

ZetTrans 2040 Regional Transport Strategy

September 2023

In partnership with:





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Executive Summary

This Regional Transport Strategy (RTS) has been prepared by ZetTrans, the statutory Regional Transport Partnership (RTP) for the Shetland Islands.

ZetTrans is responsible for the provision and maintenance of public transport services in Shetland, whilst also supporting the case for improvements to air and ferry services to the Scottish mainland. As an RTP, under the Transport (Scotland) Act 2005, ZetTrans is required to identify transport needs in Shetland, the practical means of addressing these needs, and set out how transport will be provided, developed, improved, and operated. This strategy has been prepared to fulfil this requirement and replaces the RTS 2018-2028 which was refreshed in 2018.

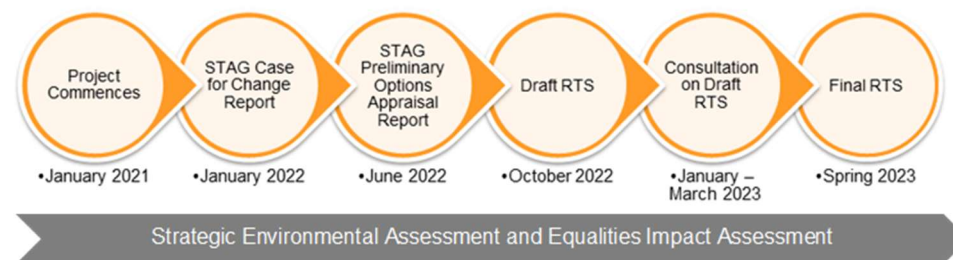
This document provides the strategic framework for the development of transport, both within Shetland and to / from the Scottish mainland up to 2040. It sets out the transport problems within Shetland and how ZetTrans proposes to respond to them with the aim of contributing to the priorities of National Transport Strategy 2 (NTS2), namely delivering a transport system that reduces inequalities, takes climate action, helps deliver inclusive economic growth, and improves the health and wellbeing of people in Shetland.

Approach

The RTS has been developed in line with the principles of the refreshed Scottish Transport Appraisal Guidance (STAG) and marks the final stage in a three-stage process which involved the delivery of a Case for Change Report (developed in January 2022) and a Preliminary Options Appraisal Report (developed in June 2022). The RTS development process is summarised in the figure overleaf. The outputs from the Case for Change and Preliminary Options Appraisal stages have been directly incorporated into this document.

The RTS, and the preceding reports, have been informed by extensive data analysis, desktop research, and stakeholder and public engagement, and incorporate and build upon the significant previous body of appraisal, business case and research work undertaken in Shetland.

To inform the development of the strategy, a series of one-to-one and group stakeholder meetings were undertaken and briefing notes and opportunities to comment were issued to a wide range of stakeholders.



RTS development process and timeline

In order to capture the views of the public and develop an understanding of how people travel around and to / from Shetland as well as any problems experienced, two separate online public surveys were undertaken as follows:

- **Internal Transport Survey** – which covered active travel, bus, road, and inter-island air and ferry transport
- **External Transport Survey** – which covered air and ferry connections to the Scottish Mainland

Each survey contained questions on the modes used, frequency of use, and overall levels of satisfaction. In total, 1,036 responses were received to the Internal Transport Survey and 611 responses were received to the External Transport Survey. The findings from the surveys and wider consultation were directly incorporated into the RTS development process and are referenced throughout this document.

In tandem with developing the RTS, a multi-stage Strategic Environmental Assessment and Equalities Impact Assessment (incorporating an Island Communities Impact Assessment) has also been undertaken. Separate SEA Environmental and Equalities Duties Assessment Reports which set out how relevant equalities and environmental issues were considered during the RTS development process and within the RTS itself accompany this document.

RTS Vision and Objectives

In line with STAG, at the 'Case for Change' stage, a set of **evidenced transport problems for each mode of transport in Shetland** and an associated series of Transport Planning Objectives (TPOs) were identified. These were then used to define an overarching **Vision** for the RTS and six associated **Strategy Objectives**. The RTS Vision is:

Our transport networks in Shetland and our connections to the rest of Scotland support our social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contribute to our net zero emission targets

The **Strategy Objectives** which support our Vision are set out below along with the transport outcomes and societal impacts that they will deliver.

Strategy Objective 1 - To address the barriers which constrain access to and / or impose unreasonable costs on travel and freight transport for all groups to / from the rest of Scotland

Transport Outcomes:	- Access to transport is more equitable - There is increased capacity, enabling increased resident and tourism trips between Shetland and the rest of Scotland which previously were not made, negatively impacting on the economies of Shetland and Scotland. - There is adequate capacity for efficient transport of freight
Societal Impacts:	Contributes to: - Improved community participation in leisure, social, cultural and sporting activities in mainland Scotland - Reduced social isolation - Physical and mental health and well-being benefits - Equality benefits for marginalised groups - Improved population retention and in-migration to support a sustainable Shetland economy - Growth of tourism market - Growth of other key markets - Supply chain efficiencies and reduced costs - Business stability, investment and growth

Strategy Objective 2: To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups within Shetland

Transport Outcomes:	- Access to transport is more equitable - There is increased capacity, enabling increased resident and tourism trips within Shetland which previously were not made, negatively impacting on the economy of the isles - There is adequate capacity for efficient transport of freight
Societal Impacts:	Contributes to: - Improved community participation in leisure, social, cultural and sporting activities - Reduced social isolation - Physical and mental health and well-being benefits - Equality benefits for marginalised groups - Improved population retention and in-migration - Growth of tourism market - Improved labour market efficiency through better matching of people to jobs - Supply chain efficiencies and reduced costs - Business stability and growth - Efficiencies in the delivery of services to the isles

Strategy Objective 3: To facilitate and encourage safe walking, cycling and wheeling for everyone, including for leisure and tourism

Transport Outcomes:	- Walking, wheeling and cycling options enhanced so that: - Access to walking, wheeling, and cycling is equitable - People make walking, wheeling, and cycling trips for a purpose and leisure leading to: - increased walking, wheeling, and cycling trips - reduced car trips / vehicle kilometres - reduced 'forced' car ownership
Societal Impacts:	Contributes to: - Transformed, liveable neighbourhoods - Increased activity levels - Reduced social isolation - Physical and mental health and well-being benefits

- Improved community participation in leisure, social, cultural and sporting activities
- Equality benefits for marginalised groups
- Growth of tourism market
- Climate change and net zero targets

Strategy Objective 4 - To improve alternative, more sustainable travel options in Shetland for all including those without access to, or who would prefer not to use a car

Transport Outcomes:	▪ Barriers to using sustainable travel options removed so that ▪ Access to sustainable modes more equitable ▪ People make sustainable transport trips, leading to: ▪ increased walking, wheeling, and cycling trips ▪ reduced car trips / vehicle kilometres ▪ reduced 'forced' car ownership
Societal Impacts:	Contributes to: ▪ People taking advantage of new employment, education, and training opportunities ▪ Improved labour market efficiency through better matching of people to jobs ▪ Improved community participation in leisure, social, cultural and sporting activities ▪ Transformed, liveable neighbourhoods ▪ Increased activity levels ▪ Reduced social isolation ▪ Physical and mental health and well-being benefits ▪ Equality benefits for marginalised groups ▪ Growth of tourism market ▪ Climate change and net zero targets

Strategy Objective 5 - To transition towards an environmentally and financially sustainable, post-carbon transport network

Transport Outcomes:	▪ People and freight travel in a more environmentally and financially sustainable way
Societal Impacts:	▪ Contributes to climate change and net zero targets

Strategy Objective 6 – To support safe, resilient, and efficient movement of all people and freight across Shetland

Transport Outcomes:	▪ Fewer disruptions to the movement of people and goods ▪ Reduced road-based casualties
Societal Impacts:	Contributes to ▪ Reduced healthcare costs (due to fewer casualties) ▪ Supply chain efficiencies and reduced costs ▪ Business stability and growth

The **Vision** and **Strategy Objectives** provide a clear direction for the RTS and their delivery would generate positive **transport outcomes** and consequential **societal impacts** for Shetland.

RTS Themes

At the Preliminary Appraisal Stage, potential options aimed at resolving the problems identified and fulfilling the Vision and Strategy Objectives were then identified and were subsequently collated into a set of eight **RTS Themes**.

These themes have been used to shape the content of this RTS, with a separate chapter of this document covering each theme and relevant **Policies** set out therein. **These policies set out the 'direction of travel' across a broad range of transport issues affecting Shetland for the period of the strategy.**

Subsequent to the agreement of the draft RTS, an accompanying **Action / Delivery Plan** will be developed which set out activities and priorities in relation to these policies and will be updated regularly. The eight Themes and the associated Policies are summarised below.



1. Enabling and encouraging active travel

Improving the public realm and facilitating walking, wheeling, and cycling both within settlements and between them.

Policies:

1. We support and encourage an increase in walking, wheeling and cycling participation in Shetland for environmental, accessibility and health reasons
2. In line with Scottish Government, we commit to rebalancing the spend in transport to support active and sustainable travel
3. We support the principle of the proportionate reallocation of road space from general traffic to walking, wheeling and cycling as a means to promote safer active travel and encourage use of active travel modes
4. We support the principle of reducing speed limits in our communities
5. We support the principle of improving the management and enforcement of traffic and parking around our schools to deliver safer routes to schools
6. We support a network of traffic free or quiet way routes to connect our communities
7. We support and will continue to develop the case for long distance walking and cycling routes
8. We support the integration of active travel and public transport connections, including the principle of carrying bikes on buses and the delivery of mobility hubs where appropriate
9. We support the upgrade of cycle parking at all of our public buildings, transport interchanges, and key on-street locations
10. Our policy is to ensure that active travel infrastructure is designed to a high quality in accordance with the most up-to-date best practice and design guidance appropriate to the Shetland context as this evolves to meet the needs of all users
11. We support the integration of active travel and public transport in the planning of all new developments.
12. We will seek the implementation of initiatives which widen access to cycle ownership and /or hire through cycle sharing schemes (including e-cycles) and wider education programmes, including school-based initiatives
13. Our active travel network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors

2. Improving the quality and affordability of, and access to our public transport

Delivering affordable and accessible public transport, enhancing the public transport infrastructure including vehicles and stops and improving ticketing options and information.

Policies:

14. Our bus network should be fully accessible to all..
15. Our bus network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors
16. A minimum level of facilities should be defined and provided at our bus station and stops, ferry termini, and airfields and airports
17. Our bus network should provide a high quality onboard experience
18. Public transport (bus, air, and ferry) information should be fully accessible and provided in a variety of formats to meet the specific needs of all users
19. Our public transport network (bus, air, and ferry) should aim to be affordable for all

3. Extending bus connectivity

Improving bus connectivity through improved frequency, extended operating hours, additional services and enhanced multi-modal connectivity.

Policies:

20. We will continue to support and develop the delivery of a financially and operationally sustainable bus network in Shetland (including staffing and succession planning) that contributes to the delivery of the Council's Climate Change Strategy
21. We will aim to widen public transport connectivity to key locations and transport interchanges in order to provide new travel options and alternatives to the private car
22. We support measures to reduce social exclusion for those without access to a car
23. We support the principle of new models of rural public transport provision, including enhanced Demand Responsive Transport
24. We will explore the application of bus related powers granted through the Transport (Scotland) Act 2019 to support the delivery of an enhanced bus network in Shetland.

4. Connecting our islands

Improving internal ferry and air connections and exploring the case for fixed links so as to better connect Shetland's island communities.

Policies:

25. Our internal ferry network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors
26. We are committed to contributing to the sustainability of our island communities by reducing or removing the cost, capacity and connectivity barriers to personal and business travel, the delivery of public services and the movement of goods between our islands
27. We commit to ensuring the maintenance of the ferry fleet and associated infrastructure and to invest in these assets and crews to a level which ensures a continuing reliable and resilient service
28. We commit to ensuring the maintenance of the inter-island air service to at least its current level and to explore opportunities to improve the service where necessary and deliverable. As part of developing and implementing this policy, we will take cognisance of the activities being undertaken by the Sustainable Aviation Test Environment (SATE) located in Orkney
29. We will progress the feasibility and case for fixed links and act on the conclusions as part of our future wider inter-island connectivity planning across all modes of travel. Any fixed link should be implemented in conjunction with a high-quality public transport offer, which incorporates provision for cyclists
30. We will support island-based vessels and crews where safe, deliverable and practicable
31. We will ensure that all future ferry and aircraft replacement programmes will contribute towards the delivery of the Council's Climate Change Strategy
32. Inter-island services will move towards being fully accessible taking account of the needs of all users



5. Enhancing our external connections and supply chain

Enhancing external ferry and air connections to the Orkney Islands and the Scottish mainland.

Policies:

33. The RTS supports improved connectivity with Scotland's mainland and further afield in the form of new connections, higher capacity, more flexible and cheaper travel
34. We will make the case to Scottish Government for new vessels for the Aberdeen – Lerwick / Kirkwall route and actively engage our communities and businesses in this process to ensure the most appropriate vessels for our routes
35. We will actively engage with our communities and businesses to define our requirements for the specification for current and future Northern Isles Ferry Services Contract and work with Scottish Government to deliver this.
36. We will make the case to the Scottish Government and Loganair to reduce the cost, capacity and connectivity barriers for travelling to and from the Scottish mainland for our communities and businesses.

6. Decarbonising our transport

Supporting the decarbonisation of transport through the adoption of zero emission vehicles, vessels and aircraft.

Policies:

37. We will support the delivery of *Shetland's Climate Change Strategy*
38. We support the implementation of measures which facilitate the decarbonisation of the vehicle fleet in Shetland and between Shetland and the Scottish mainland, including cars, buses, commercial vehicles, aircraft and ferries
39. We will seek to support the roll out of EV charging infrastructure to support decarbonisation of car-based travel
40. We note that EVs are not a zero-carbon option and recognise the risks associated with lower EV running costs. We therefore support measures (subject to equality impacts) to prevent renewed growth in private car travel, and to encourage the use of alternative modes in line with the NTS2 *Sustainable Travel Hierarchy* and national car kilometre reduction targets
41. We will seek to support the roll-out of other alternative fuels to promote the decarbonisation of our transport network, ports, ferry terminals, airports and airfields.

7. Embracing new technologies

Capitalising on innovations and new technology.

Policies:

42. New and emerging technologies will be monitored for their applicability in the Shetland context
43. We will embrace the opportunities provided by new technology to improve our provision of transport services across Shetland, including the adoption of new technology on our ferry and air services
44. We will keep opportunities for the more widespread use of connected and autonomous vehicles under review and identify any actions required to facilitate their safe introduction in Shetland
45. We will support opportunities to better serve our remote island communities through adopting new technological solutions
46. The RTS supports the development of car sharing services across the region to reduce the need for personal car ownership
47. Provision for future innovative personal transport such as e-scooters will be considered within the design of our active travel network

8. Enhancing network efficiency

Supporting the safe, resilient, and efficient movement of people and freight across the transport network.

Policies:

48. All our transport networks must be maintained to a high standard to ensure the reliable and efficient movement of people and goods and the delivery of services across Shetland
49. Incremental improvements to our road network are supported where there are safety, efficiency and environmental benefits, specifically in relation to single track roads
50. The RTS recognises the need to consider how climate change may affect our transport networks and services and the associated risks this brings and those responsible should form appropriate action plans in response
51. Our transport networks should continue to have an overarching focus on safety with a view to reducing road traffic casualties in particular

1: Introduction



1. Introduction

The Transport (Scotland) Act 2005 created the framework for Regional Transport Partnerships (RTPs), effectively recognising the need for cross-boundary transport strategy, planning and delivery. This was intended to address the long-running issues whereby, following the abolition of regional government, there was a gap between national and local transport planning, leading to inefficiencies at the regional level.

A core function of the RTPs is to produce a Regional Transport Strategy (RTS). The guidance states that this must seek to identify the present and future transport needs of a region, the practical means of addressing these needs and set out how transport will be provided, developed, improved and operated so as to: promote safety; enhance social and economic wellbeing; promote sustainability; conserve and enhance the environment; promote social inclusion and equal opportunities; improve access to health care; and foster integration between modes and with cross-boundary routes.

