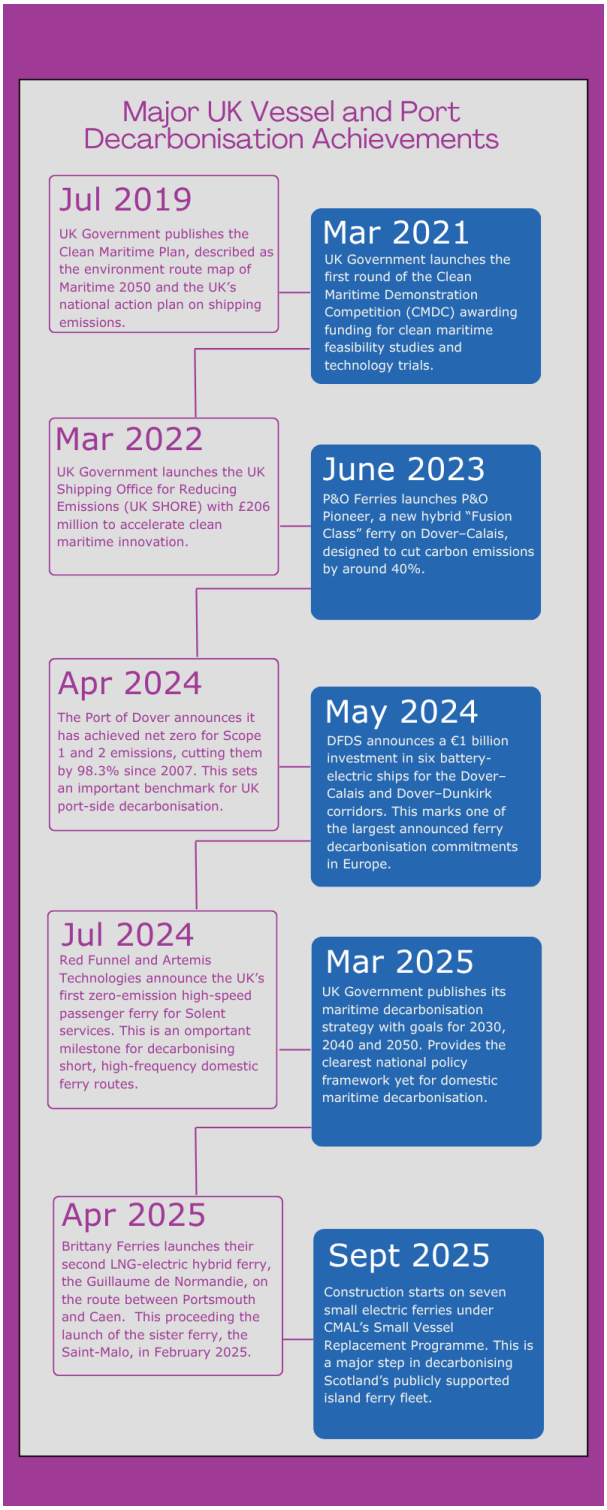
Port decarbonisation is also moving forward, with Dover reporting net zero Scope 1 and 2 port operations and Portsmouth developing one of the UK's most advanced shore-power systems for ferry and cruise berths. These examples show that progress is real, but still uneven.

The UK is no longer at the starting line, but the milestones achieved so far are mostly early markers in a much longer transition that will require coordinated vessel replacement, port upgrades, grid investment and long-term funding.

The most significant regulatory development is the expansion of the UK Emissions Trading Scheme to domestic maritime from 1 July 2026. The scheme will apply to ships of 5,000 gross tonnes and above undertaking domestic voyages, including in-port emissions. It will cover carbon dioxide, methane and nitrous oxide. The policy is intended to strengthen the financial incentive to reduce emissions, but its effects will vary by route.

Voyages between Great Britain and Northern Ireland will receive a 50% deduction from surrender obligations to avoid a disparity with EU ETS treatment of Republic of Ireland routes. Ferry services to Scotland's islands and certain peninsular communities will be exempt, with the exemption to be reviewed in 2028.

**Figure 19: Major UK Vessel and Port Decarbonisation Achievements**



# Section 4: Literature Review – Qualitative Analysis

## Role of Innovation Programmes

UK SHORE is the umbrella programme that the DFT is using to accelerate the decarbonisation of the maritime sector. The Clean Maritime Demonstration Competition (CMDC) and the Zero Emission Vessels and Infrastructure (ZEVI) programme are the main funding vehicles that sit within SHORE.

Funding is awarded to collaborative Research and Development projects that develop, deploy and operate clean maritime solutions in real-world conditions.

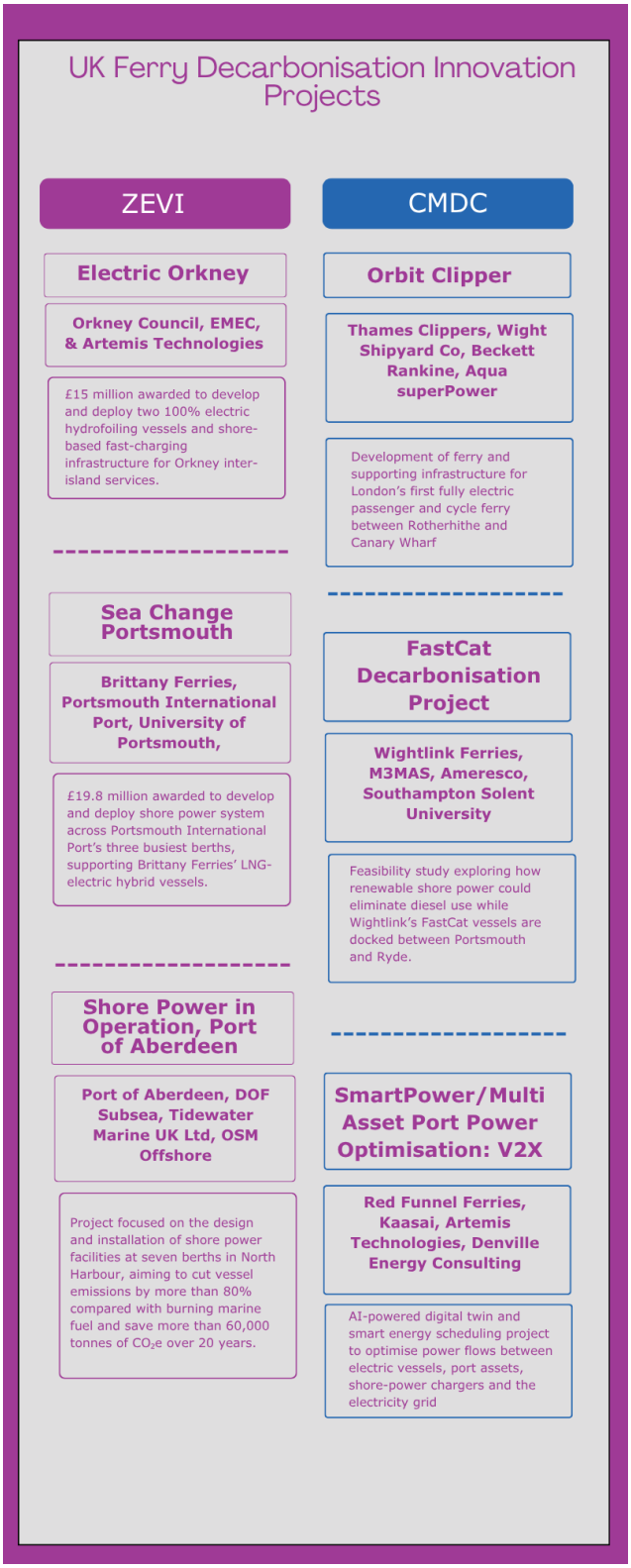
Eligible areas include alternative fuel vessels, fuel bunkering and storage, 100% battery electric vessels, vessel charging infrastructure, shore power, port energy infrastructure and vessel efficiency technologies.

Since its launch in 2021, the SHORE programme has been allocated £708 million of funding by the DfT with close to £260 million awarded to projects, and a supplemental £448 million made available for the period 2026-2030.

These programmes are important because they show that UK ferry decarbonisation is already moving beyond concept studies into route-specific demonstrations, with ferry operators involved as test-route providers, vessel owners, service operators and port-energy partners.

However, innovation funding is not the same as fleet transition. Demonstration projects prove what can work. Mainstream adoption still depends on commercial viability, procurement pipelines, port readiness, grid connections, skills, finance and regulation.

**Figure 20: Major Vessel and Port Decarbonisation Innovation Programmes**



# Section 4: Literature Review – Qualitative Analysis

### Pathway to 2050 Zero Emissions

The combination of policy, regulatory and innovation levers are creating conditions that incentivise the development of sector wide collaborations necessary to fully decarbonise vessel and port operations.

Nonetheless, the path towards zero emissions by 2050 remains fuzzy because many of the necessary technologies, capabilities and resources are in the early stages of development and deployment. The pace of decarbonisation will be shaped by public and private sector investment decisions, varying by operator and location.

### Lifeline and High Dependency Operators

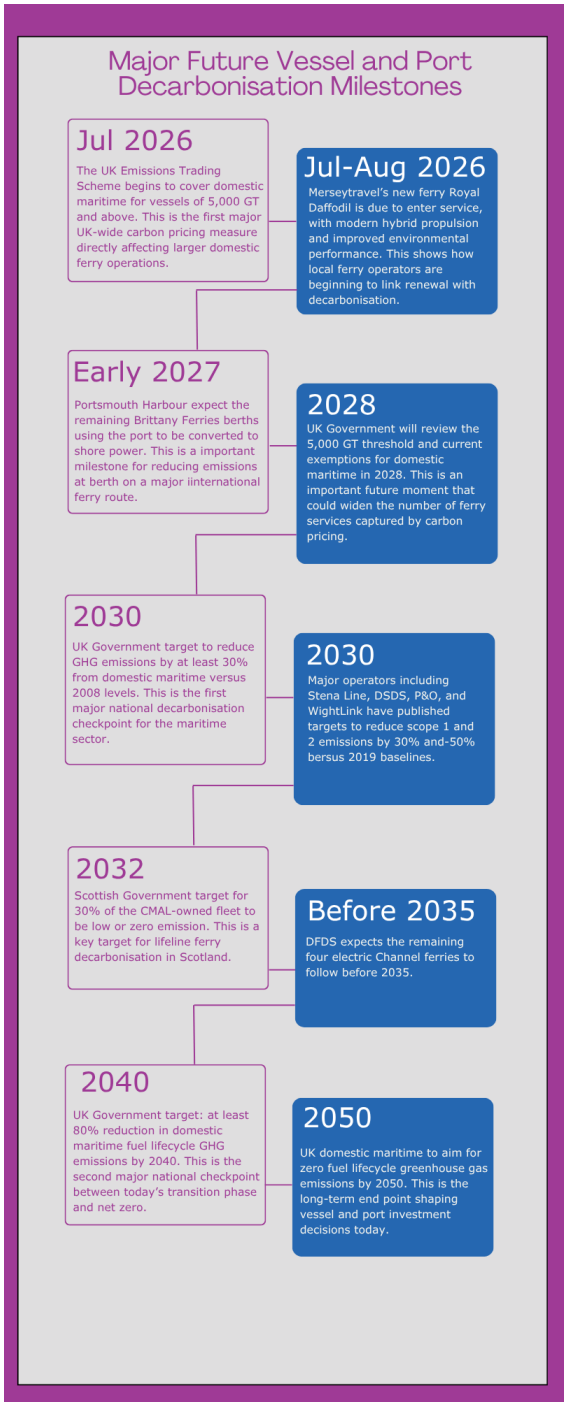
Progress is clearest in Scotland where the government controls the vessel and port asset investment plans and the long-term operational contract.

The initiation by CMAL in 2025 of a £160 million investment programme to construct seven small battery electric ferries represents the first tangible step towards full decarbonisation of Scotland's Clyde and Hebrides network.

Decarbonising the remainder of the CalMac operated fleet over the next 20 years is a more challenging proposition in large part due to the size of the vessels and the exposed routes that they operate on. Extensive techno-economic analysis will be required to determine the most suitable low carbon fuelling system for each vessel and the capacity for supporting harbour infrastructure to provide the fuelling infrastructure.

The necessity to replace CalMac's oldest vessels that are increasingly vulnerable to breakdown may mean that new conventional fuelled ferries enter service over the next 5-10 years.

**Figure 21: Future UK Vessel and Port Decarbonisation Milestones**



With a lifespan of 20-25 years, unless they are able to be retrofitted with mature low/zero emission systems, it could be after 2050 before the entire fleet is decarbonised.

In the Orkney and Shetland Isles, local authority are adopting an open minded approach to how their fleet of small inter-island vessels are decarbonised. The innovation collaboration between Orkney Isles Council and Artemis Technologies demonstrate an appetite to not only remove emissions but transform the experience of travelling by ferry.

The alternative pathway being investigated by Shetland Isles Council with support from Transport Scotland is the replacement of ferries with tunnels that connect their small isles. In itself, this won't eliminate carbon emissions, but the expectation is that it could be a more cost effective long-term decarbonisation route as road transport is electrified.

In England, privately operated lifeline and high-dependency routes are moving unevenly. Wightlink has pledged to achieve net zero carbon emissions within the next decade and has identified the removal of around 25,000 tonnes of carbon per year by 2030 as its ambition, but its larger electrification plans depend on securing sufficient investment from investors to build zero emission vessels and install grid capacity at harbours on the Isle of Wight.

Red Funnel has moved further on high-speed passenger vessel innovation through its partnership with Artemis Technologies, with a zero-emission electric hydrofoil passenger ferry intended to operate between Southampton and the Isle of Wight. At the same time, it faces similar financial challenges to WightLink. Decarbonising its entire fleet depends on Red Funnel providing investors with confidence on how and when existing vessels will be decarbonised.

### Strategic and International Operators

These operators are generally more advanced in fleet renewal, but not necessarily closer to zero emissions. Stena Line has targeted a 30% reduction in vessel $CO_2$ emissions by 2030 and DFDS is targeting a 45% reduction in vessel $CO_2e$ intensity by 2030 and net zero by 2050, announcing major investment in battery-electric vessels for the Channel.

P&O Ferries has set 2030 greenhouse gas reduction targets across Scopes 1, 2 and 3, and has introduced hybrid double-ended vessels on Dover-Calais.

Brittany Ferries has introduced LNG-electric hybrid vessels designed to use battery power in port and when manoeuvring, particularly through Portsmouth while Irish Ferries has begun using HVO on the Dublin Swift service between Dublin and Holyhead.

These actions show movement, but also reveal the current transition phase: hybridisation, LNG, HVO, efficiency upgrades and shore-power readiness are being used while zero-emission fuels and full electrification remain difficult.

A March 2026 report by the European Federation for Transport and Environment evidences the challenges that lie ahead for operators using major UK ports.

# Section 4: Literature Review – Qualitative Analysis

Bottom-up modelling was used to calculate 2023 traffic and tank-to-wake (TtW) energy and emissions for every ferry above 400 gross tons (GT) operating in Europe, based on AIS data and individual ship technical specifications.

The report concludes that ferries serving UK routes face more challenging economics for battery electrification than many ferries operating exclusively within Europe. This is attributed to higher UK electricity prices, the energy demands of larger and longer-distance services from the UK, and a policy environment that differs from the EU framework of FuelEU Maritime and ETS incentives.

As a result, while the report identifies batteries and hybrid systems as promising for many shorter intra-European routes, longer UK-connected services may depend more heavily on alternative fuels such as e-ammonia or e-hydrogen, and supportive policy measures around electricity pricing, charging infrastructure and carbon regulation.

### Local Commuter and Tourism Operators

Analysis of the UK's major local commuter and tourism ferry operators confirms that in comparison to their lifeline and strategic route peers they are overall at earlier stage in decarbonising their vessels.

Mersey Ferries' new Royal Daffodil has been built as a modern hybrid-ready vessel which is scheduled to enter service in summer 2026, while in North East England, the Shields Ferry investment programme is currently focused on securing landing infrastructure and long-term service continuity.

Many smaller river, harbour and visitor operators have limited published decarbonisation plans, reflecting both the scale of their businesses and the absence of consistent reporting expectations.

### Port decarbonisation programmes

Port decarbonisation is becoming the make-or-break issue. Ferries cannot decarbonise in isolation from the harbours, terminals and energy networks that support them.

Nevertheless. decarbonising port operations is one of the most complex challenges facing the water transport sector because ferry ports are not a single type of asset.

The UK coastline includes major international RoPax gateways such as Dover, Portsmouth, Hull, Holyhead and Cairnryan; island lifeline ports and harbours across Scotland, Northern Ireland and the Isles of Scilly; urban river ferry terminals on the Thames, Mersey and Tyne; and small piers, slipways and landing stages serving local, seasonal or tourism-focused services.

These places handle very different traffic: foot passengers, cars, coaches, freight, livestock, emergency vehicles, cruise passengers, workboats, offshore vessels and visitor boats. As a result, the transition to net zero will not look the same everywhere.

At larger ports, the challenge may be to provide shore power, berth electrification, grid reinforcement, freight handling space, EV charging and alternative fuel infrastructure while keeping high-volume passenger and freight operations moving.

# Section 4: Literature Review – Qualitative Analysis

Portsmouth International Port's Sea Change project is one of the clearest UK examples of large scale port decarbonisation in action. A 15 MVA shore power system planned for its three largest berths. This will support Brittany Ferries' LNG-electric hybrid ships and allow vessels to connect to shore power rather than run engines while alongside.

The port of Dover shows both progress and the scale of the challenge. The port has reported a 98.3% reduction in its Scope 1 and 2 emissions from 2007 and announced achievement of its 2025 net zero port operations target. However, analysis from the Dover Clean Ferry Power project highlights that the port's current grid capacity is not sufficient for future ferry electrification, with potential demand rising sharply if hybrid and fully electric ferries are introduced at scale.

At smaller ports, the issue may be more basic but no less important: whether ageing linkspans, slipways, waiting areas, ticketing systems, breakwaters, passenger shelters and local grid connections can support new low-emission vessels.

The ease with which smaller ports can be upgraded will depend on ownership, site constraints, grid capacity, planning permissions and the conditions of current infrastructure which may be many decades old.

The capital costs may exceed what local authorities, harbour trusts or operators can realistically fund from normal budgets. This has the potential to create a major sequencing problem: a new electric or hybrid ferry is only useful if the port can charge it, berth it safely, load it efficiently and manage passengers and vehicles in a way that is accessible and resilient.

To mitigate these risks, port decarbonisation should be treated as part of a whole-route investment plan because in the future, ferry ports will need to function not only as transport gateways, but as energy nodes, resilience assets and accessible public transport interchanges.

### Major Barriers to Vessel & Port Decarbonisation

The main barriers to the full decarbonisation of ferries and ports are clear.

First, vessel replacement is expensive and slow. Ferries are long-life assets, and decisions made in the next decade will shape emissions into the 2040s and beyond.

Second, grid capacity at ports of all sizes is a major constraint, especially where multiple vessels need access to shore power.

Third, the split between vessel operators, port owners, harbour authorities, electricity networks and government funders makes whole-system investment difficult.

Fourth, technology choices remain uncertain for longer and more exposed routes, where batteries may not provide sufficient range and alternative fuels such as methanol, hydrogen, ammonia or advanced biofuels are not yet widely available at the right cost, safety standard or scale.

There are also commercial and social risks. The introduction of carbon pricing schemes, most notably, the EST, may incentivise

change, but it can also increase costs for operators and passengers if alternatives are not available. Publicly funded lifeline operators may need direct capital support, while private operators will need confidence that investments can earn returns without making fares unaffordable.

Finally, weak data remains a serious barrier. Without consistent route-level emissions, fuel use, vessel age, port capacity and investment data, it is difficult to judge whether decarbonisation is happening fast enough or where support should be prioritised.#

## 4.3 Integration Between Ferries and the Wider Public Transport Network

Government sustainable transport hierarchies such as the one in figure 22 used by Transport Scotland, prioritise walking, wheeling, cycling, and the use of public transport.

