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Environmental Report

Islands Connectivity Plan – Strategic Environmental Assessment

Contents

This Environmental Report has been prepared by Ramboll UK Limited (Ramboll) on behalf of Transport Scotland.

Introduction

Background

The Ferries Plan (2013-2022), developed by Transport Scotland, was the culmination of the first comprehensive review of ferry services in Scotland ever carried out, setting out strategic guidance for the provision of ferry services in Scotland between 2013-2022. It included a proposed Vessel Replacement Programme as well as a proposed Programme of Port and Harbour Works, developed to replace life expired assets.

In 2022, Transport Scotland commenced the development of the Islands Connectivity Plan (ICP) to replace the Ferries Plan (2013-2022), widening its scope to take account of ferry services, aviation, and fixed links, as well as onward and connecting travel.

Strategic Environmental Assessment (SEA) aims to offer protection to the environment by ensuring public bodies and those organisations preparing plans of a 'public character' consider and address likely significant environmental effects. SEA can also provide a valuable opportunity to identify and address the environmental implications of public plans, assisting plan-makers to consider how their plans can achieve better environmental outcomes, while still delivering important plan objectives. A SEA of the post-consultation draft ICP (December 2024 internal version) has been undertaken and its findings are set out in this Environmental Report.

SEA Requirements and Process

Under the Environmental Assessment (Scotland) Act 2005 (the 'Environmental Assessment Act'), which transposes the European Union (EU) SEA Directive, Scottish public bodies preparing plans are required to undertake a SEA if such plans, if implemented, are considered likely to have significant effects, either positive or negative.

Figure 1 - SEA process followed in relation to the ICP development illustrates the process followed through its main components, i.e. the Strategic Approach Paper (SAP) and the Vessels and Ports Plan (VPP), further described below.

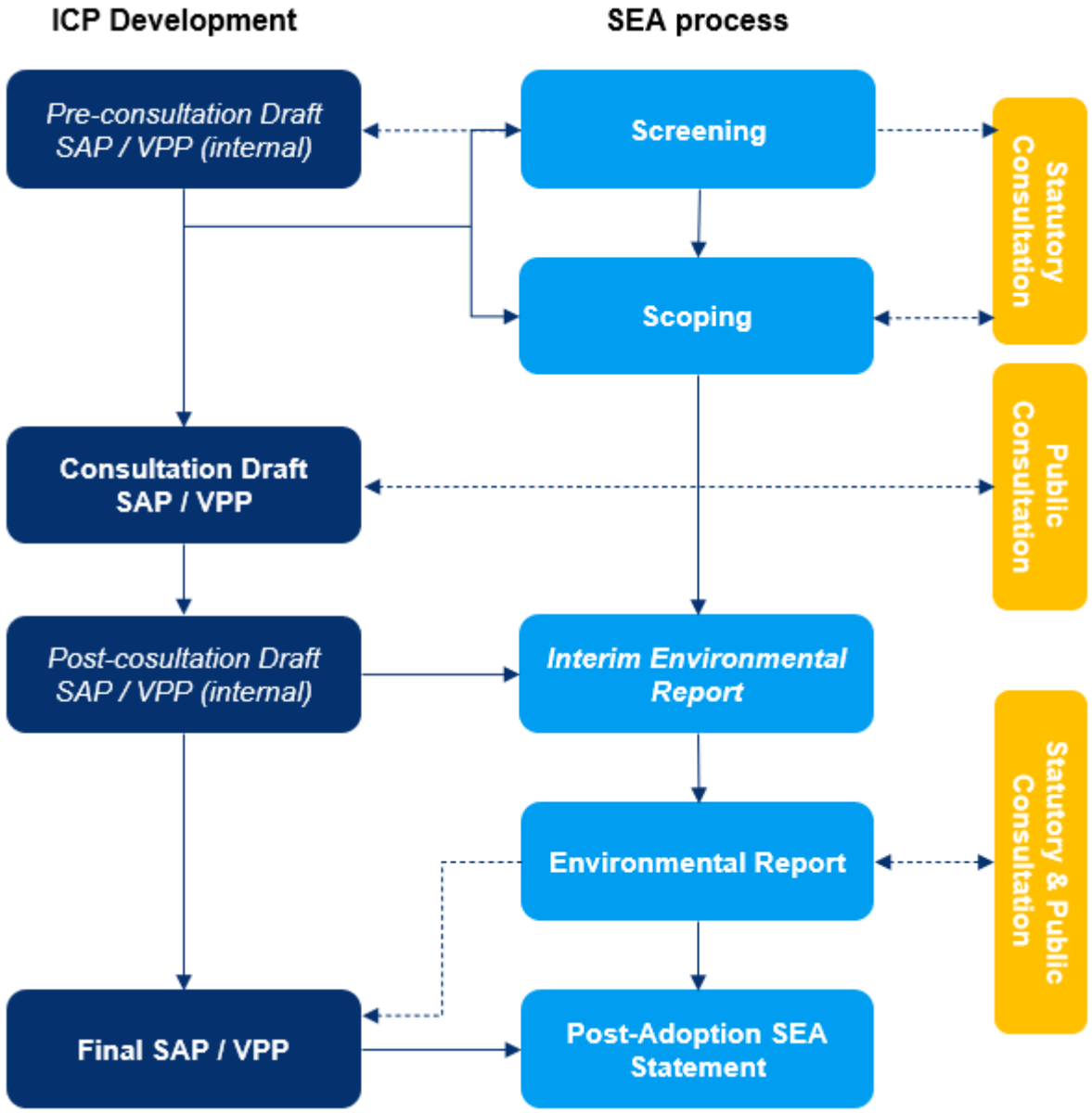

Figure 1 - SEA process followed in relation to the ICP development

- **Screening**. Transport Scotland completed a Screening Report (not publicly available) in May 2023 concluding that the plan fell within Section 5(4) of the Environmental Assessment Act, which extends the requirements of the SEA Directive to plans prepared by a Scottish public body. Although the ICP is not considered a qualifying plan, i.e. it is not required by a legislative, regulatory or administrative provision, and it does not set the framework for future development consent of projects; the likelihood of significant effects could not be ruled out, as such, it was determined that an SEA was required. The pre-consultation draft of the SAP and VPP, and the Screening Report were submitted to statutory consultation authorities, all of whom agreed with the conclusions of the Screening Report.

- **Scoping**. Transport Scotland completed a Scoping Report (not publicly available) in October 2023. The Scoping Report identified key plans and programmes of relevance to the ICP. It also set out the baseline environment, existing pressures and trends without the ICP, and scoped in the issues where significant effects could not be ruled out. The Scoping Report was also shared with statutory consultation authorities, all of whom agreed with the overall approach, scope and level of detail proposed. A draft assessment framework, including some proposed amendments to the scope of the SEA, and additional detail on the assessment methodology, was subsequently developed and shared with statutory consultation authorities in December 2024. Overall, statutory consultation authorities agreed with the approach proposed (see Appendix 2 for an overview of consultation feedback).
- **Interim Environmental Report**. Following public consultation and community engagement on the consultation draft of the SAP and VPP between February and May 2024, the SAP and VPP were revised by Transport Scotland to incorporate feedback received, and the December 2024 internal working versions of these documents were subject to initial assessment. The initial assessment culminated in an Interim Environmental Report intended for internal purposes, which included recommendations for changes aimed at strengthening the ICP and resulting in a more positive score against the SEA objectives.
- **Environmental Report**. The Interim Environmental Report has been adapted into this document for external statutory and public consultation. It should be noted that the Environmental Report is not accompanied by the post-consultation draft ICP (December 2024 internal working version). However, the consultation draft SAP and VPP (February 2024) remain publicly accessible at the following links:
  - Consultation Draft SAP
  - Consultation Draft VPP
- **Post-Adoption SEA Statement**. Upon adoption of the ICP (through the approval of the SAP and VPP), a post-adoption SEA statement will be prepared to summarise how SEA considerations and consultation responses have been integrated into the ICP, and the reason for choosing the plan adopted over any other reasonable alternatives. This statement will be published and will refer to the final published versions of the SAP and VPP.

Purpose and Structure of this Document

This document presents the assessment of the post-consultation draft SAP and VPP that form part of the ICP (internal versions dated December 2024). It is intended for external statutory and public consultation and use by Transport Scotland in the preparation of the final SAP and VPP.

The structure adopted in this document is outlined below, and refers to the information requirements for Environmental Reports listed in Schedule 3 of the Environmental Assessment Act. It should be noted that the non-technical summary is presented as a standalone document.

- Introduction
- Islands Connectivity Plan Overview
    - (1) An outline of the contents and main objectives of the plan or programme, and of its relationship (if any) with other qualifying plans and programmes.
    - (8) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of expertise) encountered in compiling the required information.
- Methodology
    - Also covers (8) as described above.
- Baseline Summary (additional detail presented in Appendix 3 (Baseline))
    - (2) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.
    - (3) The environmental characteristics of areas likely to be significantly affected.
    - (4) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to any assimilated law extending to Scotland (…).
    - (5) The environmental protection objectives, established at international or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation
- Assessment Findings
    - (6) The likely significant effects on the environment (…).
    - (7) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.
- Monitoring
    - (9) A description of the measures envisaged concerning monitoring in accordance with section 19
- Next Steps
- Appendix 1 (Abbreviations) – contains an abbreviation list
- Appendix 2 (Consultation Feedback) – summarises consultation feedback relevant to the SEA

- Appendix 3 (Baseline) - presents baseline information on SEA topics scoped in
- Appendix 4 (Assessment Proforma) – presents the assessment findings in a proforma format

Islands Connectivity Plan

Relationship with other Qualifying Plans and Programmes

The ICP is being prepared in the context of Scottish policy, namely:

- The Scottish Government's National Planning Framework 4 (NPF4), which promotes local living and aims to encourage, promote and facilitate access to local services and create connected communities which prioritise environmental, social and economic sustainability. The ICP, together with the National Islands Plan (see below), will support delivering the aims under the NPF4.
- The Climate Change Plan Update, which updates Scotland's targets to end our contribution to climate change by 2045. The ICP will contribute to achieving these targets.
- Scotland's National Strategy for Economic Transformation (SNSET), which sets out the priorities for Scotland's economy as well as the actions needed to maximise the opportunities of the next decade to achieve the vision of a wellbeing economy. The ICP will support achieving economic ambitions of ferry dependent communities.
- The National Transport Strategy 2 (NTS), which provides the national transport policy framework in Scotland, setting out a clear vision of a sustainable, inclusive, safe and accessible transport system which helps deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The NTS is set within the context of a climate emergency, with the Scottish Government committed to transitioning the transport system to one that is net zero in carbon emissions by 2045. The ICP will directly support the NTS priorities, and overall progress will be measured through NTS indicators.
- Scotland's National Islands Plan (NIP), which provides a framework for actions aimed at meaningfully improving outcomes for island communities. The NIP sets out 13 strategic objectives to address population decline; encourage sustainable economic development; and improve outcomes in areas such as transport, housing, health, education, environment, climate change and energy. A new NIP is anticipated to be published in 2025. The ICP will support addressing the challenges and ambitions set out in the NIP.
- The Aviation Statement and Key Priorities, which sets out actions the Scottish Government will take to help grow Scotland's international connectivity, secure lifeline services in the Highlands and Islands and play its part in

international efforts to decarbonise aviation. The ICP builds on the Aviation Statement.

- The Ferries Plan 2013-2022, which aimed at maximising the economic and social potential of remote rural and island communities through the delivery of sustainable ferry services. The Ferries Plan includes an investment plan up to 2025. The ICP replaces the Ferries Plan.

The ICP is also being informed by the outcomes of the Strategic Transport Projects Review 2 (STPR2), an evidence-based review of the performance of Scotland's strategic transport network undertaken in order to inform Scottish Ministers on a programme of potential transport investment opportunities between 2022 and 2042.

ICP Overview

The ICP aims to set out how ferry services, supported by other transport modes, will be delivered, and strengthened, working towards a long-term vision, and supported by clear priorities and defined outcomes for people and places. The ICP comprises the following documents (see Figure 2 - The ICP structure):

- Strategic Approach paper (SAP) is the core of the ICP and proposes an overall Strategic Approach to island transport connectivity including ferries, aviation, fixed links and, especially addresses the strategic challenges facing Clyde and Hebrides Ferry Services (CHFS) and Northern Isles Ferry Services (NIFS), for which the Scottish Ministers are directly responsible.
- Delivery plans, including:
    - Vessels and Ports Plan (VPP), for the Clyde and Hebrides and Northern Isles networks (2025-2045), which sets out the recommended investment programme needed to maintain and safely operate lifeline ferry services. The VPP replaces the Vessel Replacement Programme that was developed as part of the Ferries Plan (2013 – 2022) and the Vessel Replacement and Deployment Plan, last published in 2018.
    - Refreshed Community Needs Assessments (CNAs), which identify whether gaps exist in the current level of service provision, and where under- or over-provision are identified, options to address them are generated, developed and appraised, including consideration of supporting transport modes (i.e. aviation, fixed links). The appraisal of options follows the Scottish Transport Appraisal Guidance (STAG) criteria, namely: environment; climate change; health, safety and wellbeing; economy; equality and accessibility. The Cowal and Rosneath CNA was published in September 2024. Work on remaining CNAs for CHFS and NIFS is currently ongoing.

In addition, the Small Vessels Replacement Programme (SVRP), which stems from the now superseded Vessel Replacement and Deployment Plan, aims to achieve a very substantial renewal of the small vessel fleet between 2021 and 2031. The SVRP was initiated in 2020 and is led by Caledonian Maritime Assets Limited (CMAL) with support from Transport Scotland and CFL. The SVRP will continue supporting delivery of the ICP and will be informed by findings from CNAs.

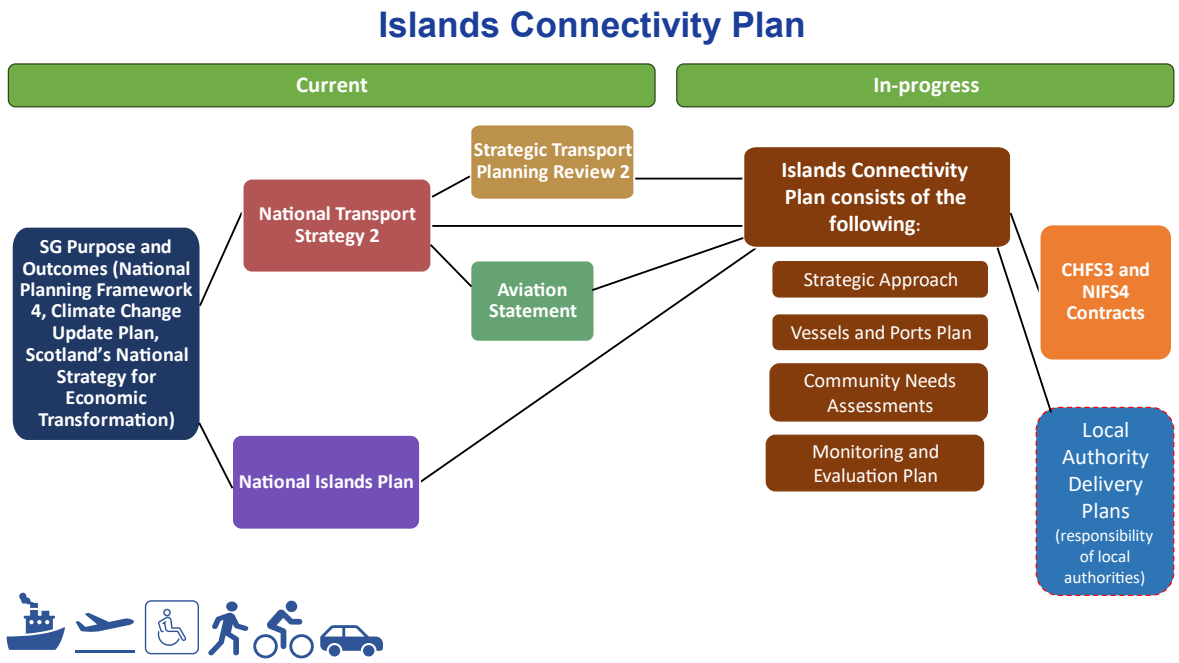

Figure 2 - The ICP structure

It is envisaged that the SAP and VPP will be reviewed and refreshed every five years, following the development of the Monitoring and Evaluation Plan, to ensure that island transport connectivity needs and challenges are clearly understood and that related policies are developed based on up-to-date assessment of needs. The ICP will inform the development of CHFS and NIFS contracts, as well as local authority delivery plans.

Strategic Approach Paper

The main components of the SAP comprise:

- The Vision, which is long-term and describes where Transport Scotland wants to get to in the future, guiding long-term planning and decision-making for those with direct responsibilities.
- Four Priorities, which provide high-level targets for Transport Scotland to monitor and review progress against.
- Outcomes, three defined under each Priority.

- Theme-based high-level commitments (around 60), which will support the realisation of the desired Outcomes. These are grouped into 12 themes.

SAP Vision, Priorities and Outcomes

The Vision of the ICP captured in the SAP is that:

> **"Scotland's ferry services, supported by other transport services, will be safe, reliable, affordable and inclusive for residents, businesses and visitors enabling connectivity, sustainability and growth of island and peninsula communities and populations".**

The Vision is supported by the following four Priorities and associated Outcomes (these have been given numerical references to facilitate subsequent assessment):

Reliable and Resilient

- Will be reliable and resilient: to provide certainty on how long a journey will take, and that it will be a simple and comfortable experience. The confidence we will have in our journey will enable us to plan our lives, access medical services, get to work on time, access education, enjoy leisure and recreational opportunities, deliver goods efficiently and keep businesses running smoothly.
- Will get people and goods where they need to get to: ferry networks and services will be integrated effectively with other transport modes, helping economic development, and adapting to changing requirements of island communities, businesses and visitors while supporting opportunities for developing and new industries.
- Will be transparent: we will feel included and listened to and we will understand the reasons for decisions being made that affect our daily lives.

Accessible

- Will ensure that marginalised members of our communities have safe and fair access to ferry services they need: This will include reducing inequalities and advancing equality of opportunities, for individuals who identify as sharing protected characteristics under the Equality Act 2010.
- Will be easy to use for all: our ferry services will recognise that people have different needs and capabilities and will work to ensure that everyone can use the services with as few barriers as possible.

- Will be affordable: we will consider options that affect peoples` lives in a way that is affordable and sustainable for ferry users and tax payers.