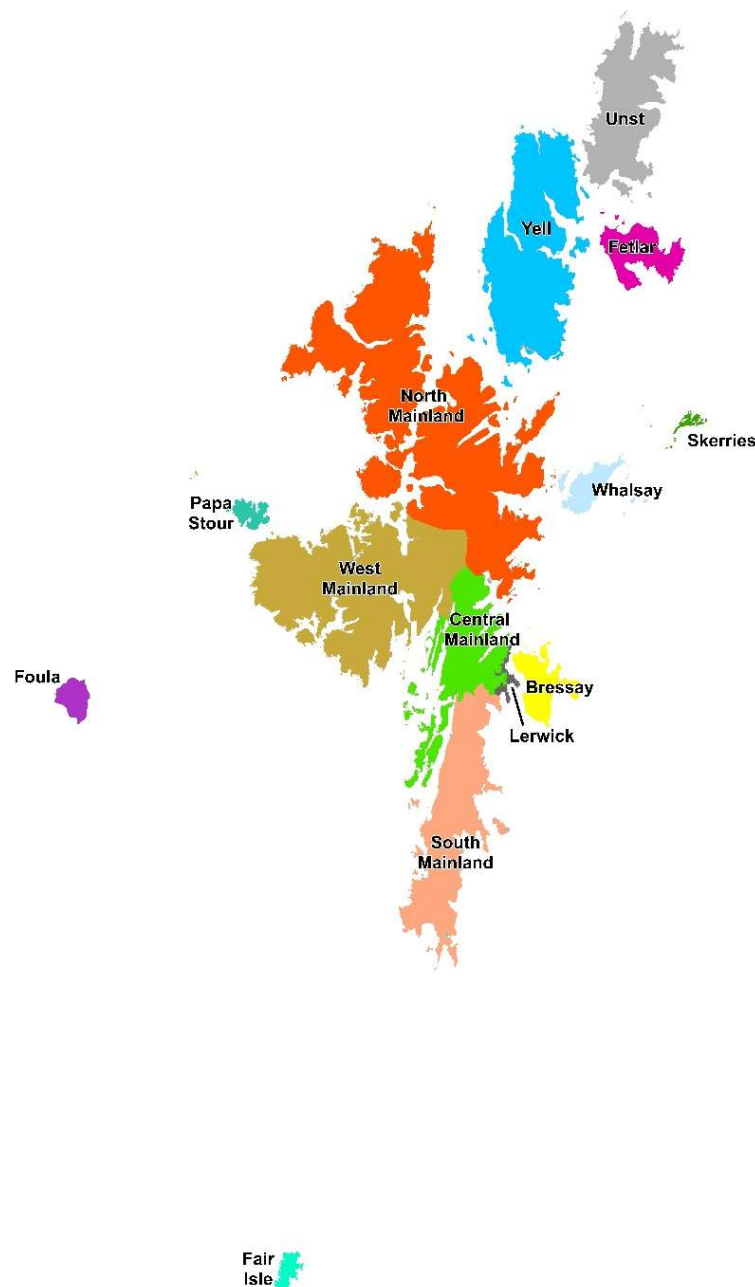
ZetTrans is the statutory RTP for the Shetland Islands and is responsible for the provision and maintenance of public transport services in Shetland, whilst also supporting the case for improvements to air and ferry services to the Scottish mainland¹. Our new **Regional Transport Strategy 2022-2040** (this document) fulfils our obligations under the Transport (Scotland) Act 2005 and replaces the original RTS 2008-2028 (refreshed in 2018).

This new RTS provides the **strategic framework for the development of transport, both within Shetland and to / from the Scottish mainland up to 2040**. It sets out the transport problems within Shetland and how we propose to respond to them with the aim of contributing to the priorities of National Transport Strategy 2 (NTS2), namely delivering a transport system that reduces inequalities, takes climate action, helps deliver inclusive economic growth, and improves the health and wellbeing of people in Shetland.

1.1 Approach

The RTS has been developed in line with the principles of the refreshed **Scottish Transport Appraisal Guidance (STAG)** and marks the final stage in a three-

⁶¹ There are three RTP models, with varying degrees of power and responsibility compared to the constituent local authorities. As ZetTrans consists of just one local authority, it is a model 3 partnership, with the highest level of responsibility and public transport functions



stage process which involved the delivery of a **Case for Change Report** (developed in January 2022) and a **Preliminary Options Appraisal Report** (developed in June 2022). The RTS development process is summarised in the figure below. The outputs from the Case for Change and Preliminary Options Appraisal stages have been directly incorporated into this document.



RTS development process and timeline

The RTS, and the preceding reports, have been informed by extensive data analysis, desktop research, and stakeholder and public engagement and incorporate and build upon the significant previous body of appraisal, business case and research work undertaken in Shetland.

To inform the development of the strategy, a series of one-to-one and group **stakeholder** meetings were undertaken and briefing notes and opportunities to comment were issued to a wide range of stakeholders.

In order to capture the views of the **public** and develop an understanding of how people travel around and to / from Shetland as well as any problems experienced, two separate online public surveys were undertaken as follows:

- **Internal Transport Survey** – which covered active travel, bus, road, and inter-island air and ferry transport
- **External Transport Survey** – which covered air and ferry connections to the Scottish Mainland

Each survey contained questions on the modes used, frequency of use, and overall levels of satisfaction. In total, 1,036 responses were received to the Internal Transport Survey and 611 responses were received to the External Transport Survey. The findings from the surveys and wider consultation were directly incorporated into the RTS development process and are referenced throughout this document.

In tandem with developing the RTS, a multi-stage **Strategic Environmental Assessment** and **Equalities Impact Assessment** (incorporating an Island Communities Impact Assessment) has also been undertaken. Separate SEA Environmental and Equalities Duties Assessment Reports which set out how relevant equalities and environmental issues were considered during the RTS development process and within the RTS itself accompany this document.

1.2 RTS Vision and Objectives

Having reviewed the transport problems in Shetland, an **RTS Vision** and six associated **Strategy Objectives** were defined.

Our **Vision** is:

Our transport network in Shetland and our connections to the rest of Scotland support our social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to our net zero emission targets.

The Strategy Objectives which support this Vision are set out below:

Strategy Objective 1 - To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups to / from the rest of Scotland

Strategy Objective 2: To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups within Shetland

Strategy Objective 3: To facilitate and encourage safe walking, cycling and wheeling for everyone, including for leisure and tourism

Strategy Objective 4 - To improve alternative, more sustainable travel options in Shetland for all including those without access to or who would prefer not to use a car

Strategy Objective 5 - To transition towards an environmentally and financially sustainable, post-carbon transport network

Strategy Objective 6 – To support safe, resilient, and efficient movement of all people and freight across Shetland

1.3 RTS Themes

Potential options aimed at resolving the problems identified and fulfilling these Objectives were then identified and these were subsequently collated into a set of RTS Themes as follows:

1. Enabling and encouraging active travel

Improving the public realm and facilitating walking, wheeling, and cycling within settlements as well as providing active travel connections between them

2. Improving the quality and affordability of, and access to our public transport

Delivering affordable and accessible public transport, enhancing the public transport infrastructure including vehicles and stops and improving ticketing options and information

3. Extending bus connectivity

Improving bus connectivity through improved frequency, extended operating hours, additional services and enhanced multi-modal connectivity

4. Connecting our islands

Improving internal ferry and air connections and exploring the case for fixed links so as to better connect Shetland's island communities

5. Enhancing our external connections and supply chain

Enhancing external ferry and air connections to the Orkney Islands and the Scottish mainland

6. Decarbonising our transport

Supporting the decarbonisation of transport through the adoption of zero emission vehicles, vessels and aircraft

7. Embracing new technologies

Capitalising on innovations and new technology

8. Enhancing network efficiency

Supporting the safe, resilient, and efficient movement of people and freight across the transport network

These themes have been used to shape the content of this RTS, with separate chapters of this document covering each theme and relevant policies set out therein. These policies set out the 'direction of travel' across a broad range of transport issues affecting Shetland for the period of the strategy. Subsequent to the agreement of the draft RTS, an accompanying Action / Delivery Plan will be developed which set out activities and priorities in relation to these policies and will be updated regularly.

1.4 Document Structure

The remainder of this RTS is structured as follows:

- **Chapter 2:** sets out the direction of national transport policy which has informed the strategic direction of this RTS.
- **Chapter 3:** provides an economic and demographic profile of Shetland
- **Chapter 4:** describes our transport networks and how they are used by people and goods
- **Chapter 5:** describes how the RTS has been developed and sets out the **RTS Objectives** and the eight **RTS Themes** which form the basis of the document
- **Chapters 6 - 13:** describe each of the eight RTS Themes in detail, covering potential activities and setting out relevant policies for each.
- **Chapter 14:** describes how the RTS will be monitored and sets out a series of key performance indicators (KPIs) linked to each of the Strategy Objectives



2: Policy and Planning Context



2. Policy and Planning Context

2.1 Overview

It is important that our new RTS aligns with the policy priorities of national government, tailored to our local circumstances. Over the last few years, there has been a significant evolution in the wider transport, environmental, equalities and land-use planning policy context within which our RTS sits – indeed, it was this evolution in policy that prompted our decision to produce a new RTS. This chapter provides a brief overview of policy developments at the national level which collectively inform the overall strategic direction of our RTS.

2.2 National Policy

Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and the Climate Change Plan Update (2020)

Through the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and the subsequent Climate Change Plan Update (2020) the Scottish Government has made a **legally binding commitment to deliver net-zero² carbon emissions by 2045**. In addition, two interim targets have been developed:

- A **75% reduction in greenhouse gas (GHG) emissions by 2030** relative to 1990 levels of carbon dioxide and 1995 levels of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.
- A **90% reduction in GHGs by 2040**, again relative to the 1990/95 baseline.³

The **Climate Change Plan Update** also included two further commitments designed to support the delivery of the above targets:

- An aim to **reduce vehicle kilometres travelled by car by 20%⁴** by 2030
- A commitment to **phase out the need for new petrol and diesel cars and vans** and for the conditions to be created to phase out the need for all new petrol and diesel vehicles in Scotland's public sector fleet by 2030

² Net zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere.

In summary, there is an unambiguous legal commitment to reducing, CO₂ emissions at the national level, supported by challenging but achievable interim targets. It is important to note that the 2019 Act embeds the principles of a 'Just Transition', which means reducing emissions in a way which tackles inequalities, or at least does not widen them. The 'Just Transition' stream of work is in its infancy, but in theory at least recognises that islands will have unique characteristics which have to be accommodated within the overall transition to net zero. Our RTS reflects these commitments, identifying how Shetland can contribute to delivering net zero emissions in a manner that reflects our unique circumstances.

National Transport Strategy 2

Embodying the principles of net zero and a just transition, Transport Scotland published its **National Transport Strategy 2 (NTS2)** in February 2020.

The NTS2 set the following 'vision' for Scotland's transport system over the 20-years to 2040

"We will have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors"



NTS2 Priorities and Outcomes (Source: NTS2)

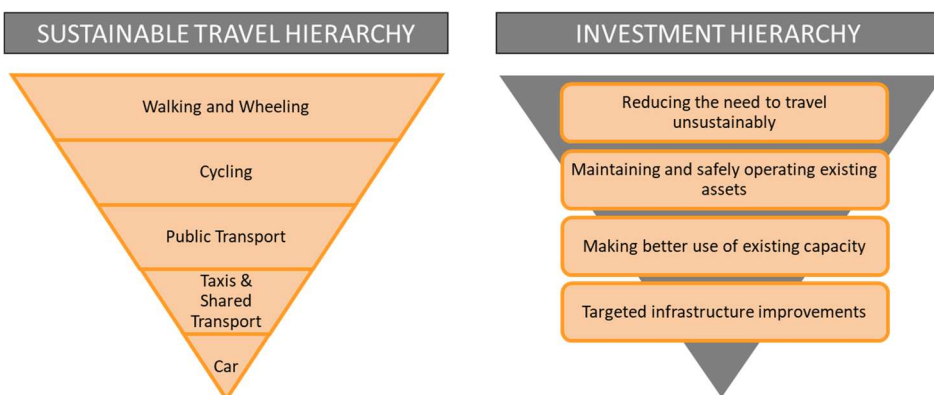
The Vision is underpinned by four 'Priorities', as shown in the figure above. The NTS2 also established two 'hierarchies' which define how future transport investment decision making and services should be planned. The **Sustainable Travel Hierarchy** (see figure below) defines the priority which will be given to each mode of transport in future investment planning, with walking and wheeling identified as the highest priority and single occupancy car travel the lowest priority. The Sustainable Travel Hierarchy is complemented by the **Sustainable**

³ <https://www.gov.scot/policies/climate-change/reducing-emissions/>

⁴ Note the base year has not yet been confirmed by Transport Scotland.

⁵ National Transport Strategy 2 (Transport Scotland, 2020), p. 5.

Investment Hierarchy which establishes a structured set of steps to be followed when planning investment in transport infrastructure (see figure below).



The NTS2 provides the framework within which our new RTS has been developed. Our RTS focuses on prioritising active travel and accessible public transport connections whilst at the same time discouraging short, single occupant car journeys. It also defines how we will reduce the need to travel unsustainably and make better use of our existing capacity before embarking on new infrastructure projects. At the same time, it recognises the unique characteristics of our islands, including spatial patterns, low population density, topography and weather.

Strategic Transport Project Review 2

The **Strategic Transport Projects Review 2 (STPR2)** sets out the Scottish Government's transport investment programme over the 20-year period 2022-2042, detailing how the government will deliver the Vision, Priorities and Outcomes of the NTS2. The focus of STPR2 was on the 'strategic transport network', in this case ferry services from Shetland to Orkney and the Scottish mainland. It therefore provided context for our RTS in relation to ferry services to / from the Scottish mainland and Orkney but did not otherwise directly impact on themes and outcomes expressed in our RTS.

National Planning Framework 4

Travel patterns are closely related to spatial planning as people travel to access employment and services like healthcare, retail, education, and leisure facilities.

In order to improve health outcomes and tackle inequalities, help reduce vehicle kilometres and deliver a low carbon society, an integrated approach to land use-development and transport planning must be adopted.

There are three tiers to land-use planning in Shetland. At the strategic level, the Scottish Government defines a National Planning Framework. The Scottish Government published **National Planning Framework 4** in February 2023. This sets out the priorities and policies for the planning system up to 2045. The document identifies six spatial principles which will guide the development of future places, namely:

- Just transition – ensuring the transition to net zero is fair and inclusive
- Conserving and recycling assets – making productive use of existing buildings, places, infrastructure, and services
- Local living compact urban growth – support local liveability and ensure people can easily access services, greenspace, learning, work, and leisure locally
- Compact urban growth – limiting urban expansion
- Rebalanced development – targeting development in areas of past decline
- Rural revitalisation – encourage sustainable development in rural areas

NPF4 also identifies **regional spatial priorities** for five broad regions of Scotland, with Shetland included in the 'North and West Coast and Islands' area for which the following priorities are identified:

- Maximising the benefits of renewable energy while enhancing blue and green infrastructure, decarbonising transport, and building resilient connections
- Delivering liveable places and supporting coastal and island communities to become carbon neutral, thus contributing to net-zero commitments and reducing fuel poverty
- Delivering productive places and seizing opportunities to grow the blue and green economy

The document notes that these regional spatial priorities will inform the preparation of regional spatial strategies (RSS) and LDPs.

The document also sets out a series of nationally important developments. Those with particular relevance for Shetland include.⁶

⁶ Draft National Planning Framework 4 (Scottish Government, 2021), pp. 12-18

- **Energy Innovation Development on the Islands** – support for the Opportunity for Renewable Integration with Offshore Networks (ORION) Clean Energy Project (see page 80).
- **Pumped Hydro Storage** – this development applies across the whole of Scotland and supports the transition to a net zero economy through the ability of pumped hydro storage schemes to optimise electricity generated from renewables by storing and releasing it when it is required.
- **Strategic Renewable Electricity Generation and Transmission Infrastructure** – this development applies across the whole of Scotland and supports renewable electricity generation, repowering, and expansion of the electricity grid.
- **Circular Economy Material Management Facilities** - this development applies across the whole of Scotland and supports the development of facilities required to achieve a circular economy.
- **National Walking, Cycling and Wheeling Network** - this development applies across the whole of Scotland and strengthens and extends a national active travel network to facilitates the shift from vehicles to walking, cycling, and wheeling for everyday journeys
- **Digital Fibre Network** - this development applies across the whole of Scotland and supports the continued roll-out of world class broadband across Scotland

From a Shetland perspective, the main thrust of the Draft NPF4 is therefore on taking measures to achieve net zero, whilst supporting the socio-economic development of the islands. Where a journey does have to be made, NPF4 is highlighting that the journey should be made sustainably.

Residential Development

The revised NPF4 also sets out the 10-year Minimum All Tenure Housing Land Requirement (MATHLR) for Shetland as set out in the table overleaf. The proposed MATHLR implies a significant increase in the housing stock in Shetland over the next decade, which will be an important contributor to supporting the retention and growth of the population.

Proposed 10 year Minimum All Tenure Housing Land Requirement for Shetland (Source: Draft NPF4)

Area	Proposed MATHLR	Total Dwellings in Shetland in 2020 ⁷	% of total dwellings
Shetland	850	11,374	7%

2.3 Our local policy context

Our RTS will act as a bridge between national and local transport and land-use planning policy. Of particular importance in this respect will be ensuring that the RTS contributes positively to the emerging **Shetland Climate Change Strategy, Local Development Plan 2 (LDP2)** and the **Islands Growth Deal**.

Shetland's current **LDP** was adopted in 2014 and the Council is currently preparing its **LDP2** which will reflect the policies and principles set out in NPF4. The Council has also adopted the use of '**Local Place Plans**' (LPP), a new type of plan which will provide local bodies with an opportunity to formulate proposals for the development and use of land in the place where they live. These plans will be based around a the 'local living' concept as set out in the NPF4.

We also recognise that inter-island connectivity was a prominent feature in the May 2022 local elections. Included in many manifestos was an aspiration to resolve how **fixed links** can be delivered for our island communities where appropriate. The RTS provides the means by which to define our strategic approach to future inter-island connectivity.

2.4 What is the role of the ZetTrans RTS?

The role of our RTS is to define Shetland-specific objectives and policies which will contribute towards achieving the national and local transport and spatial planning policy, taking account of our local circumstances.

⁷ Scottish Government Statistics, Household Estimates, Total Dwellings 2020

3: Shetland's Population and Economy



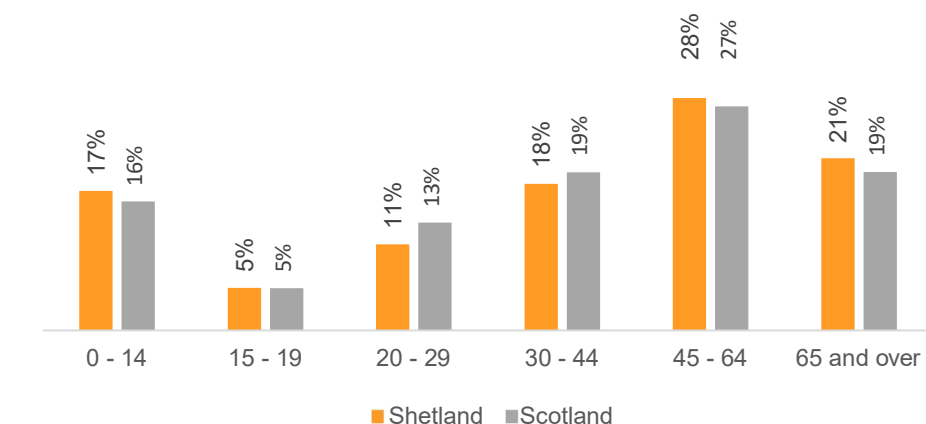
3. Shetland's Population and Economy

3.1 Overview

The demographic and economic profile of Shetland and the spatial distribution of both our population and economic activity (i) has a fundamental impact on our transport requirements; and (ii) is influenced and shaped by how we deliver transport services. In advance of setting out our long-term transport strategy for Shetland, it is therefore important to review the population profile and the patterns of economic activity across the archipelago.