**Figure 22: Transport Scotland Sustainable Travel Hierarchy**




Better integration of ferries with public transport, active travel, and other more sustainable alternatives like car clubs create a more efficient transport network, give increased choice for travellers, and ease the growing pressure on ferry vehicle deck space.

From a passenger experience perspective, better integration requires improvements to be made in the physical and digital realms. This recognises that where interchanges between trains, buses and ferries are physically located, matters as much as the integration of tickets and timetables. Long walks between a ferry terminal and a train platform are not conducive to encouraging greater levels of active travel.

To understand what the current experience feels like for non-vehicle driving passengers, we used mapping tools and information published on ferry operator and Government websites to establish.

- The policy changes that have had the greatest effect on integration levels since the late 19th century.
- The proximity of train stations or platforms to ferry terminals.
- The depth of support information provided by ferry operators to passengers who plan on start or end their journey using public transport.
- The journeys that can be using a single ticket that covers ferries, trains and buses.

### Policy Changes

As outlined in the overview of the ferry operator ecosystem, historically, a number of the UK's strategically important ferry links were developed as extensions of the rail network rather than as separate marine services. Railway companies owned or controlled ships, harbours, piers and

connecting timetables, allowing ferry services to be marketed and operated as part of longer rail-and-sea journeys.

This was especially visible on cross-Channel and Irish Sea routes, and on parts of the Clyde and west coast of Scotland, where rail companies used steamers and packet services to extend the reach of their networks beyond the railhead.

Wemyss Bay train station on the Firth of Clyde provides a vivid illustration of how in a pre-motor vehicle world, passengers departing Glasgow could travel seamlessly - using a single ticket – by train and steam boat to the Isle of Bute.

Opened in 1865 and still operational today as a Grade A listed building, Wemyss Bay station is notable for the short, covered walkway from the train platform to the CalMac ferry pier.

Holyhead, Fishguard, Harwich, and Heysham are other examples of ferry ports that retain direct links to train stations as a result of legacy ownership models.

While this feature shouldn't be remarkable, the restructuring and sale of Sealink in 1984 and rail privatisation in the 1990s separated passenger services and rail infrastructure into separate operating businesses.

The fragmentation of ownership across the rail and bus sectors has created a situation where the passenger experience is often placed in the hands of operators who have different incentives, planning horizons and funding arrangements.

The result today is not the complete absence of integration, but it's more often achieved through partnership, ticketing agreements, public-sector coordination or local goodwill rather than through a single vertically integrated transport operator.

The sharpest dividing lines on integrated transport policy are found where central or local Government bodies have complete control over planning and operations.

In Scotland, ScotRail and CalMac are both controlled by the Scottish Government, providing scope to not only develop but implement integrated transport policies. The draft Islands Connectivity Plan published in February 2024 sets out the Government's strategic approach to delivering an integrated travel experience, committing to investigate smart ticketing, integration across transport modes and how travel information can be improved for passengers during and outside of disruptions.

After a consultation period that allowed islanders to provide feedback on the proposed plan, CalMac and ScotRail announced in May 2026 that they are forming a new partnership that implements the required improvements.

In England, the clearest examples of vertical integration are found in Newcastle and Liverpool where the Local Authorities (Nexus and Mersey Travel) offer tickets that cover rail, bus and ferry travel.

In London, Transport for London's control of public transport services doesn't extend to Thames river ferries. Standard single day tickets and travel cards are not eligible on ferries although discounted travel is offered to travel card holders.

Outside of these cities, cross channel ferry operators Stena Line, Irish Ferries, and Isle of Man Steam Packet have partnerships in place with rail operators and booking agents that enable combined "Rail-Sail) tickets to be purchased. These arrangements are not governed by any policy and liable to change if the partners have evidence of low level of demand.

### Proximity of Train Stations/Platforms to Ferry Terminals

Proximity counts when – in many cases - public transport users are elderly, travelling with young children, and/or luggage. Longer walks between train stations, bus stops and ferries create the risk of missed sailings which can be more than an inconvenience if it's the last sailing of the day.

A fully integrated travel experience is one where passengers can quickly and easily transition from one mode of public transport to another. Inland this is found at transport hubs where trains, buses and trams meet.

To understand what the transition experience looks like for ferry users, mapping tools were used to determine how many UK ferry ports have a train station or platform on site. The results are summarised in figure 23

The absence of train stations situated at many lifeline and high dependency ferry ports is explained by their location. Ports located on the west and north coast of the Scottish mainland lie well outside of the mainline rail network.

**Figure 23: Analysis of UK Mainland Ferry Ports with Train Station/Platform on-site**

| Route Criticality Level | Total Number of UK Ports Analysed | Number Of UK Ports with Train Station on Site |
|---|---|---|
| Essential lifeline route | 26 | 8 |
| High-dependency route | 8 | 4 |
| Strategic economic route | 15 | 7 |
| Local connectivity route | 12 | 2 |
| Tourism oriented route | 5 | 1 |
| **Total** | **66** | **22** |

**Source: Google Maps**

The exception being Mallaig which is the final stop on the West Highland Line which starts in Glasgow.

Where train stations are co-located with lifeline ferry ports, it's largely due to the aforementioned historical reasons. In the absence of train connections, shuttle and scheduled bus operators do offer drop off points close to most ports that were analysed but infrastructure is limited to a bus shelter.

Analysis of strategic economic cross channel and Irish Sea routes produces a similar picture. Co-located ports and train stations are found in Holyhead, Heysham, Harwich, Portsmouth, Pembrooke Dock, Fishguard which all have links back to legacy railway owners.

Loch Ryan Port and Cairnryan ports on Scotland's south west coast serve as strategic

passenger and freight gateways to Northern Island and offer a cautionary note on how the benefits of integrated public transport services are lost when the need to accommodate a growing number of vehicles and freight traffic is prioritised ahead of foot passengers.

Until 2011, ferry services across the Irish Sea departed from Stranraer Harbour 5 miles down the coast from Cairnryan. With a train station adjacent to the ferry terminal this offered foot passengers a direct connection to Glasgow.

The transition of ferry operations to Cairnryan, which doesn't have a train station, means foot passengers travelling to and from Scotland's central belt are limited to a single daily bus service that departs from Ayr train station which is much less convenient.

Other large ferry ports that serve strategic economic routes and don't have a train station on site or in close proximity include Dover, Liverpool Birkenhead, Hull, and Newcastle. While bus services are available, they don't always offer drop off points at the ferry terminal meaning a walk is required to complete the final part of the journey.

Local connectivity and tourism ferry terminals are also noteworthy for the lack of a mainline train station this is nearby. A walk or bus ride is required to arrive at the departure points for Mersey Ferries, Thames Clipper and Woolwich services (although Tube stations are close by), and ferries that cross the River Tamar, River Dart, River Fal, Poole Harbour, Lake Windermere, Loch Lomond and Loch Ness.

The main conclusion to be taken from this analysis is that the needs of passengers arriving by public transport at ferry ports and terminals around the UK aren't fully served from an integrated infrastructure perspective.

There are many instances where passengers are asked to walk to the ferry terminal from the nearest train station or bus stop. Distances can be considerable, terrain uneven, unlit and hilly, and no weather protection available. This is an unattractive proposition to anyone who is open to the idea of travelling by public transport rather than using a car, and most so for those with mobility issues, carrying heavy luggage, or juggling young children.

Improving this experience isn't in many cases a straightforward process because port infrastructure and terminal buildings are not always owned and managed by ferry operators. Locating a train station or platform closer to a ferry terminal can be a significantly costly, complex and timely multi-organisational endeavour.

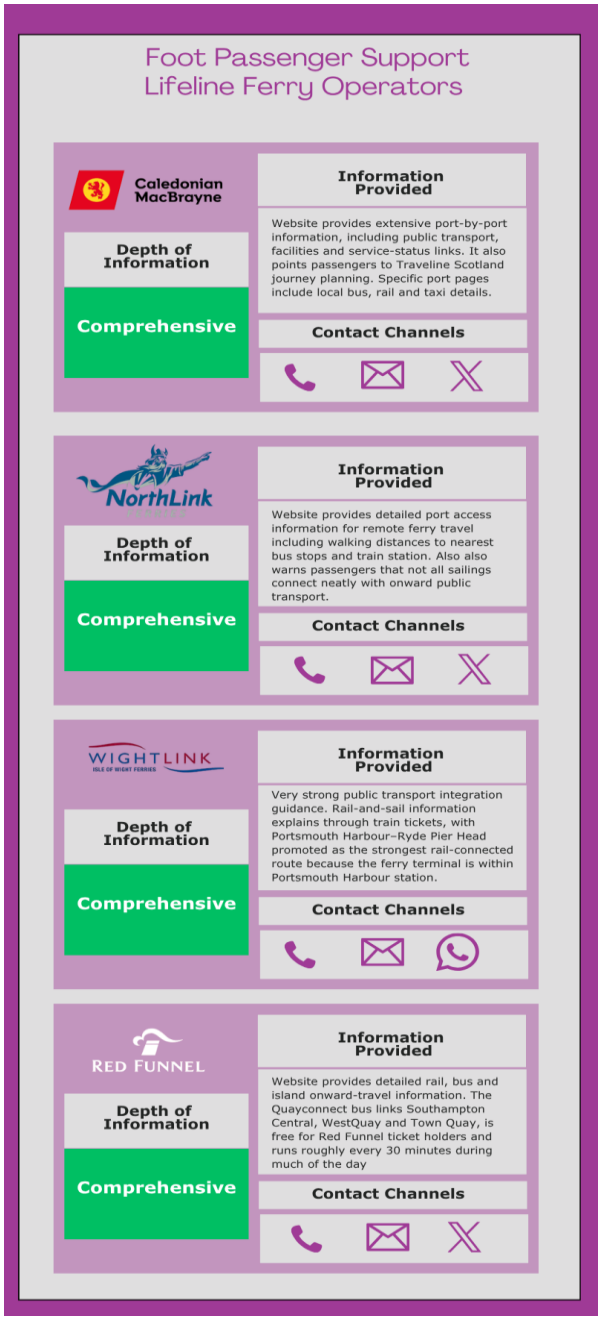
### Operator Support Offered to Foot Passengers

How supported do travellers feel when planning and using public transport to reach a ferry terminal? To answer this question, we reviewed the information that major RoPax ferry operators provide on their website and social media accounts. This recognising that passengers who are unfamiliar with the route they will be travelling on will most likely search online for guidance and contact information.

The four main lifeline service providers operating services in Scotland and to the Isle

of Wight offer the most comprehensive travel support information.

**Figure 24: Support for Foot Passengers Using Lifeline Ferry Services**




This includes help in planning journeys to their ferry ports by bus, train and taxi, and warnings where a walk is required to reach the terminal. Wightlink stand out in using WhatsApp to enable real time conversations with passengers.

Across the strategic ferry operators serving longer-distance UK, Ireland and continental routes, the depth and quality of support provided to foot passengers is variable but generally strongest where operators recognise that the ferry crossing is only one stage in a wider end-to-end journey.

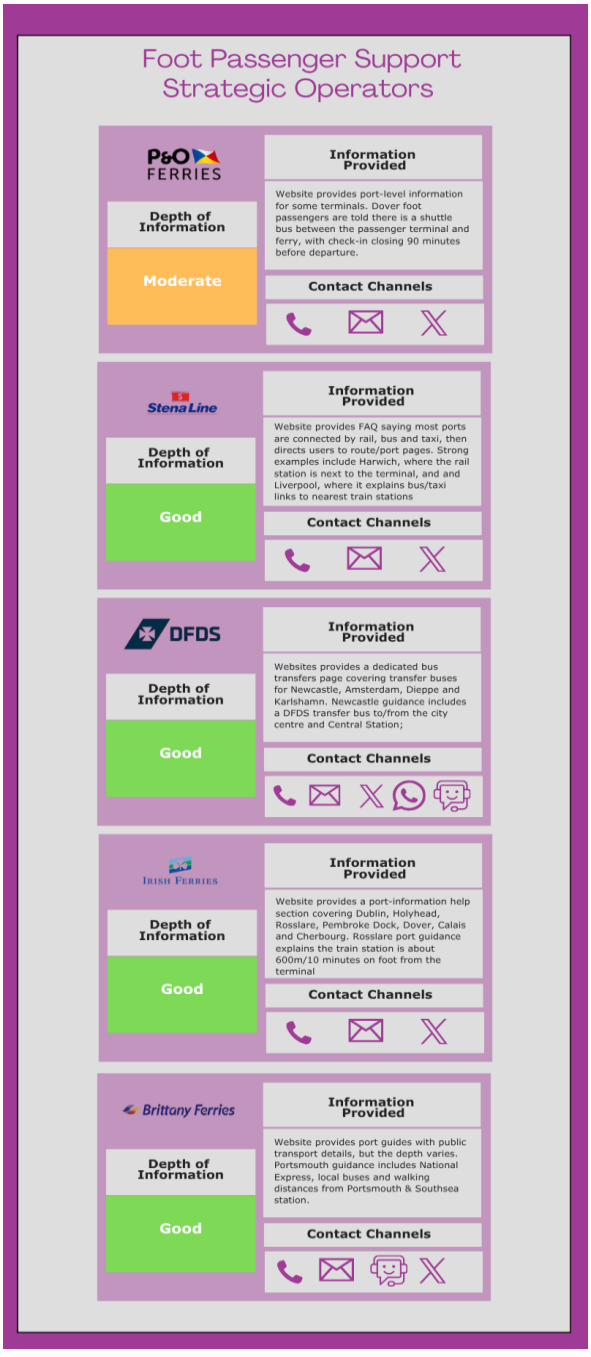
Stena Line, Irish Ferries, and Brittany Ferries give passengers enough information to understand whether public transport access is realistic, although the information is often spread across port pages, FAQs and route-specific sections rather than presented as a single, user-friendly “travelling without a car” guide.

P&O Ferries and DFDS provide more mixed support. Both operators offer useful information in specific cases, such as P&O’s Dover and Calais shuttle arrangements and DFDS’s transfer buses for routes such as Newcastle–Amsterdam and Dieppe, but the overall presentation is less consistent across routes and ports.

A recurring weakness across the strategic operators is that passengers are not always given a clear, route-by-route answer to the most basic questions: whether foot passengers are accepted, how they reach the terminal by public transport, what happens between the terminal entrance and vessel check-in, and who to contact if assistance is needed.

# Section 4: Literature Review – Qualitative Analysis

**Figure 25: Support for Foot Passengers Using Strategic International Ferry Services**




Taken together, this review of operator customer support for foot passengers highlights a clear distinction between ferry operators that treat foot passengers as part of an integrated public transport journey and those that provide only the minimum information needed to access the ferry terminal.

The key insight is that good passenger support is not simply about listing nearby buses or train stations; it requires clear route-specific guidance on whether foot passengers are accepted, how they reach the terminal, how they move between public transport stops and check-in areas, what assistance is available, and how disruptions are managed.

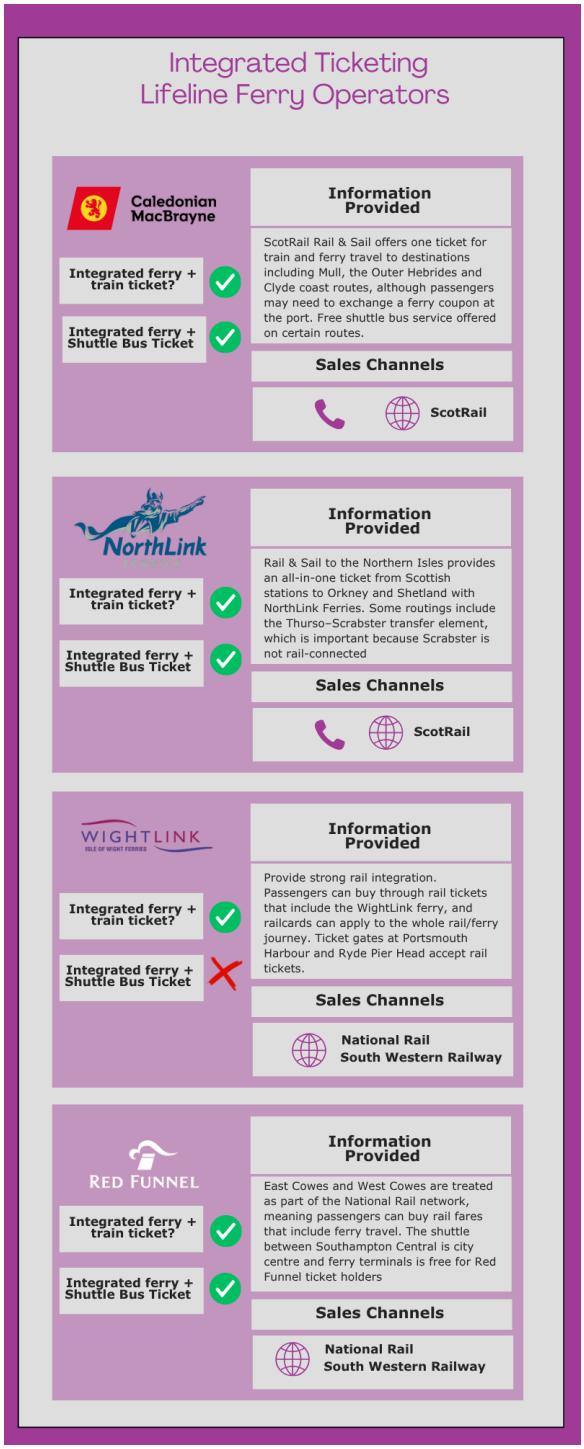
## Integrated Ticketing

The review of integrated ticketing shows that the strongest offers are generally found where ferry services are already embedded within wider public transport networks or where ferry operators have developed practical arrangements with rail and bus providers.

Lifeline and island-facing operators such as CalMac, NorthLink, WightLink, Red Funnel and the Isle of Man Steam Packet provide some of the clearest examples, with Rail & Sail or through-ticketing products enabling passengers to combine ferry travel with rail journeys.

# Section 4: Literature Review – Qualitative Analysis

**Figure 26: Support for Foot Passengers Using Strategic International Ferry Services**




Among the strategic operators, Stena Line and Irish Ferries also provide established rail-and-ferry ticketing options, while others, including P&O, DFDS and Brittany Ferries, rely more heavily on port-specific shuttle buses, transfer coaches or guidance to nearby public transport rather than fully integrated ticket products.

To make integrated tickets easier for foot passengers to book and use, ferry operators should work more closely with rail, bus, coach and journey-planning partners so that passengers can book all legs of their journey in one transaction.

This goes further than Rail and Sail offerings and would include tickets to travel on scheduled bus services that operate in locations not served by the train network, most notably the Scottish islands.

## 4.4 Vessel & Port Accessibility

Improving passenger accessibility on ferries and ports is becoming increasingly important as the UK's population ages and governments seek to encourage greater use of sustainable and active travel modes.

The DfT's "Better Connected: A Strategy for Integrated Transport" published in 2026 and the Scottish Government's 10 year Accessible Travel Framework (2016-2026) state that disabled people and those with reduced mobility should be able to travel with the same confidence, ease and independence as everyone else.

Further, in a 2015 called "The Future of Transport in an Ageing Society", Age UK, and

the International Longevity Centre UK identify accessible public transport as a critical enabler of social participation, access to services, economic activity and independent living for older people, particularly as driving becomes less viable in later life.

Environmentally, UK transport policy increasingly recognises that achieving net zero objectives will require a shift towards public transport, walking and cycling, supported by integrated and inclusive transport networks.

By removing barriers to travel for older people, disabled passengers and those with additional needs, ferry operators can help broaden access to sustainable transport options, reduce dependence on private car travel and support wider economic, health and decarbonisation objectives.

The work to deliver these improvements is led by a mix of statutory advisory and campaigning bodies.