Integrated

- Will support people making sustainable and active travel choices which will have a significant positive effect on individual health and physical and mental wellbeing.
- Will support integrated travel choices: better integration between our ferries networks and other modes of transport will be key when delivering the Strategy – in particular, active and sustainable modes - both on the mainland and those islands or rural communities to which they connect.
- Will help make our island and other ferry dependent communities great places to live, work and visit, supporting healthy population balances: by promoting active travel choices we will encourage walking, cycling and public transport usage. This will deliver more social interaction, support local businesses and services and create vibrant communities.

Low Carbon and Environmental Impact

- Will allow people to make travel choices that minimise the long-term impacts on the environment and the wellbeing of future generations: Scotland must transition to a net-zero emissions economy for the benefit of our environment, our people and our future prosperity.
- Will adapt to effects of climate change: our islands are already experiencing the impacts of climate change and we will adapt our ferry services to remain resilient and reduce the harmful effects on future generations.
- Will help deliver our net-zero target: The Scottish Government is committed to achieving net zero greenhouse gas emissions by 2045 in a fair way. We will outline the pathways to further lowering emissions of ferry services to support the delivery of our net-zero target.

SAP Theme-based Commitments

The SAP identifies high-level commitments that will support the realisation of the above Outcomes. These are grouped into 12 themes, as follows:

- Understanding connectivity needs
- Community voice and transparency
- Capacity and demand
- Reliability and resilience
- Accessibility

- Timetables, unplanned and essential travel
- Integration
- Freight services
- Vessels and ports
- Low carbon and environmental impact
- Ferry fares
- Local authority services

Vessels and Ports Plan

The main components of the VPP, for the Clyde and Hebrides and Northern Isles networks (2025-2045), comprise:

- Objectives, based on the Vision and Priorities set out in the SAP.
- Outputs, to be realised through the achievement of the VPP Objectives. These Outputs will also contribute to meeting the Outcomes defined in the SAP.
- Projects recommended for initiation or delivery in four phases extending between 2021 – 2045.

VPP Objectives and Outputs

The VPP (internal draft of December 2024) includes the following Objectives (these have been given numerical references 1-8 to facilitate subsequent assessment):

1. To maintain and safely operate ferry connections for CHFS and NIFS communities, and that opportunities continue to be taken through vessel and port investment to enhance services in support of the growth of island populations and economies.
2. To improve weather and technical reliability, primarily through renewing the fleet and upgrading ports in response to asset age and condition.
3. To reduce the average age of the total fleet (across both CHFS and NIFS networks) to around 15 years by the end of this decade.
4. To improve resilience through an expansion in the CHFS major vessel fleet and through increased interoperability and standardisation of vessels and ports within the major and small vessel fleets.
5. To improve accessibility for transport users through vessel and port design, informed by the proposed Accessibility Standard, once available.
6. To provide additional vehicle-deck capacity to address identified “pinch points” where there is practical, beneficial, and affordable.
7. To progressively decarbonise both vessel fleet and port operations, by 2045.
8. To retain a major vessel in the fleet for resilience purposes until at least 2030.

The VPP also includes the following Outputs, some of which directly related to the Objectives 1-8 as above:

A. sustainable transport connectivity for island and peninsula communities on the CHFS and NIFS networks (related to Objective 1).
B. increased reliability of the fleet due to ongoing vessel renewal (related to Objective 2).
C. increased resilience of the network as a whole due to upgrading of ports, vessel renewal and fleet expansion, with increased standardisation leading to greater flexibility across the fleets for the operators (related to Objective 2 and 4).
D. reduction in average age of the combined fleets due to ongoing vessel renewal (related to Objective 3).
E. improved accessibility for passengers across the network due to fleet and port modernisation and increased standardisation (related to Objective 5).
F. co-ordination with third-party port owners in the forward planning and delivery of investments.
G. reduction in emissions across the vessel fleets due to vessel modernisation, optimal vessel and hull design, adoption of alternative fuels, and an increase in provision of shore power (related to Objective 7).

VPP Projects

The VPP recommends the following Projects, to be initiated or delivered in four phases:

- Phase 1 (2021 – 2026)
  - 1.A – Fleet renewal, including replacement of six vessels (Clyde and Hebrides)
  - 1.B – Port upgrades at 16 locations (including by third parties)

- Phase 2 (2026 – 2031)
  - 2.A – Fleet renewal, including replacement of 18 vessels (Clyde and Hebrides) and two vessels (Northern Isles)
  - 2.B – Port upgrades at three locations and port enabling works associated with phase 2 vessel replacement projects

- Phase 3 (2031 – 2036)
  - 3.A – Fleet renewal, including replacement of three vessels (Clyde and Hebrides) and three vessels (Northern Isles)
  - 3.B – Port upgrades at eight locations.

- Phase 4 (2036 – 2045)

- 4.A – Fleet renewal, including replacement of eight vessels (Clyde and Hebrides)
- 4.B – Port upgrades at two locations.

ICP Development and Reasonable Alternatives

Although there is no legal obligation to develop / implement a Ferries Plan / ICP in Scotland, the development of the ICP is delivering the commitment made in the NIP of replacing the Ferries Plan, also recommended in the STPR2. In addition, the Scottish Islands Survey (2023) highlighted how the use and perception of transport differs between island communities, and noted that satisfaction with transport links to the Scottish mainland (both ferries and flights) had overall decreased since 2020, further supporting the need for the ICP.

In comparison to the Ferries Plan, and reflected in its name, the ICP is wider in scope, as it aims to influence other transport modes and infrastructure that can support ferry services, acknowledging that control / delivery responsibility over some of these lies outside the scope of the ICP. This responds to feedback received from communities and a desire to support reliable and resilient, accessible, and integrated transport services. In addition, given advances made on climate change policy at international and national levels, and associated concerns expressed by local communities, the ICP also aims to support low carbon / environmental impact solutions that contribute to national net-zero carbon targets, and that consider an increased adaptation of infrastructure and ferry services to climate change effects, all of which is reflected in the latest version of the Vision and four main Priorities presented in the SAP.

Based on the development of the ICP process described above, the following reasonable alternatives have been identified and assessed (see Methodology section for an overview of the approach to alternatives' assessment):

- Maintaining the Ferries Plan. Given that there is no legal requirement to have / implement a Ferries Plan, maintaining the existing one is considered a reasonable alternative, in which the Ferries Plan (2013 – 2022) would remain the default policy framework for decisions associated with transport for ferry dependent communities in Scotland.
- No replacement Plan. Given that there is no legal requirement to have / implement a Ferries Plan, concluding the existing one and having no replacement plan is considered a reasonable alternative, in which any decisions associated with transport for ferry dependent communities in Scotland would be made based on more generic and higher-level policies.

Methodology

Scope of the Assessment

Plan Components

Table 1 - Components of the draft SAP subject to assessment and Table 2 - Components of the draft VPP subject to assessment justify which components of the SAP and VPP have been subject to SEA.

Component	Subject to SEA?
Vision	**Yes** - As it sets the overall direction of the ICP and is intended to guide long-term planning and decision-making.
Priorities	No - Priorities are considered through the assessment of desired Outcomes under each priority, but not as separate plan components.
Outcomes	**Yes** - As they specify the overall objectives / desired Outcomes from implementing the ICP.
Theme-based commitments	No - Themes and theme-based commitments are considered through the assessment of desired Outcomes. Due to their nature and specificity, their assessment is considered outside the scope of SEA.

Table 1 - Components of the draft SAP subject to assessment

Component	Subject to SEA?
Objectives	**Yes** - As they specify the objectives of the VPP, defined based on the Vision and Priorities set out in the SAP.
Outputs	No - Outputs are considered through the assessment of VPP Objectives, as outputs are to be realised through the achievement of the VPP Objectives. At the same time, outputs will also contribute to meeting the Outcomes defined in the SAP, which are also assessed separately.
Projects recommended	**Yes** - Considering the two broad categories of projects recommended, i.e. fleet renewal and port upgrades, and avoiding site-specific / project-specific assessments, considered outside the scope of SEA.

Table 2 - Components of the draft VPP subject to assessment

SEA topics

The components of the SAP and VPP have been assessed against the SEA topics scoped in during the scoping stage, which include the following:

- Climatic Factors (assessed through other SEA topics)
- Air Quality
- Noise
- Soil/ Sediment
- Water Environment (fresh and marine)
- Biodiversity
- Cultural Heritage
- Landscape
- Material Assets
- Population and Human Health

Bespoke Assessment Framework

Table 3 - Assessment Framework presents the bespoke assessment framework that has been developed to test the components of the SAP and VPP scoped in. It is structured around the SEA topics ‘scoped in’ and is made up of a number of SEA objectives and assessment guide questions.

SEA Topic	SEA Objective	Assessment Guide Questions. Does the Plan…?
Air Quality	To maintain or improve air quality, reducing transport-related emissions of key pollutants, and to contribute to climate change mitigation, incl. meeting Scotland's greenhouse gas (GHG) emission targets	• contribute to reducing the impact of transport on air quality (through a reduction in the need to travel / modal shift)? • contribute to reduction of emissions of pollutants to air, including in sensitive areas such as designated Air Quality Management Areas (AQMAs)? • seek to reduce GHG emissions and meet GHG targets?
Noise	To reduce exposure to transport-related airborne / underwater noise	• seek to reduce noise emissions associated with the transport network during operational phase? • consider management of noise emissions during construction?
Soil/ Sediment	To maintain and / or improve soil/ marine sediment quality and prevent any further degradation of soils/sediments	• contribute to conserving or reducing the loss of soil, coastal erosion / marine sediment erosion? • contribute to reducing / managing levels of soil/ marine sediment contamination during the construction and operational phases?
Water Environment (fresh and marine)	To maintain or improve the benefits provided by the water environment (incl. rivers, lochs, estuaries, coastal areas and groundwater)	• contribute to the water environment objectives for water quality, water resources, fish migration and physical condition across Scotland's water bodies (marine and fresh)? • decrease the number of people or assets at risk of flooding (tidal, fluvial)?

SEA Topic	SEA Objective	Assessment Guide Questions. Does the Plan…?
Biodiversity	To protect, restore and enhance biodiversity, including in the marine environment	• contribute to protecting, and enhancing biodiversity, including designated sites? • decrease risks associated with the spreading / management of non-native species (aquatic and terrestrial)? • contribute to improving ecological connectivity and promoting positive effects on biodiversity? • promote effective management of pressures and implementation of protection measures on biodiversity?
Cultural Heritage	To maintain, protect and enhance the historic environment, including marine heritage assets	• seek to protect and promote the historic environment? • seek to protect key views to and from heritage assets? • promote opportunities to enhance the historic environment?
Landscape	To maintain, protect, enhance and sustainably manage landscape character, local distinctiveness and scenic value, including in relation to the marine environment	• seek to protect, enhance, or restore landscape character and local distinctiveness and scenic value? • seek to enhance, promote or maintain people's enjoyment and understanding of the landscape? • seek to protect, enhance, or restore and sustainably manage special qualities of designated sites?
Material Assets	To promote the sustainable use and management of existing / planned transport infrastructure and resources,	• support the efficient and sustainable use and management of resources and infrastructure (including energy)? • support the whole life cycle of infrastructure / circular economy?

SEA Topic	SEA Objective	Assessment Guide Questions. Does the Plan…?
	and meet circular economy objectives	• support the adoption of the waste hierarchy across all stages (construction, operation, and decommissioning phases)? • encourage nature-based solutions, including blue-green infrastructure? • support the development of a safe, reliable, and resilient transport network, including in response to climate change projections for Scotland?
Population and Human Health	To improve the health and wellbeing of the population, particularly island communities, and support sustainable economic development	• promote health and wellbeing? • ensure safe and sustainable access to essential services, employment, tourism and recreational spaces? • improve transport services and connectivity, including active travel? • seek to reduce disparities in poverty and social deprivation? • facilitate sustainable economic development, improving competitiveness, productivity, and investment for local businesses, including within the tourism sector? • consider future capacity needs of the network taking demographic and societal changes into account?

Table 3 - Assessment Framework

The assessment framework has been developed in consultation with statutory consultees (see Appendix 2), and has been informed by relevant SEA guidance, including the Scottish Government SEA Guidance, Consideration of Climatic Factors within SEA guidance, SEPA SEA guidance, and Scottish Natural Heritage Landscape Considerations in SEA guidance.

The assessment guide questions have provided a systematic way of interrogating the SAP / VPP components and have been used to target specific potential effects.

The assessment of environmental effects has been qualitative and has been informed by professional judgement and experience with other SEAs. A proforma has been used to include commentary as to the reasoning for identified environmental effects (see Appendix 4). It should be noted that environmental effects have been identified in the absence of any mitigation, which is proposed where relevant.

Colour coding has been used to ensure the effects are visually apparent at a glance as shown in Table 4 – Assessment scoring criteria to be used in the assessment of the SAP and VPP. It should be noted that when more than one score has been considered to apply to a given effect, the colour associated with the "worst" score has been represented.

Colour coding	Score	Description
PP	Positive significant	will result in potentially significant positive effect on the SEA objective
P	Positive	will result in potentially positive effect on the SEA objective
O	Neutral	will result in potentially no effect on the SEA objective
N	Negative	will result in potentially negative effect on the SEA objective
NN	Negative significant	will result in potentially significant negative effect on the SEA objective
U	Unknown	The relationship is unknown, or there is not enough information to make an assessment

Table 4 – Assessment scoring criteria to be used in the assessment of the SAP and VPP

Potential effects have been characterised in relation to their:

- Duration, noting whether these are short-term (<1 year), medium-term (1 – 10 years) or long-term (>10 years).
- Frequency. All potential effects identified are considered to repeat over time unless otherwise stated.

- Reversibility. All potential effects identified are considered reversible unless otherwise stated.

Assessment of Cumulative Effects

A cumulative effect can occur when two or more environmental effects combine to have a greater effect on a given SEA topic.

The assessment of cumulative effects has been undertaken following the assessment of individual components of the SAP and VPP and has evaluated the combined significance of potentially overlapping effects on each SEA topic, judging whether, together, they result in a greater effect than would occur individually.

Assessment of Reasonable Alternatives

The assessment of the 'Maintaining the Ferries Plan' alternative has been undertaken using the bespoke assessment framework, focusing on the following components of the Ferries Plan (2013-2022):

- Intention
    - "deliver first class sustainable ferry services to communities, stimulating social and economic growth across Scotland".

- Working principles:
    - concentrate on the correct service profile to meet the needs of the community.
    - ensure that there is always sufficient capacity on the route to meet demand.
    - ensure wherever possible that each island or remote peninsula community has at least one direct ferry route to the Scottish mainland.
    - all second routes on the network are currently required.
    - work towards combining routes that overlap and compete with one another so that we emerge with a stronger single route option.
    - strengthen and augment existing routes rather than start up new routes.

- Proposal categories
    - improved services
    - changes to routes, including new routes
    - new vessel provision (i.e. purchase / charter / replace)
    - port upgrades

Scoring has then been compared to that obtained for the ICP components.

It should be noted that the Ferries Plan also included other components, such as a fares policy, funding mechanism and governance framework. However, these are not considered directly comparable to the components of the ICP subject to assessment and have therefore been excluded in the assessment of reasonable alternatives.

Given that the 'No replacement Plan' alternative has no associated plan components, its assessment has been undertaken at a high-level, and in a narrative form, considering to what extent other more generic and higher-level policies would address the ICP Vision and Outcomes, and assessing the associated environmental effects.

Mitigation and Monitoring

Where negative environmental effects and/or opportunities for environmental improvement have been identified, mitigation and enhancement measures have been proposed. Mitigation and enhancement measures have mainly been proposed in the form of:

- changes to specific wording or adding of specific references in the description of SAP / VPP components
- addition of policies to the ICP

Mitigation and enhancement measures are presented in the section Assessment Findings, clearly showing the link between potential effects and proposed mitigation/enhancement measures.

If significant negative environmental effects had been identified, monitoring indicators would have been proposed, proportional to the severity and likelihood of such adverse effects. It is noted that this Environmental Report has not identified significant negative effects.

Consultation

Statutory and public consultation have been key in the development of the ICP:

- Information gathered through public consultations and engagements on a number of relevant plans and strategies (including NTS, NIP, STPR2, Project Neptune) and Parliamentary Committee reports (Rural Economy and Connectivity Committee, Public Audit Committee, Net Zero, Energy and Transport Committee) as well as extensive stakeholder engagement carried

out by Transport Scotland Ferries Directorate, was used to inform the development of an internal draft SAP.

- A pre-consultation draft of the VPP was shared with key stakeholders and published on Transport Scotland's website in December 2022. Feedback received was used to inform consultation drafts of the updated VPP.
- Consultation drafts of the SAP and VPP were subject to public consultation, supported by community engagement, between February and May 2024. An independent consultation and engagement analysis report and Transport Scotland Initial Responses were published in September 2024. Feedback received was used to inform post-consultation drafts dated December 2024 (internal versions), subject to the assessment presented in this Environmental Report.

Consultation has also been undertaken throughout the SEA process, including:

- Statutory consultation on the Screening Report in May 2023.
- Statutory consultation on the Scoping Report in October 2023.
- Statutory consultation on the bespoke assessment framework and proposed changes to the scope of the SEA in December 2024.

In addition, the following consultation activities are currently planned:

- Public and statutory consultation on the Environmental Report, anticipated between February and March 2025.

Limitations

A key difficulty encountered during the assessment was around the strategic high-level nature of the ICP and any uncertainty surrounding precisely how certain SEA topics could be affected. This issue resulted in many of the SEA objectives being given a (U - Unknown) or a (O - Neutral) score reflecting this uncertainty.

Although the ICP does include specific commitments and recommended projects, these have not been assessed individually as part of the SEA process. Should these or any other schemes be brough forward, they would need to be assessed against the Outcomes / Objectives within the ICP and, where relevant and required, be subject to environmental impact assessment (EIA) to ensure there are no significant negative impacts.

The information presented in this report is the result of a desk-based review of publicly available data and no formal requests for records, data or information have been made. Transport Scotland cannot be held liable for third party information. The

cut-off date for when relevant baseline information was included in the baseline assessment was December 2024.

This report represents the independent views and recommendations of the consultants conducting the analysis, and may not necessarily reflect the opinions held by Transport Scotland.

Baseline Summary

The baseline conditions for each of the SEA topics is summarised in this section. Additional information is presented in Appendix 3.