3.2 Demographics

The population of Shetland was **22,940** in 2021⁸ and has been broadly stable since the early 1980s, growing by **3%** between 1983 and 2020. As shown below, Shetland's age distribution is similar to that of Scotland overall. As with the rest of Scotland, the population is aging, with almost half of residents aged 45 and over.



Age breakdown (Source: 2020 Mid-year population statistics, NRS)

Lerwick has the largest population concentration, with **30%** of all island residents in 2016 living in the town. More widely, the population is heavily skewed towards the south of the islands, with circa **60%** of residents living south of a line running

from Burra to Tingwall to Lerwick. In comparison, North and West Mainland are more sparsely populated. According to the 2011 Census, **13%** of Shetland's population live on the nine islands served by the Council funded air and ferry services. The relatively sparse population overall and its uneven distribution can make transport and wider service delivery challenging.

The **population of Shetland is forecast to decline by 4%** between 2018 and 2038 compared to a 2% increase in the Scottish population⁹. The trend towards an ageing population is also expected to continue with a **19%** increase in people of pensionable age and a **7%** reduction in the number of people of working age over the 2018-2038 period. This implies an increase in the '**dependency ratio**', meaning that fewer working people are having to support a growing aging population, with resultant implications for service delivery, economic growth and productivity and for some equalities groups. An aging population will also lead to higher demands for access to key services such as healthcare and an increase in people wanting to use concessionary travel, putting increased pressure on public finances.

Shetland's population has been relatively stable over a long period, with increases from the early 1980s largely driven by economic activity resulting from North Sea oil. However, the population overall is aging, highly concentrated in central areas and forecast to decline over the next two decades, with demographic challenges particularly acute in remoter areas, including outer lying islands. This will put increasing pressure on transport planning, service delivery and public finance.

3.3 Industrial Structure

The figure below shows the percentage employee jobs by industry in 2019 for Shetland and Scotland overall. Whilst the **public sector**¹⁰ is the largest employer in Shetland overall, accounting for around **one-third of employee jobs**, there are also large concentrations of employment in the primary sector (agriculture, forestry and fishing), construction, and manufacturing, all of which is underpinned by a large 'transport and storage' sector.

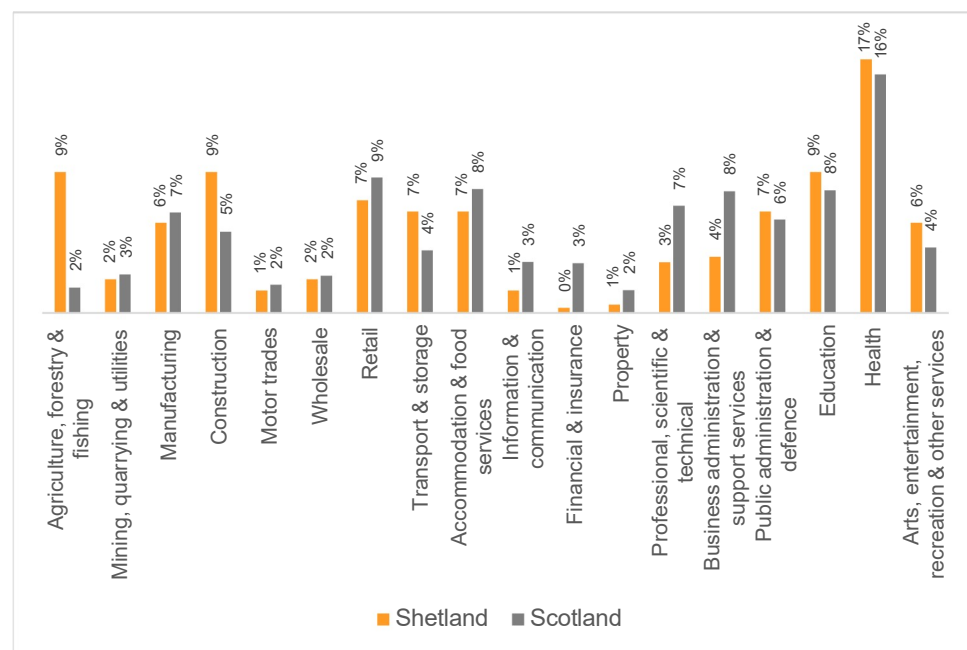
In total, almost **one tenth of Shetland jobs are in the primary sector**— almost five times the Scotland average. Fishing and aquaculture represent a significant proportion of this employment, with Shetland being a major exporter of seafood. Shetland accounts for around four fifths of all mussel production in Scotland and

¹⁰ The 'public sector' sector in this context is the combination of 'Health', 'Education' and 'Public administration and defence'.

⁸ National Records of Scotland mid-year population estimates, 2021

⁹ National Records of Scotland 20-year local authority population forecast, 2018

over one fifth of all salmon production. Shetland has the second largest fish landings by tonnage and value in the UK and lands more fish than Wales, England, and Northern Ireland combined. Lerwick is also the UK's largest pelagic (largely mackerel) port. The archipelago also has a major presence in sheep farming, with *Shetland in Statistics* recording 285,000 sheep on the island in 2017.¹¹



Percentage Employee Jobs by Industry 2019 (Source: BRES 2019)

Construction employment is also well above average in Shetland. The 2019 figures will to some extent capture the residual effects of the Shetland Gas Plant build (and the catch-up in delayed projects as a result of that development). However, the Viking Energy development is now at the construction phase and there is a strong pipeline of construction activity in the islands.

'Accommodation and Food Services' account for a comparatively smaller proportion of employment (7%) than the Scotland average. Tourism in Shetland has to some extent been limited by the cost of getting to / from the islands and

capacity of accommodation and transport links. However, prior to the COVID-19 Pandemic, the sector showed significant growth, with visitor spend increasing from £23m in 2017 to £36m in 2019, driven largely by changing visitor demographics (particularly an increase in leisure visitors) and encouraged by investment in visitor facilities and promotional activity.

Shetland is a very 'open' exporting economy. Whilst the public sector is the largest employer overall, Shetland has significant economic activity in the primary sector, particularly exporting sectors such as fishing, aquaculture and agriculture, which in turn generates major activity in supply chain sectors, such as processing, transportation, engineering, construction and business services. The significance of tourism is increasing, particularly in terms of generating community and small business activity, but it remains much smaller than national and comparator averages.

3.4 Economic performance and added value

Shetland Islands Council regularly commissions the production of economic accounts for the islands, the most recent edition being published in 2021 and related to the calendar year 2017.

Shetland's Gross Regional Domestic Product (GRDP¹²) in 2017 was **£584.4m**, amounting to **£25,443 per capita**. This is **0.48%** higher than the Scottish average – i.e., an average Shetland resident is marginally more productive than an average Scottish resident. Moreover, **between 2011 and 2017, there was a £47.8m increase in GRDP in real-terms**, highlighting increased productivity in Shetland.

Annual estimates of GVA are also produced by the Office for National Statistics. These show that GVA per head of population in Shetland (35,495) is considerably higher than the Scottish average (25,685) as well as Orkney (26,032) and Na H-Eileanan Siar (21,744)¹³. Shetland has the third highest GVA per head of population of NUTS3 regions in Scotland, after only Edinburgh and Aberdeen City and Aberdeenshire.

The value of exports from Shetland in 2017 was £597.6m and the value of imports £422.7m, **a trade surplus of £175m**. This is an important finding – very few small island groups (indeed even the UK overall) – record trade surpluses. This highlights the **major economic contribution of Shetland to Scotland and the importance of connecting producers in Shetland to markets in Scotland**,

¹¹ Number of livestock in Shetland (*Shetland in Statistics*, 2017), p. 31.

¹² GRDP measures the size of a region's economy – it is the aggregate of all Gross Value Added (the measure of the value of goods and services produced in an area) of all resident producer units in the region.

¹³ Table 2: Gross Value Added Income Approach per head of population at current basic prices, 2017, *Regional gross value added (income approach)* - Office for National Statistics (ons.gov.uk)

the rest of the UK and Europe. Indeed, over the 6-year period 2011-17, export growth in real terms has outstripped import growth (1.75% versus 0.75%).

Given that almost all trade from Shetland is in the movement of physical and often time sensitive goods (particularly aquaculture and fish landings), this further highlights the importance of frequent, reliable, and high-quality transport links.

Shetland has, like much of the country, suffered from the effects of Brexit and COVID-19, with the spike in global commodity prices in 2021, increasing energy and transport costs, availability of staff and materials, and the weakness of Sterling having presented some cost challenges for local firms. Despite this, the forward outlook provides a range of opportunities as well as the ongoing strength of sectors such as fish catching and aquaculture, tourism is growing strongly and there are opportunities of national significance in decommissioning, space, renewable energy and decarbonisation.

3.5 Labour Market

Shetland has high rates of economic activity and near full employment. However, there is insufficient labour to fill all of the vacancies in the islands, which acts as a drag on productive capacity. There are significant recruitment challenges for a number of key sectors, including health and social care, education, hospitality, construction, processing, and transportation.

With a shortage of labour, Shetland is dependent on in-migration to meet its labour supply needs. However, the archipelago experienced modest but continuous net out-migration between 2011/12 and 2019/20 (the most recent date for which data is available)¹⁴. In order to meet labour supply needs, attracting people to live in Shetland is essential, particularly when set against a forecast decline in working age population.

Employment is also highly centralised with **53% (4,808)** of all Full-Time Equivalent (FTE) jobs located in Lerwick and almost two-thirds of jobs in Lerwick, Scalloway or Tingwall. Whilst COVID-19 may have resulted in some decline in daily commuting, Lerwick remains the overwhelming service centre for the island group, highlighting the importance of good transport links to and from the town in order to connect labour to employment.

The labour market in Shetland is extremely competitive, with the islands having achieved a state of near 'full employment' over the last ten years. Whilst positive from a resident perspective, it means that there is very little slack within the

labour market to absorb increases in demand, leading to potential labour and skill shortages. Indeed, job density data for 2020 show that there are 1.21 jobs for every resident, making in-migration to Shetland, whether temporary or transient, essential.

3.6 Income and cost of living

Median annual income in Shetland is higher than the average for Scotland overall, albeit the differential has narrowed from circa £4,000 per annum in 2016 to £2,000 per annum in 2020. However, whilst income in Shetland is comparatively high, the cost of living is similarly high. Research conducted by HIE in 2016, found that the cost of living in the Northern Isles (Shetland and Orkney) is far higher than elsewhere in the UK. A range of factors drive these additional costs, with the higher cost of travel being a significant factor. For Shetland residents, there are three components to this:

- **Trips to and from the Scottish mainland** – travel to the Scottish mainland is more expensive than for any other island in Scotland (even with 'Islander' ferry fares and the Air Discount Scheme), which is primarily a factor of Shetland's distance from the mainland.
- **Higher fuel prices** - the average price per litre in Shetland is higher than the Scottish average. In addition, given the dominance of single-track roads with frequent changes in gradient and curvature, fuel consumption and maintenance costs in Shetland are likely to be higher.
- **Additional ferry costs for inter-island travel for island residents** - this typically involves taking a car on the ferry given the relative lack of public transport options and can be particularly costly for regular commuters.

Median resident incomes in Shetland are high compared to the national average, although the gap has reduced in recent years. High incomes reflect the buoyant economy and near full employment in the islands. Despite higher median incomes, the cost of living in Shetland is considerably greater than on the Scottish mainland with attendant disadvantage for island communities. There are various reasons for this, but transport is a major contributor given: the high costs of occasional trips to and from the Scottish mainland; comparatively high fuel costs; and, for isles residents, ferry fares for those travelling to Shetland mainland, particularly for regular commuters.

¹⁴ Local Area Migration Indicators, Office National Statistics, September 2021

3.7 Car availability

Access to a car is currently essential for many journeys in Shetland, particularly for those living or travelling outwith the Lerwick area. Shetland therefore has high levels of car availability and a degree of **'forced car ownership'**. In total, **45%** of households have access to two or more cars, with just **13%** having no access to a car. There were also circa 900 registered vehicles per 1,000 people in Shetland in 2019 – i.e., 9 in every 10 people own a car. This is broadly equivalent to Orkney, but much higher than the Scotland average, where the figure is closer to 7-in-10.

3.8 Physical activity and obesity levels

Physical activity levels in Shetland are slightly lower than the national level. According to the Scottish Health Survey, **62%** of adults in Shetland met the recommended daily physical activity levels between 2016-19 compared to 65% across Scotland as a whole¹⁵.

Shetland also has higher rates of obesity with **68%** of adults either obese or overweight between 2016-19 compared to 65% across Scotland. Similarly, data from The Child Health Systems Programme School System shows that **25%** of Primary 1 children in 2017/18 in Shetland were either at risk of obesity or at risk of being overweight compared to just 13% at the national level.

Transport provision can play a role in helping to reduce these inequalities through policies and investment which encourage active lifestyles.

3.9 Summary

The modern economy of Shetland has been shaped by the discovery and commercialisation of North Sea oil in the 1970s, both directly in terms of oil-related activity and indirectly in terms of investment in modern infrastructure which has facilitated other industries. Whilst the role of oil in the economy is now much diminished, it has bequeathed a legacy of a skilled and highly productive workforce, an advanced supply-chain and a high value export economy where 'full employment' has been the norm more often than not. There are significant opportunities of national significance in decommissioning, renewable energy, space and decarbonisation, traditional sectors such as fish catching and aquaculture remain strong and the tourism market is growing. **By any and every**

objective means, Shetland is punching well above its weight - it is essential that the RTS facilities this continued strong economic performance and in a sustainable manner.

However, **Shetland also has its challenges**. First and foremost, despite long-term population stability, it is an **aging population** and two separate forecasts suggest that the trend increase in the **average age of Shetland residents will accelerate sharply** over the next 20-years, set against a **forecast 2%-4% reduction in the population overall**. If realised, this will increase the dependency ratio of the islands, making **service delivery more difficult** and expensive, **weakening productivity** and making it **harder to fill posts**, particularly given that **there are currently more jobs than working age population in Shetland**.

Moreover, Shetland's location remote from the Scottish mainland means that the **cost of living is high despite higher median incomes** than Scotland overall. This is compounded by **economic centralisation in Lerwick**, which means that those living outwith the town often have to travel there for employment, personal business and leisure, giving rise to a degree of **'forced car ownership'** and the costs that come with it.

Shetland's **island communities also each have their own challenges**. This is particularly true for the smaller and more remote communities such as Fair Isle, Foula, Papa Stour and Skerries, which regularly have to overcome significant economic and transport barriers to remain viable. Others such as Yell, Unst and Whalsay have potential to grow, but require the enabling infrastructure and services to do so.

For the Council, the **maintenance and asset replacement burden associated with investment in the 1980s-2000s weighs heavy**, whilst residents have become accustomed to infrastructure and services which the Council's revenue budget continues to support, but not without difficulty.

Whilst transport is an essential component of any island economy, there is no place where this is more the case than the Shetland Islands. The provision of frequent, affordable and reliable transport connections will be essential in retaining and attracting population, maintaining high productivity and promoting and sustaining the economic viability and special character of our communities.

¹⁵ Scottish Health Survey, 2020

4: Transport in Shetland



4. Transport in Shetland

4.1 Overview

This chapter profiles the transport network in Shetland and considers how it is used by residents, business, and visitors. The chapter provides a snapshot of the current situation at the time of writing. It is split into three sections:

- **External connections:** Serco NorthLink and Loganair connections to the Scottish mainland
- **Inter-island connections:** travel between Shetland mainland and the nine inhabited islands served by Council and ZetTrans funded transport services
- **Intra-island, Shetland mainland and Lerwick connections**

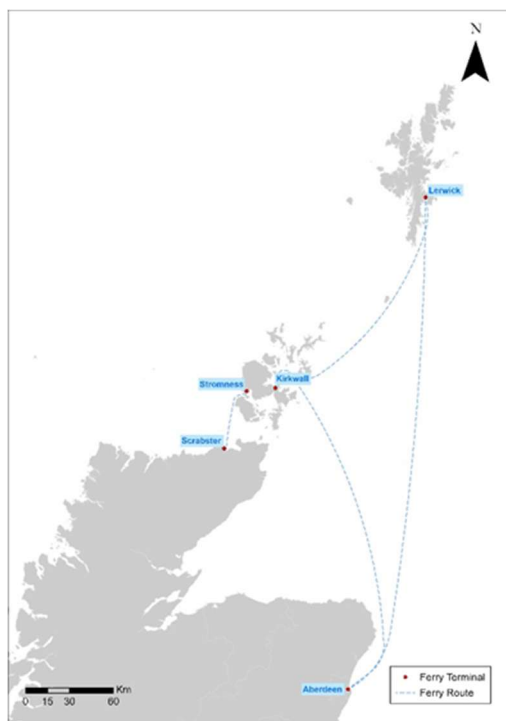
4.2 External connections

External ferries

The external ferry service is provided via the Northern Isles Ferry Services (NIFS) Public Service Contract (PSC) which is specified by Transport Scotland. The specification is very prescriptive, setting out routes, timetables, fares and other service characteristics. The service is currently operated by Serco NorthLink Ferries and runs from June 2020 to June 2026, with an option to extend for two further years. The NIFS ferry services consist of four routes:

- Aberdeen – Lerwick
- Aberdeen – Kirkwall
- Kirkwall – Lerwick
- Stromness – Scrabster

(Caithness to Orkney)



Northern Isles Ferry Service Routes

The Aberdeen – Kirkwall / Lerwick route is the focus of this RTS. The core part of this route is Aberdeen – Lerwick (both directions). The vessel additionally calls at Kirkwall:

- **Northbound:** 3 nights per week in winter and 4 nights per week in summer.
- **Southbound:** 2 nights per week in winter and 3 nights per week in summer.