In Scotland, The Mobility and Access Committee for Scotland (MACS) are an independent committee who advise the Scottish Government and Transport Scotland on disabled people's transport needs. As a key contributor to this project, MACS confirmed that they are collaborating with CMAL and CalMac on the design of new vessels to ensure they are fully accessible.

The Disabled Persons Transport Advisory Committee (DPTAC) perform a similar role to MACS, advising the DfT on the needs of disabled passengers in England and Wales. Through their Aviation and Maritime Working Group they have developed guidance and best practice for ferry operators and ports, and supported the development of the DfT's Inclusive Transport Strategy which provided nearly £1 million in grants in 2021 to improve the accessibility of lifeline ferry services to the Isle of Wight and the Isles of Scilly.

When approaching the path to accessibility improvements, it must be r ferry travel presents a more variable and operationally complex accessibility challenge than many rail or aviation journeys because the passenger experience is shaped by the interaction between the vessel, the port, the route and the weather or tidal conditions on the day of travel.

Unlike rail stations or airports, where boarding arrangements are generally more standardised and supported by mature passenger assistance systems, ferry passengers may travel through very different types of infrastructure, ranging from major international terminals to small island harbours, exposed piers and slipways.

The physical process of boarding and disembarking can vary significantly between routes and even between sailings, depending on whether passengers use linkspans, gangways, ramps, passenger access systems, lifts, vehicle decks or crew-assisted arrangements.

These challenges are intensified by the age and design of many vessels in the UK fleet, some of which were built before current accessibility expectations were embedded into vessel design.

As a result, passengers with mobility, sensory or cognitive support needs may face greater

uncertainty when planning a ferry journey than when travelling by train or plane, particularly where information about boarding arrangements, lift availability, gangway gradients or alternative access procedures is limited, static or only confirmed at the port.

### Evaluation Process

To assess the current quality of passenger accessibility support offered by UK ferry operators, a structured review was undertaken of publicly available information published on operator websites.

The assessment covered a representative sample of operators serving different market segments, including lifeline services, high-dependency island routes, strategic economic routes, local connectivity services and tourism-orientated ferry operations.

Information sources reviewed included accessibility webpages, passenger assistance guides, conditions of carriage, accessibility policies, terminal information pages, booking guidance, route-specific travel advice, sensory guides, downloadable accessibility documents and other passenger-facing resources.

The review focused on the information available to passengers before travel and did not assess the physical accessibility of vessels, ports or terminals through site visits.

Each operator was evaluated against five criteria designed to reflect the quality and usefulness of information available to foot passengers, wheelchair users and passengers requiring additional assistance.

- Clarity of information provided to foot passengers on the overall journey experience.
- transparency of procedures for requesting assistance and communicating accessibility needs.
- Level of detail provided on onboard accessibility features and services.
- Quality of port and terminal-specific accessibility information.
- Publication of formal accessibility policies, standards or performance commitments.

Scores were assigned on a scale from 0 to 5 for each criterion, where higher scores reflected more comprehensive, user-centred and easily accessible information.

In addition to reviewing static information sources, the assessment also considered the extent to which operators provide dynamic or real-time accessibility support, such as live journey updates, digital assistance tools, accessibility applications, sensory information, and personalised travel support.

This enabled comparison not only of compliance with accessibility requirements, but also the degree to which operators are adopting emerging best practice seen in the rail and aviation sectors.

Annex 6 presents the scores for each operator. Overall, ferry operators are doing a respectable job on the fundamentals. Most, including Caledonian MacBrayne, P&O Ferries and NorthLink Ferries, provide clear assistance booking processes, publish accessibility information, and offer practical

onboard features such as lifts, accessible cabins and priority seating.

A few go further by setting out formal service standards or providing structured guides, and there is evidence of growing awareness around wider needs, including sensory support and clearer communication. In short, the sector is no longer ignoring accessibility. It just hasn't fully modernised how it delivers it.

Where operators fall short is in the gap between information and experience. Accessibility support is still largely static, fragmented and reactive, relying on PDFs, advance notice requirements and staff intervention rather than real-time, integrated systems.

Foot passengers and wheelchair users often have to piece together their journey from multiple sources, with limited visibility of live conditions such as boarding arrangements, ramp gradients or lift availability. Compared to rail and aviation, the absence of dynamic updates, consistent port-level detail and personalised journey support means the experience can feel uncertain and, at times, unnecessarily stressful

The most effective improvements are relatively low cost and include:

- Publishing real-time boarding and accessibility status update
- Introduce simple digital passenger profiles to remove repeated disclosure of needs
- Provide step-by-step "what to expect" journey guidance for each route
- Expand sensory and accessibility information beyond mobility; and
- Set transparent performance metrics for assisted travel.

These are mostly information and integration challenges, not engineering ones. Solve them properly, and ferry accessibility could catch up with rail and airline operators.

Stepping beyond these improvements, digital wayfinding technologies that are being trialled by several Scottish transport and accessibility organisations show how blind and partially sighted passengers find their way through transport hubs with greater ease.

The Navilens system uses highly visible colour codes that can be detected by a smartphone camera from significant distances and angles and translated into audio navigation instructions, orientation information and contextual transport information.

Similarly, the WelcoMe accessibility app used by NorthLink ferries since 2019 helps transport operators to detect and remove physical barriers at stations and terminals, and trains and prepares staff for the arrival of passengers with accessibility needs.

In the longer term, as new ferries are introduced to operator fleets and port terminals upgraded, there are opportunities to trial and introduce a broader range of support technologies that harness AI and machine learning to deliver real time support that achieves the Government's aim to make public transport journeys full inclusive and accessible.

# Section 4: Literature Review – Qualitative Analysis

## 4.5 Social Value & Community Benefit Programmes

Ferry operators across all 5 route categories are to varying degrees anchor businesses within the communities they serve. They train and employ local people and are depended on by thousands of small and medium-sized businesses. Without reliable ferry services these businesses struggle to survive. More widely, they contribute to social and environmental outcomes.

These responsibilities are particularly relevant where ferry operators receive public subsidy, operate lifeline routes, use publicly owned ports or vessels, or play a critical role in connecting remote communities.

Relevant procurement policies that catalyse conformance to these responsibilities include The Public Services (Social Value) Act 2012 which requires transport operators to consider wider economic, social and environmental wellbeing when procuring public services, while the PPN 002 Social Value Model and National Procurement Policy Statement reinforces the need for public procurement to maximise public benefit and deliver social and economic value.

In Scotland, the Procurement Reform (Scotland) Act 2014 and sustainable procurement duty provide a direct policy basis for community benefit requirements in public contracts, including training, recruitment and subcontracting opportunities.

In a similar vein, The Welsh Government has published a procurement policy guidance note on social value clauses and community benefits, while Northern Ireland's procurement policy requires tenders to allocate at least 10% of award criteria to social value.

The enactment of these policies mean that community benefit can no longer be treated as a discretionary corporate social responsibility activity, but as a core part of how ferry services demonstrate public value, maintain trust with ferry-dependent communities and show that investment in water transport delivers benefits beyond the movement of passengers, vehicles and freight.

### Analysis of Operator Social Value and Community Benefit Programmes

The best programmes Illustrate that operators are not simply transport providers: they are anchor institutions whose decisions shape access to healthcare, employment, education, community participation, tourism and local enterprise.

### Lifeline Operators

Among Lifeline operator's CalMac's Community Fund and the Ferries Communities Board provide the strongest evidence of a social value strategy that is fully embedded within communities. The fund supports groups who are most in need, making awards to help local organisations achieve their goals.

The Communities Board is facilitated by CalMac and chaired independently. Its

primary purpose is to be the voice of communities and reflect views to CalMac directly.

From a reporting perspective. CalMac provides the strongest published evidence, stating in December 2022 that through its Communities Fund, more than 11,000 people have been supported, generating an estimated £7.32 of social return on investment (SROI) for every £1 awarded.

CalMac are the only operator in the sample analysed who publish SROI levels although more recent reporting hasn't been published which suggests that CalMac aren't obliged to provide this data in their annual reports.

The Isle of Man Steam Packet's Manx Community Assistance Scheme is the clearest and most transparent named commercial-operator scheme in England. It covers supported travel, a sport scheme that provides essential support and discounted travel rates for athletes competing on the mainland and fundraising vouchers.

Steam Packet reported that they supported 374 people and organisations in 2022 with a target to hit 400 in 2023. More recent reporting on the success of the scheme hasn't been published.

NorthLink focus their community programmes on sponsoring events, community groups, schools and individuals as they travel to and from the Orkney and Shetland islands by way of discounted fares, and the offer of travel vouchers for raffle prizes. Details on groups that have been sponsored are published on NorthLink's website but information on each is very limited.

On the Isle of Wight, WightLink have a well-established community sponsorship scheme called Wightlink in the Community which has the primary objective of enhancing the quality of life on the island, particularly for young people (under the age of 18), by providing travel discounts to sporting teams and youth organisations along with arts and environmental groups.

In 2025, WightLink's scheme provided more than 14,000 cross-Solent journeys for its sponsored groups, and in 2026 will support 20 sporting teams, 10 arts organisations and five environmental groups, while also renewing partnerships with 10 local charities.

WightLink also manage a Green Innovation Fund that in 2024 awarded individual grants from of £10,000 to island groups to bring their sustainability projects to life.

Analysis of the reporting and communication of WightLink's community benefit programmes confirms that they proactively use social media to promote award and award winners. Missing however, is any quantification of social return on investment generated from the schemes.

Similar to WightLink, Red Funnel's approach to community benefit centres on offering travel discounts to local people and groups. This includes: the HealthCare Travel Scheme targeted at islanders who need to travel to the mainland to attend NHS appointments; the Assisted Fares Scheme; Universal Credit Assisted Fares Scheme; and Job Seekers Scheme.

# Section 4: Literature Review – Qualitative Analysis

As a privately owned organisation, for reasons of commercial sensitivity, Red Funnel don't publish how much they spend annually on their discounted travel programmes.

**Figure 27: Lifeline Operator Community Benefit Programmes**




P&O publishes community commitments and has identifiable examples, but its reporting is fragmented and would need much stronger outcome evidence to sit comfortably alongside more structured schemes.

### Strategic Operators

Our examination of strategic operators confirms that while they all publish useful CSR and sustainability activities, much of it is group-level, environmental, supply-chain or inclusion focused rather than place-based community benefit.

P&O publishes community commitments and has identifiable examples, but its reporting is fragmented and would need much stronger outcome evidence to sit comfortably alongside more structured schemes.

Stena Line focus on supporting charities and groups located close to their UK ports. Examples including their donation to the POINT Youth Centre and PATCH toy appeal in Fishguard.

Irish Ferries via their parent company ICG support a wide range of national and local good causes including the RNLI, the Irish Whale and Dolphin Association, the Dublin Wicklow Mountain Rescue Team, and Tourism Ireland's 'Press the Green Button' campaign that encouraged tourists back to Ireland after the downturn caused by the Covid-19 pandemic.

**Figure 28: Strategic Operator Community Benefit Programmes**

In common with the other commercial operators analysed, Irish Ferries don't disclose the financial value of their contributions or the social value generated.

### Key Insights From Analysis of Operator Community Benefit Programmes

#### Impact

Our research reveals that UK ferry operators generate important but even levels of impact through a wide range of initiatives including community funds, discounted travel, local sponsorship, charity partnerships, apprenticeships, local procurement and support for island and coastal organisations.



Socio-demographically, their impact is experienced by a wide range of beneficiaries, most notably young people, the elderly, and those who are seeking employment.

Lifeline operators have a responsibility to support the communities they serve in ways that other operators don't. The formality of these responsibilities varies with only CalMac having a Communities Board that provides oversight.

The embedding of social value into procurement laws will over-time boost the wellbeing of coastal and island communities. However, these laws are only applicable to public sector organisations which leaves a risk that private operator community benefit programmes wax and wane based on their financial performance.

### Reporting

Detailed reporting on the impact of operator community benefit programmes is inconsistent and unstandardised. Some lifeline operators publish grant amounts, numbers of organisations supported, money raised or headline case studies; fewer publish a consistent social value framework showing who benefited, what changed, and what value was created.

CalMac is closest to a structured model because it reports social return, beneficiaries and outcome categories. WightLink and the Isle of Man Steam Packet also share impact assessments although they are infrequent.

Stakeholders who have an interest in the health and wellbeing of the people who depend on ferry services would benefit from all operators publishing annual community impact statements that use a consistent set of metrics to ease comparison.

### Policy Development

Future ferry policy should encourage all operators to treat community benefit as a core part of service performance, not a discretionary CSR add-on. This would help policy makers understand how ferry services contribute not only to mobility and trade, but also to health access, social inclusion, youth opportunity, community resilience and local economic development.

# Section 5: International Perspectives

## 5.1 Research Scope and Objectives

What can UK stakeholders learn from other countries that operate an extensive network of coastal and inland water transport services?

While a comprehensive study to answer this question is out with the scope of# this project, valuable insights can be gained from a high level analysis of governmental and ferry operator literature focusing on:

- Operating models
- Funding models
- Integration with the wider public transport network
- Performance Reporting
- Progress towards fleet decarbonisation

Every effort has been made to reference up-to-date and publicly available sources, the analysis is limited to major operators and regions where data was accessible in English. Variations within countries and smaller-scale services may not be fully represented in this overview.

A sample of six European and North American countries were chosen, each of which has distinct route profiles, and ownership and operating models.

- Norway
- Denmark
- Greece
- Canada
- USA
- Germany

Annex 7 provides a side by side comparison ferry operations in each of these countries.

There are significant variances in the models used to fund ferry operations in each country which are shaped by wider public transport policies and requirements to support island communities.

Norway, Denmark, and Greece are purposely included because they are characterised by many island communities that are dependent on ferry services. In other words, ferries are a lifeline connection to the mainland.

Due to the size of the markets and time constraints, the analysis operations in the USA and Canada was constrained to west coast services in Washington State, and British Columbia. Nonetheless, this offered sufficient opportunity to achieve the required learning outcomes.

The inclusion of Germany provides an opportunity to understand what UK can learn from the river ferry services that are a key feature of Hamburg's transport network.

## 5.2 Norway

Norway's ferry network is extensive, with around 200 vessels operating 120 routes along its coasts. The system is decentralized: responsibility is split between national and county authorities.

Sixteen major crossings are designated national routes (contracted by the Norwegian Public Roads Administration), while around 114 routes are overseen by county road departments.

### Operating Model

Norway operates a publicly funded, privately operated ferry model with day to day

operations# managed by private companies – notably four firms (Fjord1, Norled, Torghatten, and Boreal) dominate the market.

The decentralization of ferry contracts in Norway has not led to fragmentation but rather to a competitive dynamic. Dozens of small route packages are tendered regularly, which means operators know they must stay efficient and innovative or risk losing routes.

### Funding Model

Operators are funded via public service contracts where they are subsidised by national or regional government authorities to meet defined service levels, deliver service improvements, and environmental innovations that accelerate fleet decarbonisation.

Together with farebox income, the subsidies ensure that each operator's annual revenue covers operational costs. Over the past decade, Norway has increasingly moved to gross-cost contracts (where the government retains fare revenue risk and pays operators a fixed fee) instead of net contracts. This shift has provided stable income to operators and attracted more bidders, since companies are less exposed to ridership volatility.

### Integration with the wider public transport network

Norway provides one of the strongest international examples of public transport integration. The  Entur platform brings together journey planning across bus, train, tram, metro, ferry/boat and other modes, with ticket purchase available for many journeys.

This means that ferry and boat services are visible within the same journey-planning environment as land-based public transport, helping passengers understand how a sea crossing fits into a wider door-to-door journey

However, Norway's Auditor General concluded in 2024 that Entur had not yet succeeded in becoming the single widely used national travel app, citing low app use for ticket purchases and gaps in ticket and price information.

### Performance Reporting

Operator contracts typically include strict service-level and safety targets with requirements to report performance levels to their public clients. Results are often published in official documents and monitored to ensure compliance with contract requirements.

Government agencies also aggregate ferry statistics using a national database (Ferjedatabanken) to collects operational data (via the AutoPASS ticketing system) for all ferry connections. The database is open to the public to view providing transparency on ridership, cancellations, and service regularity across all of Norway's ferry routes.

### Progress towards fleet decarbonisation

To accelerate fleet decarbonisation, since the mid-2010s, many tenders have required operators to deploy low- or zero-emission vessels as a condition of winning contracts.. This has spurred a rapid greening of the fleet: the average ferry age dropped to around 26 years as operators invested in new battery-electric and hybrid ferries including the

launch of the world's first all-electric car ferry, the MF Ampere, in 2015.

Over its first 10 years in service, it has completed over 100,000 voyages and saved approximately 1,000,000 litres of diesel and prevented the emission of over 570 tons of CO2 annually. By 2025, Norway has 68 electric or hybrid ferries were in service operating across 65 routes.

In summary, over the last decade Norway's publicly funded, privately operated ferry model – anchored in strong government oversight through contracts rather than direct regulation – has delivered notable service improvements and environmental innovations. It's frequently cited as a success case of aligning public funding with private execution to achieve policy goals in the ferry sector.

## 5.3 Denmark

Denmark has more than 400 islands, some of which are connected to the mainland or other islands by bridges while others are connected by ferries. There are a total of 65 domestic ferry routes in Denmark (and approximately 20 international routes).

### Operating Model

Similar to Norway, in Denmark, responsibility for ferry services is largely decentralised. After 2005, many ferry operations were reorganized so that local governments (municipalities) own the ferries and port facilities, while private companies are contracted to operate the routes. This allows for competitive bids on specific routes while ensuring assets remain in public ownership.

Any operator has the freedom to establish a ferry service on a commercial basis with the only restriction being that it's not in a 'monopolised area'. Monopolised areas are concession areas where operators have the exclusive rights to operate.

Operators can tender for a small bundle of routes or for single routes. This approach is consistent with that used to operate buses, trains and planes, ensuring that transport services are operated cost efficiently on behalf of all Danish citizens.

The length of tendering procurement processes varies by route package but can be up to or beyond 18 months before a contract is signed. Importantly, before the successful supplier commences services, a transition period of 2 to 2.5 years is used to allow a smooth handover with the incumbent operator. This creates planning certainty and security and a realistic timeframe to procure new vessels.

### Funding Model

The state budget funds subsidies ferry operators and is split between running costs, and investment grants for port infrastructure and new vessels. Subsidies paid by the Danish Government are based on "net cost contracts", where the ferry operator retains the income from tickets.

Where investments are funded by local government, the state, the regional government, and the local government each contribute 1/3rd of the annual repayments.

Operators don't receive fare protection from the state, but government bodies regulate the

maximum and average ticket price for all tickets, and where appropriate, reduce fares in order to attract more passengers and to change transport patterns.

### Integration with the wider public transport network

Journey planning and ticketing is offered to passengers via Rejsekort & Rejseplan A/S, an operator owned by Denmark's national transport operators. Rejseplan and Rejsekort websites and apps support journey planning and ticket purchase for travel across the Danish mainland by train, bus and metro.

Journeys on metropolitan ferry services are also included. However, tickets for journeys on longer ferry routes are not included and need to be purchased directly from the operator.

The Rejseplanen website reports that the app is one of the most used in Denmark with 90 percent of Denmark's populace aware of it. in 2019 more than 140 million trips were recorded using a Rejsekort travelcard product and around 450 million searches made.

In recognition of the needs of passengers who are unable able to use web and smartphone ticketing, in early 2026, the regional and national transport operators announced a new collaboration with IDEMIA Secure Transactions (IST), a smart digital ticketing developer. The collaboration will deliver high-quality, secure and accessible contactless travel cards that can be used across the public transport network.

### Performance Reporting

Operators delivering public service contracts, especially those subsidized by the Danish Transport Ministry or municipalities, are typically required to report on key performance indicators (KPIs) such as punctuality, cancellations, reliability, and customer satisfaction.

However, our research confirms that there is no single national dashboard consolidating all ferry operator performance. Reporting standards can differ between regions and between contracted vs. commercially operated routes. While larger operators are generally transparent, smaller or unsubsidised routes don't consistently publish detailed performance data.