Climatic Factors

- Over the last few decades Scotland has experienced a warming trend, shifting rainfall patterns, and rising sea levels; changes that are projected to continue and intensify, aggravating the impact of climate change on the natural and human environment, including port infrastructure and ferry services within the wider transport network.
- In 2021, the transport sector represented approximately 28% of Scotland's GHG emissions (ferries share of those transport emissions has been estimated at around 2%). Without the influence of mitigation policies, a relatively small increase is projected up to 2045, driven by economic and population growth.
- The Scottish Government aims to ensure that Scotland is resilient and well-adapted to climate change, and that net-zero emissions of GHGs is achieved by 2045, including an increase of low emission ferries (government owned) to 30%, and a wide adoption of low emission solutions at Scottish ports by 2032. NPF4 calls for the recognition of global climate emergency as a priority in all plans and decisions.

Air Quality

- Emissions of priority air pollutants have gradually reduced over the years, which has partly been attributed to reductions in road transport emissions. However, in 2022, the Scottish transport sector, including shipping, was still considered to account for a considerable proportion of these.
- Without the influence of mitigation policies, it would be reasonable to assume that a relatively small increase in air pollutant emissions from the transport sector is anticipated up to 2045, driven by economic and population growth.
- Air quality objectives and limit values aim to reduce emissions which are potentially harmful to human health and the environment. The Scottish Government calls for the application of a sustainable travel hierarchy and the adoption of a sustainable investment hierarchy, to contribute to complying with air quality limit values. NPF4 requires the minimisation of emissions from new development and that air pollution is taken into account in development planning and management.

Noise

- Road-based transport is responsible for approximately 90% of transport noise. In Scotland, there are a number of major roads and railways where action plans for noise management have been drawn, including in connection to ports and harbours in Scottish mainland. There is a lack of knowledge of the impacts of anthropogenic sound in the marine environment. Shipping and offshore construction are among the primary sources of underwater noise in Scotland, and have potential to adversely affect marine biodiversity.
- Within a context of population and economic growth, it is reasonable to anticipate a future increase in noise generation, both airborne and underwater.
- Although there are no specific airborne / underwater noise targets, airborne and underwater noise management (including from transport-related sources) is required by existing UK and Scottish policy.

Soils / Sediment

- There is a diverse range of soils present in Scotland, including carbon-rich soils of high value. Erosion and compaction are two of the main risks affecting Scottish soils, to which transport infrastructure can contribute.
- Whilst the majority of the Scottish coastline has retained its natural character and 75% is considered broadly stable, the exposure of soils and coastline to climate change impacts could lead to future soil and sediment loss.
- The protection of carbon rich soils, restoration of peatlands and reduction of soil disturbance from development are required by Scottish policy.

Water Environment (fresh and marine)

- The majority of Scotland's water bodies, particularly coastal and marine, are classified to have an overall good condition, and whilst oil spills or pollution by persistent contaminants appear to be problems of the past, marine litter is becoming increasingly problematic, with shipping being considered one of its sources, particularly in Scotland's islands. On the other hand, flood risks are predominant along the coast in mainland Scotland, as well as in the islands.
- Scotland's water environment will continue to face pressure from climate change, which can affect both water quality and flood risk to human assets and nature.
- There are a number of policy instruments that define water quality targets and call for pollution reduction, strengthening of flood risk resilience and a more efficient and sustainable use of water resources.

Biodiversity

- Scotland hosts a biodiverse range of habitats and species, of which a considerable part is afforded legal protection. However, biodiversity in Scotland is in crisis due not only to the effects of climate change, but a number of human-driven pressures, such as changes in land use and urbanisation, including for transport infrastructure, over-exploitation, or introduction of invasive non-native species.
- Scotland's biodiversity will continue to face pressure from climate change, which can affect patterns of lifecycle events, as well as habitat degradation and species loss.
- Existing policy aims for Scotland to be Nature Positive by 2030 and to have restored and regenerated biodiversity across the country by 2045. Overall protection and enhancement of biodiversity is required, including through strengthened nature networks and nature-based solutions.

Cultural Heritage

- Scotland has a rich, diverse and extensive historic environment, which is afforded protection through over 58,000 designations. However, 95% of Scotland's historic environment remains undesignated, particularly in the marine environment.
- Main pressures on the historic environment include land use changes, societal change and climate change, with the latter expected to continue exerting pressure in the long-term. In the marine environment, natural processes and activities with potential to disturb the seabed or affect local sediment processes can particularly affect the historic environment around Scotland's coast and seas.
- The historic environment is protected through legal designations and policies that aim to recognise, conserve, sustainable manage and enhance Scotland's historic environment.

Landscape

- Scotland has a diverse character of landscapes and seascapes across its territory, characterised by a sense of openness, high intervisibility, perceived naturalness, valued remoteness and adapted infrastructure that connects scattered settlements. Landscape and seascape qualities are afforded protection through a number of statutory and non-statutory designations. However, existing pressures exist, including changes in land use and incremental development, to which transport infrastructure can contribute.

- Given the intrinsic relationship between landscapes and the wider environmental values, the future evolution of landscapes is expected to respond to changes in these, including in response to climate change impacts.
- Existing policy requires the protection and enhancement of the character, setting and identify of settlements, and species qualities of Scotland's landscapes.

Material Assets

- Transport infrastructure in Scotland includes over 57,000 km of road network, over 2,700 km of rail network, airport infrastructure at 16 different locations, including four major airports, and over 200 ports and harbours. Environmental problems are related to air pollution, traffic congestion, barriers to active travel and vulnerability to climate change (including in relation to flood risks), and although progress is being made on the decarbonisation of the sector, it still heavily relies on fossil fuels. In addition, construction of infrastructure, including for transport, has a significant material footprint, which has been associated to biodiversity loss and water stress.
- The use and development of transport infrastructure is projected to increase in line with population and economic growth, although this is anticipated to consider existing decarbonisation targets. Climate change and continued development will continue to pose a threat to the integrity of material assets.
- Existing policy aims for a net zero and sustainable growth of infrastructure assets. There is an overall aim for Scotland to become a fully circular economy by 2045, with investment being directed by principles of sustainability and in line with the waste hierarchy.

Population and Human Health

- Scotland's population in 2022 exceeded 5.4 million, and whilst the overall population of Scotland's islands has grown over the last 20 years, there is considerable variation between island regions, which have mainly suffered the loss of working age populations. Although 2022 health statistics report that the majority of Scotland's population is in good health condition, there are reported challenges associated with life expectancy and inequality, including in relation to access to services. The open mixed economic character of Scotland is also represented in island regions to some extent, which are considered to particularly rely on marine economic activities.
- Population is anticipated to age across Scotland within the next 20 years, and whilst economic growth, particularly in marine sectors are anticipated to expand, population losses are predicted in a number of areas, including island

regions, which could challenge the viability communities, businesses and services.

- The government aims for Scotland to thrive across economic, social and environmental dimensions, and there are a number of policies aimed at promoting health and wellbeing, as well as the sustainable development of economic sectors.

Assessment Findings and Mitigation

SAP

Assessment of the Vision and Mitigation

Table 5 – Summary of the assessment of the ICP Vision in relation to SEA Objectives 1 – 9 outlines the scores applicable to the potential effects of the ICP Vision.

ICP Vision	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
"Scotland's ferry services, supported by other transport services, will be safe, reliable, affordable and inclusive for residents, businesses and visitors enabling connectivity, sustainability and growth of island and peninsula communities and populations".	U	U	U	U	U	U	U	P	P

Table 5 – Summary of the assessment of the ICP Vision in relation to SEA Objectives 1 – 9 (PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

Whilst the primary drivers of the ICP (safety, reliability, affordability and inclusivity) directly / indirectly contribute to long-term benefits associated with SEA objectives 8 (material assets) and 9 (population and human health), it is not clear whether the ICP Vision would lead, in practice, to positive or negative effects on the natural and historic environment (SEA objectives 1 – 7). In addition, it is unclear how the term 'sustainability' applies to the Vision. No cumulative effects have been identified in relation to the ICP Vision.

Proposed enhancement includes consider rewording the overall Vision and/or accompanying text, or adding new text elsewhere in the document, to include specific reference to the protection and enhancement of Scotland's unique natural and historic environment when designing and implementing policies and actions that

support the Vision, and clarify how the term 'sustainability' applies to the ICP Vision. The full assessment of the ICP Vision is presented in Appendix 4.

Assessment of the Priorities / Outcomes and Mitigation

Table 6 – Summary of the Assessment of SAP Outcomes in relation to SEA objectives 1 – 9 provides a summary of the scores applicable to the potential effects of the SAP Outcomes.

SAP Outcomes		1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
1.1.	Will provide reliable and resilient service	U	U	U	U	U	U	U	P	P
1.2.	Will get people and goods where they need to get to	P	O	O	O	O	O	O	P	P
1.3.	Will be transparent	O	O	O	O	O	O	O	O	P
2.1.	Will ensure that marginalised members of our communities have safe and fair access to ferry services they need	U	U	U	U	U	U	U	O	P
2.2.	Will be easy to use for all	O	O	O	O	O	O	O	O	P
2.3.	Will be affordable	O	O	O	O	O	O	O	O	P
3.1.	Will support people making sustainable and active travel choices	P	O	O	O	O	O	O	P	P
3.2.	Will support integrated travel choices	P	O	O	O	O	O	O	P	P
3.3.	Will help make our island and other ferry dependent communities great places to live, work and visit, supporting healthy population balances	U	U	U	U	U	U	U	U	U
4.1.	Will allow people to make travel choices that minimise the long-term impacts on the environment and the wellbeing of future generations	P/ U	P/ U	P/ U	P/ U	P/ U	P/ U	P/ U	P/ U	P/ U
4.2.	Will adapt to the effects of climate change	O	O	O	O	O	O	O	P	P
4.3.	Will help deliver our net-zero target	P	P/ U	P/ U	P/ U	P/ U	P/ U	P/ U	P/ U	P

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
Potential Cumulative Effects	P	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P	PP

Table 6 – Summary of the Assessment of SAP Outcomes in relation to SEA objectives 1 – 9 (PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

Individually, there is uncertainty on whether Outcomes 1.1, 2.1, 3.3 and 4.1 have potential for positive or negative effects on SEA objective 1 (air quality) as the number of services and associated vessel / vehicle / people movements may increase or decrease as a result of the ICP, and there is also uncertainty on the mechanisms for implementing some of these Outcomes. At the same time, outcomes 1.2, 3.1, 3.2, 4.1, 4.3 are considered to contribute to reducing the number of private vehicles using ferry services, and for ferry services to gradually decarbonise, having an overall positive effect on SEA objective 1 (air quality). In combination, there is a clear intent perceived to reduce the overall dependency on private vehicles to access ferry services by facilitating better integration with public transport and encouraging active travel; and, for any new vessels / services to be more efficient and less polluting. Accordingly, SAP outcomes are considered to have a not significant positive cumulative effect on SEA objective 1. Other outcomes are found to have no effects on SEA objective 1.

Individually, there is uncertainty on whether Outcomes 1.1, 2.1, 3.3, 4.1 and 4.3 have potential for positive or negative effects on SEA objectives 1 – 7, as the number of services and associated vessel / vehicle / people movements may increase or decrease as a result of the ICP, and there is also uncertainty on the mechanisms for implementing some of these Outcomes and their benefits on these SEA objectives. Overall, no / unknown cumulative effects have been identified on SEA objectives 2 – 7.

Individually, outcomes 1.1, 1.2, 3.1, 3.2, 4.2 are considered to contribute to benefits on SEA objective 8 (material assets), including by supporting the development of a safe, resilient and reliable transport network, and promoting integration with other transport modes, which implies increased efficiency / sustainable use of existing infrastructure. In combination, these are considered to have a not significant positive

cumulative effect. Other outcomes are found to have no / unknown effects on SEA objective 8.

All outcomes are considered to individually contribute to long-term benefits on SEA objective 9 (population and human health), reflecting the vision of the ICP, which includes enabling connectivity, sustainability and growth of island and peninsula communities and populations. In combination, these are considered to have a significant positive cumulative effect, as together, through the improvement of ferry services, their integration with other transport modes, building trust, reducing inequality and access barriers, increasing affordability, promoting active travel or contributing to a reduction in air pollution, they are likely to have complementary direct and indirect positive effects on SEA objective 9 in the short, medium and long-term.

Proposed mitigation and enhancement measures have been indicated in Appendix 4 and are summarised herein:

- Priorities / Outcomes mainly cover ferry services, active travel and public transportation, and although aviation and potential new fixed links of bridges, tunnels and causeways, are described in the SAP, these modes of transport / infrastructure elements are not specifically referred to in any of the four priorities and associated Outcomes, as such it is unclear how the ICP supports these.
- It is recommended to consider rewording the description of Outcomes to ensure these are **Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART**) or to set out how progress towards the Outcomes will be monitored in a SMART way.
- It is recommended to consider rewording the Outcomes (or their description in the SAP) to include / emphasise the benefits anticipated on the natural and historic environment, protection requirements and/or enhancement opportunities, which are relevant to ferry services, port developments, as well as other interventions associated with transport modes that are intended to support these. This includes:
    - adding reference to protection of the natural and historic environment when designing and implementing policies and actions that support Outcomes, in relevant Outcomes and/or as a separate set of policies described in the SAP that underpin the ICP.
    - further highlighting environmental benefits, e.g. from the effective integration of ferry services with other transport modes (in Outcome 1.2), from promoting active travel (in Outcome 3.1), etc.
    - extending the scope of outcome 4.2 beyond ferry services, including reference to adaptation of port infrastructure and other transport

services (where relevant) to climate change, and highlighting the benefits achieved for other SEA topics.
    - extending the scope of outcome 4.3 beyond ferry services, including reference to promoting net-zero targets in port infrastructure development and relevant interventions associated with other transport modes; and highlighting the benefits achieved for other SEA topics in the description of the outcome, e.g. how outcome 4.3 contributes to reducing GHG emissions and how this benefits SEA topics 2-8.
- It is recommended to consider adding clear reference to the overarching sustainable transport hierarchy in which active travel and integration with public transportation are prioritised over measures that support private vehicle uptake when considering capacity and demand.

The full assessment of individual SAP Priorities / Outcomes is presented in Appendix 4.

VPP

Assessment of the Objectives and Mitigation

Table 7 – Summary of the assessment of VPP Objectives relation to SEA objectives 1 - 9 summary provides a summary of the scores applicable to the potential effects of the VPP Objectives.

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
1 To maintain and safely operate ferry connections for CHFS and NIFS communities, and that opportunities continue to be taken through vessel and port investment to enhance services in support of the growth of island populations and economies.	U	U	N/ U	N/ U	N/ U	N/ U	N/ U	P	P
2 To improve weather and technical reliability, primarily through renewing the fleet and upgrading ports in response to asset age and condition.	U	U	N/ U	U	N/ U	N/ U	N/ U	PP	P

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
3 To reduce the average age of the total fleet (across both CHFS and NIFS networks) to around 15 years by the end of this decade.	P	P	O	O	O	O	O	PP	P
4 To improve resilience through an expansion in the CHFS major vessel fleet and through increased interoperability and standardisation of vessels and ports within the major and small vessel fleets.	N	N	N	N	N	N	N	P	P
5 To improve accessibility for transport users through vessel and port design, informed by the proposed Accessibility Standard, once available.	O	O	O	O	O	O	O	O	P
6 To provide additional vehicle-deck capacity to address identified “pinch points” where there is practical, beneficial and affordable.	U	O	O	O	O	O	O	O	P
7 To progressively decarbonise both vessel fleet and port operations, by 2045.	P	P	O/ U	O/ U	O/ U	O/ U	O/ U	P	P
8 To retain a major vessel in the fleet for resilience purposes until at least 2030.	O	O	O	O	O	O	O	O	P
Potential cumulative effects	P	P	U	U	U	U	U	PP	PP

Table 7 – Summary of the assessment of VPP Objectives relation to SEA objectives 1 - 9 summary (PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

Individually, Objective 4 is considered to have potentially negative effects on SEA objectives 1 (air quality) and 2 (noise) as, in the absence of reference to natural environmental protection, Objective 4 could result in an increased number of people / traffic / vessel movements during asset operation with associated effects to air and noise quality, and potential negative effects on air quality and noise during construction works associated with port upgrades. At the same time, it is not clear whether Objectives 1, 2 and 6 would have a positive or negative balance on air quality or on noise overall. However, positive effects on SEA objectives 1 (air quality) and 2 (noise) would clearly arise through the implementation of Objectives 3 and 7 in the long-term.

In combination, whilst there may be short-term negative effects during the construction phase of port works or small scale negative effects during the

operational life of ferry assets (as the vessel fleet is only anticipated to add two vessels), the long-term benefits achieved through the increased adoption of modern and less polluting vessels and overall decarbonisation of the vessel fleet and port operations, are considered to overall have positive effects on SEA objectives 1 and 2. Other objectives are found to have no effects on SEA objectives 1 and 2.

Individually, there is some uncertainty on whether Objectives 1, 2 and 4 could have negative effects on SEA objectives 3 (soil/sediment), 4 (water environment), 5 (biodiversity), 6 (cultural heritage) and 7 (landscape). These could be affected negatively by any potential increase in the number of vessels / services operating (long-term and small scale) or by construction works at port locations (short-term). Other objectives are found to have no / unknown effects on SEA objectives 3 - 7. Overall, cumulative effects on these SEA objectives are rated as unknown.

Individually, objectives 1, 2, 3, 4 and 7 are considered to contribute to benefits on SEA objective 8 (material assets), including by supporting the development of a safe, resilient and reliable transport network and efficient use / management of port infrastructure, including in response to climate change, considering sustainable options. In combination, these are considered complementary and likely to have a significant positive cumulative effect. Other objectives are found to have no effects on SEA objective 8.

All objectives are considered to individually contribute to long-term benefits on SEA objective 9 (population and human health), reflecting the vision of the ICP. In combination, these are considered to have a significant positive cumulative effect, as together, through the continued operation of ferry services with improved connectivity, accessibility, resilience that result in socioeconomic effects, and reduction in air pollution, they are likely to have complementary direct and indirect positive effects on SEA objective 9 in the short, medium and long-term.

Proposed mitigation and enhancement measures have been indicated in Appendix 4 and are summarised below for easy reference:

- It is recommended to consider rewording the description of Objectives to ensure these are **SMART** or to set out how progress towards the Objectives will be monitored in a SMART way.
- It is recommended to consider rewording the Objectives or developing a separate set of principles or policies underpinning these to include reference to natural and historic environmental protection requirements and/or enhancement opportunities. This could also include:
    - adding reference to criteria considered in the assessment of needs for vessel replacement and port upgrades, noting whether this includes environmental / sustainability criteria.