Neither ZetTrans nor Shetland Islands Council have responsibility for or control over the NIFS contract. They are stakeholders, however, and can influence the tender specification and day-to-day operations.

Timetable

Ro-pax vessels

A summary of the timetable in each direction is provided in the tables below.

Aberdeen – Kirkwall / Lerwick timetable (southbound)

	Dep Lerwick	Arr Kirkwall	Dep Kirkwall	Arr Aberdeen
Kirkwall call	17:30	23:00	23:45	07:00
No Kirkwall call	19:00	-	-	07:00

Aberdeen – Kirkwall / Lerwick timetable (northbound)

	Dep Aberdeen	Arr Kirkwall	Dep Kirkwall	Arr Lerwick
Kirkwall call	17:00	23:00	23:45	07:30
No Kirkwall call	19:00	-	-	07:30

The Aberdeen – Kirkwall / Lerwick Ro-Pax timetable is shaped around a range of user requirements, including time sensitive freight, specifically seafood which must be in the Central Belt of Scotland for late morning, facilitating onward shipment to England and Europe. The need to balance a range of competing demands for travel to and from Shetland requires a degree of compromise between user needs.

As shown in the above tables, the ferry leaves earlier on evenings with a Kirkwall call - this can be unpopular with Shetland residents and businesses as it shortens the working and production day but is an essential trade-off in maintaining the service to Orkney and the early morning arrival into Aberdeen / Lerwick.

The 2016 NIFS STAG Appraisal (Transport Scotland, 2016) considered a wide range of potential additional sailing options within the parameters set by the existing timetable. However, the analysis highlighted that the distances in question mean that either: (i) additional sailings cannot be delivered within the available time; or (ii) they would present an unacceptable risk to the delivery of the current timetable; and / or (iii) departure and arrival times would be unsuitable for passengers. **The current structure of the timetable is therefore largely fixed in the short-term.**

Shetland Island Council calculated the figures shown in the table below which compare Shetland's and Orkney's ferry capacity. It is noted that these pre-date Pentland Ferries purchasing a larger vessel in 2019¹⁶. This shows that Orkney has considerably more connections and capacity than Shetland.

Orkney / Shetland Northern Isles Ferry Service Levels (Source: Shetland Island Council)

	Shetland	Orkney
Population	23,000	21,000
Weekly passenger and freight sailings to/from Scottish Mainland	24 (some shared with Orkney)	133
Daily pax capacity peak season	600	3484
Daily pax capacity low season	600	2538
Daily car capacity peak season	110	557
Daily car capacity low season	110	409

Freighters

The timetable for the two freight vessels is tailored to meet specific commodity flows from both Shetland and Orkney. The peak timetable delivers 12 sailings per week across different route combinations. There is also a separate January – May off-peak schedule when demand is lower, and a livestock timetable in September and October to meet agricultural demand for livestock transport.

Vessels

Five vessels serve the NIFS routes: three Ro-Pax (passenger and vehicle) vessels and two freight ferries. Shetland is typically served by the two freighters and the two larger sister ship Ro-Pax vessels, MV *Hjaltland* and MV *Hrossey*.

The Ro-Pax vessels were specifically designed for the route, entering service in 2002.

The MV *Hjaltland* and MV *Hrossey* are capable of operating at speeds of up to 24 knots, allowing the arrival time in Aberdeen and Lerwick to be maintained on evenings when there is a Kirkwall call, albeit with a slightly earlier departure time. The freight vessels cannot operate at this speed and therefore tend to leave earlier and / or arrive later, meaning that there is a supply-chain preference for time sensitive freight to go on the Ro-Pax vessels.

Both MV *Hjaltland* and MV *Hrossey* are equipped with 117 cabins, supplemented by sleeping 'pod' lounges while the two freighters have six two-berth cabins. Both Ro-pax vessels also offer 470 metres of vehicle deck space (equating to around 125 cars) and can accommodate 600 passengers.

Transport Scotland is currently considering options for replacing the ageing NIFS freighters, which were built in 1997 and 1999 respectively. Whilst the design and business case are still in preparation, it is possible that these new vessels will be 'freight plus' – i.e., freight vessels with the scope for carrying up to 200 passengers, with 60 cabins, pods and reclining seats. It is estimated that these vessels would offer around 40% more lane meterage than the current freighters and would operate at speeds similar to that of the current Ro-Pax vessels.¹⁷

The constraining factor in the design of the current NIFS fleet is the size of vessel which can be accommodated within the current infrastructure at Aberdeen Harbour. Whilst there is as yet no commitment to relocate NIFS services, the construction of Aberdeen South Harbour (ASH) at Nigg Bay does offer potential future opportunities to explore the deployment of larger vessels on the Shetland run.

Fares

Fares on the NIFS services are set by Transport Scotland through the contract. Passenger, vehicle, and cabin fares differ by season, with low¹⁸, mid¹⁹, and peak²⁰ season fares. In 2022, on the Lerwick to Aberdeen route, fares for an adult single visitor were £23.20, £30.00, and £36.00 in the low, mid, and peak periods, with cars costing £95.00, £121.00, or £127.00 and two berth cabin prices

¹⁶ <https://pentlandferries.co.uk/pentland-ferries-new-vessel-the-mv-alfred-begins-the-long-voyage-to-orkney/>

¹⁷ [Scotland: New "Freight Plus Ferries" For Northern Isles? \(ferryshippingnews.com\)](https://www.ferryshippingnews.com/scotland-new-freight-plus-ferries-for-northern-isles/)

¹⁸ In 2022, 7th January – 23rd March and 1st November – 17th December

¹⁹ In 2022, 1st – 6th January 24th March – 14th June, 1st September – 31st October and 18th December – 31st December.

²⁰ In 2022, 15th June – 31st August

ranging from £63.00 - £110.00, £77.00 - 142:00, and £93:00 - £153:00 respectively.

Island residents receive a 30% discount on standard passenger and vehicle fares and a 20% discount on cabins. There is also a 10% discount on passenger and vehicle fares for concessionary card holders, with Shetland residents holding the National Entitlement Card entitled to four free single passenger fares per annum.

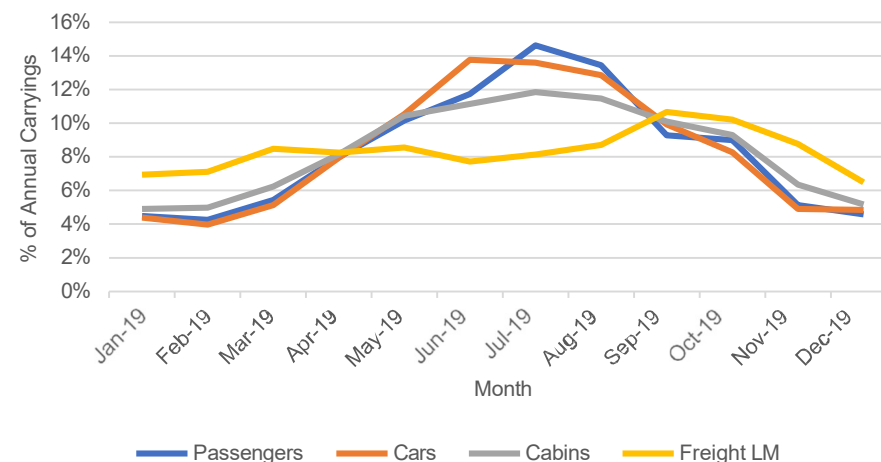
It has long been recognised that fares on the NIFS services – particularly on the Aberdeen – Lerwick route – are very high in absolute terms, especially when travelling as a family. This contributes to the high cost of living in Shetland and has a disproportionate impact on those on lower incomes with associated implications for equalities. The Scottish Government has committed to introducing a modified version of the Road Equivalent Tariff (RET) fares system for passengers and cars as per the west coast of Scotland. However, due to a legal challenge and concerns surrounding state aid on the Kirkwall – Aberdeen

leg, RET has not yet been introduced. An interim 20% reduction in passenger and car fares was introduced on 30th June 2018 however. Nevertheless, the cost of travel by ferry is a constraint on travel between Shetland and Scotland and this has a disproportionate impact on those on lower incomes, inhibiting their ability to travel as often as they would wish.

NorthLink **freight fares** are based on a rate per incremental lane metre (LM) which is broadly equivalent to that on other ferry networks in Scotland. By virtue of distance, the tariff per nautical mile is higher on the Aberdeen – Lerwick route than anywhere else in Scotland.

Passenger Carryings

The Aberdeen – Kirkwall / Lerwick route is characterised by marked seasonality with passenger, car, and cabin demand concentrated in the summer months and a pronounced freight peak in September and October driven by the Shetland and Orkney livestock export seasons (see figure overleaf).



Aberdeen – Kirkwall / Lerwick monthly share of annual demand by carrying type, 2019 (Source: NorthLink Ferries)

Around two thirds of passenger, car and cabins carryings are between April and September, which is broadly equivalent with many other ferry routes in Scotland. The freight situation is however unique, with a major increase in absolute terms every September and October to accommodate the Shetland and Orkney livestock seasons.

The figure below shows the trend in NorthLink carryings by type over the 2010-2020 period. Freight carryings in 2018 and 2019 were over 60% above the 2010 base and remained 51% above their 2010 level even after the onset of the COVID-19 pandemic. This growth has largely been driven by modal shift from Streamline (which ceased operations 2017) (i.e., from lift-on, lift-off containers to Ro-Ro), project cargo (e.g., schools, piers, hospitals) and strong export growth.



Aberdeen – Kirkwall / Lerwick 2010-2021 trend by carrying type (2010=100)

Car traffic had also grown strongly prior to the pandemic and in 2019 was 25% above its 2010 level.

Passenger carryings have been broadly steady over a long period. There was a significant uplift in growth in 2019 but figures dropped to around 40% of their 2010 level in 2020 as the pandemic took hold.

Overall, **the picture on NorthLink services between 2010 and the onset of the pandemic has been one of growth**. This was particularly the case for commercial vehicle (CV) lane metres (LMs), which grew exceptionally strongly over the period. This growth, combined with more modest but nonetheless significant car growth, has been set against a largely static supply-side in terms of vessels and the timetable.

Capacity

The key capacity 'issues' on the NIFS service are securing **a vehicle deck space, a sole-use cabin (individual or family)** and, for freight customers, **securing space on the preferred Ro-Pax sailings**.

It is important to reiterate that **the supply of capacity on any given day is largely fixed by the available vessels and timetable, which cannot be easily amended. The operator also has very few levers for managing or changing**

the nature of demand and thus is faced with balancing the competing priorities of different sectors.

Detailed capacity analysis requires the review of sailing-by-sailing data. This is too detailed an exercise for a Strategy document. However, the Northern Isles Ferry Services STAG which Appraisal (2016) identified the following main issues with regards to capacity utilisation.

- There is **moderate year-round vehicle utilisation**, with **significant peaks in the summer months**. While car-based loadings varied significantly across the year, **freight carryings demonstrate much less variance**.
- **Accommodation utilisation is extremely peaky**, with very high levels of utilisation experienced throughout the summer months.
- There are very high base volumes of freight originating in Shetland supplemented by the livestock season and regular inbound project traffic

Capacity challenges were clearly identified in the 2016 NIFS STAG Appraisal and will have worsened over time given the general growth in demand (particularly freight demand) pre-pandemic. The 'booking to travel' window for Shetland residents is now around six weeks, although urgent travel is almost always accommodated.

Reliability

The NorthLink services are highly reliable, with only **2.1%** of sailings cancelled in 2019 and **8.9%** of sailings running late, this despite the challenging sea and weather conditions in which the services operate.

The Ro-Pax vessels are much more reliable than the freighters with just **1.2%** of Ro-Pax sailings cancelled compared to **3.1%** of freight sailings and just **2.8%** of Ro-Pax sailings running late compared to **15.8%** of freight sailings. Due to the better reliability of the Ro-Pax vessels, along with faster journey times and the earlier arrival in Aberdeen, freight customers generally prefer to travel on the Ro-Pax vessels where possible.

External air

Shetland's scheduled air connections to the Scottish mainland are currently delivered by Loganair on a commercial basis. We therefore have no direct control over the services other than influencing the operator through bodies such as the External Transport Forum.

Routes

For an island group of our population, Shetland is relatively well-served in terms of the frequency and destination of flights, with the typical pre-COVID-19 flight schedule involving two or more direct flights per day to Aberdeen, Edinburgh, Glasgow and Kirkwall, a Saturday direct connection to Manchester, and a twice weekly connection to Bergen during the summer months. However, as a commercially run network, the services are subject to change based on commercial and operational needs and are vulnerable to the wider macroeconomic trends that periodically impact the aviation industry.

Aircraft

As a commercial operation, aircraft deployment is determined entirely by the operator, which leases / owns its fleet. Loganair is currently in the process of phasing out its Saab fleet and replacing it with the larger turboprop aircraft. Aircraft size is limited by the length and width of the runway at Sumburgh.

Fares

Fares on Loganair services are set on a commercial basis. Whilst island residents benefit from the Air Discount Scheme (ADS), which provides a 50% discount on the pre-tax air fare, the absolute level of fares can be prohibitive, particularly for short notice travel at peak times. In addition, whilst eligible employees of third sector organisations can benefit from the ADS, the discount does not currently extend to business travel.

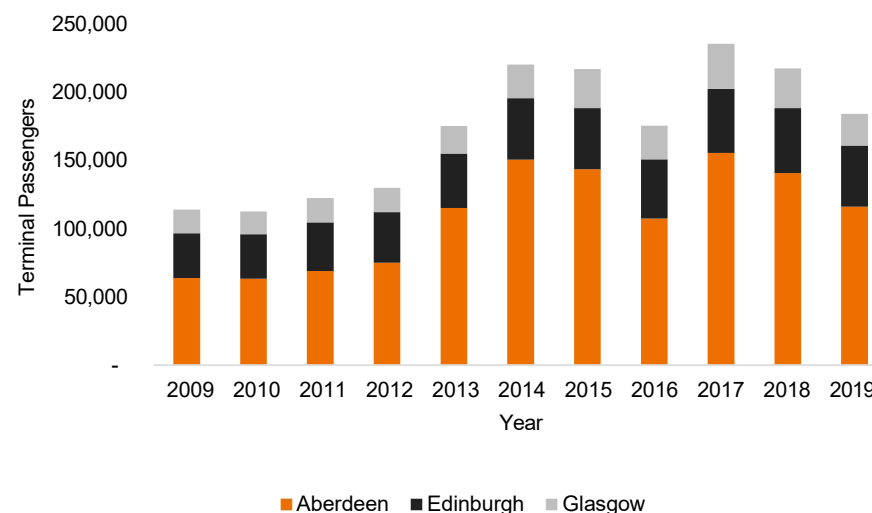
Transport integration

There is a daily bus service (Service 6) connecting Sumburgh Airport to Lerwick which runs on a broadly hourly weekday frequency. However, bus journey times are not competitive with car or taxi. In addition, where the airline makes changes to flight times, making the corresponding changes to the bus times is not always straightforward and / or can take time to implement due to wider demands across the bus network and the requirements of the traffic commissioner. This can therefore lead to connectivity issues. Parking at Sumburgh is free for the first two hours and is £3 per 24-hour period thereafter. There are also two car hire companies based at Sumburgh Airport.

Passenger numbers

Sumburgh handled almost double the number of terminal passengers in 2019 (267,000) that it did in 2010 (139,000). However, given that many of these passengers will have been oil-related, a better way to understand the resident aviation market is to consider passengers travelling between Sumburgh and the primary Scottish airports, Aberdeen, Edinburgh and Glasgow. This is shown in the figure below.

Aberdeen is the primary origin / destination for those flying between Shetland and the Scottish mainland, accounting for almost twice the number of terminal passengers to / from Edinburgh and four times that from Glasgow. There are also small flows to Kirkwall (not recorded), Inverness (figures peaked at 4,200 in 2012 but fell to 200 in 2019), other UK airports, including Manchester (1,697 in 2019) and Europe (assumed to be Bergen, 1,778 in 2019).



Passenger numbers travelling between Sumburgh and most frequent destinations of Aberdeen, Edinburgh, and Glasgow¹

4.3 Inter-island connections

This section focuses on the inter-island ferry and air services connecting the islands of Bressay, Fair Isle, Fetlar, Foula, Papa Stour, Skerries, Unst, Whalsay and Yell to Shetland mainland.

Inter-island ferry services

Routes

There are nine routes in the inter-island ferry network (see figure overleaf). Five of these (Unst and Fetlar – collectively known as Bluemull Sound, Bressay, Whalsay and Yell Sound) are high-volume and high-frequency Ro-Ro routes and four (Fair Isle, Foula, Papa Stour and Skerries) connect the islands of small population and are lower frequency as they are focused on meeting essential travel and supply-chain needs rather than regular ‘travel’ needs.