### Progress towards fleet decarbonisation

Denmark's progress towards decarbonising its ferry fleet is best understood as a targeted, subsidy-led transition focused on domestic and island routes where battery-electric operation is technically and commercially most viable. This sits within Denmark's wider climate framework, including its legally anchored objective to reduce greenhouse gas emissions by 70% by 2030 and reach climate neutrality by 2050.

The main delivery mechanism has been the green ferry subsidy scheme, supported through Denmark's Recovery and Resilience Plan and national green transport funding. This scheme was designed to co-finance the purchase of zero- or low-emission ferries, retrofits of existing vessels, and related charging or harbour infrastructure, with public funding prioritised according to $CO_2$ and

wider environmental benefits per krone invested.

The Danish model is notable because delivery is closely tied to municipal ferry ownership and public service obligations. Many domestic ferry routes are essential links for island communities and are operated or commissioned by municipalities, meaning public procurement and capital subsidy can be used to shape fleet renewal.

By 2024, Danish transport authorities reported that support commitments had been made for 14 green ferries to replace 15 existing vessels, with all of the supported vessels being converted to electric operation and funding also covering necessary port adaptations.

This highlights an important difference from countries relying mainly on operator-led investment: Denmark has used central government funding to reduce the capital burden on local authorities while aligning ferry renewal with national climate policy.

To date the focus has been on the electrification of small and medium size ferries that operate on shorter duration routes. The next phase will transition to longer energy-intensive routes that are harder to decarbonise.

## 5.4 Greece

Domestic ferries link the economies of 114 inhabited islands in Greece to the mainland. There are approximately 150 ports at which a total of about a thousand ferry connections are made each day. The Greek ferry market is composed of 7 regions and 58 ferry operators operating 365 itineraries.

About 70% of the coastal passenger ships operating in Greece are deployed in the Aegean Sea area. The Aegean network has a mono-hub structure based upon the Port of Piraeus. Additionally, 70% of the national passenger transport demand is served through the Aegean network.

Approximately 299 vessels (247 conventional, 52 high-speed) are operated by 216 companies, with Attica Group and Seajets dominating the market, together accounting for approximately 60% of passenger capacity. The fleet is relatively old (average age 25 years) and the integration of green technologies remains limited.

Demand for ferry services is highly seasonal and demand among the routes is highly skewed. This disparity is caused not only because of differences in tourism at the island destinations but also by differences in permanent population on the islands.

### Operating Model

Greece's ferry operating model is built around a liberalised maritime cabotage market. In practice, this splits the ferry market between commercially operated services, which receive no public subsidy and are mainly viable on higher-demand island and tourism corridors, and subsidised coastal services supported through Public Service Contracts (PSC).

This creates a mixed model in which private operators make route and service decisions on commercially attractive corridors, while

the state intervenes where thin, low-demand or winter routes would otherwise be underserved.

The result is a system that supports both tourism-driven mobility and essential island connectivity, but which must continually manage the tension between market efficiency and the need to maintain territorial cohesion for remote and smaller islands.

The Greek state can tender PSC's for exclusive route operation, either without subsidy or, more commonly, in return for a lease/subsidy payment. It's also moved towards longer contract periods. in 2025, the Ministry of Shipping and Island Policy launched a four-year tender for state-subsidised ferry routes running from November 2025 to October 2029.

This longer procurement cycle is intended to provide greater continuity, although the model still faces challenges around competition, route viability, fleet renewal and the effectiveness of incentives for operators to serve less profitable islands.

### Funding Model

Available data suggests that Greece's subsidy commitment for these non-commercial ferry routes has risen significantly. The Hellenic Competition Commission reports that the cost of PSCs increased from around €10 million per year in 2001 to approximately €150 million in 2025, with around 75 routes expected to be covered through to 2029.

More recent Ministry of Shipping and Island Policy announcements refer to a new four-year tender for subsidised routes covering the period from 1 November 2025 to 31 October 2029, with total funding of €668 million, equivalent to €167 million per year.

The Greek state currently plays a limited role in setting and regulating fares. It can impose price caps for coastal connections with limited passenger traffic, and support islanders with transport subsidies.

Liberalisation of the ferry market from 2002 has allowed operators to choose routes and frequency around their own business strategies, leaving small, remote and less tourist-intensive islands with weaker service quality than more attractive destinations.

That means subsidies are not just filling occasional gaps, they have become a standing mechanism for holding the island network together, especially in winter.

The tendering framework for PSCs contains an intermediate stage where the state can tender an exclusive route without subsidy for 1 to 5 years. However, interest among operators is limited who instead wait for the next stage where subsidised PSCs are offered. The undesirable outcome is that the current system increases the public budget required to support lifeline services.

### Integration with the wider public transport network

The available evidence suggests that Greece does not currently have a national integrated journey planning and ticketing platform. Instead, the Greek experience is fragmented by mode and geography. Rail tickets are sold through the Hellenic Train's online system; interurban buses are provided by regional

operators; and ferries planned and booked through operator websites or commercial ferry aggregators such as Ferryhopper, GTP, Open Seas and Ferries.gr.

Ferryhopper, lets users compare ferry companies, prices and timetables and combine ferry companies in a single booking, but this is still ferry-to-ferry integration rather than full ferry-bus-rail integration.

Under the EU intelligent transport and multimodal travel information framework, Greece has taken the first steps to develop a National Access Point which is the digital layer needed to support interoperable European travel information services. There is however, no evidence that this programme has moved beyond archetyping.

### Performance Reporting

The strongest evidence points to contractual and regulatory oversight rather than transparent public performance reporting for PSC routes. Practically, this requires the Greek National Enforcement Body supervising daily ship departure and arrival timetables through regional Coast Guard authorities, with more than 200 Greek ports covered by local port authorities.

The Greek National Enforcement Body (NEB) publishes activity data on complaints and penalties: for 2023–2024 it recorded 435 passenger complaints, including delay, cancellation, lack of information, non-response, accessibility and accommodation/safety issues. This data is limited to complaints and is not a full annual service-performance report by route or operator.

On subsidised routes, The Hellenic Statistical Authority ELSTAT publishes passenger, goods and vehicle traffic through Greek ports, including coastal ferry traffic, but this is port-level transport statistics rather than route-level operator performance.

Larger listed ferry groups such as Attica and Minoan publish annual financial statements, but those are corporate financial disclosures, not public-service route performance reports

### Progress towards fleet decarbonisation

Greece is beginning to implement a structured delivery plan for ferry decarbonisation, but progress remains at an early and uneven stage. The main drivers are EU regulation, and national fleet-renewal policy.

The EU Emission Trading Scheme and FuelEU Maritime are increasing the cost of operating higher-emitting vessels, particularly on larger routes and services connected to major islands, creating pressure on operator to improve efficiency and shift towards lower-carbon fuels and technologies.

In response, the Greek Ministry of Maritime Affairs and Insular Policy has announced a masterplan for coastal fleet renewal, a wider investment programme for green coastal shipping and targeted support for low-emission vessels on public service routes.

Reported funding commitments include an initial €80 million, potentially rising to €360 million, for greener vessels on state-supported routes, alongside a broader €300 million green fleet renewal initiative expected

to be supported by European Investment Bank finance.

The main success to date is that decarbonisation is now being tied directly to the ferry subsidy and procurement system, rather than treated only as an environmental add-on. This is notable because many of the routes most in need of newer vessels are commercially weak and unlikely to support investment without public intervention.

Independent analysis published by the Transport & Environment group in February 2025 suggests that Greece has strong technical potential for ferry electrification, estimating that around one-third of Greek ferries could already be cost-effective as battery-electric newbuilds in 2025.

However, turning that potential into actual fleet replacement will depend on whether Greece can align long-term PSC contracts, public subsidy, private capital, port investment and EU regulatory compliance into a deliverable investment model.

## 5.5 Canada

British Columbia has one of the most extensive ferry networks in North America, combining a large regulated coastal ferry system with inland lake and river ferries, urban passenger ferry services and newer private passenger-only operations. The core coastal network is operated by BC Ferries, which operate 37 vessels on 25 designated routes from 47 terminals.

These services connect Metro Vancouver with Vancouver Island, the Sunshine Coast, the Gulf Islands, Haida Gwaii, Prince Rupert and remote central and northern coastal communities. The network includes high-volume strategic corridors such as Tsawwassen–Swartz Bay, Horseshoe Bay–Departure Bay, Tsawwassen–Duke Point and Horseshoe Bay–Langdale, alongside lower-density lifeline routes serving island and remote communities.

Alongside this main coastal system, British Columbia supports 14 inland ferry routes, which are free to users and operated under private contract with the Ministry of Transportation and Transit; these include cable ferries, reaction ferries, free-running ferries and tug/barge-type services.

### Operating Model

British Columbia's main coastal ferry operating model is built around a long-term public service contract rather than periodic competitive tendering of individual routes. BC Ferries was transformed in 2003 from a provincial Crown corporation into an independently managed company under the Coastal Ferry Act.

It is now governed through the British Columbia Ferry Authority, which holds the single voting share, while the Province of British Columbia owns non-voting preferred shares.

Under the contract, BC Ferries operates designated passenger and vehicle ferry routes on behalf of the Province, with the contract setting routes, minimum service levels and provincial service payments.

The contract commenced in 2003 for a 60-year term and is reviewed and updated

through four-year "performance terms", with the current term covering April 2024 to March 2028. The BC Ferries Commissioner provides independent economic regulation, including monitoring service levels, regulating average fare increases through price caps, and reviewing major capital expenditure.

This model stands in contrast to those employed in Norway and Denmark where PSCs are used to procure services on a route-by-route basis.

### Funding Model

BC ferry services are funded through a mixed model of user fares, commercial/ancillary revenue, provincial service payments, federal legacy funding, fare-affordability support and regulated financing. BC Ferries is expected to operate commercially, but the coastal network is not commercially self-sustaining.

In 2025 they reported that of its 25 routes, only one recovered its full cost of service from fares, with the rest dependent on cross-subsidisation, provincial service fees and other government funding. Total operating revenues of CAD $866 million was supplemented with CAD $37 million of state subsidies.

This reinforces the underlying economics that coastal ferry operators around the world face: high-volume major routes generate significant revenue, but minor routes require substantial public support because they perform a lifeline function for island communities.

The procurement of new vessels employ a blended funding model rather than direct route-by-route subsidies. As an independently managed business, BC Ferries can access private markets to raise funds. However, major capital expenditure is regulated by the BC Ferries Commissioner, who approves large vessel and terminal investments and requires BC Ferries to maintain a rolling five-year capital plan.

The Province of BC also provides additional funding where affordability or public policy objectives require it. For the contractual period April 2024 to March 2028, it committed CAD $500 million above the core Coastal Ferry Services Contract to help support greenhouse gas reduction initiatives and hold average annual fare increases to around 3.2%.

### Integration with the wider public transport network

The province of British Columbia doesn't offer a clear equivalent of a national or provincial journey planner or ticketing platform that enables passengers to use a single ticket to travel by bus, rail and ferry.

Practically, this mean someone planning on travelling from central Vancouver to an outer island would need to use multiple websites and apps to plan their trip and purchase tickets for individual legs. This could include Metro Vancouver transit operated by TransLink, Vancouver Island and Sunshine Coast buses operated by BC Transit, and the ferry journey with BC Ferries.

While many ferry terminals are connected to buses, and some connections are actively explained or coordinated, the main weakness in the BC public transport experience is a lack

of commercial and digital integration across operators.

Today, BC Ferries provides schedules, current conditions, bookings and detailed public transport access guidance for major terminals through its website and explicitly advises passengers to check transit options at both ends of the ferry journey. However, ferry tickets can only be bought through BC Ferries website, by phone or at terminals. Onward transit fares are separate.

Looking forward, while the province doesn't have operational control over public transport operators, it can develop a strong policy hook that requires better data sharing, integrated journey-planning feeds, common passenger information standards, and potentially ticketing interfaces with BC Transit and TransLink. However, BC Ferries is an independently managed company, and ferry fares/reservations are operationally separate from public transit fares.

### Performance Reporting

BC Ferries has clear statutory reporting duties under the Coastal Ferry Act. For all subsidised routes lit must provide the Commissioner with quarterly reports for each designated ferry route covering tariffs and tariff revenue, ridership and traffic patterns, ferry-service frequency, vessel capacity, and any other core-service information the Commissioner requires.

It must also provide an annual report within four months of each anniversary of the Coastal Ferry Services Contract, setting out the services provided on designated routes, including financial statistics, traffic levels and other operating statistics, plus any surveys or other service-quality records required by the Commissioner.

The Act also requires audited financial statements relating to designated routes. Importantly, the Act says these quarterly and annual reports must be maintained at the operator's records office and made available to the public.

In addition to the Coastal Ferry Act, the Coastal Ferry Services Contract requires that BC Ferries keep accurate accounting records related to the service fee and permit the Province to inspect, copy or audit those records.

The contract also requires them to provide the Province with quarterly reports covering ridership and traffic patterns, service frequency and vessel capacity, and to provide audited financial statements within 120 days after each contract anniversary

With regards to service quality, the Commissioner requires BC Ferries to report service reliability quarterly and show changes over time. The two route-level reliability measures identified are on-time performance, defined as the percentage of sailings departing within ten minutes of scheduled departure, and overloads, defined as the percentage of sailings departing full and leaving customers behind.

BC Ferries also publishes customer satisfaction survey reports, which are commissioned as part of the Coastal Ferry Services Contract, and the Act requires an approved complaints process that reports the

number, nature and disposition of complaints.

### Progress towards fleet decarbonisation

BC Ferries is making structured progress towards decarbonising its fleet, with its approach shaped by CleanBC policy targets, the Coastal Ferry Services Contract, the BC Ferries Commissioner's capital-approval process, provincial fare-affordability funding and federal clean-infrastructure finance.

It has committed to meeting the CleanBC 2030 transportation-sector target by reducing greenhouse gas emissions by at least 27% from 2008 levels by 2030. Its 2024–25 Performance and Sustainability Report records total emissions of approximately 286,000 tonnes $CO_2e$ in fiscal 2025, around 16% below its 2008 baseline, meaning it has made progress but still has a further reduction gap to close.

Technical implementation is being pursued through a combination of biofuels, vessel electrification, battery-electric hybrid newbuilds and future-electric-ready major vessels.

Six battery-electric hybrid Island Class ferries are already in service, four more Island Class vessels are entering service in 2026–27 and are capable of operating fully on electricity once charging infrastructure is available, and four new Summit Class major vessels are planned to enter service between 2029 and 2031.

To accelerate the greening of the BC Ferries fleet, the Canada Infrastructure Bank is providing clean-fleet finance, including CAD $75 million for Island Class electrification and up to CAD $1 billion for new diesel-battery hybrid major vessels and terminal electrification.

## 5.6 USA

Washington State has one of the largest and most strategically important ferry networks in the United States, centred on Washington State Ferries (WSF), a division of the Washington State Department of Transportation.

In broad terms, Washington's ferry market consists of one dominant state-owned vehicle/passenger ferry operator (WSF), several county or local public ferry operators, passenger-only river taxis, private international passenger services, and smaller lifeline vehicle ferries serving island or river communities.

WSF operates the core public vehicle/passenger ferry network across Puget Sound and the Salish Sea, linking Seattle, Tacoma, the Kitsap Peninsula, Whidbey Island, Vashon Island and the San Juan Islands. Its system comprises a fleet of 21 RoPax vessels, 20 terminals and 9 domestic routes.

The WSF fleet ranges from smaller 64-car Kwa-di Tabil class vessels used on shorter routes to large Jumbo and Jumbo Mark II class vessels carrying up to around 188–202 vehicles on the busiest corridors.

# Section 5: International Perspectives

## Operating Model

Washington State's core ferry operating model is a fully publicly owned and publicly operated state ferry system, rather than a concessioned or route-by-route contracted model.

WSF is part of the Washington State Department of Transportation and operates as a marine extension of the state highway and public transport network.

The state's statutory framework gives the Department authority to acquire, operate, improve and extend a ferry system, including vessels, terminals, docks, landings and related infrastructure.

The State also has locally operated or privately operated ferry services, including county ferry services, passenger-only commuter ferries and private international services, but these sit outside the main state-operated WSF network.

The procurement model for WSF is similarly state-led. Vessels, terminals, charging systems and major upgrades are procured through public-sector contracting processes, funded through state transportation budgets, fare revenues, dedicated surcharges and federal or climate-related funding where available.

## Funding Model

WSF is subsidised through the state transportation budget rather than through individual public service contracts for specific uncommercial routes. Fares contribute to a major share of operating income but don't fully cover the cost of running the network.

Fares are not set directly by WSF but through a regulated public process involving the Washington State Department of Transport (WSDOT), Washington State Transportation Commission and the state legislature. WSDOT is required to review fares and pricing policies annually, using user survey data and consultation with ferry advisory committees, while fare proposals must generate the level of revenue required by the biennial transportation budget. The Transportation Commission then adopts fares and fare policies by rule.

Passenger and vehicle fares account for the vast majority of revenues generated mainly but WSF also has smaller non-fare income streams, including commercial advertising, concessions, parking, leases, contracts and trademark licensing.

In addition, a vessel replacement surcharge is applied to ferry fares and is ring-fenced for the construction or purchase of ferry vessels and related debt service, helping link fare policy to long-term fleet renewal as well as day-to-day operations.

WSF's financial year 2024 route statements show system-wide farebox recovery of 49.8%, with total revenue recovery of 50.8%, meaning roughly half of operating costs were recovered from customer fares and other revenues.

The state covers the remaining gap through legislative appropriations from wider transportation accounts. The route statement report also highlights that state subsidy was $9.05 per rider, while federal grants/subsidies were $4.25 per rider and total subsidy per

rider was $4.79 after federal support was taken into account.

For the two year period (July 1, 2025 – June 30, 2027), the state legislature set a ferry fare revenue target of $408.8 million, and the Commission approved average fare increases of 3% from October 2025 and a further 3% from May 2026.

### Integration with the wider public transport network

Analysis of Washington State's public transport system indicates that there is a good level of multimodal journey-planning coverage but there isn't a single seamless statewide "plan, book and travel" platform covering train, bus, and publicly and privately operated ferries.

The strongest journey-planning tools are regional rather than statewide. A notable example being the Puget Sound Trip Planner app that covers bus, train, light rail, streetcar, ferry, water taxi and monorail.

There is good evidence of physical and timetable connection around ferry terminals. For example, Community Transit that operates in Snohomish County, provides direct bus connections to Edmonds and Mukilteo ferry terminals, with Sounder commuter rail near both waterfront areas.

Similarly, Kitsap County Transit describes its Kingston Fast Ferry as connecting at Kingston with routed and Dial-A-Ride services, and at Seattle's Pier 50 with King County Metro, Sound Transit and Link light rail.

Ticketing and payment integration is delivered through the ORCA platform which can be used across most of the State's county transit operators to pay for travel on buses, trains and ferries, including WSF.

However, ORCA is not a fully integrated fare product for WSF. Passengers can use ORCA to buy and use multi-use passenger passes and monthly passes, and can pay any WSF fare, including vehicle and motorcycle fares, using ORCA e-purse funds. The limitation is that WSF does not accept ORCA regional day or monthly passes as payment for ferry fares. That means ORCA can act as a payment wallet for WSF, but not as a fully transferable regional ticket.

### Performance Reporting

WSF is legally required to produce an annual ferry performance report for the Governor and Legislature which covers performance across capital programme effectiveness, safety, cost containment and service effectiveness, with additional reporting on staffing, service delivery and cancellations.

WSF also maintains an online dashboard with historical on-time performance, daily ridership and ridership by sailing, plus monthly on-time performance reports and quarterly/annual ridership reports. Furthermore, its route statements include cost, ridership and revenue trends for each route, culminating in route-level farebox recovery ratios.

Ferry operators outside WSF are not under the same obligation to provide route by route reporting. Where they do provide data, it 's presented in WSDOT's annual Summary of Public Transportation report.