- ensuring consistency with the SAP, adding reference to a sustainable transport hierarchy in which active travel and integration with public transportation are prioritised over measures that support private vehicle uptake when considering capacity and demand.

The full assessment of the VPP Objectives is presented in Appendix 4.

Assessment of the Project Categories and Mitigation

Table 8 – Summary of the assessment of VPP Project Categories in relation to SEA objectives 1 - 9 outlines the scores applicable to the potential effects of the VPP Project Categories.

VPP Project Categories	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
A. Fleet renewal	P/U	P/ U	N/ U	N/ U	N/ U	N/ U	O	P	P
B. Port upgrades	P/U	P/ U	N/ U	N/ U	N/ U	N/ U	N/ U	P	P
Potential cumulative effects	P	P	U	U	U	U	U	P P	P P

Table 8 – Summary of the assessment of VPP Project Categories in relation to SEA objectives 1 - 9 (PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

Individually, project categories A and B are considered to have both positive (i.e. through decarbonisation and modernisation of assets) and unknown effects (i.e. due to potential negative effects associated with short-term port construction works and long-term small-scale changes in the number of vessel / traffic movements) on SEA objectives 1 (air quality) and 2 (noise). In combination, the long-term benefits achieved through the increased adoption of modern and less polluting vessels and overall decarbonisation of the vessel fleet and port operations, are considered to overall have positive effects on SEA objectives 1 and 2.

Individually, project categories A and B are considered to have potential for negative effects on SEA objectives 3 – 7 associated with short-term construction effects and long-term (but small scale) operational changes in ferry services (noting that the latter would not have an effect on SEA objective 7 (landscape)). Given that there is uncertainty on whether long-term benefits associated with fleet renewal and port upgrades could have an effect on SEA objectives 3 – 7, individually potential effects are rated as both negative and unknown. In combination, these are overall rated as unknown.

Individually, project categories A and B are considered to contribute to benefits on SEA objectives 8 (material assets) and 9 (population and human health) including by supporting the whole life cycle of vessels and circular economy objectives, ensuring efficient use of port infrastructure and resilience and overall increased connectivity to local communities). In combination, these are considered complementary and likely to have significant positive cumulative effects.

Proposed mitigation and enhancement measures have been indicated in Appendix 4 and are summarised below for easy reference:

- it is recommended to consider including reference in the VPP to the principles by which new vessels should be designed and built and how environmental / heritage protection requirements are to be considered through existing project appraisal, development and business case approval processes.
- it is recommended to consider developing policies / principles to follow during the planning of port upgrades, so environmental protection can be considered from the outset, and increase opportunities for enhancement measures to be considered at an early stage.
- it is recommended to consider adding specific reference to adherence to circular economy / waste hierarchy principles as part of “principles for fleet renewal” or similar to further strengthen benefits to SEA objective 8.

The full assessment of the VPP Project Categories is presented in Appendix 4.

Assessment of Reasonable Alternatives

Findings of the Assessment of the ‘Maintaining the Ferries Plan’ Alternative

Table 9 – Summary of the assessment of the 'Maintaining the Ferries Plan' alternative in relation to SEA objectives 1 – 9 outlines the scores applicable to the potential effects of the ‘Maintaining the Ferries Plan’ alternative.

'Maintaining the Ferries Plan' Alternative	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health
Intention "deliver first class sustainable ferry services to communities, stimulating social and economic growth across Scotland"	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	O/ U	P
Working Principle "concentrate on the correct service profile to meet the needs of the community"	U	U	U	U	U	U	U	O/ U	P
Working Principle "ensure that there is always sufficient capacity on the route to meet demand"	N	N	N	N	N	N	N	O/ U	P
Working Principle "ensure wherever possible that each island or remote peninsula community has at least one direct ferry route to the Scottish mainland"	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	O/ U	P
Working Principle "all second routes on the network are currently required"	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	O/ U	P
Working Principle "work towards combining routes that overlap and compete with one another so that we emerge with a stronger single route option"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P
Working Principle "strengthen and augment existing routes rather than start up new routes"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P
Proposal category "Improved services"	N	N	N	N	N	N	N	O/ U	P
Proposal category "Changes to routes, including new routes"	N	N	N	N	N	N	N	O/ U	P
Proposal category "New vessel provision (i.e. purchase / charter / replace)"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P
Proposal category "Port upgrades"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P

Table 9 – Summary of the assessment of the 'Maintaining the Ferries Plan' alternative in relation to SEA objectives 1 – 9
(PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

This alternative only scores positively on SEA topic 9, which reflects that it was originally conceived to prioritise socioeconomic growth over other environmental aims and aspirations. The expanded scope of the ICP in relation to the Ferries Plan can be considered to overall decrease the potential negative effects that implementing this alternative would have, and to overall increase the opportunities for environmental enhancement.

In addition, maintaining an out-of-date plan would mean that existing issues that have been identified by island communities through consultation would not be addressed, and all decisions associated with transport for ferry dependent communities in Scotland would be made based on an assessment that was carried out back in 2009. This would not only have the potential to result in negative indirect effects on SEA objectives 8 (material assets) and 9 (population and human health), but also contradict higher-level policies, including in relation to environmental and historic protection (e.g. the Ferries Plan does not consider contribution to GHG targets), potentially resulting in negative effects on SEA objectives 1 – 7.

The full assessment of the 'Maintaining the Ferries Plan' Alternative is presented in Appendix 4.

Findings of the Assessment of the 'No replacement Plan' Alternative

Without the ICP, decisions associated with transport for ferry dependent communities in Scotland would be made based on more generic and higher-level policies, namely the NTS, the NPF4, the NIP and the SNSET (see Section on Relationship with Other Qualifying Plans and Programmes). These would fail to address existing issues that have specifically been identified by island communities through consultation, hindering the management and delivery of ferry services by the Scottish government.

Overall, without a strategic vision, desired Outcomes, or sector-specific objectives that guide the delivery of ferry services and associated infrastructure, this alternative would potentially result in negative indirect effects on SEA objectives 8 (material assets) and 9 (population and human health), and neutral effects on SEA objectives 1 – 7. There would also be lost opportunities for environmental enhancements that are achieved through the ICP.

Monitoring

No significant negative effects have been identified, and accordingly no monitoring is proposed. However, it is recommended that the ICP Monitoring and Evaluation Plan that will be developed, considers the inclusion of environmental criteria / indicators relevant to the SEA topics and assessment carried out in this Environmental Report to monitor progress on positive effects and enhancement measures outlined.

It should be noted that there are a wide range of existing monitoring programmes in place at national and local level that cover SEA topics and that may be relevant to consider when developing the ICP Monitoring and Evaluation Plan.

Next Steps

Commenting on the Environmental Report

Public views are now invited on this Environmental Report. The consultation runs until the 13 March 2025 and there are a number of ways that responses can be submitted. These are:

- By email to: icp@transport.gov.scot
- By post to: Transport Scotland
  George House
  2nd Floor
  36 North Hanover Street
  Glasgow
  G1 2AD

Respondents may find the following questions helpful to provide a focus on their responses to this Environmental Report. Please note that responses do not need to be confined to these questions, and more general comments on this Environmental Report are also invited.

- **What are your views on the accuracy of the information used to describe the SEA environmental baseline?**
- **What are your views on the predicted environmental effects and mitigation measures?**

Post-Adoption SEA Statement

Following consultation on this Environmental Report and consequent revisions to and adoption of the final ICP SAP and VPP, a Post-Adoption SEA Statement will be produced as the final step of the SEA process. Assuming the ICP is adopted by April 2025, this is expected to be ready in May 2025.

The Post-Adoption SEA Statement will document:

- how environmental considerations and SEA findings have been incorporated into the ICP;

- how the environment-related feedback from the consultation on the SAP, VPP and Environmental Report has been incorporated into the ICP;
- the reasons for choosing the plan in light of other reasonable alternatives considered by the SEA; and
- the measures to be taken to monitor the significant environmental effects of implementing the plan (if any).

Appendix 1 - Abbreviations

AQMA	Air Quality Management Area
CAFS2	Clean Air for Scotland 2
CCRA3	Climate Change Risk Assessment 3
CFL	CalMac Ferries Limited
CHFS	Clyde and Hebrides Ferry Service
CMAL	Caledonian Maritime Assets Limited
CNA	Community Needs Assessment
CO_2	Carbon Dioxide
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EU	European Union
GDP	Gross Domestic Product
GES	Good Environmental Status
GHG	Greenhouse Gas
GVA	Gross Value Added
HES	Historic Environment Scotland
ICP	Islands Connectivity Plan
IIP	Infrastructure Investment Plan
LLA	Local Landscape Areas
LNG	Liquified Natural Gas
MPA	Marine Protected Area
NFRA	National Flood Risk Assessment
NIFS	Northern Isles Ferry Services
NIP	National Islands Plan
NMA	Noise Management Area
NMVOC	Non-Methane Volatile Organic Compound
NO_x	Nitrogen Oxides
NPF4	National Planning Framework 4
NSA	National Scenic Areas
NTS	National Transport Strategy
OPOF	Our Place, Our Future
PCBs	Polychlorinated biphenyls
PM	Particulate Matter
PVA	Potentially Vulnerable Areas
RBMP	River Basin Management Plan
SAP	Strategic Approach Paper
SEA	Strategic Environmental Assessment
SEPA	Scottish Environment Protection Agency
SVRP	Small Vessels Replacement Programme

SMART	Specific, Measurable, Achievable, Relevant, and Time-Bound
SNSET	Scotland's National Strategy for Economic Transformation
STAG	Scottish Transport Appraisal Guidance
TNAP	Transportation Noise Action Plan
VOCs	Volatile Organic Compounds
VPP	Vessels and Ports Plan

Appendix 2 - Consultation Feedback

Public Consultation Feedback relevant to the Scope of the SEA (Feb – May 2024)

The analysis report presents an analysis of responses to a public consultation, along with a number of engagement events held by Transport Scotland officials, on the ICP: SAP and VPP. This includes responses to question 14 “what environmental issues do you believe should be captured in the SEA in relation to this plan”, which are summarised in Table 2-1 together with a note on how this has been considered in the draft assessment framework:

Comments relevant to the scope of the SEA	Consideration in the Assessment Framework
SEA should capture Scope 3 emissions to allow planning for their reduction	This is considered in SEA topic Air Quality.
SEA should include reference to the importance of reducing carbon emissions and moving to renewable energy sources, including in relation to travel by sea, aviation and construction activities associated with fixed links	This is considered in SEA topics Air Quality and Material Assets.
SEA should consider impacts associated with the whole life of a ferry, including emissions during construction, operation and decommissioning	This is touched on in SEA topic Materials Assets but the whole lifecycle of ferries is beyond the scope of the ICP.
SEA should consider impacts associated with port operations, e.g. in relation to additional recharging / refuelling infrastructure	This is considered across various SEA topics including soils, air quality, and material assets.

Comments relevant to the scope of the SEA	Consideration in the Assessment Framework
SEA should consider vulnerability of port infrastructure to the impacts of climate change	This is considered in SEA topic Material Assets.
SEA should consider impacts on air quality, including with respect to ferry emissions, aviation exhaust and road traffic	This is considered in SEA topic Air Quality.
SEA should consider impacts on water quality in both marine/coastal and freshwater environments	This is considered in SEA topic Water Quality.
SEA should consider impacts of nuisance noise from ferry engines and other port equipment, as well as from aviation activities and from road traffic	Noted, an additional SEA topic has been added to the draft assessment framework.
SEA should consider impacts to marine biodiversity	This is considered in SEA topic Biodiversity
SEA should consider impacts associated with the generation and disposal of waste and debris associated with ferry operations, aviation activities, and construction projects	This is considered in SEA topic Material Assets
SEA should consider impacts on land use patterns and on natural landscapes	This is considered in SEA topic Landscape
SEA should consider impacts on cultural heritage and the historic environment	This is considered in SEA topic Cultural Heritage
SEA should consider potential cumulative impacts, including associated with current and future ferry operations in a given area, and the broader cumulative effects of multiple projects and activities on the environment	Cumulative impacts are assessed as part of the framework, considered as a combination of the SAP / VPP interventions on given SEA topics.

Comments relevant to the scope of the SEA	Consideration in the Assessment Framework
	Please note that potential effects associated with site-specific interventions / projects / activities are outside the scope of an SEA, and these should be considered at project level.
SEA should consider impacts of increased connectivity on tourism	This is considered in SEA topic Population and Health.
SEA should consider the needs of disabled people, to avoid inadvertently disadvantaging disabled people who rely on private car travel.	Equality and accessibility are beyond the scope of the SEA and are considered separately in the Equality Impact Assessment of the ICP.

Table 2-1 - Public consultation feedback relevant to the scope of the SEA (Feb – May 2024) and how this has been considered in the assessment framework

Statutory Consultation Feedback on Draft Assessment Framework (Dec 2024)

Table 2-2 outlines consultation feedback received on the draft assessment framework shared with statutory consultees in December 2024. It should be noted that no feedback was received from Historic Environment Scotland (HES).

Consultee	Date received	SEA Topic	Consultation Feedback	Response
Transport Scotland (Outside ICP team)	11 Dec 2024	Air Quality	Not sure on how the guide questions relate to adaptation	SEA objective has been reworded, reference to climate change adaptation / resilience have been included under SEA topic 8 (material assets).

Consultee	Date received	SEA Topic	Consultation Feedback	Response
		Water Environment (fresh and marine)	What about the opposite, e.g. Could the proposal affect the condition of the water environment (water quality, physical condition, water resources/ fish?	The guide question would prompt a “yes” or “no” response, so potential effects on water quality would also be capture in the assessment. Wording of guide questions has been revised throughout for consistency.
		Biodiversity	Could the plan affect designated sites? International, locally important etc.	Specific reference to designated sites has been added to the first guide question.
		Population and Human Health	What about consideration of active travel? To existing or proposed. Will it affect links to any paths, cycle or coastal.	Specific reference to active travel has been added to the third guide question.
			What about tourism?	Specific reference to tourism has been added to the second and fifth guide questions.
NatureScot	17 Dec 2024	Soil/ Sediment	Welcome the inclusion of soils into the assessment process. This should also consider the effects on marine soils where appropriate.	Although reference to sediment was already included in the framework, this has been specified to be marine sediment for clarity.

Consultee	Date received	SEA Topic	Consultation Feedback	Response
		Landscape	Not sure what is meant by 'Does the Plan… seek to protect, enhance visual effects?' can I suggest the bullets are amended as follows. • Seek to protect, enhance or restore landscape character, local distinctiveness and scenic value. • Seek to enhance, promote or maintain people's enjoyment and understanding of the landscape. • Seek to protect, enhance or restore and sustainably manage special qualities of designated sites.	A typo is noted, should have read visual "amenity" and not "effects". Suggestions have been incorporated in the guide questions.
		General	Appreciate that the marine environment should automatically be considered within the assessment questions, but particularly given reference to the public feedback, I wonder if there would be merit in specific reference to this, for example, 'Does the Plan……protect, enhance and sustainably manage marine resources and protect coastal features?'	The marine environment is covered under all relevant SEA topics, incl. marine soils, marine water environment, marine biodiversity, marine landscapes, marine cultural heritage, etc. The term "marine" has been specified in some guide questions for clarity.

Consultee	Date received	SEA Topic	Consultation Feedback	Response
			The use of the matrix methodology is appropriate but it would be helpful if, within the table, there is a column for providing a narrative to expand on the scoring where necessary. For example, this could also include whether the scoring is the finding of the assessment following any mitigation applied or whether this scoring is pre-mitigation (and what that mitigation might be).	Noted. A proforma has been used to include commentary as to the reasoning for identified effects, this is presented in Appendix 4. It has also been clarified that the assessment is pre-mitigation. Mitigation measures are then specified in the Findings of the Assessment section.
			There is some inconsistency in the Assessment Guide Questions. Some are worded as outcome focussed while others are worded as impact focussed.	Wording of guide questions has been revised throughout for consistency.
			Other useful references might include: For biodiversity – • https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management • Policy 3 Biodiversity' in NPF4, particularly given the requirement for biodiversity enhancement in all EIA development.	References considered relevant for the purposes of the SEA have been consulted.

Consultee	Date received	SEA Topic	Consultation Feedback	Response
			https://www.gov.scot/publications/national-planning-framework-4/pages/3/ • https://www.gov.scot/publications/scottish-government-draft-planning-guidance-biodiversity/ For landscape - • https://www.nature.scot/professional-advice/landscape/framework-landscape-policy/european-landscape-convention • https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/what-landscape-character-assessment For Soils – • Policy 5 in NPF4 affords specific protection to peatland, carbon rich soils and priority peatland habitat – link as above.	

Consultee	Date received	SEA Topic	Consultation Feedback	Response
SEPA	17 Dec 2024	General	It would be useful if the matrix included a commentary column to explain the rationale behind the assessment results.	Noted. A proforma has been used to include commentary as to the reasoning for identified effects, this is presented in Appendix 4.
			It is also useful to show the link between potential effects and proposed mitigation/enhancement measures.	Noted. Section Assessment Finings specifies the relationship between potential effects and proposed mitigation/enhancement measures.
			Satisfied that the assessment questions cover the main issues under our remit.	Noted.
		Soil / Climatic Factors	We also welcome the inclusion of soil in the assessment and are content for climatic factors to be integrated in other relevant SEA topics	Noted.

Table 2-2 - Public consultation feedback relevant to the scope of the SEA (Feb – May 2024) and how this has been considered in the assessment framework

Appendix 3 - Baseline

Introduction

This appendix presents baseline information collated to inform the SEA. It builds from baseline information presented in the SEA scoping report and aims to respond to the following questions for each of the SEA topics considered:

- What is the current state of the environment? Are there any environmental problems relevant to the plan?
- What is the likely evolution of the state of the environment without the implementation of the plan?
- What are the environmental protection objectives relevant to the plan?

Given the strategic nature of the ICP, baseline data reflect the main type of environmental effects anticipated. Its geographical scope is limited to Scotland.

Climatic factors are cross cutting and closely related to a number of other SEA topics. Although SEA objectives and assessment guide questions covering climatic factors have been integrated in other relevant SEA topics to avoid duplication and streamline the assessment, baseline information is separately presented, justifying its inter-relationship with other SEA topics.