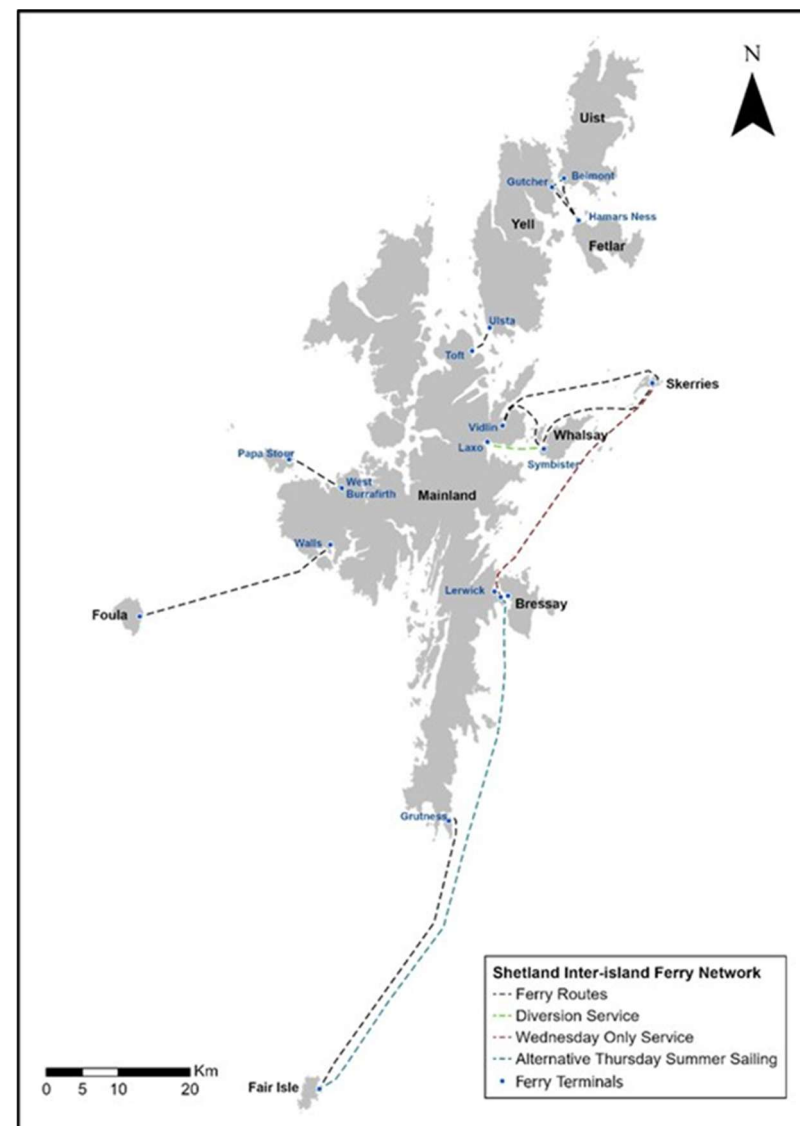
The Council owns, funds, and directly operates all internal ferry services in Shetland, the only exception being the Foula route which is contracted to a private operator. The ferry service operates at a deficit of over £5m per annum, although the Scottish Government provided supplementary funding for financial years 2021-22 and 2022-23 to cover this shortfall.

Assets

Vessels

There are 12 vessels in the internal ferry fleet which range in age, with the oldest entering into service in 1982. The typical assumed life of a vessel in Scottish waters is 30-years, albeit many vessels across Scotland are now much older than this. In Shetland, no new vessels have entered service since 2004 and there is an increasingly urgent need for a funded vessel replacement programme or alternative solution.

The more modern vessels in the fleet are Equality Act 2010 compliant (i.e., fully accessible). However, the older vessels, particularly those built before 2000, are not typically fully accessible, with the passenger lounge in many cases being below the waterline (and thus accessed by steep steps). On most routes, passengers can remain in their car, but this nonetheless falls short of required modern accessibility standards. On the Fair Isle and Foula routes, access to the vessels for those with a mobility impairment is wholly inadequate.



Landside Infrastructure

Of the nine routes, seven are roll-on, roll-off (Ro-Ro) and thus work from linkspans. The Council has invested in radio controlled linkspans for its Ro-Ro fleet and thus there are no shoreside staff at any port. Two routes (Fair Isle and Foula) operate on a lift-on, lift-off (Lo-Lo) basis.

Crew

Almost all of the Shetland internal ferry crew are shore-based and work defined shift systems which vary by route. Crew serving all islands except Foula are employed on Council contracts rather than seafarer terms and conditions. This has created challenges of crew retention due to competition from other sectors, for example, from oil and gas, NIFS services, and the aquaculture industry.

The Shetland crewing model is very lean, with highly efficient vessel design minimising the number of crew required. The ferry service is nonetheless a major employer, providing well-paid and secure jobs for residents of Shetland mainland and the isles.

Timetables

The table below shows the number of daily connections by route. It should be noted that:

- The table includes **request calls**
- The number of connections is based on the **summer timetable** (non-sailing days in winter are highlighted orange and days with fewer sailings referenced in a footnote)
- The **number of sailings in each direction are the same on all routes except Bluemull Sound, and thus only one direction is shown**. On the triangular Bluemull Sound route, the sailings are broken down by leg.

The high frequency and high-volume Ro-Ro routes offer a large number of connections across the day, although the frequency for Fetlar is lower given its smaller population. These routes also provide a long operating day, with services commencing between 06:00-07:00 and typically operating through to 23:00-00:00, and later on a Friday and Saturday on the Bressay route, although it is

²¹ Only direct sailings on each leg are counted. However, there will be a significantly higher number of indirect sailings from e.g. Gutcher to Hamars Ness via Belmont.

²² Note that marginally fewer crossings operate on the Bluemull Sound route in winter, e.g., 24 rather than 26 sailings between Gutcher and Belmont on a winter Monday.

Number of single leg sailings per day, summer timetable

Route	Leg	M	T	W	T	F	S	S
Yell Sound	Ulsta – Toft	21	25	25	25	25	16	15
Bluemull Sound ^{21 22}	Gutcher – Belmont	26	27	27	27	27	20	15
	Belmont – Gutcher	20	23	23	23	23	16	17
	Gutcher – Hamars Ness	3	4	4	4	4	1	3
	Hamars Ness – Gutcher	7	8	8	8	8	5	1
	Belmont – Hamars Ness	6	6	6	6	6	5	2
	Hamars Ness – Belmont	1	2	2	2	2	1	4
Whalsay	Symbister – Laxo	17	18	17	18	18	11	16
Bressay	Bressay – Lerwick	20	20	20	20	22	20	16
Papa Stour	West Burrafirth – Papa Stour	2	0	2	0	2	²³	1
Skerries	Skerries – Vidlin	1	0	0	0	3	1	2
	Skerries – Lerwick	0	0	1	0	0	0	0
Fair Isle	Fair Isle - Grutness	0	1	0	²⁴	0	1	0
Foula	Foula – Walls	0	1	0	1	0	1	0

noted that on the Yell and Bluemull Sounds routes, the later ferries are booking only. The high service frequency and long operating days on these routes have facilitated significant commuting and have closely inter-twined these islands with Shetland mainland in terms of both their economy and service delivery.

The service frequency on Yell Sound, Bluemull Sound and Whalsay does however reduce significantly at the weekend, although the length of operating day remains broadly the same or longer. This is a product of the weekend

²³ Note that there is only one return sailing on a winter Saturday

²⁴ Travels to Lerwick on alternative Thursdays

(particularly Saturday) service reductions introduced in 2013 when the Bluemull Sound, Whalsay and Yell Sound routes were reduced to a single vessel service²⁵.

The services to Fair Isle, Foula, Papa Stour and Skerries are less than daily, with Fair Isle reducing to a single weekly service in winter and Foula twice weekly.

Fares

Ferry fares (passenger and car) are set by the Council. on a two-tier (short Ro-Ro route and longer distance routes) system of flat fares. Fares are lower in absolute terms than most other ferry networks in Scotland. However, the need to pay for ferry travel to Shetland mainland (and the frequency of travel implied by the inter-linked economies nature of the islands and the mainland) introduces a disadvantage for island residents and businesses compared to those based on Shetland mainland. As with passenger and car fares, a common system of flat fares for CVs is operated across all Ro-Ro routes.

Transport Integration

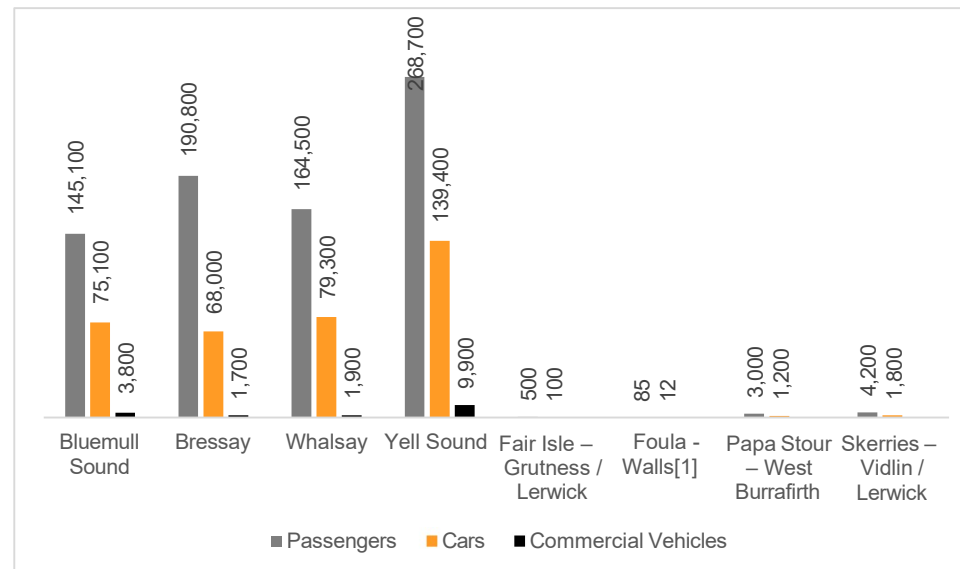
The Shetland inter-island ferry network was built around car-based travel and there are very few connecting or through (where the bus travels on the ferry) bus services. There are also no integrated ticketing options for bus and ferries and no discount for multi-leg journeys, despite all of these services ultimately being funded by the Council. The exception to this is the 'North Isles Integrated service' which runs daily from Unst to Lerwick travelling on the ferry for which only the bus fare is paid.

Carryings

The figure overleaf shows the total passenger, car, and CV carryings on each route in 2019. The high frequency Ro-Ro routes to Yell, Whalsay, Bressay and Bluemull Sound account for nearly all passenger and car carryings, equating to 99% of total traffic on the internal network in 2019.

Yell Sound is by some distance the busiest crossing with the highest levels of passenger, car, and CV carryings. The latter are primarily associated with the large aquaculture industry and fish landings on the island as well as the emerging Spaceport on Unst.

²⁵ A consequential impact of this has been a marginal reduction in service frequency on some weekdays (e.g., Whalsay on a Monday and Wednesday and Yell Sound on a Monday) to facilitate drills and maintenance which were previously undertaken at the weekends.



Passenger, car and CV carryings on the inter-island ferry network (Source: Scottish Transport Statistics Table 9.16, 2020)

In comparison, passenger and car volumes on the services to the islands of small population (Fair Isle, Foula, Papa Stour, and Skerries) are far lower and there is next to no conventional commercial traffic to these islands. Indeed, in Fair Isle and Foula, all commercial traffic is loose freight craned onto the vessel.

Overall, passenger carryings on the main Ro-Ro routes in 2019 are below their 2012 level, although only marginally so in the case of Yell Sound. This has been primarily driven by the 2013 service reductions but static or declining island populations have also been a factor.

Unlike passenger carryings, car carryings have grown on the main Ro-Ro routes between 2012-19 (with the exception of Bluemull Sound). This means that **more passengers are now travelling in a car than did so in 2012, which is against the direction of current policy.**

Note that the above focuses on 2019 figures and, as with all public transport services, passenger carryings should continue to be reviewed post COVID-19 as numbers recover.

Capacity

Each of the high-volume Shetland Ro-Ro routes suffers from vehicle capacity challenges at certain points of the day and times of year. The Whalsay and Bluemull Sound routes are particularly affected. Some of this is driven by weekday commuting volumes and reflects the concentration of economic activity in Lerwick, meaning island residents must travel for most employment, personal business, retail, and leisure opportunities. Tourist traffic, including campervans can add to pressures in the summer months. There is also a high-volume of aquaculture and associated freight traffic on the Yell Sound route.

A similar pattern is evident at weekends, with mid-morning sailings from the island and late afternoon sailings back to the island typically being the most pressured. The problem is most acute on the Whalsay route. The predominantly Saturday capacity challenges are largely a product of the aforementioned 2013 service reductions.

The capacity challenges on the 'islands of small population' routes differ to those on the main Ro-Ro routes. Limitations in terms of passenger numbers, deadweight, and crane capacity limit the number of people and the volume and size of goods that can be carried. With long gaps – sometimes several days or more – between sailings, these limitations can act as a constraint on island life.

Reliability

The design of the Shetland network means that the network of short Ro-Ro routes are, on the whole, highly reliable, although this can be impacted by aging vessels and crew shortages. Crossings are mainly short and sheltered - the exception to this is the Laxo – Symbister (Whalsay) route, for which a diversionary port is maintained at Vidlin (see page 32). Fair Isle, Foula and, to a lesser degree, Papa Stour and Skerries suffer more from weather-related reliability issues. However, the presence of an island-based crew on Fair Isle and Foula ensures that the services can be responsive to weather windows. This is not the case for Skerries whose crew is based on Whalsay and there is a long-standing ambition in Skerries for an island-based vessel and crew.

Inter-island air services

The inter-island air services connect the islands of Fair Isle and Foula to the mainland airfield at Tingwall, which is located to the north-west of Lerwick. They are commissioned by ZetTrans.

The inter-island air services were subject to a comprehensive Outline Business Case ('The Air OBC') which was completed in 2018 and informed the design of the 2020-24 contract. The islands of Papa Stour and Skerries were previously part of the inter-island air network but were withdrawn in 2020 due to very low demand (Papa Stour) and lack of appropriate Rescue and Firefighting Services (RFFS) at Skerries.

Aircraft and Airfields

The service is delivered by two Britten-Norman Islander (BN2) aircraft, which are owned by Council and leased to the contracted operator. The Air OBC confirmed that the BN2 Islander remains the most appropriate aircraft for the service. The aircraft are however not particularly suitable for Persons of Reduced Mobility (PRM). Whilst PRM can be accommodated, the aircraft fall below current accessibility standards.

The aircraft are operated by a single pilot under Visual Flight Rules (VFR), meaning the service can only operate in weather conditions clear enough to see where the aircraft is going. This imposes significant weather-related restrictions on the service. However, the Air OBC ruled out the adoption of navigational aids due to their likely limited benefit and the additional pressures that instrument-based flying would put on a single pilot operation.

Tingwall airfield is owned and operated by the Council and its status as the base for the service was confirmed in the Air OBC, which ruled out both Sumburgh and Scatsta as alternatives.

Timetable

Whilst there is a published timetable for the inter-island air service, maintaining this timetable in the Shetland environment is extremely challenging. There is therefore significant flexibility in the operation of the service, which will take advantage of favourable weather windows when the timetable cannot be maintained.

In the summer timetable, three flights per week to Fair Isle and two to Foula are designated as 'operational contingency flights' and will only be operated if there is a reason to do so, such as catching-up on a disruption-related backlog. In the winter timetable, there are scheduled cargo flights to both Fair Isle and Foula on a Thursday. The inclusion of these flights reflects the fact that the ferry service to both islands operates very infrequently in winter and is subject to extensive disruption.

On most weekdays in summer and winter, it is possible to make a day-return trip from Fair Isle and Foula to Shetland mainland. There are no weekend services outwith a single Saturday rotation to each island between May and October. With no weekend ferry services in winter, both islands are effectively cut-off from Shetland mainland from Friday afternoon to Monday morning (assuming the flights operate on those days).

Fares

ZetTrans, on behalf of the Council, is responsible for setting the maximum fares through the tendering process. These fares reflect a balance between supporting the socio-economic wellbeing of each island and achieving a degree of cost recovery. Whilst ZetTrans set the maximum fares, the operator can offer lower or other fare types so long as they do not exceed the contractual maximum. The fares are reviewed each April and are summarised in the table below.

Inter- Island air service adult fares²⁶

	Fair Isle	Foula
Economy – Single	£53.78	£50.30
Economy – Return	£102.42	£96.62
Resident - Return	£50.14	£50.14

Transport Integration

There is dial-a-bus service (Service 90) which connects Tingwall Airport with the Viking Bus Station in Lerwick. There is a small car park at Tingwall airport where some island residents leave their 'mainland' car. There are also a range of informal car shares associated with this.

Carryings

Overall passenger volumes on the service are low. In total, there were slightly fewer than 3,500 passengers at Tingwall in 2019²⁷ with Fair Isle and Foula routes accounting for 98% of passengers in 2017. Air is the primary mode of passenger transport for these islands, with the ferry predominantly fulfilling a supply-chain role. There has been a steady decline in air passenger numbers and aircraft movements in recent years, with a major reduction in demand associated with the COVID-19 pandemic.

Capacity

Aircraft load factors are generally below the capacity of the aircraft. However, specific research in Fair Isle found that certain flights can be challenging to book and that most households have experienced occasions where they cannot secure a booking when they wish to travel.

Reliability

The operating conditions for the Shetland inter-island air services mean that they are highly prone to weather-related disruption, with around one third of all flights from Fair Isle and Foula cancelled in 2017. The challenges associated with operating the air service are however well understood by island residents and the service itself is operating towards the maximum possible given available resources.

4.4 Intra-island, Shetland mainland and Lerwick connections

Active Travel

Levels of walking and cycling

According to the Scottish Household Survey, walking was the main mode of travel for 19% of journeys in Shetland in 2019 and cycling was the main mode for 1% of journeys. This compares to 22% and 1% respectively for Scotland as a whole.

The results of the 'Internal Transport Survey' undertaken to inform the development of the RTS suggest that residents of Lerwick walk and, to a lesser extent, cycle more frequently than those based elsewhere in Shetland (see figure on p40). This is to be expected given the concentration of activities in Lerwick

²⁶ Copy of Fares 2022.xlsx (squarespace.com)

²⁷ It should be noted that these data include all passengers / aircraft movements at Tingwall (by way of context, the inter-island air service accounted for 74% of all aircraft movements in 2016/17):

and the greater impracticality of walking / cycling as a means of transport in more rural locations because of the journey distances involved and the quality of facilities.