Where local ferry operators receive public transportation grants, there can also be grant-specific performance reporting. WSDOT says it works with grantees to develop performance measurement plans and report performance, and monitors compliance through reporting, financial tracking and site visits.

Private ferry operators are regulated primarily by the Washington Utilities and Transportation Commission (UTC), not WSDOT. To secure an operating licence they must agree to provide annual reports that include financial statements, ridership and revenue forecasts, cost of service, asset cost estimates and relevant operating experience.

Once operational, they are obliged to file fares and timetables with the UTC, publish/post schedules for public inspection, and adhere to these timetables. They must also report service interruptions likely to continue for more than 24 hours, including the cause and probable duration.

### Progress towards fleet decarbonisation

Washington State's Ferry System Electrification Programme aims to move WSF towards a reliable, emission-free fleet by 2050 by converting six existing vessels to hybrid-electric power, building up to 16 new hybrid-electric ferries, and adding shore charging at up to 16 terminals.

The programme is estimated to cost around US$6 billion, with approximately US$1.68 billion currently funded through mechanisms including Move Ahead Washington and the state's Climate Commitment Act.

The programme is starting to delivery results through the launch of the Wenatchee, North America's largest hybrid-electric passenger vessel, and in 2025 the state selected Eastern Shipbuilding Group to build new 160-vehicle hybrid-electric ferries.

However, in common with other countries, the transition is constrained by the age and reliability of the existing fleet, high capital costs, shipyard capacity, terminal electrification requirements and the need to maintain full service while taking vessels out of operation for conversion to cleaner fuel systems.

A noteworthy example is the decision by the state to delay the conversion of Jumbo Mark II vessels until after the 2026 World Cup. This illustrates the core trade-off that needs to be made between trying to decarbonise a network that is simultaneously short of vessels, politically exposed, and operationally fragile.

Outside of WSF, the most visible decarbonisation activity is being led mainly by county and public transit ferry operators. King County Water Taxi has shifted its two main vessels to renewable diesel, Kitsap Transit is developing an all-electric zero-emission hydrofoil fast ferry demonstrator with state grant support, and Skagit County continues to pursue an all-electric Guemes Island ferry replacement but faces an US$11 million gap with total project costs around US$45 million.

# Section 5: International Perspectives

## 5.7 Germany

The city of Hamburg operates one of Europe's clearest examples of an urban river ferry system that is fully embedded into a wider public transport network. HADAG, a subsidiary within Hamburg's public transport ecosystem, provides scheduled passenger ferry services across the Elbe and through the Port of Hamburg as part of the hvv network.

The system consists of seven public ferry routes serving around 18 to 20 piers, with around 180,000 sailings and approximately 9 to 10 million passenger journeys per year. Services are used by commuters, port workers, residents and visitors, with Line 62 particularly well known because it combines a practical cross-river service with views through the working harbour.

The fleet comprises around 28 passenger vessels, although the number active at any given time may be lower due to maintenance and conversion work. Vessel capacities range from roughly 114 to 250 passengers, reflecting the short urban-route profile, high passenger turnover and navigational constraints of the Elbe and Hamburg harbour.

### Operating Model

Hamburg's ferry operating model is best understood as part of an urban public transport network rather than a standalone entity.

After regionalisation in 1996, German states became responsible for organising and funding local public transport, meaning Hamburg is responsible within its boundaries for local rail, bus, rapid-transit U-Bahn and harbour or river ferry services

HADAG is wholly owned by Hamburger Hochbahn AG, itself a city-owned public transport company while hvv acts as the regional transport association and management body coordinating fares, ticketing, passenger information and network integration across participating authorities and operators.

Vessel procurement sits within Hamburg's wider public transport governance and direct-award model. Within the hvv system, contracts are directly awarded to operator U-Bahn, bus and ferry services by the Free and Hanseatic City of Hamburg.

### Funding Model

Hamburg's public ferry services are funded as part of the wider hvv urban public transport system rather than as a standalone ferry subsidy or route-by-route public service contract.

Fare income is generated through the hvv tariff system. Therefore, HADAG therefore receives its public transport income through the wider hvv revenue allocation system rather than only through direct ferry ticket sales. HADAG also generates some commercial income from harbour tours, special services, advertising and charter activity.

Any operating deficit is managed within Hamburg's municipal transport ownership structure. This meaning losses are absorbed through the wider city-owned transport group

rather than exposed as a separate route subsidy.

Available data suggests that HADAG's scheduled ferry operations have historically required significant public support, although recent HADAG-only subsidy figures are not published within Hochban's annual accounts.

Older published figures confirm that HADAG operates on a loss making basis. Reports from 2016 show that it generated revenues of about €9.86 million but made a loss of about €8.34 million, while HGV's 2018 annual report reported that HADAG had revenues of €9.73 million and a €10.70 million annual loss, up from €8.95 million in 2017.

This infers that HADAG's losses were absorbed by their parent company Hochbahn AG. Whie not classified as subsidies, the absorption of these losses is in fact a form of indirect subsidy without which HADAG would not be able to operate.

### Integration with the wider public transport network

With HADAG ferries being part of the hvv public transport network, passengers can use the same hvv ticket on the U-Bahn, S-Bahn, regional rail and buses. HADAG explicitly say that passengers can "hop straight on" its ferries with an hvv ticket for underground/suburban rail or bus, and hvv lists HADAG as one of the operators in its integrated fares system.

The integration covers multiple operators, not just one municipal company. 28 transport operating companies are linked through an integrated fares system, with coordinated timetables across Hamburg and surrounding districts in Schleswig-Holstein and Lower Saxony.

Operators include rail companies such as AKN, DB Regio and metronom, bus operators in Hamburg and the surrounding region, and HADAG for Elbe ferry services.

For journey planning, hvv provide apps covering bus, rail and ferry services that support route planning, timetable information and ticket purchase.

A particularly useful feature of the app for ferry users is the integration of real-time passenger information. By 2024, all 26 HADAG ferries had begun transmitting real-time data into the app, allowing passengers to see current departure and arrival times and timetable deviations.

While planning and ticketing is well integrated across Hamburg's publicly operated ferry services, the wider commercial river ferry market that operate harbour tours, tourist cruises, and private sightseeing services are not integrated because there is no mandate for them to do so.

### Performance Reporting

Performance reporting for Hamburg's public ferry services is embedded within the city's wider public transport and municipal company reporting framework rather than published on a standalone basis.

HADAG's ferry services are reported through several channels: HOCHBAHN's annual financial statements and corporate governance reporting, hvv's public transport quality reporting, and operational information

published through hvv/HADAG passenger information system.

These sources provide useful information on ownership, fleet size, passenger transport role, ticketing integration, financial structure, public service compensation and customer satisfaction, but they do not appear to provide a single annual route-by-route ferry performance report equivalent to the published reporting seen for some larger ferry operators in the other countries that have been analysed.

The most visible reporting gaps relate to ferry punctuality, cancellations and reliability. hvv's public Quality Monitor states that its monthly punctuality and reliability data covers U-Bahn, S-Bahn, regional rail and HOCHBAHN bus services, with ferries not clearly included in that live dashboard.

### Progress towards fleet decarbonisation

Our analysis highlights that Hamburg is making visible progress towards decarbonising its urban ferry system, with HADAG's fleet transition closely linked to the city's wider public transport and climate policy framework.

HADAG benefits from being embedded in Hamburg's municipal public transport model rather than being left to decarbonise as a standalone commercial ferry operator. Its transition is being delivered through new hybrid ferries, charging infrastructure and planned fully electric vessels.

It states that three new hybrid ferries entered service in 2024/25, that its own charging infrastructure is being developed for hybrid and future fully electric ferries, and that fully electric ferries have been ordered for use on the Elbe from 2028.

HADAG and hvv share the same challenges as public and private ferry operators: high vessel capital costs; shore-side charging requirements; battery range, space-constrained harbour infrastructure; operational resilience; and the need to fit electric vessel charging into existing timetables.

# Section 6: Key Findings

The evidence gathered through this project points to eight connected findings that together describe the current condition of UK water transport and the changes needed to make it more resilient, inclusive, affordable, integrated and sustainable.

Annex 8 provides a graphical representation of these findings. They have been chosen because they recur across the quantitative and qualitative literature review, stakeholder interviews and virtual roundtables. They also cut across different route types, ownership models and geographies.

Finally, they provide the bridge to the recommendations that follow in the next section, because each finding points to a practical area where policy, funding, regulation, planning or delivery needs to improve.

## 6.1 Water Transport Is Critical Infrastructure, but Public Recognition Is Uneven

The first and most important finding from the research undertaken in this project is that water transport should be understood as critical infrastructure, not as a marginal, seasonal or specialist part of the UK transport system. Ferries, river crossings and harbour services perform roles that go well beyond the movement of passengers across water.

This matters because the consequences of ferry disruption, closure or unaffordability are not evenly distributed. For some passengers, a cancelled sailing may be an inconvenience. For ferry-dependent communities, the same disruption can mean missed medical appointments, delayed freight, lost business bookings, reduced access to education, greater isolation for older or disabled people, and additional pressure on families and local employers.

The extent to which these services are recognised as critical infrastructure varies significantly across the UK. Scotland has the clearest national policy framework for lifeline ferry services through the Islands Connectivity Plan, Islands (Scotland) Act 2018, Community Needs Assessments, and the Island Communities Impact Assessments.

Elsewhere, policy recognition is more uneven. England has a larger number of privately operated domestic, river, estuary and international ferry services. Some are commercially strong and strategically important, particularly cross-Channel, Irish Sea and Isle of Wight services. Others are shorter local crossings that reduce road detours and support everyday mobility.

The passenger experience issue is not simply whether the routes are privately owned or profitable. It is whether passengers have sufficient protection around affordability, resilience, service standards and long-term investment where there is no fixed link and limited practical alternative.

The policy problem is the absence of a consistent UK-wide public-interest framework for determining which water transport routes are critical, what level of service they require, who depends on them, how they should be funded, what protections passengers need, and how they should be integrated into wider

transport, energy, accessibility, resilience and decarbonisation planning.

For governments, it highlights the need to plan water transport according to social and economic dependency, not simply ownership model or passenger volume.

### 6.2 Different Routes Need Different Investment Strategies

UK water transport should not be treated as a single market. Although all ferry and waterborne services involve moving people, vehicles or freight across water, the roles they perform are fundamentally different.

A lifeline island ferry, a high-volume international RoPax service, a privately operated cross-Solent route, a council-supported river crossing, an urban waterbus and a seasonal visitor boat may use similar language and infrastructure, but they operate under very different social, economic, commercial and policy conditions.

This distinction should be heeded because the same policy, funding, regulatory or decarbonisation approach will not work across all routes.

International evidence supports this finding. In the six markets that we reviewed, ferry policy is strongest where governments understand the public function of routes and use contracts, subsidies, regulation, fare frameworks, performance reporting and investment planning accordingly.

The UK does not need to copy any one international model. Geography, ownership, public finance and political culture differ too much for that. But the international comparison shows the value of being explicit about route purpose, dependency, service standards and public-interest outcomes.

The practical implication is clear: future policy should assess ferry and water transport services according to the role each route performs. This does not require every government or authority to adopt an identical policy model. It does require a shared route criticality approach that can inform funding decisions, service standards, performance reporting, investment priorities, accessibility requirements and decarbonisation planning.

Implementing this approach would need to reflect the UK's devolved and fragmented transport governance landscape. For that reason, the route criticality framework should not be presented as a centrally imposed UK classification system. Its value lies instead in providing a common analytical language that different governments and authorities can adapt within their own policy, funding and delivery responsibilities.

In practice, this would mean using shared criteria to assess route dependency, vulnerability, affordability, resilience, accessibility, decarbonisation needs and consequence of failure, while allowing each nation and responsible authority to determine how those findings inform local decisions.

# Section 6: Key Findings

## 6.3 Funding, Ownership and Fare Models Are Not Keeping Pace with Asset Risk

Ferry services are expensive to operate, asset-intensive to maintain and increasingly costly to decarbonise. They depend on vessels, ports, harbours, piers, linkspans, terminals, crews, fuel systems, booking platforms, maintenance regimes and shore-side infrastructure all working together. When one part of that system fails, the effect can be immediate and severe, especially on routes where passengers, businesses and essential services have few practical alternatives.

Capital investment is the most exposed part of the system, and the challenge is becoming more urgent because many operators must now fund both conventional asset renewal and the transition to low or zero-emission operations which will intensify these pressures.

Operators will need to fund new vessels, shore charging, alternative fuel systems, energy efficiency measures and port upgrades over the next 15 to 25 years.

This creates different risks for different operators. Publicly funded lifeline operators require long-term capital settlements from Government that are aligned with vessel replacement, port investment and service resilience.

Local authority ferry operators often face acute challenges because they are responsible for socially valuable services but do not always have access to the capital funding required to replace vessels or modernise infrastructure.

In contrast, privately owned operators may need to fund fleet renewal through fares, retained earnings, debt or shareholder investment.

Fares are therefore becoming a more sensitive policy issue. On publicly supported routes, fares can be used to protect affordability and support social and economic inclusion. On privately operated routes, fares may be dynamically adjusted according to demand, vehicle type, sailing time and commercial strategy.

The implication for the UK policy makers is that funding and ownership models need to be assessed against route criticality and asset risk to ensure that lifeline and high-dependency routes have funding, fare and governance arrangements that are proportionate to the consequences of failure.

In summary, future policy should place greater emphasis on long-term asset planning, clearer public-interest tests, transparent fare and funding principles, and stronger alignment between vessel replacement, harbour investment, decarbonisation and passenger affordability.

Without this, the sector risks drifting into a cycle in which older vessels become less reliable, ports become harder to upgrade, fares rise to cover delayed investment, and communities carry the cost of decisions that were never properly planned at system level.

## 6.4 Ageing Assets and Limited Spare Capacity Are Turning Reliability into a Resilience Risk

Ferry reliability is often discussed in terms of cancellations, delays, mechanical faults or timetable disruption. These are important measures, but they do not fully capture the consequences of failure on routes where passengers, businesses, public services and supply chains have few practical alternatives.

The impact is particularly severe on lifeline and high-dependency routes, but it is not limited to them. Short river and estuary crossings can also create major social, economic and environmental consequences when they fail, close or become unreliable.

Age is one of the clearest risk factors. The average age of vessels currently in service has increased to around 22 years. The domestic coastal fleet has a particularly heavy concentration of older vessels, many of which entered service in the 1980s, 1990s and early 2000s.

While age alone does not determine reliability, older vessels generally require more intensive maintenance, are more vulnerable to faults, and can become harder to cover when spare capacity is limited.

Port and harbour constraints compound these risks. Some of this infrastructure is old, space-constrained or difficult to upgrade. Larger ports may face pressure to modernise while keeping high-volume passenger and freight flows moving.

Smaller ports may face more basic questions about whether ageing linkspans, slipways, passenger shelters and local access arrangements can support modern vessels safely and efficiently.

Where ownership is split between operators, harbour authorities, local authorities and public bodies, responsibility for investment can be unclear.

The interaction between vessel and port constraints is especially important for future resilience. A modernised harbour cannot solve reliability problems if the fleet remains too old, too small or too thinly spread.

The evidence also shows that reliability affects passenger demand and confidence. Where tourists, businesses or residents lose confidence in a route, the impact can extend beyond transport into local economic performance, visitor numbers and community wellbeing.

International comparisons reinforce the importance of treating reliability as part of long-term asset planning. Norway, Denmark, British Columbia and Washington State all show different ways in which public contracts, capital planning, regulated service levels, performance reporting and fleet renewal can be used to protect route resilience.

The implication for the UK is that reliability should be assessed more systematically against route criticality. On essential lifeline and high-dependency routes, the public consequences of disruption justify stronger planning around spare vessels, maintenance windows, resilience standards, passenger communication, alternative arrangements and long-term fleet renewal.

# Section 6: Key Findings

## 6.5 Data Transparency and Performance Reporting Are Too Weak

Performance reporting across the UK water transport is too weak to support effective governance, investment planning, public accountability or long-term decarbonisation.

This is not because no data exists. Passenger statistics, operator reports, government accounts, annual reports, route maps, emissions models, public funding records, FOI responses and policy documents all provide useful evidence.

The problem is that the data is fragmented, inconsistent, incomplete and difficult to compare across route types, operators, nations and ownership models.

Improvements are needed because decisions about subsidy, fares, vessel replacement, port investment, service standards, resilience, accessibility and decarbonisation all depend on good evidence.

The evidence presented in this report points to the fact that publicly funded services are generally subject to stronger scrutiny than privately operated services.

Commercial operators are not always required to publish comparable information on passenger volumes, vehicle carryings, fares, profitability, investment plans, social value, route-level performance or emissions.

Yet some of these privately operated routes perform critical or high-dependency functions for residents, businesses, public services and supply chains.

Social value and community benefit reporting is also inconsistent. The research found that ferry operators generate important benefits through a range of programmes, however, the quality of reporting varies widely.

International evidence shows that stronger reporting is possible. Norway's national ferry database provides public access to operational data across ferry connections. British Columbia requires BC Ferries to provide quarterly and annual route-level reporting covering tariffs, revenue, ridership, traffic patterns, service frequency, vessel capacity and reliability measures such as on-time performance and overloads.

The insight for policy makers across all devolved governments is to develop a shared evidence and reporting standard that can be applied flexibly within different governance arrangements.

A shared standard would help the UK to understand where asset risks are greatest, where fares are least affordable, where performance is weakest, where emissions interventions are most urgent, and where public investment would create the greatest social, economic and environmental value.

# Section 6: Key Findings

## 6.6 Ferries Are Not Sufficiently Integrated with the Wider Public Transport Network

For many passengers, especially foot passengers, older people, disabled people, visitors and those travelling with children or luggage, the quality of the whole journey depends on how well ferries connect with trains, buses, coaches, taxis, active travel routes, ticketing systems and real-time information.

The evidence reviewed in this report shows that the UK once had stronger physical and commercial integration between ferries and rail, particularly where railway companies owned or controlled ships, harbours, piers and connecting timetables. Some of that legacy remains visible today at harbours such as Wemyss Bay, Holyhead, Fishguard, Harwich and Heysham.

However, later restructuring, privatisation and fragmented ownership across rail, bus, ferry and port infrastructure have weakened the passenger experience.

The result is an uneven experience for passengers. Some routes and operators provide useful Rail & Sail products, port access guidance, shuttle buses or local ticketing arrangements.

However, these examples are not consistent across the UK. In many places, passengers still have to use separate websites, separate tickets and separate sources of information to plan what should feel like one journey.

Physical integration is equally important but lacking at many ports and harbours where foot passengers face long walks, poor signage, limited shelters, uneven surfaces, weak lighting, unclear terminal layouts and uncertainty about check-in arrangements which in aggregate discourage non-car travel.

The quality of operator online support for foot passengers is also inconsistent. The best operators recognise that the ferry crossing is only one stage in a wider journey and provide route-specific guidance. Others provide more limited or fragmented information, forcing passengers to piece together their own journey from port pages, FAQs, third-party maps and transport operator websites.

International examples show that stronger integration is achievable. Norway's Entur, Denmark's Rejseplanen and Hamburg's hvv network demonstrate the value of making ferry services visible within wider journey planning, ticketing and real-time passenger information systems.

The key takeaway is that ferry integration should be treated as a core transport planning issue. Improving integration would make ferry journeys easier, more inclusive and more attractive to foot passengers. It would also support wider goals around accessibility, decarbonisation, reduced car dependency and more resilient local transport networks.

# Section 6: Key Findings

## 6.7 Passenger Accessibility Support Is Improving, but Still Too Static and Reactive

This report confirms that most major operators now provide basic accessibility information, assistance booking processes and practical onboard features such as lifts, accessible seating, accessible cabins and staff support. Some operators go further and publish formal accessibility policies, structured guidance or sensory information. This shows that accessibility is no longer being ignored by the sector.

Worryingly, there is still a significant gap between published information and the lived experience of travelling by ferry. Ferry journeys are more variable than many rail or aviation journeys because they depend on the interaction between vessels, ports, tides, weather, gangways, ramps, linkspans, lifts, vehicle decks, crew support and terminal layouts.