Climatic Factors

Baseline

United Nations indicate that there is a direct link between the concentration of GHGs in the atmosphere and the average global temperature, and that since the 1800s, human activities, particularly those contributing to GHG emissions, have been the main driver of climate change. Scottish Transport Statistics 2023 indicate that transport, including international shipping and aviation, accounted for 12 million tonnes of carbon dioxide equivalent ($MtCO_2e$) in 2021, representing approximately 28% of Scotland's GHG emissions (including 2% from ferries).

The Independent Assessment used to inform the third UK Climate Change Risk Assessment (CCRA3) indicates that over the last few decades Scotland has experienced a warming trend, shifting rainfall patterns, and rising sea levels, and that there are a number of risks from climate change affecting natural and human assets, of which 32 are considered to require more action. The Transport Scotland Approach to Climate Change Adaptation and Resilience highlights key climate change risks

affecting Scotland's transport system, such as increases in the intensity and frequency of severe and extreme weather events and sea level rise which could damage port infrastructure and disrupt ferry services.

Baseline Evolution and Trends

Greenhouse Gas Emissions Projections for Scotland anticipates that without the influence of mitigation policies, and driven by economic and population growth, there would be a relatively small (c. 5%) increase in total emissions between 2019 and 2045, as illustrated in Figure 3-1 - Total GHG emissions under a scenario in which no mitigation policies are implemented, including within the transport sector.

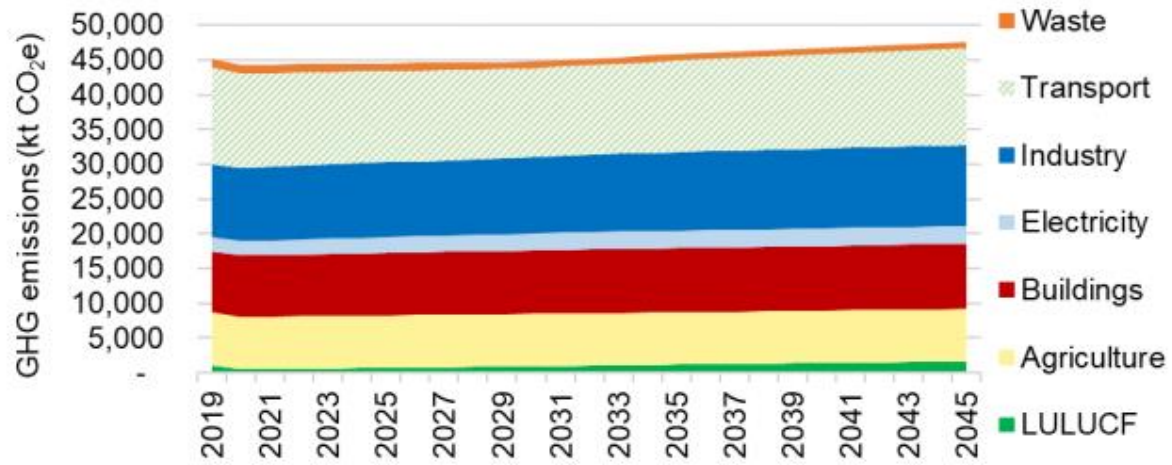

Figure 3-1 - Total GHG emissions under a scenario in which no mitigation policies are implemented

Climate Projections for Scotland indicate that changes in climate already experienced are projected to continue and intensify, including greater extremes in temperature and precipitation.

Coastal and marine environments offer opportunities to mitigate for climate change impacts, including through habitats that absorb and store carbon, and that protect against erosion and flood risks, and through the adoption of technologies that can reduce GHG emissions.

Environmental Protection Objectives

The Update to the Climate Change Plan (2018 – 2032) sets the Scottish Government's objective to reduce emissions of all GHGs to net-zero by 2045. It also includes a commitment for 30% of Scottish Government owned ferries to be low emission

by 2032, and for low emission solutions to be widely adopted at Scottish ports by 2032.

The Scottish National Adaptation Plan (2024 – 2029) sets the Scottish Government's vision for a resilient, inclusive and well-adapted Scotland as the climate continues to change. This includes enhancing the ferry fleet's resilience and reliability, including in response to changing weather conditions.

NPF4 calls for the recognition of global climate emergency as a priority in all plans and decisions.

Inter-relationship with other SEA topics

Climatic factors, air quality and human health are inherently linked. For instance, extreme weather events, such as heat waves, can negatively impact air quality by creating areas of high pressure and stagnant air that concentrates air pollutants, affecting human health. At the same time air pollutants, such as GHGs, are the main contributors to climate change.

Climatic factors can affect soils and sediments through physical interaction, such as erosion and waterlogging caused by changes in rainfall patterns or sea storm events, which can also impact any heritage assets contained within such soils and sediments. At the same time, carbon-rich soils and sediments act as a sink for CO_2, and therefore their conservation allows these to maintain their sequestration function.

Climatic factors can also affect the water environment through changes in rainfall and temperature patterns, that can change the physical and chemical properties, and therefore the quality, of water environments, and biodiversity and heritage assets within these. Extreme weather events can also increase flooding risks, affecting material assets, including transport infrastructure, heritage assets, and human receptors vulnerable to these. At the same time, material assets, such as construction materials, have embodied carbon emissions, that will be released during their extraction, fabrication, or transport.

Climatic factors can also affect biodiversity, as global warming can change patterns of lifecycle events, such as migration timing, and cause habitat and species loss through desertification of vegetated areas, acidification of water environments, or creating pathways for the introduction and spread of non-native invasive species. Impacts on natural resources that form part of landscapes can therefore also alter the value and perception of these.

Air Quality

Baseline

The Air Pollutant Inventory for Scotland (2022) reports that emissions of priority air pollutants: nitrogen oxides (NOx), particulate matter (PM_{10} and $PM_{2.5}$), sulphur dioxide (SO_2), non-methane volatile organic compounds (NMVOCs), ground-level ozone (O_3) and ammonia (NH_3) have gradually reduced over the years, see Figure 3-2 - Scotland normalised trends for all pollutants. The overall decline observed in transport-related emissions, mainly NO_x, PM_{10} and $PM_{2.5}$, has partly been attributed to reductions in road transport emissions. However, in 2022, the transport sector was still considered to account for a considerable proportion of these pollutant emissions.

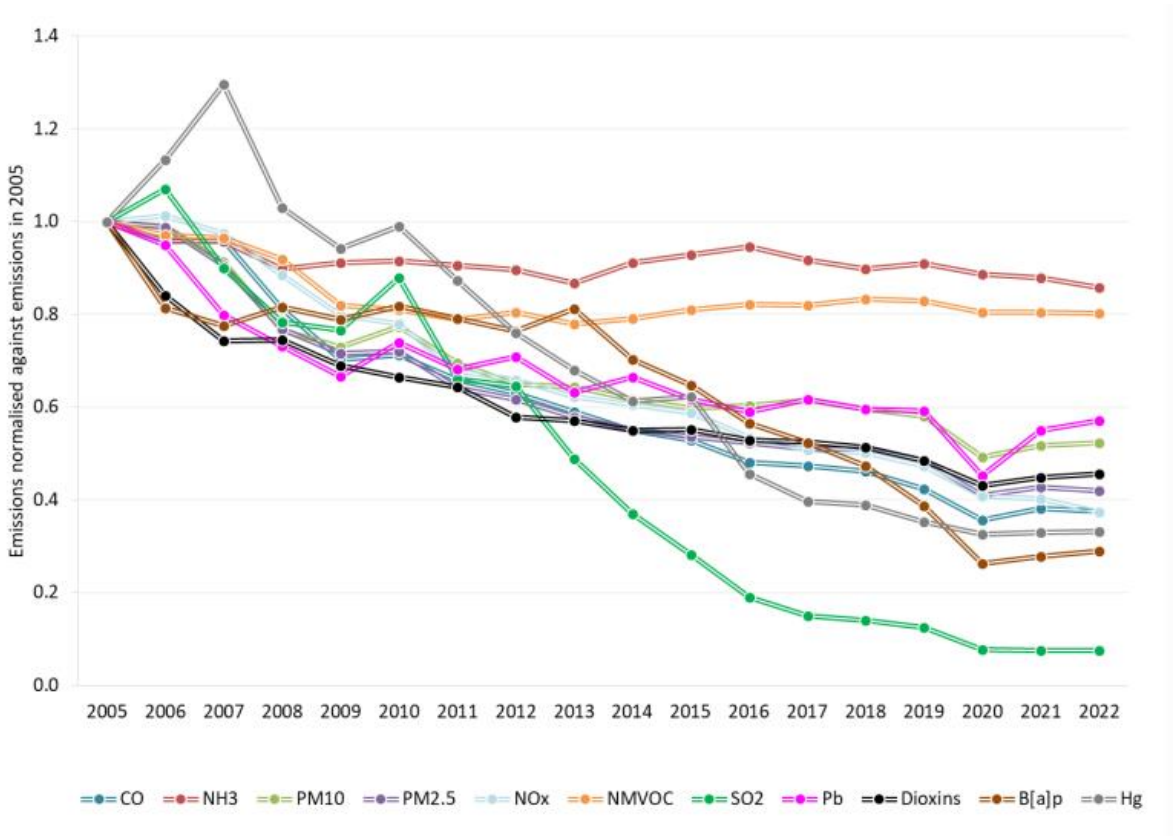

Figure 3-2 - Scotland normalised trends for all pollutants. Source: Air Pollutant Inventories for England, Scotland, Wales and Northern Ireland: 2005 - 2022

The Cleaner Air for Scotland 2 (CAFS 2) further notes that road transport in urban areas remains the significant contributor to poor air quality, with air quality standards for human and environmental health not being met in some locations. This is reflected in the designation of Air Quality Management Areas (AQMA), which are declared where air quality objectives are not met. Based on data from the Scottish Government's website on air quality in Scotland, As of December 2024, a total of 21

AQMAs were in place in Scotland, most of which relate to localised pollution hotspots within urban centres.

The Decarbonisation of Scottish Maritime Transport Study notes that shipping is a major contributor of air pollution, including carbon dioxide (CO_2) emissions, NOx, sulphur oxides (SOx), PM and Volatile Organic Compounds (VOCs).

Baseline Evolution and Trends

As in the case of GHG emissions, without the influence of mitigation policies, and driven by economic and population growth, it would be reasonable to assume that projections in the emissions of other air pollutants from the transport sector would also be anticipated to experience a slight increase up to 2045.

Environmental Protection Objectives

Air quality objectives aim to reduce emissions which are potentially harmful to health and the environment.

CAFS 2 calls for the application of a sustainable travel hierarchy, in line with NTS, that promotes a reduction in travel needs and the effective management of demand; and the adoption of a sustainable investment hierarchy, supporting strategic investments in sustainable, smart and cleaner transport options; which will contribute to complying with air quality limit values. NPF4 requires the minimisation of emissions from new development and that air pollution is taken into account in development planning and management.

Noise

Baseline

The Transportation Noise Action Plan (TNAP) 2019-2023 notes that transport noise, i.e. from road transport, aircraft and railways, is the most common form of noise, with road responsible for approximately 90% of transport noise. The TNAP considers mapping and action planning for major roads (with more than three million vehicle passages a year) and major railways (with more than thirty thousand train passages per year), which are present within Scottish mainland, as illustrated in Figure 3-3 -

Scotland's Noise Map of major roads (left) and railway (right) averaged across the day, evening, and night.

Figure 3-3 - Scotland's Noise Map of major roads (left) and railway (right) averaged across the day, evening, and night

Although the TNAP does not make specific reference to ports and harbours, some of these major roads and railways have links with ports and harbours in which ferry services are offered (e.g. Inverness, Aberdeen, etc).

The UK Marine Strategy notes that, at present, there is a lack of knowledge of the impacts of anthropogenic sound in the marine environment. The Scotland's Marine Atlas states that shipping and offshore construction (which could include construction activities at port locations) are among the primary sources of underwater noise in Scotland, and have potential to cause displacement and damage to marine biodiversity.

Baseline Evolution and Trends

Within a context of population and economic growth that increases transport and maritime activity, it is reasonable to anticipate a future increase in noise generation, both airborne and underwater.

Environmental Protection Objectives

There are no fixed noise level targets in Scotland. The TNAP aims to ensure noise management is incorporated into all transport-related activities, and that noise levels are managed at Noise Management Areas (NMAs), preserving environmental noise quality where this is good.

The Cleaner Air for Scotland 2 (CAFS 2) calls for noise action plans developed by local authorities to be closely aligned with air quality action plans to deliver co-benefits. NPF4 ensures that noise pollution is taken into account in development planning and management.

The UK Marine Strategy aims to manage loud, low and mid frequency impulsive sounds and continuous low frequency sounds introduced into the marine environment to the extent that they do not have adverse effects on marine ecosystems and animals at the population level.

Soil/ Sediment

Baseline

The national soils and soil properties map for Scotland, see Figure 3-4 - Soils of Scotland, shows the diverse range of soils present in Scotland, with peaty gleys dominance along the north- northwest coast, humus-iron rich soils around the north-northeast coast, a great peaty podzols presence inland and a combination of primarily mineral gleys and brown earths in the south.

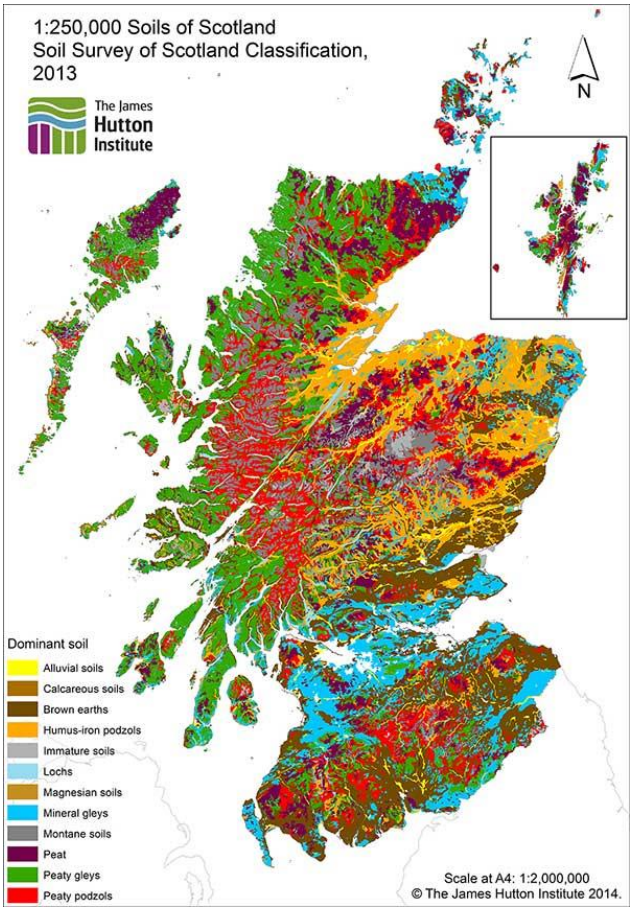

Figure 3-4 - Soils of Scotland. Sourced from UK Soil Observatory

According to NatureScot, Scotland's geology and sediment formed from deposits in the Quaternary Period and the sediments around Scotland are mostly sandy or gravelly. Approximately 70% of the Scottish coastline is classified as hard coast, 29% as soft coast and less than 1% is considered artificial e.g. harbours and seawalls. Highly exposed to climate change due to the effects of sea level rising and coastal erosion, 75% of Scottish coastline is considered broadly stable, 12% is erosional and 8% is accretional.

The risks to Scotland's soils scoping report identifies erosion and compaction as the main risks to soils (also affecting the wider environment), which, among other causes, can be caused by transport infrastructure (e.g. compaction of soils beneath roads, erosion and changes to sediment transportation around fixed port infrastructure, etc). Other risks include those associated with water retention, draught resistance and flooding, soil sealing, soil-borne disease and pests, landfilling of waste soil, application of waste to land, poorly managed sequestration, and contamination.

Baseline Evolution and Trends

Scotland's soils will continue to face pressure from climate change effects, including temperature changes, leading to drying out, cracking and subsequent erosion; degradation of peatlands; and increased run-off, flooding and landslides, leading to soil loss and degradation.

Environmental Protection Objectives

> **NPF4 calls for the protection of carbon-rich soils, restoration of peatlands and reduction of soil disturbance from development.**

Water Environment (fresh and marine)

Baseline

According to Scotland's Environment, Scotland's freshwater environment comprises over 125,000 km of rivers and streams, 220 km of canals, and 30,000 freshwater lochs. Scotland's marine environment comprises approximately 790 islands, a total of 18,000 km of coastline and approximately 462,000 km^2 of marine waters (within the Exclusive Economic Zone (EEZ)).

The SEPA's Water Classification Hub indicates that 64% of Scotland's water environment, including inshore groundwater and surface water bodies, and transitional and coastal water bodies (up to the territorial sea limit), was rated as good or better condition in 2023, see Figure 3-5 - SEPA Scottish Water Classification Hub Map. Most coastal water bodies achieved good and high status, with only a few exceptions, including the Middle Forth Estuary (moderate ecological potential), the Solway Estuary (moderate), Irvine Bay (moderate) or Leith Docks to Port Seton (poor ecological potential) due to ecological and hydro-morphological criteria.

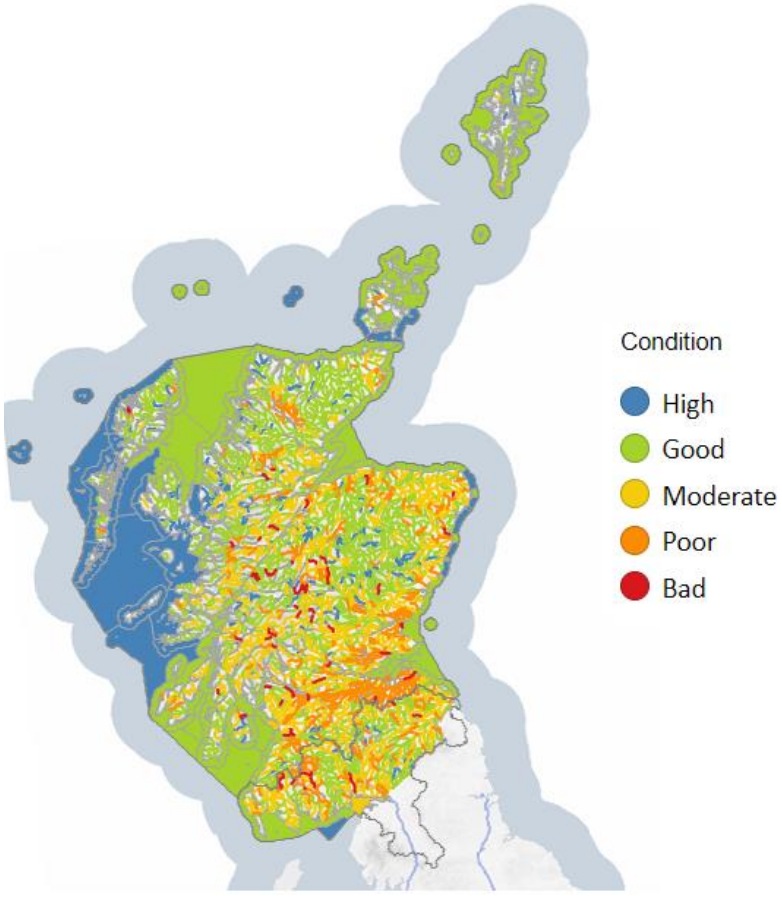

Figure 3-5 - SEPA Scottish Water Classification Hub Map

The Clean seas indicator reports that, in 2020, 79% of contaminant assessments in Scottish marine waters showed concentrations unlikely to harm marine organisms.