The Scottish Household Survey Travel Diary reports on the frequency of walking both as a means to an end (as a means of transport), and as an end in its own right (leisure). This data suggests that rates of walking for the purpose of leisure are higher in Shetland with 51% of people walking more than 2 days a week for pleasure compared to 43% who walk as a means of transport. This finding was replicated in the results of the 'Internal Transport Survey' with rates of both walking and cycling higher for leisure-based activities compared to for the purpose of going somewhere (see figure overleaf).

Active travel Provision

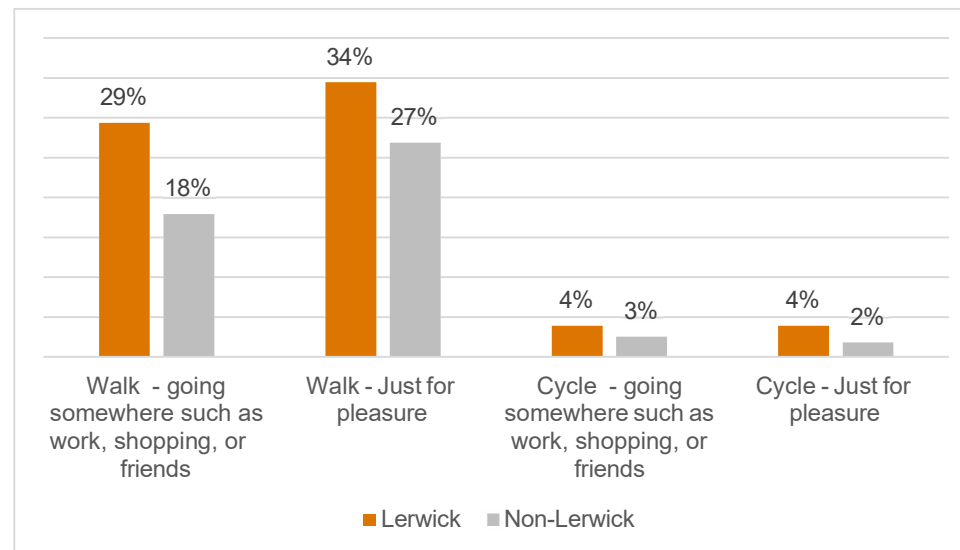
The higher rates of leisure-based cycling may in part reflect the active travel provision in Shetland, with many of the active travel routes focused towards leisure based activities.

While there is a reasonably well-developed 'core path' network, as can be seen in the map on page 38, most of these routes are circular and primarily intended for leisure-based activities rather than travel to a destination.

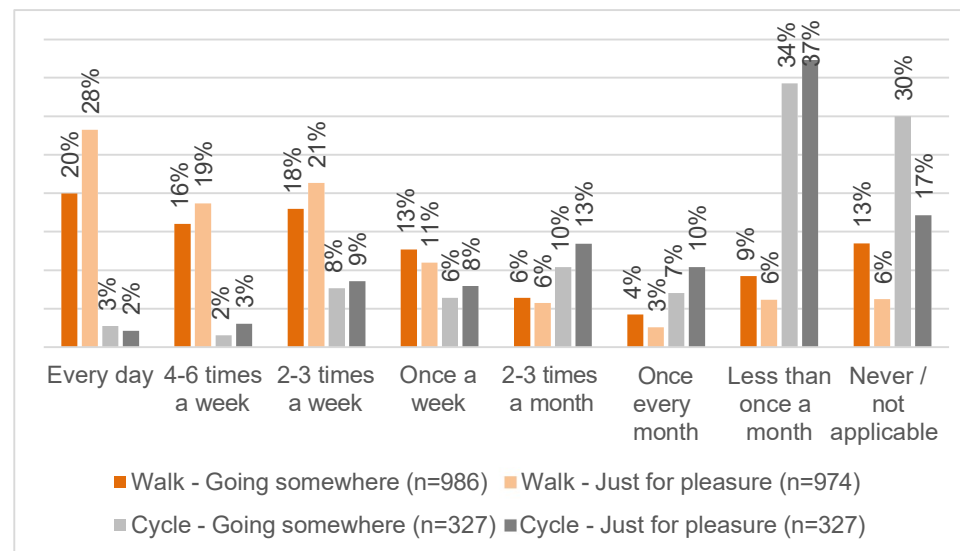
There are a number of good quality and attractive paths, such as the Clickimin Path and the Hoswick to Sandwick Path (see figure on page 38). However, current provision is uneven and the quality variable. Moreover, there are few connections between the good quality paths, which are often interrupted by busy road crossings, wide junctions and narrow footways, whilst the absence of dropped kerbs is also an issue.

There are also no dedicated cycle routes in Shetland. The UK National Cycle Network (NCN) Route 1 which runs from Dover, in Kent to Tain, north of Inverness formerly extended to and ran through Shetland. However, in 2018, the route was de-designated north of Tain on safety grounds, thus terminating the only advertised continuous north-south active travel route through the archipelago.

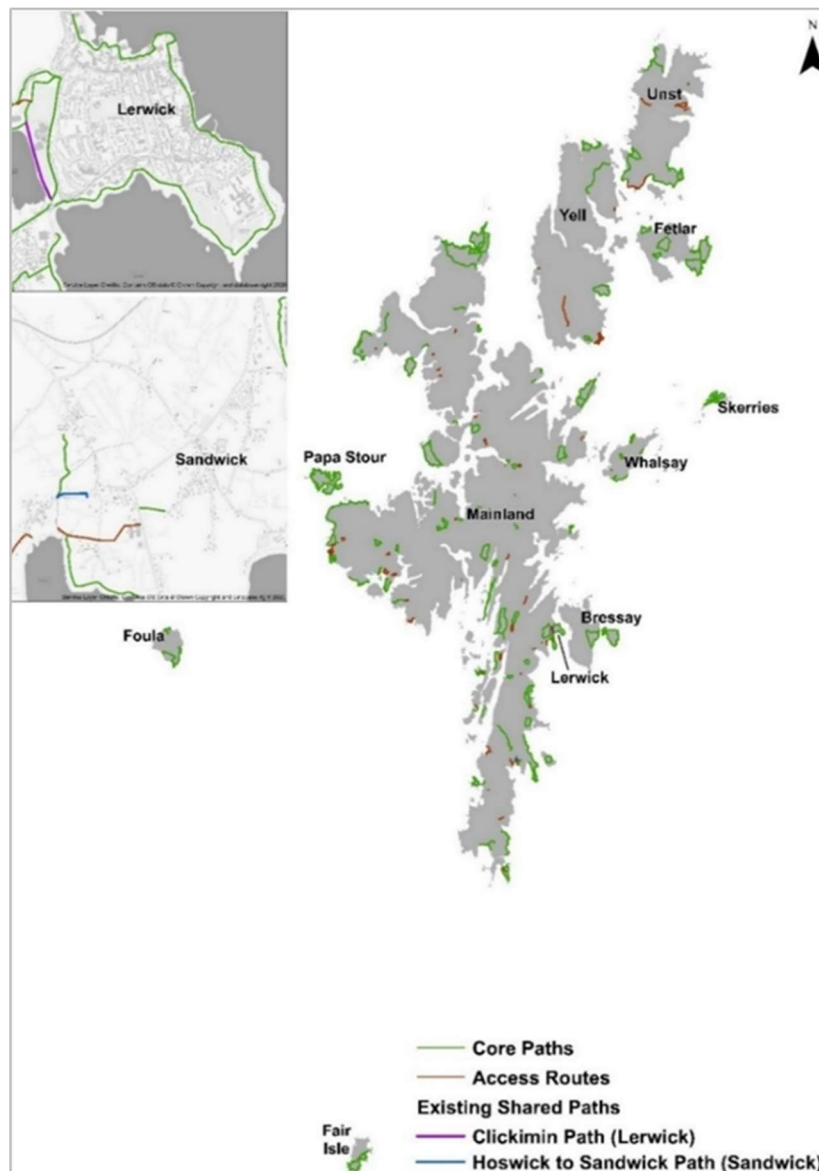
Outwith key settlements, provision of pavements and associated infrastructure such as lighting is limited or non-existent. This acts as a deterrent to people walking for leisure or to facilities in their village or a neighbouring village



Percentage of residents in Lerwick and elsewhere who walk / cycle every day (Source: Internal Transport Survey 2021).



Levels of walking and cycling (Source: Internal Transport Survey 2021)



Shetland active travel network

Bus

The Shetland bus network is largely of a 'hub and spoke' nature, with the majority of services starting / terminating in Lerwick, reflecting the dominance of the town as the island's major service centre. There are no commercial bus services in Shetland, with ZetTrans contracting all public transport timetabled and demand responsive transport (DRT) services and the Council responsible for providing dedicated school transport services, Additional Support Needs (ASN), and adult social work transport.

All bus fares in Shetland are charged as singles and are distance-based. Whilst the bus and internal ferry services are operated by the Council or ZetTrans, there is no integrated ticketing between modes or discounts for multi-leg journeys by bus or bus-ferry / bus-air combinations. There are also no multi-journey tickets available for buses.

The majority of buses are privately owned. The Council is responsible for the provision and maintenance of bus stops and we maintain a webpage and travel app which provides timetables and live bus, ferry, and inter-island air service information.

While the council funds all public bus services through ZetTrans, there is no common vehicle standard or branding on the buses. In addition, a high proportion of services are operated with minibus vehicles. Whilst all public bus vehicles adhere to current accessibility regulations, these are less stringent for smaller vehicles, and many are not suitable for people with mobility issues.

One future issue from a delivery perspective could potentially be driver availability. Whilst there are sufficient drivers in Shetland to deliver services at present, the workforce is ageing and the recruitment of new bus drivers is becoming an increasing issue, hastened by the COVID-19 pandemic and the consequent lack of testing facilities for public service vehicle (PSV) and HGV drivers. Added to this, reduced patronage post-COVID and an aging population means that more concessionary passengers will continue to put pressure on bus service finances.

Timetables

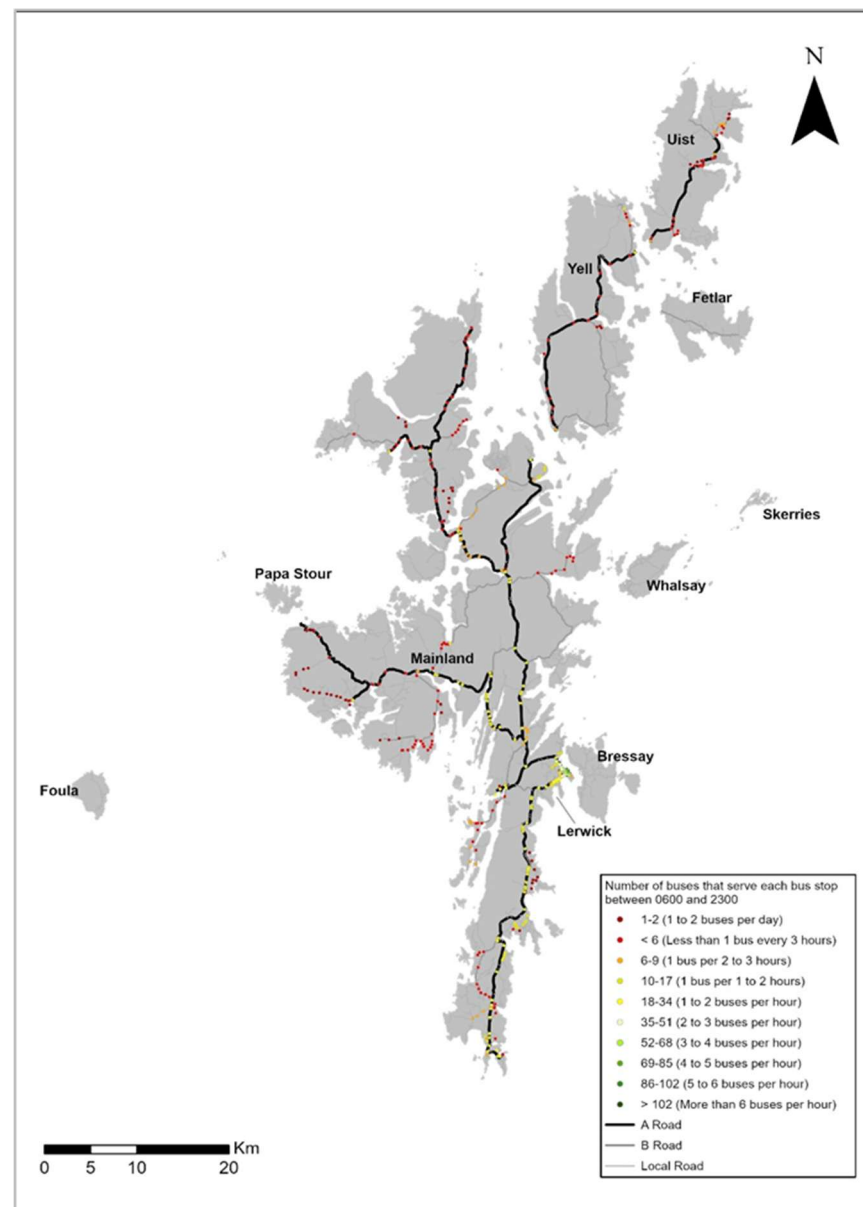
There are eight core scheduled routes within the network. These link Lerwick to the main settlements in Shetland (including Scalloway, Sumburgh, Walls, Vidlin, Toft, Brae, and Cullivoe) and operate 6-7 days per week to a fixed and regular ('clockface') timetable. Outwith the core network, there is a mixture of scheduled non-daily services, feeder services to the main routes, and timetabled dial-a-ride services.

The figure opposite shows bus services frequency at bus stops across the archipelago on a typical weekday (Tuesday). With the exception of Scalloway and South Mainland (where Sumburgh Airport is located), service frequency is generally low, with a less than hourly service. At some bus stops, there are only 1-2 services per day. This is the case in parts of West and to a lesser extent North Mainland. The timings of the first and last bus departures at each stop during the week are shown in the figures on page 41. In some locations, the length of time between the first and last buses serving each stop can be: (i) very short i.e., not sufficient to enable a full 09:00-17:00 workday or an afternoon in Lerwick; or (ii) too long i.e., meaning that individuals must spend a full day at their destination. This can act to deter people from using the bus, where the car in particular offers a much greater degree of convenience.

Bus Patronage

In 2019/20, five routes accounted for over 70% of total passenger carryings with three routes accounting for over half of all passengers (see table on page 40). Patronage on the remaining routes is therefore low, highlighting the financial challenges with operating bus services in Shetland and the limited options available to passengers.

Overall, bus patronage in Shetland declined between financial year (FY) 2015/16 and FY2019/20. Perhaps most importantly, fare paying passengers reduced by almost 12% over this period, resulting in an increase in the subsidy per passenger and thus the overall cost to the Council. In contrast, the number of concessionary passengers remained broadly stable over the same period indicating the importance of public transport for people in some key equalities groups. There will however have been an increase in the latter from 31st January 2022 due to the introduction of free travel for under 22s. As with bus services across Scotland, the COVID-19 pandemic led to a major reduction in patronage - 53% between FY19/20 and FY20/21.