Boarding arrangements can differ not only between routes, but between sailings. For passengers with mobility, sensory, cognitive or other support needs, that variability creates uncertainty before the journey has even started.

The main weakness is that accessibility support is still largely built around static information, advance notice and staff intervention. Passengers often have to consult multiple pages, PDFs or operator documents to understand what assistance is available, whether a terminal is accessible, how boarding works, whether lifts are available, and what happens if conditions change.

This places too much responsibility on passengers to interpret fragmented information, repeat their needs and hope that the right support is available at the right point in the journey. In a modern public transport system, that should not be good enough.

Practical improvements required are relatively clear. Operators and transport bodies should provide clearer route-specific “what to expect” guidance, real-time boarding and accessibility updates, better port and terminal accessibility information, digital passenger profiles that reduce repeated disclosure of support needs, broader sensory and cognitive accessibility guidance, and transparent performance measures for assisted travel.

This finding is important because improving accessibility is not only about compliance. It is central to enabling the growing number of older and disabled travellers, families, and other foot passengers to travel with confidence.

It also supports wider public policy goals around inclusive transport, active travel, modal shift, social participation and decarbonisation.

If ferries are to form part of a modern, sustainable public transport network, accessibility must be designed around the whole journey, not treated as an assistance request bolted onto the booking process.

# Section 6: Key Findings

## 6.8 Vessel & Port Decarbonisation Requires Whole-System Planning

The transition to low and zero-emission water transport depends on vessels, ports, harbours, electricity networks, charging systems, alternative fuel supply chains, maintenance facilities, crews, safety standards, procurement models and funding arrangements all developing together.

In this report we show that the UK has moved beyond early policy ambition. Maritime 2050, the Clean Maritime Plan, UK SHORE, CMDC, ZEVI, the Maritime Decarbonisation Strategy and the forthcoming expansion of the UK Emissions Trading Scheme are all helping to create stronger incentives for vessel and port decarbonisation.

Operators and ports are also beginning to act, with hybrid vessels, electric ferry programmes, shore power projects, port energy schemes and clean maritime demonstrations now visible across different parts of the sector. This is real progress, but it remains uneven and early-stage.

The future implementation challenge must address the fact that different route types require different decarbonisation pathways. Short, frequent and predictable routes may be well suited to battery-electric vessels, provided charging infrastructure and grid capacity are available.

Larger RoPax and longer exposed routes may need hybrid systems, shore power, alternative fuels, efficiency improvements or staged transition pathways before full zero-emission operation is technically and commercially viable.

Smaller local, river and visitor services may face lower technical barriers but greater funding and capacity constraints.

Ports and harbours are becoming the critical constraint. They will need to function not only as transport gateways, but as energy nodes, resilience assets and accessible public transport interchanges.

Larger ports may need shore power, berth electrification, grid reinforcement, freight-compatible layouts and alternative fuel systems while keeping high-volume services operating. Smaller ports will require more basic but equally important upgrades to linkspans, slipways, passenger areas, shelters, local power connections and landing infrastructure.

The barriers are clear: high capital costs, long asset lives, uncertain technology choices, constrained grid capacity, split ownership between operators and infrastructure owners, limited public funding, private investment risk and weak route-level data.

The overall policy mandate is to move beyond treating ferry decarbonisation as a technology challenge and realise that it's a systems planning challenge. Without coordinated investment in vessels, ports, power, fuels, skills, data and governance, the sector risks creating expensive low-carbon assets that cannot be used to their full potential.

# Section 7: Conclusions

The critical conclusion that can be drawn from the research undertaken through this project and presented in this report is clear.

**UK water transport is more important, more fragmented and more exposed to future risk than is currently reflected in policy, funding and governance arrangements.**

Ferries, river crossings and harbour services are critical infrastructure for many island, coastal, river and estuary communities, but they are not consistently planned, funded or regulated according to the role they perform.

The sector should not be treated as a single market. Different routes carry different levels of public dependency, economic value and consequence of failure. This means future decisions on subsidy, fares, ownership, resilience, accessibility, integration and decarbonisation should be shaped by route criticality rather than by passenger volume, ownership model or historical precedent alone.

Ageing assets, limited spare capacity, weak data transparency and fragmented public transport integration are already constraining performance. At the same time, decarbonisation will require coordinated investment in vessels, ports, grid capacity, fuels, skills and long-term funding.

Collaboration required across the UK Government, devolved governments, local authorities and transport bodies is visible but not systematic enough to support a coherent UK-wide view of water transport risk, investment need or future opportunity. This is significant because many of the challenges identified in this report do not stop at administrative boundaries.

The international evidence reinforces this conclusion. Norway, Denmark, Greece, British Columbia, Washington State and Hamburg do not offer a single model that the UK can copy. However, they show the value of being more explicit about the public-interest role of ferries, using contracts and regulation to define service expectations, linking public funding to fleet renewal, improving performance transparency, integrating ferries into wider public transport networks, and aligning decarbonisation with port and energy planning.

To be fit for the decades ahead, water transport needs to be brought more fully into mainstream transport, infrastructure, energy and community-resilience planning. Without this, passengers and communities will continue to carry the cost of a system that is too often planned in parts rather than as a whole.

# Section 8: Recommendations

The following recommendations focus on the practical changes needed to implement a coordinated and evidence-led approach to policy development that reflects route criticality, strengthens public-interest outcomes, supports long-term investment, and helps ensure that water transport is planned as an integral part of the UK's wider transport and infrastructure system.

## Overarching Recommendation

**1. Establish a UK-wide Water Transport Transition Framework**

Policy makers should establish a UK-wide Water Transport Transition Framework that recognises ferries, water buses and other passenger water transport services as essential parts of the wider public transport, economic resilience and decarbonisation system. The framework should not replace devolved responsibilities or local decision-making, but should provide a shared structure for setting priorities, improving data, coordinating investment, strengthening resilience, improving passenger experience and accelerating decarbonisation.

## Supporting Recommendations

**2. Adopt a route criticality framework to guide policy and investment decisions**

Develop a national system that classifies water transport routes according to their social, economic and strategic importance. This should include factors such as community dependency, availability of alternative routes, freight importance, healthcare and education access, tourism value, public transport role, vulnerability to disruption and importance during emergencies.

**3. Create common data, performance and transparency standards**

A common reporting framework should be introduced for publicly funded and strategically important ferry and water transport services. This should cover route performance, cancellations, punctuality, vessel availability, passenger numbers, freight volumes, accessibility standards, emissions, subsidy levels, capital investment, customer satisfaction and public transport integration.

### 4. Develop long-term funding and investment plans for vessels, ports and supporting infrastructure

Governments and transport authorities should move towards longer-term funding settlements and investment plans for strategically important ferry and water transport routes. These plans should cover vessel renewal, port upgrades, grid connections, shoreside power, linkspans, passenger facilities, digital systems, accessibility improvements and climate resilience.

### 5. Accelerate route-specific decarbonisation planning

Every strategically important route should have a route-specific decarbonisation plan that considers vessel type, route length, port constraints, energy availability, operating patterns, replacement cycles, passenger and freight demand, and whole-life costs. These plans should be technology-neutral but should provide a clear pathway for reducing emissions from vessels and port operations.

### 6. Improve integration between ferries, buses, rail, active travel and ticketing systems

Water transport services should be better integrated into wider public transport planning, journey planning platforms, ticketing systems and interchange design. This should include clearer information for foot passengers, better connections with bus and rail services, improved wayfinding at ports, more consistent support for accessible journeys and greater use of integrated ticketing where practical.

### 7. Establish stronger cross-government and cross-sector collaboration mechanisms

A formal collaboration mechanism should be created to bring together UK Government, devolved governments, local authorities, ferry operators, port owners, passenger representatives, accessibility bodies, energy networks and industry suppliers. This should focus on shared challenges including funding, service resilience, procurement, decarbonisation, public transport integration, accessibility and data standards.

# Section 8: Recommendations

**8. Embed passenger accessibility, social value and community benefit into future funding and procurement**

Future public funding, procurement and service agreements should place greater emphasis on accessibility, social value and community benefit. This should include minimum standards for passenger information, assistance, terminal accessibility, vessel accessibility, disruption support, community engagement, local employment, skills development and support for vulnerable users.

# Section 9: Next Steps

The publication of this report should be treated as the beginning of a wider programme of engagement rather than the end of the research process. The immediate priority is therefore to use the report to build momentum around a shared agenda for change via the following steps.

### 1. Formalise a small cross-sector Focus Action Group

Stakeholders who participated in the 3 virtual roundtables convened during the course of this project confirmed their support for the formation of a Focus Action Group. This group could be facilitated by SRITC and include representatives from government, operators, ports, local authorities, community interest groups, and relevant technical specialists.

It would be tasked with turning the report's recommendations into a practical work programme, including proposed timescales, lead organisations, data needs and potential funding routes. The group should focus on areas where progress can be made without waiting for major legislative reform.

### 2. Produce short policy briefing papers for decision-makers

The Focus Action Group would produce short policy briefing papers for ministers, civil servants, local authority leaders, transport bodies and parliamentary stakeholders. They would outline the main risks facing the sector and the specific actions requested from policy makers based on the evidence presented in this report and scrutinised by members of the action group.

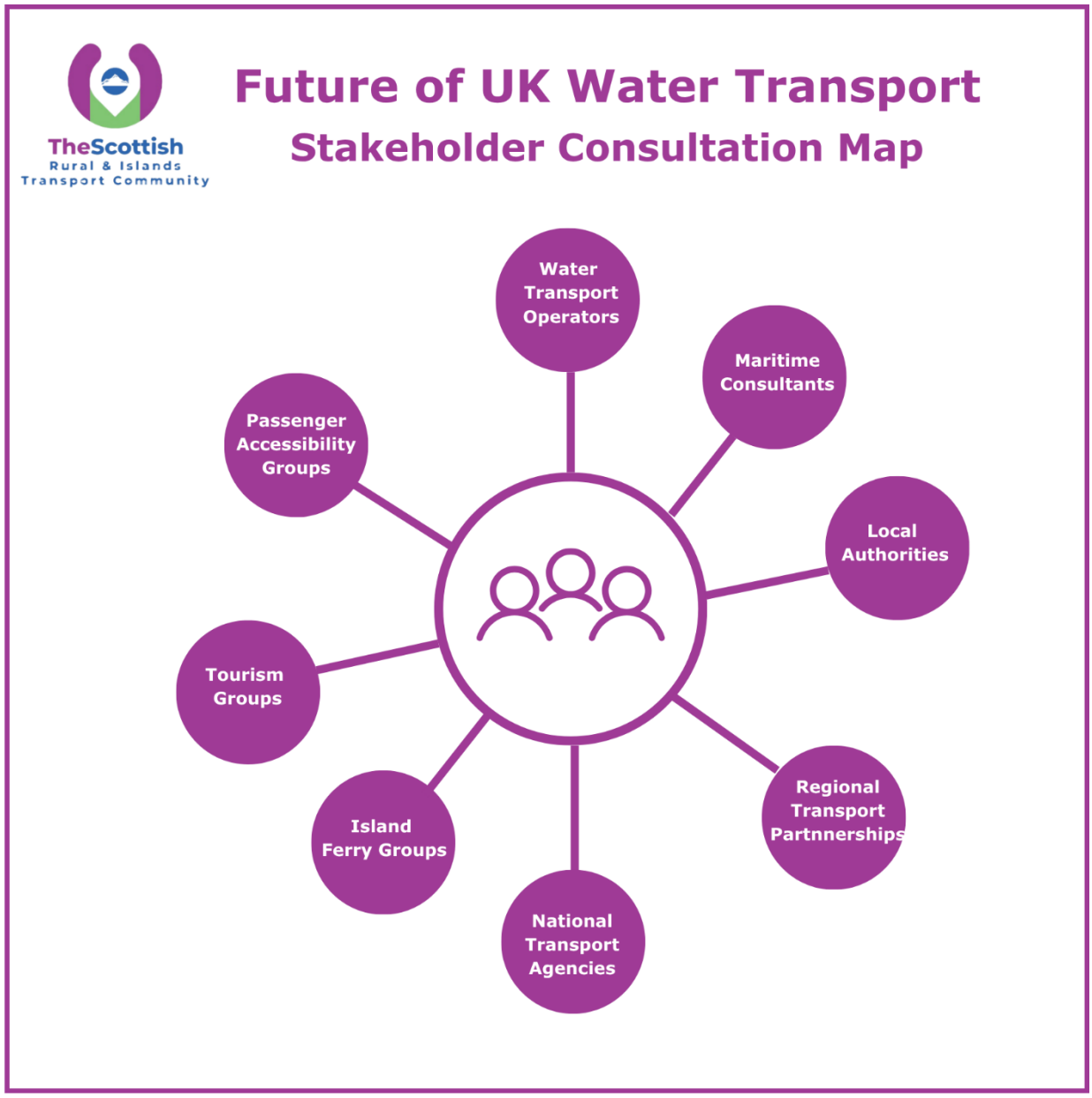
### 3. Maximise public and stakeholder visibility

SRITC will use webinars/virtual Cafes, our email news bulletin, social media posts, case studies and direct engagement with relevant parliamentary groups, committees and transport forums to maximise the visibility and understanding of the findings and recommendations put forward in this report and build consensus that water transport is essential infrastructure for many communities and should be planned, funded and governed accordingly.

# Annex 1: Stakeholder Consultation Map

Over the course of this project, SRITC consulted with individuals and organisations from across the water transport sector. This ensuring that we obtained we a wide range of perspectives on the current challenges and future opportunities. The map below groups contributors by the type of organisation that they represented.

For completeness, Annex 2 on the following page, provides a tabulated list of individuals who contributed to the 3 virtual roundtables that took place between September 2025 and May 2026 or met with SRITC individually.



# Annex 2: Research Contributors

| Name | Organisation | Stakeholder Group |
|---|---|---|
| Robina Barton | ZetTrans | Regional Transport Partnership |
| John Carr | Association of Transport Co-ordinating Officers | Consultant |
| Lucy Conway | CalMac (Non-Exec Director) | Water Transport Operator |
| Lisa Cook | Portsmouth Council | Local Authority |
| Stuart Cordner | Cruise Loch Lomond | Water Transport Operator |
| Emily Davie | Loch Lomond & The Trossachs National Park | Local Authority |
| Justin Denny | Westmorland & Furness Council | Local Authority |
| Rebecca Drake-Green | Gravesend Green Party | Ferry Action Group |
| Iona Dundas | Orkney Youth Action Group | Passenger Accessibility Group |
| Jason Dutoit | Sandbanks Ferry | Water Transport Operator |
| Nicholas Finney | Independent Consultant | Consultant |
| Anne Foy | Destination Helensburgh | Ferry Action Group |
| Nicky Gardner | Hidden Europe | Consultant |
| Sheila Gilmour | Visit Arran | Tourism Group |
| Emily Harvey | FEL Scotland | Consultant |
| Caroline Hood | NesTrans | Regional Transport Partnership |
| Stephen Joseph | Stephen Joseph Associates | Consultant |
| Mike Kean | Fair Acres Group | Water Transport Operator |
| Felix Klann | European Federation for Transport and Environment | Consultant |
| Mia Lalanne | Scottish Rural Action | Passenger Accessibility Group |
| Jonathan Lowden | DFDS | Water Transport Operator |
| Anne Macleod | MACS | Passenger Accessibility Group |
| Ariana Makinson | European Federation for Transport and Environment | Consultant |
| Murray Mcadam | Enterprise Mobility | Passenger Accessibility Group |
| John McLuckie | Argyll & Bute Council | Local Authority |
| Caitlin McNeil | Argyll & Bute Third Sector Interface | Passenger Accessibility Group |
| Matthew Moss | Ricardo | Consultant |
| Roy Pedersen | Independent Consultant & Author | Consultant |
| Richard Porteus | Highland Council | Local Authority |
| Robert Powell | Tamar Crossing | Water Transport Operator |
| Hugh Raven | Independent Consultant | Consultant |
| Joe Reade | Mull and Iona Ferry Committee | Ferry Action Group |
| Gordon Ross | Western Ferries | Water Transport Operator |
| George Sowerby | Westmorland & Furness Council | Local Authority |
| Andrew Stevens | P&O Ferries | Water Transport Operator |
| Ewan Swaffield | Transport Scotland | National Transport Agency |
| Stuart Wadley | Lerwick Port Authority | Port Operator |
| Tom Wallace | Steamship Sir Walter Scott Ltd | Water Transport Operator |
| Chris Wilcock | Transport Scotland | National Transport Agency |
| Martin Worth | Cornwall Council | Water Transport Operator |

# Annex 3: Route Criticality Index

| *Operator* | Route | Criticality Level |
|---|---|---|
| *Brittany Ferries* | Portsmouth to Caen | Strategic Economic |
| *Brittany Ferries* | Portsmouth to Cherbourg | Strategic Economic |
| *Brittany Ferries* | Portsmouth to Le Havre | Strategic Economic |
| *Brittany Ferries* | Portsmouth to St Malo | Strategic Economic |
| *Brittany Ferries* | Poole to Cherbourg | Strategic Economic |
| *Brittany Ferries* | Plymouth to Roscoff / Santander | Strategic Economic |
| *Brittany Ferries* | Portsmouth to Bilbao (Zierbena) | Strategic Economic |
| *Brittany Ferries* | Poole to Guernsey / Jersey / St Malo | High Dependency |
| *Brittany Ferries* | Portsmouth to Guernsey / Jersey | High Dependency |
| *Caledonian MacBrayne* | Troon to Brodick | Lifeline |
| *Caledonian MacBrayne* | Wemyss Bay to Rothesay | Lifeline |
| *Caledonian MacBrayne* | Oban to Craignure | Lifeline |
| *Caledonian MacBrayne* | Ullapool to Stornoway | Lifeline |
| *Caledonian MacBrayne* | Uig to Tarbert | Lifeline |
| *Caledonian MacBrayne* | Uig to Lochmaddy | Lifeline |
| *Caledonian MacBrayne* | Mallaig to Armadale | Lifeline |
| *Caledonian MacBrayne* | Mallaig to Small Isles | Lifeline |
| *Caledonian MacBrayne* | Kennacraig to Port Askaig (Islay) | Lifeline |
| *Caledonian MacBrayne* | Kennacraig to Port Ellen (Islay) | Lifeline |
| *Caledonian MacBrayne* | Oban to Castlebay | Lifeline |
| *Caledonian MacBrayne* | Oban to Coll & Tiree | Lifeline |
| *Caledonian MacBrayne* | Largs to Cumbrae | Lifeline |
| *Caledonian MacBrayne* | Colintraive to Rhubodach | Lifeline |
| *Caledonian MacBrayne* | Tayinloan to Gigha | Lifeline |
| *Caledonian MacBrayne* | Fionnphort to Iona | Lifeline |
| *Caledonian MacBrayne* | Sconser to Raasay | Lifeline |
| *Caledonian MacBrayne* | Oban to Lismore | Lifeline |
| *Caledonian MacBrayne* | Mallaig to Lochboisdale | Lifeline |
| *Caledonian MacBrayne* | Tarbert to Portavadie | Lifeline |
| *Caledonian MacBrayne* | Gallanach to Kerrera | Lifeline |
| *Caledonian MacBrayne* | Lochaline to Fishnish | Lifeline |
| *Caledonian MacBrayne* | Kilchoan to Tobermory | Lifeline |
| *Caledonian MacBrayne* | Berneray to Leverburgh | Lifeline |
| *Caledonian MacBrayne* | Clonaig to Lochranza | Lifeline |
| *Caledonian MacBrayne* | Ardmhor to Eriskay | Lifeline |
| *Caledonian MacBrayne* | Gourock to Kilcreggan | Lifeline |
| *Dartmouth Lower Ferry* | River Dart | Local Connectivity |
| *DFDS Seaways* | Dover to Calais | Strategic Economic |
| *DFDS Seaways* | Dover to Dunkirk | Strategic Economic |
| *DFDS Seaways* | Newhaven to Dieppe | Strategic Economic |
| *DFDS Seaways* | Newcastle to Amsterdam | Strategic Economic |
| *Gravesend–Tilbury Ferry* | River Thames | Local Connectivity |
| *Hythe Ferry* | River Solent | Local Connectivity |
| *Isle of Man Steam Packet* | Douglas to Heysham | Lifeline |
| *Isle of Man Steam Packet* | Liverpool Birkenhead to Douglas | Lifeline |
| *Isle of Man Steam Packet* | Belfast to Douglas | Lifeline |