Scotland's reported assessments are in line with the wider UK Marine Strategy, which noted that Good Environmental Status (GES) in relation to hydrographical conditions, contaminants and eutrophication was largely achieved in 2018, with most failures related to eutrophication problems restricted to estuarine and harbour waters with limited water circulation, and highly persistent legacy chemicals such as Polychlorinated biphenyls (PCBs) in biota and coastal sediments, often close to polluted sources. Whilst a number of small oil spills, including from shipping activities, have also been reported, there have been no major significant acute

pollution events where habitats and species have been affected at a sub-regional level. On the other hand, marine litter has been reported to be present in significant amounts, with UK waters failing to achieve GES in relation to this descriptor. The Marine Litter Strategy for Scotland further notes that whilst most of marine litter in mainland Scotland originates from land-based sources, the Scottish islands also receive marine litter from the Atlantic Ocean and maritime industries, including shipping.

The National Flood Risk Assessment (NFRA) shows a number of Potentially Vulnerable Areas (PVAs), where highest flood risk exists now or is likely to occur in the future, located along the coast in mainland Scotland, as well as in the islands.

Baseline Evolution and Trends

Scotland's water environment will continue to face pressure from climate change effects, including changes in natural variations affecting water supply and circulation, as well as water quality, and increasing the frequency and severity of droughts and flooding.

Given past trends for contaminant concentrations, the UK Marine Strategy, anticipates these to continue reducing over time.

Environmental Protection Objectives

> **Scotland's River Basin Management Plan (RBMP) aims to protect and improve the water environment, including coastal waters, and defines objectives in relation to water quality, resources, fish migration and physical condition. The UK Marine Strategy aims to achieve / maintain GES in relation to eutrophication, hydrographical conditions, contaminants (in water, sediment and biota) and marine litter, among other water quality descriptors. NPF4 calls for the strengthening of resilience to flood risk, and for the efficient / sustainable use of water resources.**

Biodiversity

Baseline

Almost 18% of Scotland's land surface is protected specifically for nature, and 37% of Scotland's marine environment now forms part of the Scottish Marine Protected Area (MPA) network. However, as of March 2023, NatureScot reports that only 65% of natural features on protected sites (excluding marine sites beyond territorial waters) are classed as being in favourable condition, with a further 11% classed as unfavourable but recovering. The Scottish Biodiversity Strategy to 2045 further reports that Scotland has retained just over half of its historic land-based biodiversity, and that there have been declines on measurements of natural capital (15% since 1950), on abundance of terrestrial and freshwater species (24% since 1994) and on marine abundance, see Figure 3-6 - Terrestrial and marine species indicator. In the marine realm, out of 15 components in the UK Marine Strategy, 11 had not achieved GES by 2020, and Scotland's Marine Assessment 2020 highlighted declines in biogenic habitats and species such as Atlantic salmon.

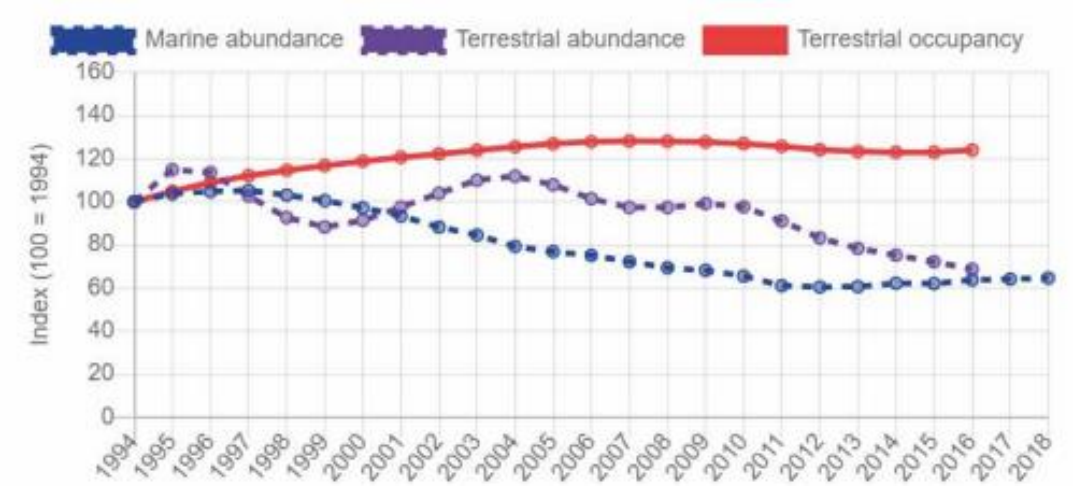

Figure 3-6 - Terrestrial and marine species indicator. Source: Scottish Biodiversity Strategy to 2045

There are a number of pressures affecting Scotland's biodiversity, including urbanisation and associated developments, such as transport infrastructure, changes in land use, over-exploitation and habitat fragmentation. Invasive non-native species are also considered a major threat to biodiversity, colonising, displacing smothering, competing with and disrupting native species and habitats. Scotland's Marine Assessment 2020 reported that no Scottish marine regions are confirmed free of non-native species, and that one of the pathways for their introduction includes ballast water transfer during shipping activities.

Baseline Evolution and Trends

NatureScot indicates that 30% of Scotland's biodiversity is already at risk from climate change and without mitigation this would continue to worsen to 50% by 2050. Scotland's Marine Assessment 2020 also highlights the increasing impacts of climate change and ocean acidification, which have a direct impact on marine habitats and species.

Environmental Protection Objectives

> **Although statutory targets for natural restoration are yet to be adopted, the Scottish Biodiversity Strategy to 2045 aims for Scotland to be Nature Positive by 2030 and to have restored and regenerated biodiversity across the country by 2045**
>
> **NPF4 calls for the protection and enhancement of biodiversity, including through strengthened nature networks and nature-based solutions.**

Cultural Heritage

Baseline

Scotland has a rich, diverse and extensive historic environment. Our Place, Our Future (OPOF), the Strategy for Scotland's Historic Environment, reports that, as of March 2023, Scotland's historic environment is supported by more than 58,000 designations, covering both cultural and natural heritage, yet 95% of Scotland's historic environment remains undesignated, particularly in the marine environment.

The Historic Environment Policy for Scotland notes a number of challenges that can have an impact on the historic environment and its assets, such as land use changes (which can determine transport infrastructure needs), climate change (which can expose assets to conditions that they were not designed to cope with) or societal change (regarding how societies value and interact with the historic environment). The historic environment around the coasts and seas of Scotland is particularly vulnerable to a wide range of natural processes, marine activities and developments, particularly those causing seabed disturbance and changes to local sediment supply as they can cause damage or loss of submerged heritage assets from accretion/ erosion, which could include shipping activities and port infrastructure development.

Baseline Evolution and Trends

Climate Ready HES notes that climate change will likely continue to increase the frequency and severity of climate risks that impact the historic environment, including physical risks to historic environment assets, to the natural capital associated with the historic environment, and to day-to-day operations; climate risks to human safety and wellbeing; and transition climate risks to HSE core functions.

Environmental Protection Objectives

> **There are a number of designations that afford legal protection to the historic environment, and policies that aim to recognise, protect, sustainable manage and enhance Scotland's historic environment, which are captured in OPOF, the Historic Environment Policy for Scotland and NPF4 among others.**

Landscape

Baseline

The national assessment of Scotland's landscapes identifies 365 types of distinctive character, grouped into 52 categories, see Figure 3-7 - Landscape character 'groupings' identified in the national assessment of Scotland's landscapes, evidencing the diverse character of landscapes across Scotland, where dramatic mountains, sweeping moorland and a highly indented, exposed coastline fragmented into islands characterises the north and west, and rolling uplands, fertile straths and populated estuaries dominate in the south and east.

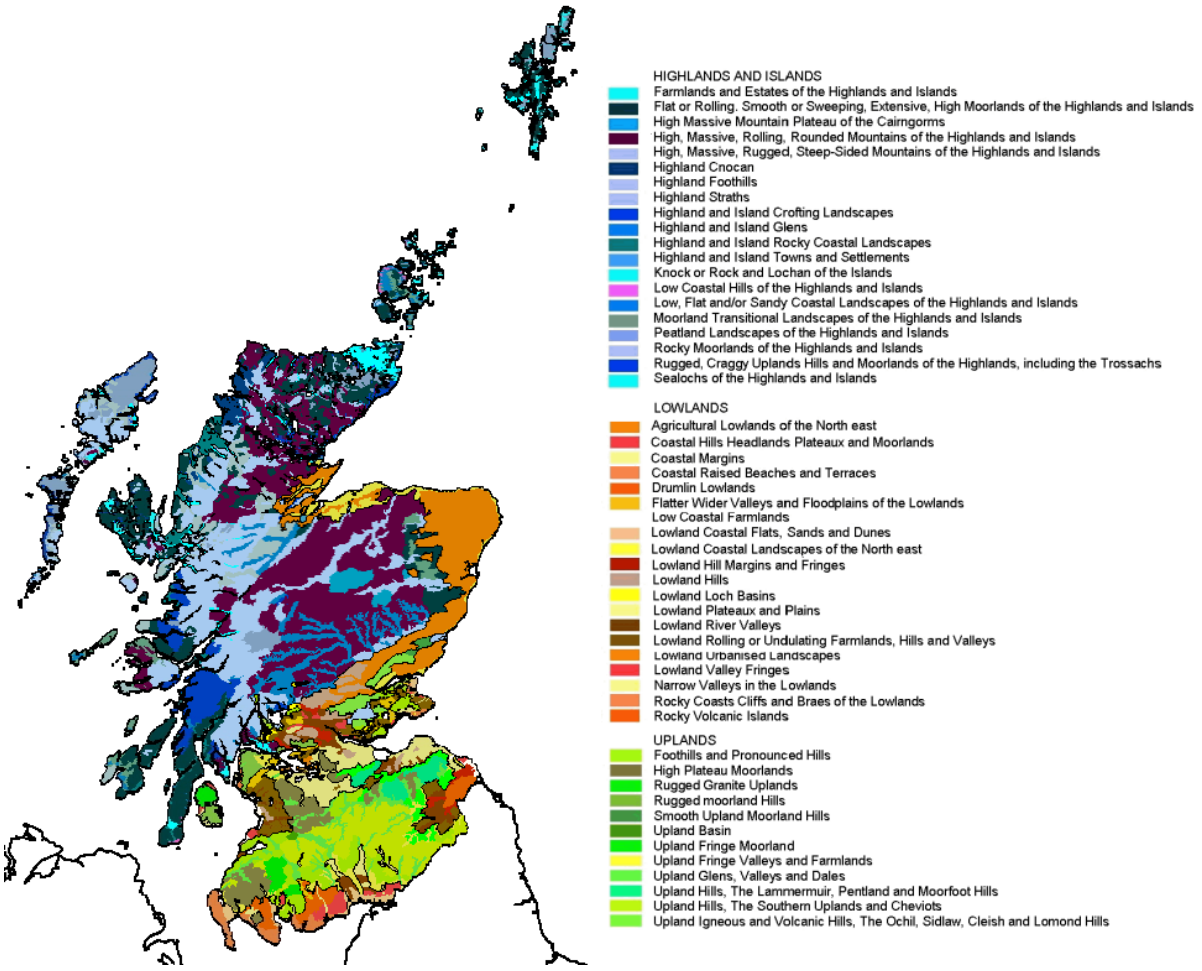

Figure 3-7 - Landscape character ‘groupings’ identified in the national assessment of Scotland’s landscapes

Scotland's coasts are an important part of its nature and landscapes. There is great variety, ranging from the lochs and islands of the west coast to the sweeping beaches and dunes of the east. A separate Coastal Character Assessment identifies 13 national coastal character types.

The national assessment of Scotland’s landscapes identifies the key characteristics of Scottish landscapes to include the sense of openness, emphasised by the lack of ‘native’ tree cover; intervisibility that offers opportunities for panoramic views, particularly important in coastal and island landscapes; perceived naturalness and dominance of natural processes, particularly where there is interaction between land and water features; valued remoteness, where accessibility and connectivity are sometimes hindered; and infrastructure adapted to topographical constraints, often concentrated and in connection with scattered settlements.

Scotland's landscapes underpin a range of social and economic interests, which is reflected in the designation of 46 National Scenic Areas (NSA), which aim to safeguard areas of nationally significant scenic quality; and a number of Local Landscape Areas (LLA), which help to protect landscape from inappropriate development and encourage positive landscape management. In addition, Scotland has two National Parks, which aim to conserve and enhance their natural and cultural heritage, applying an integrated approach to people and nature; 43 National Nature Reserves, which are exceptional places managed for wildlife and to encourage people to enjoy and appreciate wildlife; two UNESCO Global Geoparks, which recognise outstanding geological heritage value and its benefit to local people through tourism and education; and two UNESCO Biosphere reserves, which provide models for how we can live with nature and use resources for the well-being of people everywhere.

Whilst changes to landscapes exerted by natural processes are, overall, not considered to have a negative effect on landscape value, changes induced by some human activities can be considered to have a negative effect on landscape character, namely changes in perception / expectations in relation to recreation and visitor experience, changes in land use and changes introduced by incremental development, all of which can be exerted by transport infrastructure and ferry services to some extent.

Baseline Evolution and Trends

Given the intrinsic relationship between landscapes and the wider environment, baseline evolution and trends on other SEA topics, will be reflected on the future evolution of landscape value.

Environmental Protection Objectives

> **NatureScot Landscape Policy Framework aims to safeguard and enhance the distinct identity, the diverse character and the special qualities of Scotland's landscapes. NPF4 calls for the protection and enhancement of the character, landscape, natural setting and identity of settlements.**

Material Assets

Baseline

Material assets cover a wide variety of built and natural assets. Those of particular relevance to the ICP are considered to include transport infrastructure, energy infrastructure at ports; construction materials, such as aggregates; fuel resources, and flood protection built and natural. This SEA topic also considers built and natural assets within the context of waste management.

Scottish Transport Statistics 2023 identifies the following transport infrastructure in Scotland:

- Road network, which stretches along 57,187 km, including 7% of trunk roads (managed centrally by Transport Scotland), with Local Authorities being responsible for the remaining roads. This network supported 47.4 billion vehicle kilometres and 301 million bus passenger journeys in 2022.
- Rail network, which stretches along 2,730 km, and includes 360 stations. It supported 64 million ScotRail passenger journeys in 2022-2023.
- Four main airports (Aberdeen, Edinburgh, Glasgow and Glasgow Prestwick), which supported the transportation of 50,000 tonnes of freight and 21.5 million air terminal passengers in 2022, 4.4% from within Scotland, 34% between Scotland and the UK, and 55% between Scotland and mainland Europe. In addition, Scottish Ministers, through Highlands and Islands Airports Limited, and Local Authorities operate airports in Benbecula, Campbeltown, Dundee, Inverness, Islay, Kirkwall, Stornoway, Sumburgh, Wick, Oban, Coll, Colonsay and Tiree.
- Eleven major ports, which handled 59 million tonnes of freight in 2021, and a further 200 smaller ports and harbours. Ferry routes supported 7.6 million passengers and 2.6 million vehicles within Scotland in 2022.

The NTS notes the following environmental problems associated with transport infrastructure: air pollution, traffic congestion, and barriers to active travel; as well as vulnerability to climate change impacts.

There are a number of hybrid ferries currently operating in Scotland, as reported by CMAL, as well as ongoing procurement processes, such as the seven new electric ferries that will support the Clyde and Hebrides network by Transport Scotland. There are also a number of Scottish ports offering shore power, i.e. provision of electricity to ships berthed alongside in port, such as the port of Montrose and the port of Aberdeen (currently under construction and scheduled to deliver its first power in March 2025); or offering alternative low carbon fuels, such as Liquified

Natural Gas (LNG) as reported by Scottish Enterprise. However, the majority of the Scottish fleet still relies on fossil fuels, as noted by the NTS, which has associated resource availability and pollution problems (i.e. operational air emissions and accidental discharges / spills to the water environment).

Scotland's Marine Assessment 2020 reports that approximately £18 billion of Scottish buildings and infrastructure lie within 50 meters of the shoreline, with 75% of these protected by artificial defences and 25% protected by natural defences, such as sand dunes. Main challenges faced by flood defence built and natural assets are related to coastal erosion and rising sea levels associated with climate change.

Construction materials relevant to the ICP are those associated with transport infrastructure development. Green Alliance reports that in the UK, the construction sector has the largest material footprint of any sector. It is estimated the sector uses nearly 100Mt of materials in new infrastructure each year, 82% of which are virgin resources, predominantly concrete. Scotland's Circular Economy and Waste Route Map to 2030 notes that the extraction and processing of products and services manufactured in Scotland contribute to biodiversity loss and water stress.

Baseline Evolution and Trends

The use and development of transport infrastructure is projected to increase in line with population and economic growth. With the implementation of existing policies, it is anticipated that port infrastructure and vessels progress in their decarbonisation, making use of alternative fuel and propulsion technologies. Examples of these are identified in The Decarbonisation of Scottish Maritime Transport Study, as illustrated in Figure 3-8 - Examples of alternative fuel and propulsion technologies that could be explored for different vessel types.