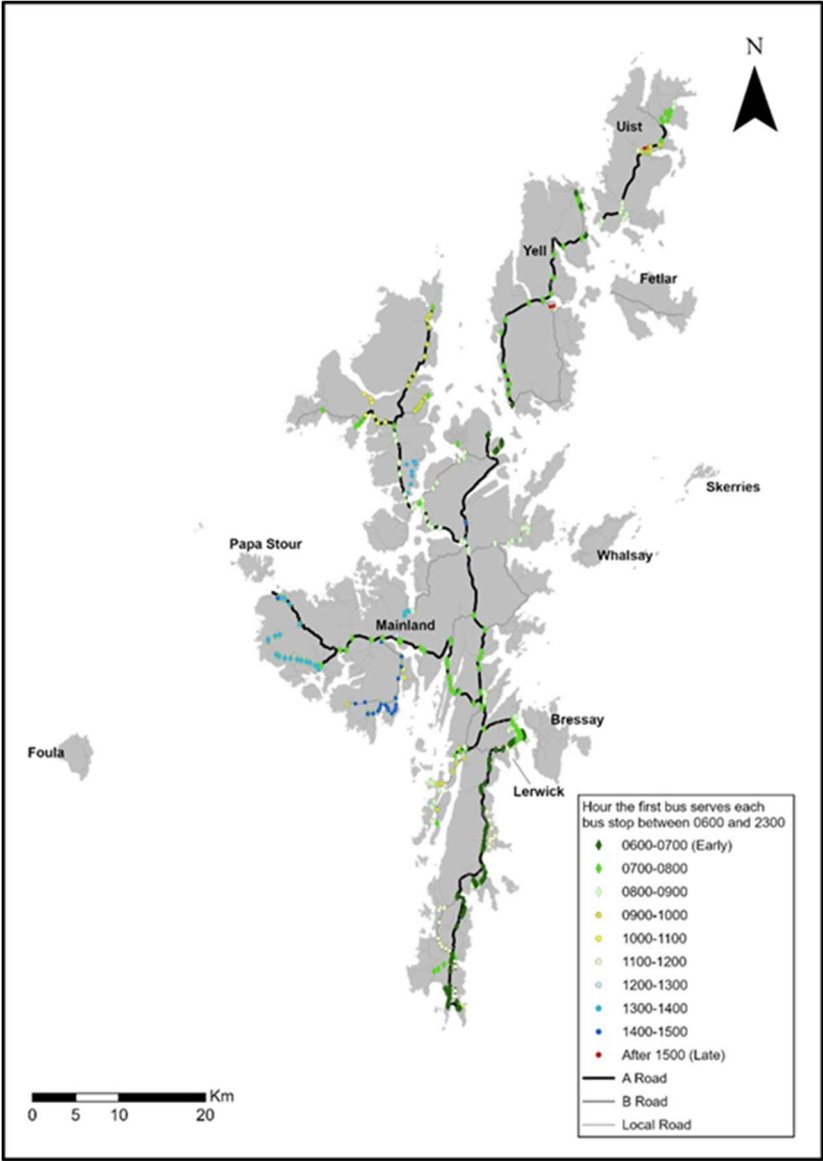


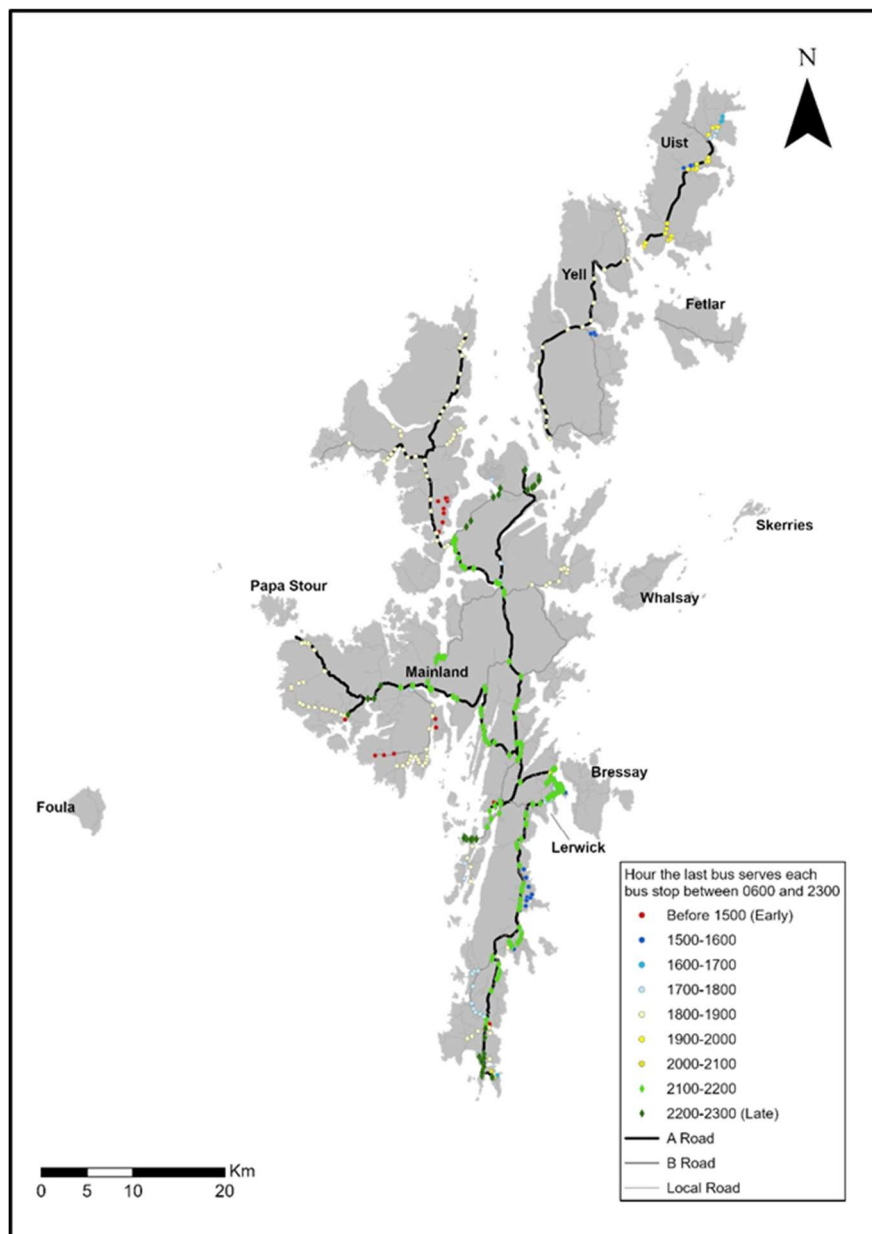
Bus Services with the highest patronage in 2019/20 (Source: Shetland Islands Council)

Service	Route	Proportion of total passengers in 2019/20
6	Lerwick to Sumburgh	24%
4	Lerwick to Scalloway	16%
1	Lerwick Town Service	15%
23	Lerwick to Toft / Mossbank	11%
9	Lerwick to Walls	7%

Going forward, there are a range of issues which will put pressure on bus services finances and the cost of delivering our bus network, including:

- Difficulties retaining and recruiting drivers.
- Increased concessionary travel costs associated with the under-22 scheme
- A forecast aging population, meaning more concessions





Road transport

Road network

The Shetland road network is shown in the figure opposite. The main spinal route connecting Sumburgh Airport with Lerwick, Brae and North Mainland is the A970. Other key roads include the A968 from Hillside to Toft, Yell and Unst and the A971 from Tingwall to Walls and Sandness.

Capital investment in, and the maintenance of, the road network is the responsibility of the Council as the statutory roads authority. There are no trunk roads in Shetland and therefore no role for Transport Scotland in road provision and maintenance.

The main road network is built to a very high standard of single carriageway, with generally high quality horizontal and vertical geometry and the ability to maintain relatively high average speeds. However, several of the B-roads reduce to single track with passing places, as is common in Scottish islands, but these are nonetheless generally engineered to a high standard.

From a resilience perspective, there are two locations where there are no alternative routes in the event of road closure: the A970 near Voe which links North and South Mainland and the A970 south of Sandwick which links to Sumburgh Airport. There is no history of this causing any significant problem however.

Parking

There is no charged parking in Shetland (except Sumburgh Airport, which is owned by HIAL and Victoria Pier Car Park in Lerwick, which is owned by Lerwick Port Authority) and, with the exception of the Esplanade in Lerwick and the car park below Fort Charlotte, there are no waiting restrictions. There is also currently no dedicated parking enforcement i.e., no traffic wardens, although the police can take action if they identify any wrongdoing and inappropriate parking (e.g., parking on the pavement) has been identified as an issue in some locations.

There are several formal and informal 'park and share / ride' sites around Shetland which are used by motorists looking to reduce costs and car-share for longer journeys to e.g., Sullom Voe. These sites are not managed or charged.

Electric vehicle charging

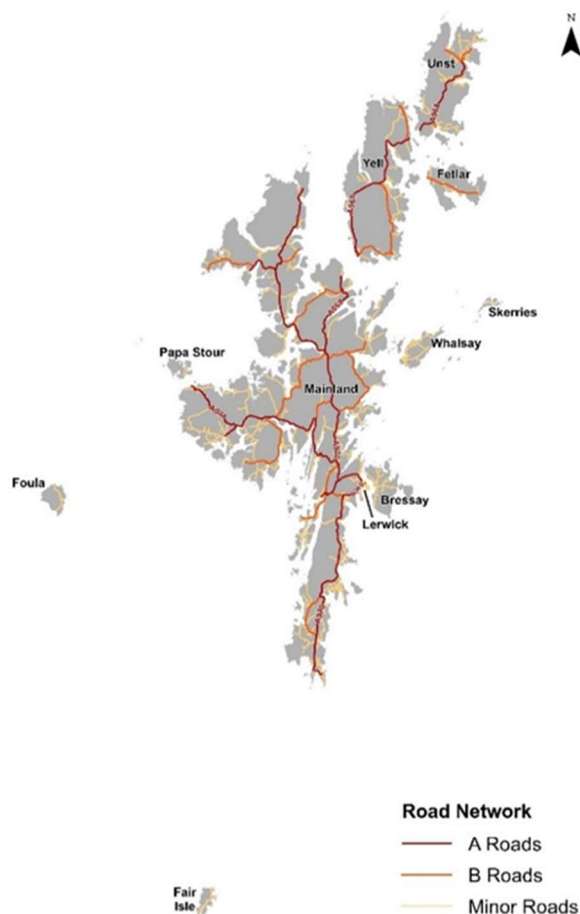
Shetland is behind other island authorities in terms of providing publicly available electric vehicle (EV) charging points. As of 2019, the archipelago has fewer charging points per 100,000 people (92) than Orkney (183) and the Outer Hebrides (109). In addition, whilst 27% of chargers in Orkney and 24% in the Outer Hebrides are rapid chargers, just 10% of those in Shetland fall into this category.

Taxis

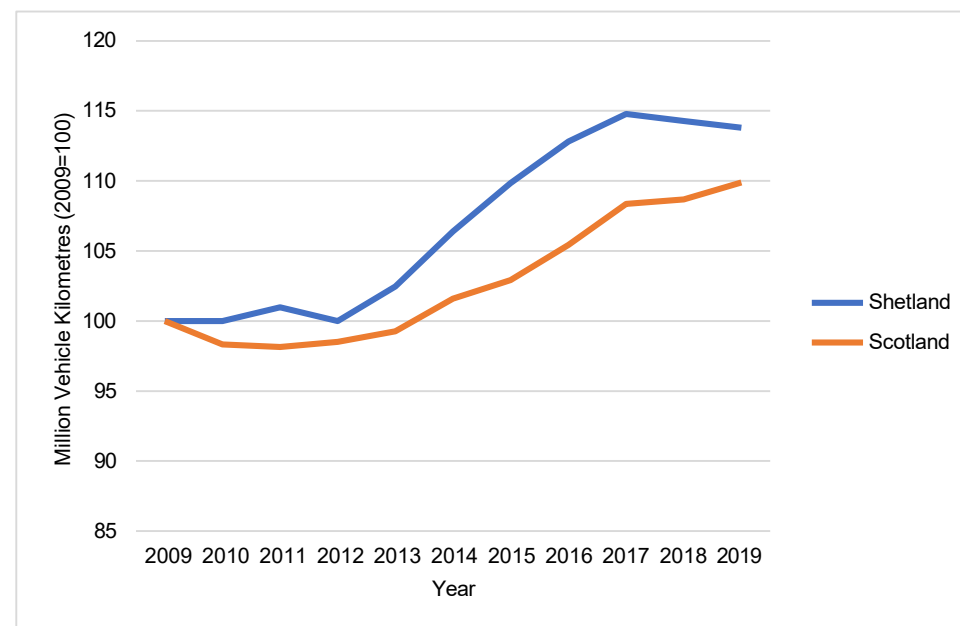
The taxi industry in Shetland is commercially operated, with the Council fulfilling a licencing role. There are as yet no app-based ride-hailing companies such as Uber or Lyft in Shetland. There are also only three wheelchair accessible taxis and two wheelchair accessible private hire cars recorded as licensed in 2021.

Traffic levels

Total vehicle kilometres in Shetland increased significantly between 2009 and 2019. Most of this growth occurred between 2012 and 2017, which broadly coincides with the construction of the Shetland Gas Plant at Sullom Voe. However, whilst million vehicle kilometres (mvk) reduced marginally following the completion of that project, they remained 29 vkm per annum above their 2009 level.



The growth in vkm in Shetland has outpaced that of Scotland overall (see figure below), with vkm in Shetland 14% higher in 2019 compared to 2009, compared to a 10% increase in Scotland overall. This highlights the challenge facing Shetland in delivering the Scottish Government target to reduce vkm by 20% by 2030.



Index of traffic on all roads in Shetland and Scotland 2009-2019, 2009=100 (Source: Scottish Transport Statistics 2020, Table 5.5)

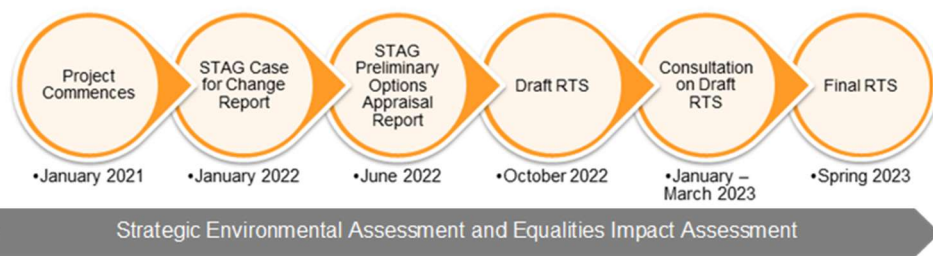
5: Developing the Regional Transport Strategy



5. Developing the Regional Transport Strategy

5.1 Overview

This RTS has been developed in line with the principles of the refreshed Scottish Transport Appraisal Guidance²⁸ and marks the final stage in a three-stage process which involved the delivery of a 'Case for Change' (developed in January 2022) and a Preliminary Options Appraisal (developed in June 2022). The development of this RTS has also been informed by a multi-stage Strategic Environmental Assessment and Equalities Impact Assessment (incorporating an Island Communities Impact Assessment) undertaken in tandem with the RTS development stages. This section summarises how the RTS was developed and sets out the **RTS Strategy Objectives** and **RTS Themes** which are the foundation of the Strategy.



5.2 Initial Appraisal: The Case for Change

Every STAG-based project starts from a set of **transport problems**. These form the basis of any study and STAG notes that as well as the problem themselves, the analysis should “*explore the root causes and consequences of problems*”.

At the 'Case for Change' stage, a 'Transport Problems Framework' was specified. This defined a transport problem as ‘*a problem experienced by a user, or potential user of the transport network*’ and set out a concise range of parameters which could be used to categorise such problems as set out in the bullet list opposite.

All modes of travel:

- Awareness of travel options
- Cost of travel and affordability
- Fuel / power issues
- Integration of travel between modes (e.g., bus to ferry)
- Journey information, including for protected groups who may find accessing information particularly difficult
- Journey quality
- Journey times
- Personal security (fear of crime)
- Personal Accessibility – being able to access transport networks and services specifically including people with disabilities or other protected characteristics which affect accessibility
- Reliability of journey times (including public transport service punctuality)
- Safety (transport)
- Travel emissions

Public transport services specifically:

- Capacity
- Comfort
- Connectivity (availability of services)
- Ease of use / convenience
- Integration between services (within mode, e.g., bus to bus)
- Service reliability (cancellations)
- Timetables (first and last / frequency)

Drawing on the data analysis, policy review, and stakeholder and public engagement undertaken, the above list was used as a ‘checklist’ to develop a set of **evidenced transport problems for each mode of transport in Shetland**. These were split into categories which broadly align with the NTS2 *Sustainable Travel Hierarchy*, as follows:

- walking and wheeling
- cycling

²⁸ <https://www.transport.gov.scot/media/50895/scottish-transport-appraisal-guidance-managers-guide.pdf>

- bus
- internal ferry
- internal air
- external ferry – passengers
- external ferry – freight
- external air
- other road-based travel

5.3 Vision and Strategy Objectives

Using the evidenced list of transport problems, a series of Transport Planning Objectives (TPOs), each linked to a specific transport problem were identified. These were subsequently used to define an overarching **Vision** for the RTS and six associated **Strategy Objectives**.

Our **Vision** is:

Our transport networks in Shetland and our connections to the rest of Scotland support our social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contribute to our net zero emission targets

The **Strategy Objectives** which support our Vision are set out below along with the transport outcomes and societal impacts that they will deliver.

Strategy Objective 1: To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups to / from the rest of Scotland

- | | |
|----------------------------|---|
| Transport Outcomes: | <ul style="list-style-type: none"> ■ Access to transport is more equitable ■ There is increased capacity, enabling increased resident and tourism trips between Shetland and the rest of Scotland which previously were not made, negatively impacting on the economies of Shetland and Scotland ■ There is adequate capacity for efficient transport of freight |
|----------------------------|---|

- | | |
|--------------------------|---|
| Societal Impacts: | <p>Contributes to:</p> <ul style="list-style-type: none"> ■ Improved community participation in leisure, social, cultural and sporting activities in mainland Scotland ■ Reduced social isolation ■ Physical and mental health and well-being benefits ■ Equality benefits for marginalised groups ■ Improved population retention and in-migration to support a sustainable Shetland economy ■ Growth of tourism market ■ Growth of other key markets ■ Supply chain efficiencies and reduced costs ■ Business stability, investment and growth |
|--------------------------|---|

Strategy Objective 2: To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups within Shetland

- | | |
|----------------------------|---|
| Transport outcomes: | <ul style="list-style-type: none"> ■ Access to transport is more equitable ■ There is increased capacity, enabling increased resident and tourism trips within Shetland which previously were not made, negatively impacting on the economy of the isles ■ There is adequate capacity for efficient transport of freight |
| Societal Impacts: | <p>Contributes to:</p> <ul style="list-style-type: none"> ■ Improved community participation in leisure, social, cultural and sporting activities ■ Reduced social isolation ■ Physical and mental health and well-being benefits ■ Equality benefits for marginalised groups ■ Improved population retention and in-migration ■ Growth of tourism market ■ Improved labour market efficiency through better matching of people to jobs ■ Supply chain efficiencies and reduced costs ■ Business stability and growth ■ Efficiencies in the delivery of services to the isles |

Strategy Objective 3: To facilitate and encourage safe walking, cycling and wheeling for everyone, including for leisure and tourism

- | | |
|----------------------------|--|
| Transport outcomes: | <ul style="list-style-type: none"> Walking, wheeling and cycling options enhanced so that: <ul style="list-style-type: none"> Access to walking, wheeling, and cycling is equitable People make walking, wheeling, and cycling trips for a purpose and leisure leading to: <ul style="list-style-type: none"> increased walking, wheeling, and cycling trips reduced car trips / vehicle kilometres reduced 'forced' car ownership |
|----------------------------|--|

- | | |
|--------------------------|---|
| Societal Impacts: | <p>Contributes to:</p> <ul style="list-style-type: none"> Transformed, liveable neighbourhoods Increased activity levels Reduced social isolation Physical and mental health and well-being benefits Improved community participation in leisure, social, cultural and sporting activities Equality benefits for marginalised groups Growth of tourism market Climate change and net zero targets |
|--------------------------|---|

Strategy Objective 4: To improve alternative, more sustainable travel options in Shetland for all including those without access to, or who would prefer not to use a car

- | | |
|----------------------------|--|
| Transport outcomes: | <ul style="list-style-type: none"> Barriers to using sustainable travel options removed so that <ul style="list-style-type: none"> Access to sustainable modes more equitable People make sustainable transport trips, leading to: <ul style="list-style-type: none"> increased walking, wheeling, and cycling trips reduced car trips / vehicle kilometres reduced 'forced' car ownership |
|----------------------------|--|

Societal Impacts:

- | |
|--|
| <p>Contributes to:</p> <ul style="list-style-type: none"> People taking advantage of new employment, education, and training opportunities Improved labour market efficiency through better matching of people to jobs Improved community participation in leisure, social, cultural and sporting activities Transformed, liveable neighbourhoods Increased activity levels Reduced social isolation Physical and mental health and well-being benefits Equality benefits for marginalised groups Growth of tourism market Climate change and net zero targets |
|--|

Strategy Objective 5: To transition towards an environmentally and financially sustainable, post-carbon transport network

- | | |
|----------------------------|---|
| Transport outcomes: | <ul style="list-style-type: none"> People and freight travel in a more environmentally and financially sustainable way |
|----------------------------|---|

- | | |
|--------------------------|--|
| Societal Impacts: | <ul style="list-style-type: none"> Contributes to climate change and net zero targets |
|--------------------------|--|

Strategy Objective 6: To support safe, resilient, and efficient movement of all people and freight across Shetland

- | | |
|----------------------------|--|
| Transport outcomes: | <ul style="list-style-type: none"> Fewer disruptions to the movement of people and goods Reduced road-based casualties |
|----------------------------|--|

- | | |
|--------------------------|--|
| Societal Impacts: | <p>Contributes to</p> <ul style="list-style-type: none"> Reduced healthcare costs (due to fewer casualties) Supply chain efficiencies and reduced costs Business stability and growth |
|--------------------------|--|

The **Vision** and **Strategy Objectives** provide a clear direction for the RTS and their delivery would generate positive **transport outcomes** and consequential **societal impacts**. Associated Key Performance Indicators (KPIs) which can be used for the purpose of monitoring and evaluating the RTS are set out in Chapter 14.