# Annex 3: Route Criticality Index

| *Operator* | Route | Criticality Level |
|---|---|---|
| *Isles of Scilly Steamship Company* | Penzance (Cornwall) to St Mary's (Hugh Town) | Lifeline |
| *Irish Ferries* | Holyhead to Dublin | Strategic Economic |
| *Irish Ferries* | Rosslare to Pembroke Dock | Strategic Economic |
| *Irish Ferries* | Dover to Calais | Strategic Economic |
| *Mersey Ferries* | River Mersey | Local Connectivity |
| *NorthLink Ferries* | Aberdeen to Lerwick (Shetland) via Kirkwall (Orkney) | Lifeline |
| *NorthLink Ferries* | Scrabster to Stromness (Orkney) | Lifeline |
| *Orkney Island (Council) Ferries* | Inter-Island Ferries (Kirkwall to Westray, Papa Westray, and North Ronaldsay) | Lifeline |
| *P&O* | Cairnryan (Scotland) – Larne (Northern Ireland) | Strategic Economic |
| *P&O* | Dover to Calais | Strategic Economic |
| *P&O* | Hull to Rotterdam | Strategic Economic |
| *Pentland Ferries* | Gills Bay (Caithness) to St Margaret's Hope (Orkney) | Lifeline |
| *Rathlin Island Ferry Ltd* | Ballycastle to Rathlin Island | Local Connectivity |
| *Rathlin Island Ferry Ltd* | Strangford–Portaferry (N. Ireland) | Local Connectivity |
| *Red Funnel* | Southampton to East Cowes (Isle of Wight) | Lifeline |
| *Red Funnel* | Southampton to West Cowes (Isle of Wight) | Lifeline |
| *Shetland Island (Council) Ferries* | Inter-Island Routes | Lifeline |
| *Sheilds Ferry* | North Shields to South Shields | Local Connectivity |
| *Stena Line* | Holyhead (Wales) to Dublin | Strategic Economic |
| *Stena Line* | Fishguard to Rosslare | Strategic Economic |
| *Stena Line* | Liverpool (Birkenhead) to Belfast | Strategic Economic |
| *Stena Line* | Cairnryan (Scotland) to Belfast | Strategic Economic |
| *Stena Line* | Harwich to Hook of Holland | Strategic Economic |
| *St Mawes Ferry* | River Fal | Local Connectivity |
| *Thames Clippers* | River Thames | Local Connectivity |
| *Torpoint Ferry* | River Tarmar | Local Connectivity |
| *Wightlink* | Portsmouth to Fishbourne (Isle of Wight | Lifeline |
| *Wightlink* | Portsmouth Harbour to Ryde Pier Head (Isle of Wight) | Lifeline |
| *Wightlink* | Lymington to Yarmouth (Isle of Wight) | Lifeline |
| *Western Ferries (Clyde)* | Gourock to Dunoon | High Dependency |
| *West Lynn Ferries* | Great Ouse River | Local Connectivity |
| *Windermere Ferry* | Lake Windermere | Local Connectivity |
| *Woolwich Ferries* | River Thames | Local Connectivity |

# Annex 4: Vessel Classification Index

| Operator | Vessel Name | Launch Date | Vessel Class | Weight (Gross Tonnes) |
|---|---|---|---|---|
| Brittany Ferries | Mont St Michel | 2022 | RoPax Ferry | 30000-40000 |
| Brittany Ferries | Guillaume de Normandie | 2024 | RoPax Ferry | 30000-40000 |
| Brittany Ferries | Galicia | 2022 | RoPax Ferry | >40000 |
| Brittany Ferries | Salamanca | 2023 | RoPax Ferry | >40000 |
| Brittany Ferries | Santoña | 2023 | RoPax Ferry | >40000 |
| Brittany Ferries | Commodore Clipper | 2000 | RoPax Ferry | 10000-20000 |
| Brittany Ferries | Bretagne | 1990 | RoPax Ferry | 20000-30000 |
| Brittany Ferries | Saint-Malo | 2024 | RoPax Ferry | 30000-40000 |
| Brittany Ferries | Barfleur | 1991 | RoPax Ferry | 20000-30000 |
| Brittany Ferries | Pont Aven | 2005 | RoPax Ferry | >40000 |
| Brittany Ferries | Armorique | 2010 | RoPax Ferry | 20000-30000 |
| Brittany Ferries | Galicia | 2022 | RoPax Ferry | >40000 |
| Caledonian MacBrayne | MV Caledonian Isles | 1993 | RoPax Ferry | 5000-10000 |
| Caledonian MacBrayne | MV Glen Sannox | 2025 | RoPax Ferry | 5000-10000 |
| Caledonian MacBrayne | MV Argyle Flyer | 2007 | Passenger Only | 2500-5000 |
| Caledonian MacBrayne | MV Isle of Mull | 1988 | RoPax Ferry | 2500-5000 |
| Caledonian MacBrayne | MV Loch Seaforth | 2015 | RoPax Ferry | 5000-10000 |
| Caledonian MacBrayne | MV Hebrides | 2001 | RoPax Ferry | 5000-10000 |
| Caledonian MacBrayne | MV Loch Bhrusda | 1996 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Lochnevis | 2001 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Finlaggan | 2011 | RoPax Ferry | 5000-10000 |
| Caledonian MacBrayne | MV Isle of Lewis | 1995 | RoPax Ferry | 5000-1000 |
| Caledonian MacBrayne | MV Clansman | 1998 | RoPax Ferry | 5000-1000 |
| Caledonian MacBrayne | MV Loch Shira | 2007 | RoPax Ferry | 1000-2500 |
| Caledonian MacBrayne | MV Loch Dunvegan | 1991 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Ranza | 1987 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Buie | 1992 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Hallaig | 2013 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Striven | 1986 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | Lord of the Isles | 1989 | RoPax Ferry | 2500-5000 |
| Caledonian MacBrayne | MV Lochinvar | 2013 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Carvoria | 2017 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Fyne | 1991 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Tarbert | 1992 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Portain | 2003 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Catriona | 2016 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Loch Alainn | 1997 | RoPax Ferry | <1000 |
| Caledonian MacBrayne | MV Chieftain | 2007 | Passenger Only | <1000 |
| Caledonian MacBrayne | NV Isle of Islay | 2026 | RoPax Ferry | 5000-1000 |
| Cremyll Ferry | MV "Edgcumbe Belle" | 1957 | Passenger Only | <1000 |
| Cremyll Ferry | MV Tamar Belle (II) | 1960 | Passenger Only | <1000 |
| Dartmouth Lower Ferry (River Dart) | MV Dartmouth Princess | 1990 | Passenger Only | <1000 |
| DFDS Seaways | Côte des Dunes | 2002 | RoPax Ferry | 30000-40000 |
| DFDS Seaways | Côte des Flandres | 2002 | RoPax Ferry | 30000-40000 |
| DFDS Seaways | Côte d'Opale | 2002 | RoPax Ferry | >40000 |

# Annex 4: Vessel Classification Index

| Operator | Vessel Name | Launch Date | Vessel Class | Weight (Gross Tonnes) |
|---|---|---|---|---|
| DFDS Seaways | Dover Seaways | 2002 | RoPax Ferry | 30000-40000 |
| DFDS Seaways | Delft Seaways | 2002 | RoPax Ferry | 30000-40000 |
| DFDS Seaways | Dunkerque Seaways | 2002 | RoPax Ferry | 30000-40000 |
| DFDS Seaways | Côte d'Albâtre | 2002 | RoPax Ferry | 10000-20000 |
| DFDS Seaways | Seven Sisters | 2002 | RoPax Ferry | 10000-20000 |
| DFDS Seaways | King Seaways | 2002 | RoPax Ferry | 30000-40000 |
| DFDS Seaways | Princess Seaways | 2002 | RoPax Ferry | 30000-40000 |
| Gravesend–Tilbury Ferry | Jacob Marley | 1985 | Passenger Only | <1000 |
| Isle of Man Steam Packet | Manxman | 2023 | RoPax Ferry | 20000-30000 |
| Isle of Man Steam Packet | Ben-my-Chree | 1998 | RoPax Ferry | 10000-20000 |
| Isles of Scilly Steamship Company | Scillonian III | 1997 | Passenger Only | 1000-2500 |
| Irish Ferries | Ulysses | 2000 | RoPax Ferry | >40000 |
| Irish Ferries | W.B. Yeats | 2018 | RoPax Ferry | >40000 |
| Irish Ferries | Dublin Swift | 2001 | RoPax Ferry | 5000-10000 |
| Irish Ferries | James Joyce | 2006 | RoPax Ferry | 30000-40000 |
| Irish Ferries | Isle of Innisfree | 1993 | RoPax Ferry | 20000-30000 |
| Irish Ferries | Isle of Inishmore | 1998 | RoPax Ferry | 30000-40000 |
| Mersey Ferries | MV Royal Iris of the Mersey | 1959 | Passenger Only | <1000 |
| Mersey Ferries | MV Snowdrop | 1959 | Passenger Only | <1000 |
| NorthLink Ferries | MV Hjaltland | 2002 | RoPax Ferry | 10000-20000 |
| NorthLink Ferries | MV Hrossey | 2002 | RoPax Ferry | 10000-20000 |
| NorthLink Ferries | MV Hamnavoe | 2002 | RoPax Ferry | 5000-10000 |
| Orkney Ferries | MV Earl Sigurd | 1990 | RoPax Ferry | <1000 |
| Orkney Ferries | MV Earl Thorfinn | 1990 | RoPax Ferry | <1000 |
| Orkney Ferries | MV Golden Mariana | 1973 | Passenger Only | <1000 |
| Orkney Ferries | MV Eynhallow | 1987 | RoPax Ferry | <1000 |
| Orkney Ferries | MV Hoy Head | 1994 | RoPax Ferry | <1000 |
| Orkney Ferries | MV Thorsvoe | 1991 | RoPax Ferry | <1000 |
| P&O | European Highlander | 2002 | RoPax Ferry | 20000-30000 |
| P&O | European Causeway | 2002 | RoPax Ferry | 20000-30000 |
| P&O | P&O Pioneer | 2022 | RoPax Ferry | >40000 |
| P&O | P&O Liberte | 2024 | RoPax Ferry | >40000 |
| P&O | Pride of Rotterdam | 2001 | RoPax Ferry | >40000 |
| P&O | Pride of Hull | 2001 | RoPax Ferry | >40000 |
| Pentland Ferries | MV Pentalina | 2009 | RoPax Ferry | 1000-2500 |
| Pentland Ferries | MV Alfred | 2019 | RoPax Ferry | 2500-5000 |
| Rathlin Island Ferry Ltd | Kintra II | 2020 | Passenger Only | <1000 |
| Rathlin Island Ferry Ltd | Spirit of Rathlin | 2016 | Passenger Only | <1000 |
| Rathlin Island Ferry Ltd | MV Portaferry II | 2001 | Passenger Only | <1000 |
| Rathlin Island Ferry Ltd | MV Strangford II | 2016 | Passenger Only | <1000 |
| Red Funnel | Red Falcon | 1994 | RoPax Ferry | 2500-5000 |
| Red Funnel | Red Osprey | 1994 | RoPax Ferry | 2500-5000 |
| Red Funnel | Red Eagle | 1996 | RoPax Ferry | 2500-5001 |
| Red Funnel | Red Kestrel | 2019 | RoPax Ferry | 1000-2500 |
| Red Funnel | Red Jet 6 | 2016 | Passenger Only | <1000 |

# Annex 4: Vessel Classification Index

| Operator | Vessel Name | Launch Date | Vessel Class | Weight (Gross Tonnes) |
|---|---|---|---|---|
| Red Funnel | Red Jet 7 | 2018 | Passenger Only | <1000 |
| Sandbanks Ferry | *Bramble Bush Bay* ( | 1994 | RoPax Ferry (Chain) | <1000 |
| Shetland Island Council Ferries | MV Hendra | 1982 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Snolda | 1983 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Fivla (II) | 1985 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Good Shepherd IV | 1986 | Craned Vehicle Lift & Passenger | <1000 |
| Shetland Island Council Ferries | MV Geira (II) | 1988 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Bigga | 1991 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Leirna | 1992 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Linga | 2002 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Filla (II) | 2003 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Daggri | 2003 | RoPax Ferry | <1000 |
| Shetland Island Council Ferries | MV Dagalien | 2004 | RoPax Ferry | <1000 |
| Sheilds Ferry | Pride of the Tyne | 1983 | Passenger Only | <1000 |
| Sheilds Ferry | Spirit of the Tyne | 2007 | Passenger Only | <1000 |
| Stena Line | Stena Adventurer | 2003 | RoPax Ferry | >40000 |
| Stena Line | Stena Estrid | 2020 | RoPax Ferry | >40000 |
| Stena Line | Stena Nordica | 2000 | RoPax Ferry | 20000-30000 |
| Stena Line | Stena Edda | 2020 | RoPax Ferry | >40000 |
| Stena Line | Stena Superfast VII | 2001 | RoPax Ferry | 30000-40000 |
| Stena Line | Stena Superfast VIII | 2001 | RoPax Ferry | 30000-40000 |
| Stena Line | Stena Britannica | 2010 | RoPax Ferry | >40000 |
| Stena Line | Stena Hollandica | 2010 | RoPax Ferry | >40000 |
| St Mawes Ferry | Duchess of Cornwall | 2008 | Passenger Only | <1000 |
| St Mawes Ferry | May Queen | 1939 | Passenger Only | <1000 |
| St Mawes Ferry | Queen of Falmouth | 1937 | Passenger Only | <1000 |
| Thames Clippers | Celestial Clipper | 2023 | Passenger Only | <1000 |
| Thames Clippers | Mars Clipper | 2024 | Passenger Only | <1000 |
| Thames Clippers | Aurora Clipper | 2008 | Passenger Only | <1000 |
| Thames Clippers | Comet Clipper | 2019 | Passenger Only | <1000 |
| Thames Clippers | Cyclone Clipper | 2007 | Passenger Only | <1000 |
| Thames Clippers | Galaxy Clipper | 2015 | Passenger Only | <1000 |
| Thames Clippers | Hurricane Clipper | 2001 | Passenger Only | <1000 |
| Thames Clippers | Jupiter Clipper | 2017 | Passenger Only | <1000 |
| Thames Clippers | Mercury Clipper | 2017 | Passenger Only | <1000 |

# Annex 4: Vessel Classification Index

| Operator | Vessel Name | Launch Date | Vessel Class | Weight (Gross Tonnes) |
|---|---|---|---|---|
| Thames Clippers | Meteor Clipper | 2008 | Passenger Only | <1000 |
| Thames Clippers | Monsoon Clipper | 2007 | Passenger Only | <1000 |
| Thames Clippers | Moon Clipper | 2005 | Passenger Only | <1000 |
| Thames Clippers | Neptune Clipper | 2015 | Passenger Only | <1000 |
| Thames Clippers | Orion Clipper | 2016 | Passenger Only | <1000 |
| Thames Clippers | Sky Clipper | 1999 | Passenger Only | <1000 |
| Thames Clippers | Star Clipper | 1999 | Passenger Only | <1000 |
| Thames Clippers | Storm Clipper | 1999 | Passenger Only | <1000 |
| Thames Clippers | Sun Clipper | 2005 | Passenger Only | <1000 |
| Thames Clippers | Tornado Clipper | 2007 | Passenger Only | <1000 |
| Thames Clippers | Twinstar Clipper | 2004 | Passenger Only | <1000 |
| Thames Clippers | Typhoon Clipper | 2007 | Passenger Only | <1000 |
| Thames Clippers | Venus Clipper | 2019 | Passenger Only | <1000 |
| Torpoint Ferry | Tamar II | 2004 | Passenger Only | <1000 |
| Torpoint Ferry | Lynher II | 2005 | Passenger Only | <1000 |
| Torpoint Ferry | Plym II | 2005 | Passenger Only | <1000 |
| Wightlink | Victoria of Wight | 2018 | RoPax Ferry | 5000-10000 |
| Wightlink | St Clare | 2001 | RoPax Ferry | 5000-10000 |
| Wightlink | St Faith | 1990 | RoPax Ferry | 2500-5000 |
| Wightlink | Wight Ryder I | 2009 | Passenger Only | <1000 |
| Wightlink | Wight Ryder II | 2009 | Passenger Only | <1000 |
| Wightlink | Wight Sky | 2009 | RoPax Ferry | 2500-5000 |
| Wightlink | Wight Light | 2009 | RoPax Ferry | 2500-5000 |
| Wightlink | Wight Sun | 2009 | RoPax Ferry | 2500-5000 |
| Western Ferries (Clyde) | MV Sound of Scarba | 2001 | RoPax Ferry | <1000 |
| Western Ferries (Clyde) | MV Sound of Seil | 2013 | RoPax Ferry | <1000 |
| Western Ferries (Clyde) | MV Sound of Shuna | 2003 | RoPax Ferry | <1000 |
| Western Ferries (Clyde) | MV Sound of Soay | 2013 | RoPax Ferry | <1000 |
| Thames Clippers | Earth Clipper | 2023 | Passenger Only | <1000 |
| Windermere Ferry | Mallard | 1991 | RoPax Ferry | <1000 |
| Woolwich Ferries | Ben Woollacott | 2018 | Passenger Only | <1000 |
| Woolwich Ferries | Dame Vera Lynn) | 2018 | Passenger Only | <1000 |

# Annex 5: Ferry & Rail Integration - Route Analysis

| Operator(s) | Route | Train Station at Mainland Harbour(s) | Rail/Coach/Sail Ticket Available |
|---|---|---|---|
| NorthLink Ferries | Aberdeen to Lerwick (Shetland) via Kirkwall (Orkney) | No | Yes |
| CalMac | Ardrossan – Brodick | Yes | No |
| Isle of Man Steam Packet | Belfast to Douglas | No | No |
| P&O & Stena Line | Cairnryan (Scotland) – Larne (NI) | No | Yes |
| P&O & Stena Line | Cairnryan to Belfast | No | Yes |
| CalMac | Clonaig to Lochranza | No | No |
| Isle of Man Steam Packet | Douglas to Heysham | Yes (Heysham | No |
| P&O, Irish Ferries, DFDS | Dover to Calais | No | No |
| DFDS | Dover to Dunkirk | No | No |
| Stena Line | Fishguard to Rosslare | Yes (Both Harbours | Yes |
| Pentland Ferries | Gills Bay (Caithness) to St Margaret's Hope (Orkney) | No | No |
| CalMac | Gourock to Dunoon | Yes (Gourock) | Yes |
| Stena Line | Harwich to Hook of Holland | Yes (Both Harbours) | Yes |
| Isle of Man Steam Packet | Heysham to Douglas | Yes (Heysham) | Yes |
| Stena Line | Holyhead (Wales) to Dublin | Yes (Holyhead) | Yes |
| P&O | Hull to Rotterdam | No | No |
| Stena Line | Liverpool (Birkenhead) to Belfast | No | No |
| Wightlink | Lymington to Yarmouth (Isle of Wight) | Yes (Lymington) | Yes |
| CalMac | Mallaig to Armadale | Yes (Mallaig) | Yes |
| CalMac | Mallaig to Lochboisdale | Yes (Mallaig) | Yes |
| CalMac | Mallaig to Small Isles | Yes (Mallaig) | Yes |
| DFDS | Newcastle to Amsterdam | No | No |
| DFDS | Newhaven to Dieppe | Yes (Both Harbours) | |
| CalMac | Oban to Castlebay | Yes (Oban) | Yes |
| CalMac | Oban to Coll & Tiree | Yes (Oban) | Yes |
| CalMac | Oban to Craignure | Yes (Oban) | Yes |
| CalMac | Oban to Lismore | Yes (Oban) | Yes |
| Isles of Scilly Steamship Company | Penzance (Cornwall) to St Mary's (Hugh Town) | No | No |
| Brittany Ferries | Plymouth to Roscoff / Santander | No | No |
| Brittany Ferries | Poole to Cherbourg | No | No |
| Brittany Ferries | Poole to Guernsey / Jersey / St Malo | No | No |