	Type	Ongoing Action	Short Term (next five years)	Long Term (10 - 15 years)
	Small Ferry	Optimise efficiency	Diesel - electric hybrid / battery electric	Battery Electric
	Large Ferry	Optimise efficiency	Biofuels or Diesel - electric hybrid	Ammonia combustion
	Fishing Boat	Optimise efficiency	Biofuels	Ammonia or methanol combustion
	Inshore Service Vessel	Optimise efficiency	Biofuels / Electric / Diesel - electric hybrid	Battery electric / Ammonia or methanol combustion
	Offshore Service Vessel	Optimise efficiency	Biofuels / Electric / Diesel - electric hybrid	Electric / Ammonia or methanol combustion
	Large Cargo Vessel	Optimise efficiency	Biofuels / LNG	Ammonia combustion or fuel cell / SMR

Figure 3-8 - Examples of alternative fuel and propulsion technologies that could be explored for different vessel types. Optimising efficiency is an ongoing action that will continue in the long-term.

Climate change, together with continued development, will continue to exert pressure on material assets.

Environmental Protection Objectives

The Infrastructure Investment Plan for Scotland 2021-22 to 2025-26 (IIP) aims for infrastructure to improve Scotland's resilience and enable inclusive, net zero and sustainable growth. The NTS aims for a sustainable, inclusive, safe and accessible transport system.

Scotland's Circular Economy and Waste Route Map to 2030 aims for Scotland to become a fully circular economy by 2045, driven by responsible production and consumption, and maximising value from waste and energy. Waste reduction targets are due to be updated.

NPF4 calls for investment in transport infrastructure that supports connectivity and reflects place-based approaches and local living, placing an emphasis on active and sustainable travel. It calls for the expansion of renewable, low-carbon and zero emission technologies, and to strengthen resilience to flood risk. It also encourages, promotes and facilitates development that is consistent with the waste hierarchy.

Population and Human Health

Baseline

Scotland's 2022 Census reported a population of over 5.4 million in 2022. The Scottish Island Typology Overview (2024) notes that whilst the overall population of Scotland's islands has grown over the last 20 years, there is considerable variation between island regions and some islands have a declining population, as illustrated in Figure 3-9 - Percentage population change in Scottish Island Regions and Mainland Scotland, 2001 – 2021. The loss of working age populations in the islands has also been estimated to be disproportionately higher than the total percentage loss of population.

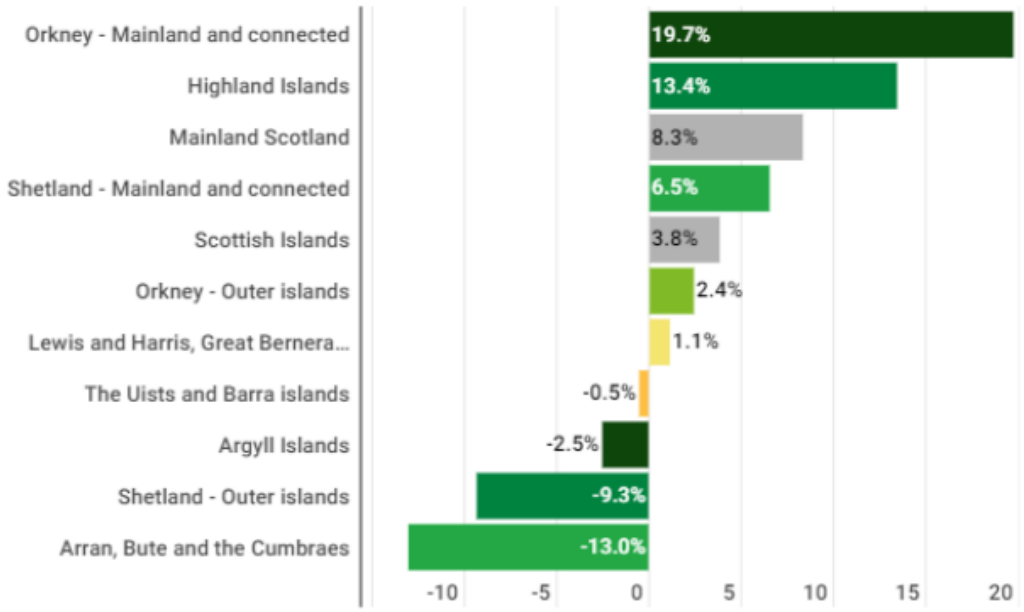

Figure 3-9 - Percentage population change in Scottish Island Regions and Mainland Scotland, 2001 – 2021

The Public Health Scotland Strategic Plan 2022-2025 notes that life expectancy in Scotland has not improved since 2012 and that there are longstanding health inequalities. Challenges include inflation on food and fuel pushing up the cost of living, tightening public sector budgets and climate change. At the same time, across the Scotland's 2022 Census, the general health statistics show that over 78% of people are in good or very good health condition. Access to amenities and services, including GPs and hospitals, schooling, grocery stores and vehicle fuel varies widely across regions and across Scotland's inhabited islands. In some of these, residents must leave the island to access amenities and services, and have a strong reliance on ferry services, which have become key in daily life. Of the 73 islands / island groupings considered in the Scottish Island Typology Overview (2024), 28 did not have access to direct ferry connections to mainland Scotland in the winter of 2023/24, meaning that passengers were required to travel via up to two other islands in order to reach the Scottish mainland.

According to the latest national accounts, the economy of Scotland is an open mixed economy, mainly services based, and had an estimated nominal gross domestic product (GDP) of £218.0 billion in 2023, including oil and gas extraction in the country's continental shelf region. The Islands Growth Deal highlights that the Scottish islands make an outsized contribution to the economy, including 50% of Scotland's aquaculture gross value added (GVA), 30% of Scottish sea fish GVA, and the handle of 13% of the oil and gas produced in UK waters. The Scotland's National Islands Plan (NIP) also identifies creativity and tourism sectors as economic drivers in the Scottish islands. Marine GVA and employment are particularly important to rural economies, including those in island communities. Scotland's Marine Assessment 2020 reports that Scottish tourism represented £4.1 billion GVA in 2017,

of which 14% was marine tourism, covering a wide range of outdoor recreational activities, visitor attractions and cruise ship visits.

SNSET notes that rural and island areas face particular challenges such as a falling labour supply, poorer access to infrastructure and housing challenges which are holding back local businesses.

Baseline Evolution and Trends

The Scottish Island Typology Overview (2024) notes that across Scotland, the projected percentage change in population by age grouping shows that the population will age in every area to 2043. Large population losses are predicted in Island Sparsely Populated Areas, which presents direct difficulties for the viability of communities, businesses and services due to low access to people. Furthermore, the percentage loss of working age population in the islands is anticipated to be disproportionately higher than the total percentage loss of population.

Scotland's Marine Assessment 2020 predicts that marine tourism is expected to continue to expand. This and other industries important to island communities are expected to grow under the support of targeted investment programmes, including the Islands Growth Deal.

Environmental Protection Objectives

Public Health Scotland Strategic Plan 2022-2025 aims to prevent disease, prolong healthy life and promote health and wellbeing. The NIP includes policies for islands population retention and growth. The Action Plan to Address Depopulation further sets out actions to take forward at both a local and national level, to address the challenges Scotland faces as a result of depopulation. SNSET aims for Scotland to thrive across economic, social and environmental dimensions. NPF4 calls for the protection of people and places from environmental harm and supports development that improves health and wellbeing. It encourages, promotes and facilitates spaces and opportunities for play, recreation and sport. It also supports the sustainable development of economic sectors, including tourism, culture and creativity industries.

Appendix 4 - Assessment Proforma

SAP Vision

ICP Vision	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human	Comments / Effect and Mitigation / Enhancement
"Scotland's ferry services, supported by other transport services, will be safe, reliable, affordable and inclusive for residents, businesses and visitors enabling connectivity, sustainability and growth of island and peninsula communities and populations".	U	U	U	U	U	U	U	P	P	Safety, reliability, affordability, and inclusivity are the primary drivers for the ICP. These would overall improve connectivity, and support the development of a resilient transport network, as well as economic and population growth, ensuring access to essential services and reducing inequality– on this basis, there is potential for the ICP to have likely direct / indirect positive effects on SEA objectives 8 (material assets) and 9 (population and human health) in the long-term. The Vision also specifically includes a desire to enable sustainability. However, this could be a reference to economic and social (population) sustainability as it makes no specific mention to the natural and historic environment. The fact that the ICP will enable growth could suggest an increased uptake of ferry services by users, resulting in an increased number of people / vehicle / vessel traffic, which could have associated negative effects. However, through CNAs, and

ICP Vision	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human	Comments / Effect and Mitigation / Enhancement
										in response to actual needs identified for relevant communities, the ICP could also result in a reduction of people / vehicle / vessel traffic. Given the uncertainty on the practical implications of implementing the Vision, potential effects on SEA objectives 1-7 are rated as unknown. The ICP has the potential to provide opportunities not only to protect, but to improve Scotland's natural and historic environment. Proposed enhancement includes consider rewording the overall Vision and/or accompanying text, or adding new text elsewhere in the document, to include specific reference to the protection and enhancement of Scotland's unique natural and historic environment when designing and implementing policies and actions that support the Vision, and clarify how the term 'sustainability' applies to the Vision.

Table 4-1 - Assessment of the ICP Vision in relation to SEA Objectives 1 – 9
(PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

SAP Outcomes

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
1.1 Will provide reliable and resilient service	U	U	U	U	U	U	U	P	P	This Outcome focuses on the reliability (i.e. services with good performance and low risk of disruption, including under adverse weather conditions, and that run on time) and resilience (i.e. services with capacity to deal with, adapt to and recover from disruptions) of ferry services, which the SAP notes would potentially increase the number of services / vessel movements and increase the capacity of ferries for people and vehicles. Although not described under this Outcome, the SAP also makes reference to the potential for air services and fixed links to improve reliability and resilience of island transport connectivity. By increasing the reliability and resilience of ferry services, there is potential for the ICP to have indirect positive effects on SEA objectives 8 (material assets, as this Outcome supports the development of a safe, reliable, and resilient transport network) and 9 (population and human health, as this Outcome ensures access to essential services, employment, tourism and recreational services; improves competitiveness, productivity, and investment for local businesses; and overall improves transport services and connectivity and sustainable

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										economic development, including within the tourism sector) in the short, medium and long-term. However, it is not clear whether increasing reliability and resilience may necessarily result in an increased number of vessel and vehicle movements across all services / routes, which shall be determined in CNAs separately. Accordingly, potential effects on SEA objectives 1-7 are rated as unknown. Proposed enhancement includes considering adding reference to protection of the natural and historic environment that is relevant to SEA objectives 1-7 when designing and implementing policies and actions that support this Outcome; and consider rewording to ensure this Outcome is aligned with Outcome 1.2 (see below). Reference to a sustainable transport hierarchy in which active travel and integration with public transportation are prioritised over measures that support private vehicle uptake would also be beneficial to increase clarity on this Outcome.
1.2 Will get people and goods where they need to get to	P	O	O	O	O	O	O	P	P	This Outcome focuses on the effective integration between ferry services and other transport modes, which could result in time and cost savings to users, and improved accessibility, and promote active

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										travel and public transportation uptake, potentially increasing the number of non-vehicle passengers and reducing the number of private vehicle journeys. Through this Outcome, there is potential for the ICP to have indirect positive effects on SEA objective 1 (air quality, as this Outcome contributes to reducing the number of private vehicles using ferry services); By effectively integrating ferry services with other transport modes, there is potential for the ICP to also have likely indirect positive effects on SEA objectives 8 (material assets, as this Outcome supports the efficient and sustainable use of infrastructure) and 9 (population and human health, as this Outcome overall improves transport services and connectivity) in the medium and long-term. Through this Outcome, no potential effects on other SEA objectives are considered likely. Proposed enhancement includes considering highlighting benefits from the effective integration of ferry services with other transport modes relevant to SEA objectives 1-7.

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
1.3 Will be transparent	O	O	O	O	O	O	O	O	P	This Outcome focuses on being transparent to society on decisions being made, allowing operators and businesses to align with government investment priorities and strengthening trust on decision-makers by the wider community. Through this Outcome, there is potential for the ICP to have likely indirect positive effects on SEA objective 9 (population and human health, as this Outcome would improve investment opportunities / planning for local businesses) in the medium and long-term. Through this Outcome, no potential effects on other SEA objectives are considered likely.
2.1 Will ensure that marginalised members of our communities have safe and fair access to ferry services they need	U	U	U	U	U	U	U	O	P	This Outcome focuses on reducing inequality, which would facilitate access to ferry services by marginalised members of communities. Through this Outcome, there is potential for the ICP to have indirect positive effects on SEA objective 9 (population and human health, as this Outcome could support reducing disparities in poverty and social deprivation) in the medium and long-term. However, it is not clear whether reducing inequality may necessarily result in an increased number of vessel and vehicle movements across

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										all services / routes, which shall be determined in CNAs separately. Accordingly, potential effects on SEA objectives 1-7 are rated as unknown. Through this Outcome, no potential effects on SEA objective 8 (material assets) are considered likely. Proposed enhancement indicated for Outcome 1.1, also applies to this Outcome.
2.2 Will be easy to use for all	O	O	O	O	O	O	O	O	P	This Outcome focuses on ensuring accessibility for all, reducing barriers where possible. Through this Outcome, there is potential for the ICP to have likely indirect positive effects on SEA objective 9 (population and human health, as this Outcome would support safe access to essential services, employment, tourism and recreational spaces) in the medium and long-term. Through this Outcome, no potential effects on other SEA objectives are considered likely.

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
2.3 Will be affordable	O	O	O	O	O	O	O	O	P	This Outcome focuses on the affordability and economic sustainability of ferry services, which would deliver value for money to residents and tax payers. Through this Outcome, there is potential for the ICP to have indirect positive effects on SEA objective 9 (population and human health, as this Outcome would support safe access to essential services, employment, tourism and recreational spaces) in the medium and long-term. Through this Outcome, no potential effects on other SEA objectives are considered likely.
3.1 Will support people making sustainable and active travel choices	P	O	O	O	O	O	O	P	P	This Outcome focuses on promoting active travel, making sure that ferry services accommodate for this and are better integrated with other transport modes, as per Outcome 1.2. For clarity, active travel refers to journeys made my modes of transport that are fully or partially people-powered, including walking, cycling, etc., which could result in an increased uptake of ferry services by non-vehicle passengers. Although the Outcome makes specific reference to 'sustainable travel', this is understood to include public transport and/or community transport initiatives.

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										Through this Outcome, there is potential for the ICP to have indirect positive effects on SEA objective 1 (air quality, as this Outcome contributes to reduce the impact of transport on air quality through a reduction in the need for private car use/ modal shift); SEA objective 8 (material assets, as this Outcome supports the efficient and sustainable use of infrastructure) and on SEA objective 9 (population and human health, as this Outcome would support health and wellbeing) in the short, medium and long-term. Through this Outcome, no potential effects on other SEA objectives are considered likely. Proposed enhancement include further highlighting benefits from promoting active travel on SEA objective 1.
3.2. Will support integrated travel choices	P	O	O	O	O	O	O	P	P	This Outcome focuses on a better integration between ferries networks and other modes of transport, as per outcome 1.2 and 3.1, and accordingly, the same assessment findings apply.
3.3. Will help make our island and other ferry dependent communities great places to live,	U	U	U	U	U	U	U	U	U	This Outcome is very high level and overarching, and potentially could result in a vast range of activities for which potential effects cannot be predicted.

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
work and visit, supporting healthy population balances										
4.1 Will allow people to make travel choices that minimise the long-term impacts on the environment and the wellbeing of future generations	P/ U	P/ U	P/ U	P/U	P/U	P/ U	P/ U	P/U	P/ U	This Outcome focuses on supporting travel choices that minimise long-term impacts, which are understood to include active travel and increasing public transportation uptake, as per Outcomes 1.2, 3.1, 3.2. However, in this case, there is specific reference to minimising long-term impacts on the environment and human health, suggesting that environmental protection is promoted. Through this Outcome, there is potential for the ICP to have indirect positive effects on SEA objectives 1 – 9, as this Outcome specifically refers to minimising impacts on the environment (SEA objectives 1-7), human health (SEA objective 9) and support the sustainable use / management of infrastructure (SEA objective 8) in the long-term. However, given that the mechanism for implementing this Outcome is unclear, the potential for the positive effects is unknown. Proposed enhancement includes specifying environmental protection requirements, which could be described under the Outcome or presented as a separate set of policies that underpin the ICP.

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
4.2 Will adapt to the effects of climate change	O	O	O	O	O	O	O	P	P	This Outcome focuses on adapting ferry services to remain resilient to climate change impact, which is understood to be limited to increasing the resilience of ferry services (not of port infrastructure). Through this Outcome, there is potential for the ICP to have likely indirect positive effects on SEA objectives 8 (material assets, as this Outcome supports the development of a safe, reliable, and resilient transport network) and 9 (population and human health), as this Outcome ensures access to essential services, employment, tourism and recreational services; improves competitiveness, productivity, and investment for local businesses; and overall improves transport services and connectivity). Through this Outcome, no potential effects on other SEA objectives are considered likely. Proposed enhancement includes extending the scope of this Outcome beyond ferry services, including reference to adaptation of port infrastructure and other transport services (where relevant) to climate change, and highlighting the benefits achieved for other SEA topics.
4.3 Will help deliver our net-zero target	P	P/ U	P/ U	P/U	P/U	P/ U	P/ U	P/U	P	This Outcome is specific, measurable and timed goal, i.e. the Scottish Government is committed to achieving net zero greenhouse gas

SAP Outcomes	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										emissions by 2045, and is focused on lowering emissions of ferry services. Through this Outcome, there is potential for the ICP to have direct/indirect positive effects on SEA objectives 1 (air quality, as it would contribute to reduce the impact of transport on air quality) and 9 (population and human health), as this Outcome would reduce air pollution and therefore promote health and wellbeing in coastal areas. Effects on SEA topics 2-8 are rated as both potentially positive and unknown due to a lack of specific reference to environmental benefits in the Outcome description. Proposed enhancement includes extending the scope of this Outcome beyond ferry services, including reference to promoting net-zero targets in port infrastructure development and other relevant interventions associated with other transport modes; and highlighting the benefits achieved for other SEA topics in the description of the Outcome, i.e. how Outcome 4.3 contributes to reducing GHG emissions and how this benefits SEA topics 2-8.