# Annex 5: Ferry & Rail Integration - Route Analysis

| Operator(s) | Route | Train Station at Mainland Harbour(s) | Rail/Coach/Sail Ticket Available |
|---|---|---|---|
| Wightlink | Portsmouth Harbour to Ryde Pier Head (Isle of Wight) | Yes (Portsmouth) | Yes |
| Brittany Ferries | Portsmouth to Bilbao (Zierbena) | Yes (Portsmouth) | Yes |
| Brittany Ferries | Portsmouth to Caen | Yes (Portsmouth) | Yes |
| Brittany Ferries | Portsmouth to Cherbourg | Yes (Portsmouth) | Yes |
| Wightlink | Portsmouth to Fishbourne (Isle of Wight | Yes (Portsmouth) | Yes |
| Brittany Ferries | Portsmouth to Guernsey / Jersey | Yes (Portsmouth) | Yes |
| Brittany Ferries | Portsmouth to Le Havre | Yes (Portsmouth) | Yes |
| Brittany Ferries | Portsmouth to St Malo | Yes (Portsmouth) | Yes |
| Irish Ferries | Rosslare to Pembroke Dock | Yes (Both Ports) | Yes |
| NorthLink Ferries | Scrabster to Stromness (Orkney) | No | No |
| Red Funnel | Southampton to East Cowes (Isle of Wight) | No | No |
| Red Funnel | Southampton to West Cowes (Isle of Wight) | No | No |
| CalMac | Troon to Brodick | No | No |
| CalMac | Uig to Lochmaddy | No | No |
| CalMac | Uig to Tarbert | No | No |
| CalMac | Ullapool to Stornoway | No | No) |
| CalMac | Wemyss Bay to Rothesay | Yes (Wemyss Bay) | Yes |

# Annex 6: Operator Passenger Accessibility Support Evaluation

The table below provides a summary of the quality of passenger accessibility information offered by major lifeline and cross channel ferry operators. For each accessibility category, a score from 1-5 was awarded based on the quality and clarity of information provided online and at the ferry harbour/port. These scores should taken as rough guidance only and used as the basis for further discussion and action.

| Operator | Foot Journey Clarity | Wheelchair / PRM Clarity | Onboard accessibility detail | Harbour-specific detail | Formal accessibility standards | Total |
|---|---|---|---|---|---|---|
| **CalMac** | 3 | 4 | 3 | 3 | 3 | 16 |
| **NorthLink Ferries** | 3 | 5 | 4 | 4 | 5 | 21 |
| **WightLink** | 5 | 4 | 3 | 4 | 4 | 20 |
| **Red Funnel** | 3 | 4 | 3 | 3 | 4 | 17 |
| **Isle of Man Steam Packet** | 2 | 3 | 4 | 2 | 2 | 13 |
| **Stena Line** | 2 | 3 | 3 | 2 | 2 | 12 |
| **P&O Ferries** | 3 | 4 | 4 | 4 | 5 | 20 |
| **Irish Ferries** | 3 | 5 | 4 | 3 | 4 | 19 |
| **Brittany Ferries** | 2 | 4 | 3 | 3 | 3 | 15 |

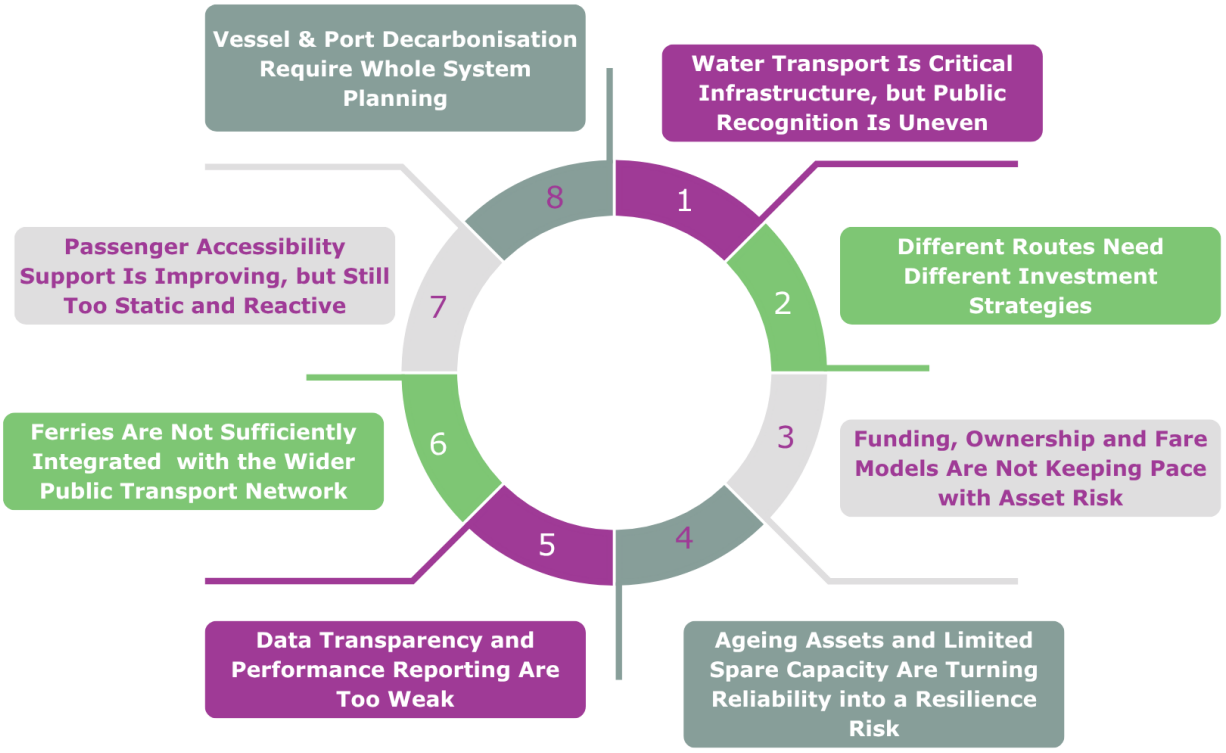
# Annex 7: Comparison of International Water Transport Markets

| Country | Operating Model | Asset Ownership | Primary Funding Source | Revenue Risk | Decarbonisation Policy |
|---|---|---|---|---|---|
| **Norway** | Competitive tendering of routes (public service contracts awarded to private operators | Vessels typically owned by private operators; terminals owned by the state or county authorities | Substantial government subsidies (public funding makes services viable) + fare revenues | Mostly borne by government – many contracts are gross-cost | Government uses public procurement and route contracts as the main decarbonisation lever. |
| **Denmark** | Public–private partnership at local level – many ferry routes are municipally owned and privately operated | Ferries and facilities often owned by public entities (municipalities or regional authorities) | Fare revenue complemented by public subsidies from municipal and state budgets | Generally borne by government – authorities. Many contracts are gross cost | National climate policy, municipal transport policy and EU rules are pushing ferry electrification. |
| **Greece** | Commercial routes privately run; unprofitable/lifeline routes tendered as Public Service Contracts (PSC) | Vessels mainly privately owned; ports/terminals largely public, municipal or port-authority assets. | Fare revenue on viable routes; state PSC subsidy for barren/lifeline routes | Operator carries risk on commercial routes; State carries risk on lifeline routes | Combination of EU ETS/FuelEU and national fleet-renewal policies used to drive decarbonisation |
| **Canada (British Columbia)** | Arm's-length corporatized model – BC Ferries is a government-owned but independent company with a 60-year service contract | Vessels owned by BC Ferries (financed independently); most terminals owned by the Province and leased to BC Ferries | Predominantly fare revenue (circa 70%) with government payments for select lifeline routes | Borne by operator – BC Ferries retains fare revenue and takes profit/loss risk within contract | Canada Infrastructure Bank provides major finance (up to CAD $1 Billion) to BC Ferries, including support for electric/hybrid vessels and charging infrastructure |
| **USA (Washington State)** | 100% public operation – Washington State Ferries (WSF) is part of state-run transport system | Vessels and terminals are state-owned (part of the state highway system) | Mixed: Circa 57% from fares and state subsidies and 43% from fuel taxes and other sources | Borne by government – the state covers any deficits | WSF ferry electrification programme is estimated to cost around US$6 billion, with approximately US$1.68 billion currently funded |
| **Germany (Hamburg)** | Urban passenger ferry model embedded in the public transport network (no standalone ferry concession contract) | Ferries owned/operated by HADAG within city-owned HOCHBAHN group; jetties/port infrastructure in municipal/port system. | Primarily fare revenue with operating deficits absorbed into wider Hamburg public transport P&L | Public sector/municipal group bears deficit risk | Hamburg/HOCHBAHN climate policy supports electrification; HADAG adding hybrid ferries and ordering fully electric vessels from 2028. |

# Annex 8: 8 Key Findings Infographic

TheScottish Rural & Islands Transport Community

## Future of UK Water Transport
## 8 Key Findings



# Annex 9: Sources & Evidence Base

| Publisher | Year | Source/Title | Relevant Sections |
|---|---|---|---|
| Audit Scotland | 2017 | Transport Scotland's ferry services | Section 3.4 Funding & Subsidy Levels; Section 3.8 Vessel Profiles; Sect 4.1 Policy Environment; Section 6.3 Funding, Ownership & Fare Models; Section 6.4 Reliability & Resilience |
| Audit Scotland | 2019 | Transport Scotland's ferry services: impact report | Section 3.3 Passenger & Vehicle Journeys; Section 3.8 Vessel Profiles; Section 3.4 Funding & Subsidy Levels; Section 6.3 Funding, Ownership & Fare Models; Section 6.4 Reliability & Resilience |
| Audit Scotland | 2025 | 2024/25 Annual Audit Report: Transport Scotland | Section 3.4 Funding & Subsidy Levels; Section 4.1 Policy Environment; Section 6.3 Funding, Ownership & Fare Models |
| BC Ferry Commission | 2026 | How is the Price Cap Determined? | Section 3.4 Funding & Subsidy Levels; Section 5 International Perspectives; Section 6.3 Funding, Ownership & Fare Models; |
| Cabinet Office | 2024 | National Procurement Policy Statement | Section 4.1 Policy Environment; Section 4.5 Social Value & Community Benefit |
| Cabinet Office | 2025 | Procurement Policy Note 002: The Social Value Model | Section 4.1 Policy Environment; Section 4.5 Social Value & Community Benefit |
| Caledonian MacBrayne | 2025 | Governance and Contract Requirements \| CHFS3 | Section 3.4 Funding & Subsidy Levels; Section 4.1 Policy Environment; Section 6.3 Funding, Ownership & Fare Models |
| Caledonian MacBrayne | 2025 | Annual Report 2024 | Section 3.4 Funding & Subsidy Levels; Section 3.8 Vessel Profiles; Section 4.5 Social Value & Community Benefit; Section 6.3 Funding, Ownership & Fare Models; Section 6.4 Reliability & Resilience |
| Caledonian MacBrayne | 2025 | Annual Carryings 2024 | Section 3.3 Passenger & Vehicle Journeys; Section 3.7 Route Network Profiles Section 3.8 Vessel Profiles; Section 6.2 Route Criticality; Section 6.4 Reliability & Resilience |

# Annex 9: Sources & Evidence Base

| | | | |
|---|---|---|---|
| Centre for Economics and Business Research | 2022 | The socio-economic impact of CalMac ferry services | Section 3.4 Funding & Subsidy Levels; Section 4.5 Social Value & Community Benefit; Section 6.3 Funding, Ownership & Fare Models; |
| Climate Change Committee | 2025 | The Seventh Carbon Budget | Section 3.6 Carbon Emission Levels; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| Competition and Markets Authority | 2024 | Report on the proposed subsidy to CalMac Ferries Limited by Transport Scotland | Section 3.4 Funding & Subsidy Levels; Section 4.1 Policy Environment;; Section 6.3 Funding, Ownership & Fare Models |
| Danish Journal of Transportation Research / Aalborg University | 2024 | Strategic tendering process in accelerating the transition to electric ferries: The case of Norway | Section 3.6 Carbon Emission Levels; Section 4.2 Vessel & Harbour Decarbonisation; Section 5 International Perspectives; Section 6.8 Decarbonisation; |
| David MacBrayne Ltd | 2025 | Annual account: March 2025 | Section 3.2 Operator Ecosystem; Section 3.7 Route Network Profiles; Section 3.8 Vessel Profiles; Section 6.2 Route Criticality; Section 6.4 Reliability & Resilience |
| Department for Energy Security and Net Zero | 2025 | Digest of UK Energy Statistics (DUKES) | Section 3.6 Carbon Emission Levels; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| Department for Energy Security and Net Zero | 2026 | Final UK greenhouse gas emissions statistics: 1990 to 2024 | Section 3.6 Carbon Emission Levels; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| Department of Finance Northern Ireland | 2021 | PPN 01/21 - Social Value in Procurement | Section 4.5 Social Value & Community Benefit |
| Department for Transport | 2022 | Maritime Route Recovery Map | Section 3.7 Route Network Profiles; Section 4.1 Policy Environment; Section 6.2 Route Criticality |
| Department for Transport | 2024 | Maritime emissions modelling framework | Section 3.6 Carbon Emission Levels; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| Department for Transport | 2025 | Maritime Decarbonisation Strategy | Section 3.6 Carbon Emission Levels; Section 4.1 Policy Environment; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |

# Annex 9: Sources & Evidence Base

| | | | |
|---|---|---|---|
| Department for Transport | 2025 | Sea passenger statistics, all routes: 2024 | Section 4.3 Public Transport Integration; Section 6.6 Ferries and Wider Public Transport |
| Department for Transport | 2025 | Sea passenger statistics: domestic sea passengers 2024 | Section 3.3 Passenger & Vehicle Journeys; Section 3.7 Route Network Profiles; Section 6.2 Route Criticality |
| Department for Transport | 2025 | Sea passenger statistics: international sea passengers 2024 | Section 3.3 Passenger & Vehicle Journeys; Section 5 International Perspectives |
| Department for Transport | 2026 | Better Connected: a strategy for integrated transport | Section 4.1 Policy Environment; Section 4.3 Public Transport Integration; Section 4.4 Vessel & Port Accessibility; Section 6.6 Ferries and Wider Public Transport; Section 6.7 Passenger Accessibility |
| Government of British Columbia | 2024 | Coastal Ferry Services Contract | Section 3.4 Funding & Subsidy Levels; Section 5 International Perspectives; Section 6.3 Funding, Ownership & Fare Models; |
| International Energy Agency | 2025 | Public procurement for zero-emission fuels in ferries | Section 3.6 Carbon Emission Levels; Section; Section 4.1 Policy Environment; 4.2 Vessel & Harbour Decarbonisation; Section 5 International Perspectives; Section 6.8 Decarbonisation; |
| International Longevity Centre UK / Age UK | 2015 | The Future of Transport in an Ageing Society | Section 4.4 Vessel & Port Accessibility; Section 6.7 Passenger Accessibility |
| National Atmospheric Emissions Inventory | 2026 | UK emissions data selector | Section 3.6 Carbon Emission Levels; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| NorthLink Ferries | 2025 | Annual Carryings 2024 | Section 3.3 Passenger & Vehicle Journeys; Section 3.7 Route Network Profiles; Section 3.8 Vessel Profiles; Section 6.2 Route Criticality; Section 6.4 Reliability & Resilience |
| OECD | 2021 | Applying the Island Transport Equivalent to the Greek Islands | Section 3.4 Funding & Subsidy Levels; Section 5 International Perspectives; Section 6.3 Funding, Ownership & Fare Models; |
| Rod Pedersen | 2013 | Who Pays the Ferryman? | Section 3.3 Passenger & Vehicle Journeys; Section 3.7 Route Network Profiles; Section 3.8 |

# Annex 9: Sources & Evidence Base

| | | | |
|---|---|---|---|
| | | | Vessel Profiles; Section 6.2 Route Criticality; Section 6.4 Reliability & Resilience;; |
| Rod Pedersen | 2024 | A Better Future for Scotland's West Coast Ferries | Section 3.4 Funding & Subsidy Levels; Section 6.3 Funding, Ownership & Fare Models; |
| Rod Pedersen | 2024 | Better Orkney and Shetland Connections | Section 3.4 Funding & Subsidy Levels; Section 6.3 Funding, Ownership & Fare Models |
| Scottish Government | 2018 | Islands (Scotland) Act 2018 | Section 4.1 Policy Environment |
| Scottish Government | 2025 | National Islands Plan: annual report 2024 | Section 4.1 Policy Environment |
| Systra and Frontier Economics | 2025 | Evaluation of UK Shore | Section 3.6 Carbon Emission Levels; Section 4.1 Policy Environment; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| The Highland Council | 2026 | Corran Ferry Infrastructure Improvement Scheme | Section 3.6 Carbon Emission Levels; Section 3.8 Vessel Profiles; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation; Section 6.4 Reliability & Resilience |
| Transport Scotland | 2016 | Going Further: Scotland's Accessible Travel Framework | Section 4.1 Policy Environment; Section 4.4 Vessel & Port Accessibility; Section 6.7 Passenger Accessibility |
| Transport Scotland | 2020 | National Transport Strategy 2 | Section 4.3 Public Transport Integration; Section 6.6 Ferries and Wider Public Transport |
| Transport Scotland | 2024 | Scotland's Accessible Travel Framework - Delivery Plan 2024-2026 | Section 4.1 Policy Environment; Section 4.4 Vessel & Port Accessibility; Section 6.7 Passenger Accessibility |
| Transport Scotland | 2025 | Strategic Approach - Islands Connectivity Plan | Section 4.1 Policy Environment |
| Transport Scotland | 2025 | The Vessels and Ports Plan for the Clyde and Hebrides and Northern Isles networks (2025 – 2045) | Section 4.1 Policy Environment |
| Transport & Environment | 2026 | Full Charge Ahead: How battery electrification can transform Europe's ferries | Section 3.6 Carbon Emission Levels; Section 3.7 Route Network Profiles; Section 4.2 Vessel & Harbour Decarbonisation; Section 5 International Perspectives; |

# Annex 9: Sources & Evidence Base

| | | | |
|---|---|---|---|
| | | | Section 6.2 Route Criticality; Section 6.8 Decarbonisation; |
| Transport for the South East / Economicsense | 2025 | Solent Ferry Services | Section 3.2 Operator Ecosystem; Section 3.4 Funding & Subsidy Levels; ; Section 3.7 Route Network Profiles; Section 3.8 Vessel Profiles; Section 4.3 Public Transport Integration; Section 6.3 Funding, Ownership & Fare Models; Section 6.6 Ferries and Wider Public Transport |
| UK ETS Authority / GOV.UK | 2025 | UK ETS scope expansion: domestic maritime | Section 3.6 Carbon Emission Levels; Section 4.1 Policy Environment;; Section 4.2 Vessel & Harbour Decarbonisation; Section 6.8 Decarbonisation |
| UK Parliament | 2012 | Public Services (Social Value) Act 2012 | Section 4.5 Social Value & Community Benefit |
| Welsh Government | 2024 | WPPN 003: Social value clauses/community benefits through public procurement | Section 4.1 Policy Environment; Section 4.5 Social Value & Community Benefit |

TheScottish
Rural & Islands
Transport Community

A Community Interest Company

# Contact SRITC

**W: ruralmobility.scot**

**E: sritc@ruralmobility.scot**