Table 4-2 - Assessment of the SAP Outcomes in relation to SEA objectives 1 – 9
(PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

VPP Objectives

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
1 To maintain and safely operate ferry connections for CHFS and NIFS communities, and that opportunities continue to be taken through vessel and port investment to enhance services in support of the growth of island populations and economies.	U	U	N/ U	N/ U	N/U	N/U	N/ U	P	P	Through Objective 1, there is potential for the VPP to have direct/indirect positive effects on SEA objectives 8 (material assets, as it would contribute to the development of a resilient transport network, and support the sustainable use / management of port infrastructure), and 9 (population and human health, as it would support the continued operation of ferry services to ensure island connectivity, having a number of socioeconomic benefits in the short, medium and long-term (operational phase). Also, the fact that the Objective specifically refers to supporting growth of island populations and economies suggests that future capacity needs would be considered, having a long-term effect. Whilst it is not clear whether this Objective may necessarily result in an increased number of vessel and vehicle movements across all services / routes, without specific reference to environmental protection in the description of the Objective or elsewhere in the VPP, there is potential for the VPP to have direct / indirect negative effects on SEA objectives 1-7, as any investments in port infrastructure, and associated construction works required to realise this Objective, could have a negative impact on the

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										natural and historic environment in the short-term, during the construction phase. At the same time, in the long-term, a modern and decarbonised fleet and port infrastructure could introduce benefits, particularly to SEA objectives 1 (air quality) and 2 (noise). Accordingly, potential effects on SEA objectives 1 and 2 are rated as unknown, and potential effects on SEA objectives 3 – 7 are rated as both negative and unknown. Proposed mitigation includes adding reference to protection of the natural and historic environment relevant to SEA objectives 1-7 either in the description of the Objective, or presented separately, as a set of principles or policies that underpin the VPP to guide future developments towards construction practices that ensure environmental protection.
2 To improve weather and technical reliability, primarily through renewing the fleet and upgrading ports in response to asset age and condition.	U	U	N/ U	U	N/U	N/U	N/ U	PP	P	Through Objective 2, there is potential for the VPP to have potential direct/indirect positive effects on SEA objectives 4 (water environment, as it would contribute to the reduction of flood risks / disruption at ports), 8 (material assets, as it would support the development of a safe, reliable, and resilient transport network, including in response to climate change), and 9 (population and human health, as it would improve accessibility and connectivity opportunities (operational phase).

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										On the other hand, Objective 2 places an emphasis on “renewing” and “upgrading” which the VPP describes to not only include acquisition of new vessels / development of new infrastructure, but also considering other sustainable options such as rebuilding, adapted vessel / port designs or retrofitting. Accordingly, this adds to the benefits of Objective 2 on SEA objective 8, and there is potential for the VPP to have likely direct/indirect significant positive effects during the operational life of these assets. As noted under the assessment of Objective 1, whilst it is not clear whether this Objective may necessarily result in an increased number of vessel and vehicle movements across all services / routes, without specific reference to environmental protection in the description of the Objective or elsewhere in the VPP, there is potential for the VPP to have direct / indirect negative effects on SEA objectives 1-7, as any port upgrades, and associated construction works required to realise this Objective, could have a negative impact on the natural and historic environment in the short-term, during the construction phase. At the same time, in the long-term, a modern and decarbonised fleet and port infrastructure could introduce benefits, particularly to SEA objectives 1 (air quality) and 2 (noise). Accordingly, potential effects on SEA objectives 1, 2 and 4 are rated as unknown, and

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										potential effects on SEA objectives 3, 5, 6 and 7 are rated as both negative and unknown. Given that the source of potential negative effects associated with this Objective is the same as identified in relation to Objective 1, the same proposed mitigation applies. It is also noted that it may be prudent to re word the VPP Objective to state 'to improve reliability associated with both the weather and technical issues' to clarify its scope.
3 To reduce the average age of the total fleet (across both CHFS and NIFS networks) to around 15 years by the end of this decade.	P	P	O	O	O	O	O	PP	P	Objective 3 builds on Objective 2, as it specifies the quantifiable and time-bound target for the vessel fleet, e.g. average of fleet to be 15 years or less by 2030, and accordingly, the same assessment findings apply in relation to the renewal of the vessel fleet (for SEA objectives 8 and 9). Given that the focus of Objective 3 is on reducing the age of the fleet, it can be assumed that new vessels will incorporate measures to reduce air and noise emissions, and accordingly, there is potential for the VPP to have a likely indirective positive effect on SEA objectives 1 (air quality) and 2 (noise (operational phase)). No potential effects on SEA objectives 3 - 7 are considered likely.

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										Proposed enhancement includes highlighting the benefits of replacing the existing "old" fleet with new modern vessels that incorporate mechanisms to ensure environmental improvements.
4 To improve resilience through an expansion in the CHFS major vessel fleet and through increased interoperability and standardisation of vessels and ports within the major and small vessel fleets.	N	N	N	N	N	N	N	P	P	Objective 4 seeks to further improve resilience of ferry services by ensuring that vessels can work from different ports (interoperability) and that their design is the same or similar (standardisation). Standardisation of ports is also understood to involve interventions on existing / new ports that reduce constraints to ferry access and use, which can involve construction activities such as dredging. Through Objective 4, there is potential for the VPP to have indirect positive effects on SEA objectives 8 (material assets, as it supports the efficient use of port infrastructure) and 9 (population and human health, as it supports transport connectivity and its socioeconomic benefits) (operational phase). Objective 4 also suggests that the CHFS major vessel fleet would be expanded, adding two new vessels, which could result in an increased number of vessel movements. In addition, port interventions to ensure standardisation would potentially involve physical interaction with the natural and historic environment. Without appropriate mitigation, increased

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										vessel traffic and port interventions could have direct / indirect negative effects on SEA objectives 1 - 7. Proposed mitigation and enhancement include adding reference to protection of the natural and historic environment relevant to SEA objectives 1-7 either in the description of the Objective, or presented separately, as a set of principles or policies that underpin the VPP.
5 To improve accessibility for transport users through vessel and port design, informed by the proposed Accessibility Standard, once available.	O	O	O	O	O	O	O	O	P	Objective 5 focuses on increasing accessibility. Through Objective 5, there is potential for the VPP to have indirect positive effects on SEA objective 9 (population and human health, as this Objective would support safe access to essential services, employment, tourism and recreational spaces) in the medium and long-term (operational phase). Through this Objective, no potential effects on other SEA objectives are considered likely.
6 To provide additional vehicle-deck capacity to address identified “pinch points” where there is	U	O	O	O	O	O	O	O	P	Objective 6 focuses on increasing vehicle-deck capacity, a key issue identified in the SAP to affect some ferry routes at peak times. Through Objective 6, there is potential for the VPP to have likely indirect positive effects on SEA objective 9 (population and human health, as this

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
practical, beneficial and affordable.										Objective would facilitate connectivity where this is needed, and therefore sustainable economic development, including within the tourism sector, and competitiveness, productivity, and investment for local businesses. In addition, given that it specifically refers to identified issues that are likely to persist in the future, it can be considered to account for future capacity needs). At the same time, it is not clear whether this Objective may necessarily result in an increased number of vehicle movements across services / routes, and accordingly, potential effects on SEA objective 1 (air quality) are rated as unknown. Through this Objective, no potential effects on other SEA objectives are considered likely. Proposed mitigation includes adding clear reference, in the description of this Objective or elsewhere in the VPP, to the adoption of a sustainable transport hierarchy in which active travel and integration with public transportation are prioritised over measures that support private vehicle uptake.
7 To progressively decarbonise both vessel	P	P	O/ U	O/ U	O/U	O/U	O/ U	P	P	The VPP indicates that a range of decarbonisation options will be explored and implemented, including increasing the uptake of electric vessels,

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
fleet and port operations, by 2045.										implementation of retrofitting solutions to make vessels / port operations more efficient, adoption of alternative fuels or increase in the provision of shore power. Through Objective 7, there is potential for the VPP to have likely indirect positive effects on SEA objective 1 (air quality, as it would contribute to reduce emission of key air pollutants and GHGs), SEA objective 2 (noise, as it would contribute to reduce noise generation at port locations), SEA objective 8 (material assets, as it would support the efficient and sustainable use and management of port infrastructure), and SEA objective 9 (population and human health, as human health would benefit from improved air quality) in the long-term (operational phase). Not enough information is provided to confirm any other potential effects on the remaining SEA objectives. Proposed enhancement includes adding specific reference to the protection / benefits to the wider natural / historic environment as part of this Objective to allow for positive scoring on other SEA objectives. It is recommended that a staged timeline be prepared to ensure a 2045 can be achieved.

VPP Objectives	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
8 To retain a major vessel in the fleet for resilience purposes until at least 2030.	O	O	O	O	O	O	O	O	P	Objective 8 seeks to further improve resilience of ferry services by retaining a major vessel until at least 2030, which suggests some level of duplication with Objective 4, and accordingly, would mainly result in positive effects on SEA objective 9 (population and human health, as ferry users would benefit for any increased resilience). Through this Objective, no potential effects on other SEA objectives are considered likely.

Table 4-3 - Assessment of the VPP Objectives in relation to SEA objectives 1 – 9
(PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

VPP Project Categories

VPP Project Categories	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
A. Fleet renewal	P/ U	P/ U	N/ U	N/ U	N/ U	N/ U	O	P	P	The VPP indicates that fleet renewal would be delivered by: • Vessel replacements, including with both newbuild, acquisition of second-hand vessels or vessel chartering. At this stage, a total of two new vessels are anticipated to be acquired and 38 vessels are anticipated to be replaced between 2021 and 2045. • Adapting the existing fleet for redeployment or through retrofitting to increase their interoperability, capacity to adopt alternative fuels, vehicle capacity, and/or reducing passage time and carbon footprint (conversion of vessels to zero/low emission technology). • Releasing existing vessels for disposal. The VPP makes reference to reviewing assets at their approximate mid-life to plan life extensions or programme timing of replacement / disposal, and develop outline business cases to inform decision-making. Whilst fleet renewal could result in an increased number of vessel and vehicle movements across all services / routes, and potentially have negative effects on SEA

VPP Project Categories	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										objectives 1 – 7 due to increased air and noise emissions, increased risks of coastal and seabed erosion (potentially affecting known / unknown marine heritage assets), accidental spills into the water environment, collision between ferries and marine mammals, and of introduction / spread of non-native invasive species. Any potential increases in vessel activity would not be anticipated to have an effect on SEA objective 7 (landscape) are considered likely. The above potential negative effects would likely be small in scale, as although there is uncertainty on vessel movement changes, only two additional vessels are anticipated to be added to the fleet. At the same time, in the long-term, a modern and decarbonised fleet could introduce benefits, particularly to SEA objectives 1 (air quality) and 2 (noise). Accordingly, potential effected are rated as both positive and unknown. Benefits to SEA objectives 3 – 6 are not clear and potential effects are therefore rated as both negative and unknown. Through fleet renewal, there is potential for the VPP to have an indirect positive effect on SEA objective 8 (material assets, as this supports to the whole life cycle of vessels and circular economy objectives, and adoption of the waste hierarchy). Through fleet renewal, there is potential for the VPP to also have likely indirect positive effects on SEA objective 9 (population and human health as ferry users

VPP Project Categories	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										would actually benefit from the increased reliability, efficiency and capacity of the renewed fleet). Mitigation and enhancement measures include adding specific reference to adherence to circular economy / waste hierarchy principles as part of "principles for fleet renewal" or similar to further strengthen associated benefits, and to include the principles by which new vessels, engaged in the provision of lifeline services, should be designed and built. A set of principles are actually outlined in the latest publicly available Vessel Replacement and Deployment Plan (Annual Report 2016), now superseded, noting that they are kept under regular review, and therefore opportunities for principles to include environmental / heritage protection requirements that benefit SEA topics exist.
B. Port upgrades	P/ U	P/ U	N/ U	N/ U	N/ U	N/ U	N/ U	P	P	The VPP indicates that port upgrades would comprise: • New port construction • Major redevelopment of existing ports • Enabling works at existing ports, such as dredging for vessels with a deeper draught; ensuring piers and fendering can accommodate heavier vessels; providing wider linkspans to accommodate vessels with a larger beam; or increasing the provision of shore power among others • Consideration of increasing resilience to climate change impacts

VPP Project Categories	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										• Consideration of opportunities for improved integration with public transport / active travel The VPP makes reference to the development of outline business cases to inform decision-making. Port upgrades would likely involve physical interaction with the natural and historic environment, which, without appropriate natural and historic environmental protection, could have direct / indirect negative effects in the short-term (during construction works) on SEA objectives 1 – 7, due to increased air pollution, increased noise production, increased risks of coastal and seabed loss due to dredging or reclamation requirements (potentially affecting known / unknown marine heritage assets), increased risks for accidental spills, introduction of marine litter and sediment disturbance, biodiversity disturbance and impacts on landscape values due to land use changes. At the same time, through port upgrades, there is potential for the VPP to have likely indirect positive effects on SEA objectives 1 and 2 (as it supports the decarbonisation and modernisation of port infrastructure, which would benefit air quality and noise climate), SEA objectives 8 (material assets, as it supports the efficient use of port infrastructure and increases its resilience to climate change,) and 9 (population and human health, as it supports transport connectivity and its socioeconomic benefits).

VPP Project Categories	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Mitigation / Enhancement
										Therefore, potential effects on SEA objectives 1 and 2 are rated as positive and unknown, potential effects on SEA objectives 3 – 7 are rated as negative and unknown, and potential effects on SEA objectives 8 and 9 are rated as positive. Although in most cases port upgrade works would be subject to planning policy and planning permission, and be subject to project-specific EIAs, proposed mitigation includes considering the development of policies / principles to follow during the planning of port upgrades, so environmental protection can be considered from the outset, and increase opportunities for enhancement measures to be considered at an early stage, which would benefit other SEA objectives.

Table 4-4 - Assessment of the VPP Project Categories in relation to SEA objectives 1 – 9
(PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

‘Maintaining the Ferries Plan’ Assessment of Alternatives

‘Maintaining the Ferries Plan’ Alternative	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Potential Improvements
Intention ”deliver first class sustainable ferry services to communities, stimulating social and economic growth across Scotland”	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	O/ U	P	The overall intention of the Ferries Plan places its focus on social and economic growth through the delivery of ferry services, and there would be potential for positive effects on SEA objective 9 (population and human health). However, there is no reference to environmental / historic protection / enhancement, which could potentially result in negative effects on the other SEA objectives at the cost of social and economic growth. However, not enough information is provided to confirm any other potential effects on the remaining SEA objectives.
Working Principle ”concentrate on the correct service profile to meet the needs of the community”	U	U	U	U	U	U	U	O/ U	P	As above, this working principle prioritises meeting the needs of the community above everything else, it is not clear if it could result in an increased / reduced number of vessel / traffic movements.
Working Principle	N	N	N	N	N	N	N	O/ U	P	As above, this working principle prioritises meeting demand, and in this case, it would likely result in an increased number of vessel / traffic movements and therefore associated potential negative effects on SEA objectives 1 - 7.

'Maintaining the Ferries Plan' Alternative	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Potential Improvements
"ensure that there is always sufficient capacity on the route to meet demand"										
Working Principle "ensure wherever possible that each island or remote peninsula community has at least one direct ferry route to the Scottish mainland"	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	O/ U	P	As above, this working principle prioritises connectivity between islands / remote peninsula communities and Scottish mainland, and potential for negative effects on other SEA topics cannot be ruled out.
Working Principle "all second routes on the network are currently required"	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	N/ U	O/ U	P	As above, this working principle prioritises maintaining second routes, i.e. connectivity between islands / remote peninsula communities and Scottish mainland, and potential for negative effects on other SEA topics cannot be ruled out.

'Maintaining the Ferries Plan' Alternative	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Potential Improvements
Working Principle "work towards combining routes that overlap and compete with one another so that we emerge with a stronger single route option"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P	This working principle prioritises efficiency of ferry services achieved through the combination of overlapping routes, which could have an indirect positive effect on SEA objective 9, benefiting from a stronger single route option, and result in a reduced number of vessel trips and vehicle / good / people movements, which could potentially have positive effects on SEA objectives 1 – 7. However, not enough information is provided to confirm any other potential effects on these SEA objectives.
Working Principle "strengthen and augment existing routes rather than start up new routes"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P	This working principle prioritises strengthening long-established routes over new routes, making reference to avoiding costs associated with set-up of new routes. Whilst, this would result in more efficient services for ferry-dependent communities, with potential for positive effects on SEA objective 9, and avoid potential negative effects on other SEA topics (namely 1-7) associated with new routes, not enough information is provided to confirm any other potential effects on these SEA objectives.
Proposal category "Improved services"	N	N	N	N	N	N	N	O/ U	P	Improved services are described as increments in the length of the operating day, frequency and/or the number of sailing days, resulting in an increase of traffic estimated at 0.3% - 200% on specific routes during specific times of the year. Whilst this would potentially have positive effects on SEA objective 9, without environmental / historic protection in place, increased levels of vessel

'Maintaining the Ferries Plan' Alternative	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Potential Improvements
										traffic and associated increased levels of people / good / vehicle movements, could potentially have a negative effect on SEA objectives 1-7. Not enough information is provided to confirm any other potential effects on these SEA objectives.
Proposal category "Changes to routes, including new routes"	N	N	N	N	N	N	N	O/ U	P	This proposal category seems to contradict the working principle that prioritises strengthening / augmenting existing routes. As above, new routes could imply increased levels of vehicle, people, good and vessel traffic, and without appropriate environmental / historic mitigation, result in negative effects on SEA objectives 1 – 7. Not enough information is provided to confirm any other potential effects on these SEA objectives.
Proposal category "New vessel provision (i.e. purchase / charter / replace)"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P	This proposal category involves the replacement and acquisition of existing / new vessels to further improve ferry services, which would result in positive indirect effects on SEA objective 9. Not enough information is provided to confirm any other potential effects on these SEA objectives.

'Maintaining the Ferries Plan' Alternative	1. Air Quality	2. Noise	3. Soil/ Sediment	4. Water environment	5. Biodiversity	6. Cultural Heritage	7. Landscape	8. Material Assets	9. Population & Human Health	Comments / Effect and Potential Improvements
Proposal category "Port upgrades"	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	O/ U	P	This proposal category involves port upgrade works to further improve ferry services, which would result in positive indirect effects on SEA objective 9. Not enough information is provided to confirm any other potential effects on these SEA objectives.

Table 4-5 - Assessment of the 'Maintaining the Ferries Plan' Alternative
(PP-positive significant, P-positive, O-neutral, N-negative, NN-negative significant, U-unknown)

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