5.4 Preliminary Options Appraisal

Following the 'Case for Change', a Preliminary Options Appraisal was undertaken. This identified and appraised a long list of **potential options to resolve the problems identified** at the 'Case for Change' stage. In line with STAG, the options were appraised against the:

- Strategy objectives as outlined above
- STAG Criteria:
 - Environment
 - Health, safety and wellbeing
 - Economy
 - Equality and accessibility
- Established policy directives
- Feasibility, affordability and public acceptability
- Risk and uncertainty
- SEA and EqlA Criteria



5.5 Regional Transport Strategy Themes

The options identified within the Preliminary Options Appraisal were then collated into a set of RTS Themes as set out below.

1. Enabling and encouraging active travel

Improving the public realm and facilitating walking, wheeling, and cycling within settlements as well as providing active travel connections between them

2. Improving the quality and affordability of, and access to our public transport

Delivering affordable and accessible public transport, enhancing the public transport infrastructure including vehicles and stops and improving ticketing options and information

3. Extending bus connectivity

Improving bus connectivity through improved frequency, extended operating hours, additional services and enhanced multi-modal connectivity

4. Connecting our islands

Improving internal ferry and air connections and exploring the case for fixed links so as to better connect Shetland's island communities

5. Enhancing our external connections and supply chain

Enhancing external ferry and air connections to the Orkney Islands and the Scottish mainland

6. Decarbonising our transport

Supporting the decarbonisation of transport through the adoption of zero emission vehicles, vessels and aircraft

7. Embracing new technologies

Capitalising on innovations and new technology

8. Enhancing network efficiency

Supporting the safe, resilient, and efficient movement of people and freight across the transport network

The table opposite shows the **RTS Themes** mapped against the **RTS Strategy Objectives** and demonstrates the relationship between the two. The Themes have been used to shape the content of the RTS, with each subsequent chapter of this document focusing on a separate theme and relevant **policies** set out therein. These policies set out the 'direction of travel' across a broad range of transport issues affecting Shetland for the period of the strategy. Subsequent to the agreement of the RTS, an accompanying **Action / Delivery Plan** will be developed which will set out activities and priorities in relation to these policies and will be updated regularly.



Mapping of RTS Themes to Strategy Objectives

	Strategy Objective 1	Strategy Objective 2	Strategy Objective 3	Strategy Objective 4	Strategy Objective 5	Strategy Objective 6
1. Enabling and encouraging active travel		✓	✓	✓	✓	✓
2. Improving the quality and affordability of, and access to our public transport		✓		✓	✓	
3. Extending bus connectivity	✓	✓		✓		✓
4. Connecting our islands		✓		✓		
5. Enhancing our external connections and supply chain	✓					
6. Decarbonising our transport				✓	✓	
7. Embracing new technologies		✓		✓	✓	
8. Enhancing network efficiency		✓				✓

6: Enabling and encouraging active travel



6. Enabling and encouraging active travel

6.1 What is this theme?

Increasing rates of walking, wheeling and cycling in Shetland will contribute to reducing carbon emissions, supporting healthier lifestyles, delivering more pleasant places to live, reducing inequalities and supporting sustainable economic growth.

As a transport strategy, the RTS is more focussed on walking, wheeling, and cycling as modes of transport for day-to-day functional trips (i.e., to work, school, the shops, visit family etc) rather than leisure-based journeys, although these are also important for health and wellbeing. The Scottish Government's 2030 Vision for active travel is '*Scotland's communities are shaped around people, with walking or cycling the most popular choice for shorter everyday journeys*'. This is encapsulated within the '20-minute neighbourhood' concept set out in NPF4. This focus on shorter everyday journeys is also reflected in the ZetTrans Active Travel Strategy (ATS) which sets out the actions which will be taken up to 2026 aimed at '*making walking and cycling attractive and realistic travel choices for short journeys in Shetland*'.

Given the concentration of activities and higher population density in Shetland's key settlements (principally Lerwick), it is these locations where there is the greatest potential to encourage people to use active travel for shorter everyday journeys, and therefore it is these locations where much of our activity will be targeted. There is, however, also a need to facilitate longer distance active travel journeys between our key settlements, particularly with the growth in availability and usage of electric bikes (e-bikes). In terms of the RTS, given the impracticality of making regular long-distance walking trips for functional journeys, the primary focus for inter-settlement trips is facilitating and encouraging cycling. However, there are clear overlaps with our broader aims to grow walking, wheeling, and cycling as leisure and tourism activities²⁹, particularly when longer distance routes are considered, and we will work to capitalise on opportunities in this respect.

The discussion below reflects and builds upon the policies and actions included within our ATS and aims to provide a longer-term framework for how we will continue to promote and develop active travel in Shetland beyond 2026. It explores a wide range of potential improvements which could be made, including

public realm improvements; upgrades to existing active travel routes; the delivery of new active travel infrastructure; re-allocation of road space from the car to walking, wheeling, and cycling; traffic calming; speed enforcement; schemes designed to help widen cycle access; and land use planning measures which support active and sustainable travel choices.

6.2 What problems are we setting out to address?

As discussed in Chapter 4, rates of walking and cycling in Shetland are slightly below the national average and levels of walking and cycling for day-to-day functional trips (to work, school, the shops etc.) are lower than rates of leisure-based walking and cycling.

There are typically a range of factors which prevent people from walking, wheeling and cycling more frequently. The UK DfT's National Travel Attitudes Survey (Wave 5) focussed on attitudes towards walking and cycling. When asked what would encourage them to walk more, the top five factors cited were:

- Well-maintained pavements (even, clean, uncluttered, well-lit) – 74%
- Safer roads – 45%
- More safer crossing points – 44%
- More direct walking routes – 43%
- Better provision for health needs (e.g., benches, public toilets, access ramps) – 40%

The same survey also asked respondents what factors would encourage them to cycle more. The top ten factors cited were:

- Off-road and segregated cycle paths – 55% of respondents
- Safer roads – 53%
- Well-maintained road surfaces for cycling – 49%
- More direct cycle routes – 43%
- Raising awareness of local cycle routes – 36%
- Visible signposting of low-traffic cycle routes – 34%
- Secure storage or parking at work or home – 28%
- Cheaper bicycles available to buy – 27%
- Cheaper bicycles available to hire – 18%

²⁹ These aims are most clearly articulated in our Active Shetland Strategy (2018-2023) and the Shetland Outdoor Access Strategy (2019)

■ Better bicycle hire facilities – 17%

This research also found that a majority of respondents (64%) strongly or somewhat supported ‘the creation of dedicated cycle lanes in [their] local area, if this means less road space for cars’. It also found that while 74% of all male respondents reported to feel ‘fairly’ or ‘very confident’ when riding a bicycle, the same was only true for 43% of female respondents.



In the Shetland context, the survey conducted to inform the development of the RTS found that 42% of respondents indicated that there were things which prevented them walking more often and 51% indicated that there were things which prevented them cycling more often, suggesting there is potential for increased walking and cycling if barriers can be removed. Overall, a **lack of segregation from traffic** was the most commonly cited reason for low rates of active travel, with nearly 40% identifying this as a major factor in preventing them walking more and over 60% stating that this was a major factor in preventing them cycling. The lack of segregated active travel provision was also identified as an issue in the open text responses:

“Segregation is needed especially in Lerwick and ... in some of the main villages (Brae, Sandwick etc)”

“walking in ... areas such as around Lerwick, there could be more provision for walking and cycling, particularly as you are leaving the town both north and south. The traffic goes extremely quickly and the verges are rough and unsuitable for cycling and running.”

The lack of segregated provision and traffic intimidation was seen as particularly problematic for certain equality groups, including those with prams, young children and older people:

“When walking with small children, most routes are along busy roads in Lerwick. Access along the street in Lerwick is an issue and as a pedestrian it can be intimidating to have cars coming up behind you all the time”

The public survey undertaken to inform the ATS corroborates the above survey findings, with the ATS survey identifying the **lack of dedicated space for walking and cycling** as well as **traffic speeds and volume** as the key barriers preventing people walking and cycling more. Critically, the ATS also identified clear support for prioritising walking and cycling investment above other modes, with 77% of respondents either very supportive or generally supportive of **investment in active travel even when this would mean less room for other traffic**.

Within the RTS survey, the **poor accessibility of existing paths** was also identified as an issue, with 24% of those who said they would like to walk more and 37% of those who said they would like to cycle more identifying this as a major barrier to doing so. A range of problems were identified in this respect in the open text responses and wider consultation, including uneven pavements, paths being too narrow, a lack of dropped kerbs, inappropriately placed and poorly designed street furniture, and wide junctions which were not designed with pedestrians in mind. These issues were felt to restrict access and lead to inequalities:

“There are some great walks even in Lerwick but sometimes the approaches to them or parts of them are not disability friendly making them stressful or unsafe”.

“Pavements are uneven and slope in different directions, with double cambers on many routes which makes it difficult for wheelchair users. Due to the width, there is often not enough space if you do slide. At some points, it is safer to go onto the road”.

“There is a lack of dropped kerbs and kerbs in some areas are too high which restricts access for wheelchair users and those with mobility issues”.

“Street furniture can be poorly located and there are no markings included which makes it difficult for the visually impaired”.

In addition, several comments were made in the surveys and wider consultation about **inappropriate parking blocking access**. Again, this was identified as a particular issue for vulnerable groups such as those with young children, older people, people with visual impairments and people with mobility issues.

“I get frustrated at the number of vehicles that think a wide area of pavement is a parking space, forcing walkers (especially the elderly or those with prams) to be forced to step onto a busy road to get past them”.

The **lack of dedicated cycle parking** in Lerwick and more broadly was also identified as an issue. In Lerwick, there is no cycle parking in the town centre apart from a decorative Shetland bike stands sign; at the main supermarket (Tesco); Clickimin Leisure Centre, and the health centre. This was felt to not only make bicycles more vulnerable to theft but also reduce the visibility of cycling, removing the opportunity to inspire others to cycle as part of an everyday journey.

Beyond our key settlements, the lack of cycling provision between Shetland’s communities and the need to travel on road amongst general traffic was identified as a key barrier to cycling:

“Cycling on the roads in Shetland outwith the town [Lerwick] feels dangerous due to the behaviour of traffic and lack of cycle lanes”.

“I want to cycle but the roads between Scalloway and Lerwick are too dangerous for an inexperienced cyclist. Segregation is necessary for me to cycle the four miles to work”.

Respondents also noted that **inclement weather and limited hours of daylight** during the winter months and **steep gradients** further detract from cycling as a potential travel option. The potential benefits of **e-bikes** in the Shetland context were also noted. E-bikes are growing in popularity and provide a particular opportunity in Shetland as they facilitate longer journeys by bike, reducing the barrier of steep gradients, and open-up cycling to a wider range of users.

“Electric bikes can make a huge difference here - Shetland is otherwise far too hilly and windy for cycling to catch on in a big way”.

The widespread uptake of e-bikes could therefore help reduce car dependency and vehicle kilometres by enabling modal shift for a wider range of journeys. However, the **cost of e-bikes** is prohibitive for most, especially for new or infrequent users and for families with socio-economic disadvantage. In addition, while there are a number of cycle hire facilities in Shetland³⁰, options to hire bicycles are more limited beyond Lerwick. The high cost of e-bikes and the need to widen access was recognised in the survey responses and wider consultation:

“More access to electric bikes in the local community so that they can be tried out before committing to purchase. Information about grant schemes available.... These would all encourage me to cycle more”.

The benefits of improving longer distance active travel routes from a **tourism** perspective were also identified through the engagement undertaken to inform the RTS. The green and eco-tourism markets were identified as specific growth opportunities in Shetland and support for longer-distance active travel routes and facilities is considered essential to support growth in this market.

“Shetland seems to be a very popular cycling holiday destination. It would be great if it was made safer for tourists and locals alike”.

“Improved cycle routes would benefit the community greatly but would also attract more visitors to the isles if more dedicated routes were available, or even an annual event, for example Shetland South to North, all off-road”.

The **inability to take bikes on Shetland’s buses** was identified as a barrier in terms of longer distance trips, with consultees and survey respondents noting that cycling could form part of a longer distance multi-modal trip if buses were able to accommodate cyclists.

“Inability to take bicycles on the bus means I cannot use it to travel further afield, to / from Lerwick”.

“Lack of provision for bicycles [makes] it impossible for people to engage in active travel”.

“If bikes [were] allowed on buses, they could provide a useful link to go cycling in other areas of Shetland without having to either cycle all the way or drive there with your bike in the car, which is what most cyclists in Shetland do”.

³⁰ See [Cycle Hire | Grantfield Garage](#) and [Shetland Community Bike Project, Lerwick – Cycle hire and bike shops | VisitScotland](#)

6.3 What sort of things could we do to address these problems

Providing good quality active travel infrastructure is an essential element of **successful placemaking** and a fundamental component of the ‘**20-minute neighbourhood**’ concept. To ensure people are able to walk and cycle to access many everyday services, a network of routes in each of our key settlements is required. To be effective, these should provide direct links between important origins and destinations, including our schools, employment locations and social and leisure opportunities. Routes should be safe, attractive, and comfortable and be of a consistently high quality and accessible with smooth surfaces and appropriate lighting.

As identified above, safety and the level of segregation from traffic is a key barrier to walking, wheeling and cycling. To help overcome safety concerns and minimise traffic intimidation, **road space can be reallocated** away from general traffic to walking, wheeling and cycling. This could include options to **widen pavements** to provide more room for walking and wheeling as well as providing dedicated, segregated spaces for cyclists. In order to cater for a broad range of the latter, including new and less confident users, the delivery of cycle routes within our key settlements which are physically **segregated from motor traffic** should be prioritised where possible.

Speed limit reduction, 20mph zones, and traffic calming, including around our schools, would also help improve safety and the perception of safety, as well as providing an environment which is more conducive to walking, wheeling and cycling. In Lerwick and elsewhere, there are also a number of wide junctions which are both unattractive and intimidating for some pedestrians to navigate and encourage higher turning traffic speeds. In such locations, there are options to physically change the road network and tighten the road geometry, reducing both the crossing distance and the speed of turning traffic.

In order to facilitate and encourage active travel for longer distance journeys, there is a need to provide a **network of traffic free or ‘quiet way’ routes between our key communities**. To encourage use, these routes should be safe, attractive, comfortable and direct and should link in with the network of walking, wheeling and cycling routes within our settlements.

Alongside new routes, it can also be beneficial to provide accessible and secure **cycle parking** at the beginning and end of each journey. Cycle parking should be prominently located near the entrances of key destinations and sit within the

context of the wider route. It is also important that large workplaces and other popular destinations are equipped with facilities to support cycling, such as showers, lockers etc. There may also be opportunities to facilitate and encourage multi modal journeys through the creation of **mobility hubs**, physical spaces within the public realm that combine public transport interchange with facilities for active travel (like cycle parking), shared mobility solutions (such as cycle and car share), electric vehicle (EV) charging and ancillary services like cycle repairs and information provision.

In designing and delivering new active travel infrastructure, it will be important to follow **the most up-to-date best practice and design guidance**. A summary of the key principles and qualities from current guidance are set out in the table below. It is also important that active travel routes and facilities **cater for disabled users**. For example, cycle routes should be designed so that they are suitable for ‘non-standard’ cycles, such as recumbent cycles, tricycles, handcycles and any other cycle that might be specially adapted for a disabled user.

Cycle Design Core Principles (Cycling by Design ³¹)	Accessible Qualities of successful places (Designing Streets ³²)
Safe ▪ Direct ▪ Coherent ▪ Comfortable ▪ Attractive ▪ Adaptable	▪ Distinctive ▪ Safe and pleasant ▪ Easy to move around ▪ Welcoming ▪ Adaptable
Design Principles (Places for Everyone³³) ▪ Develop ideas collaboratively and in partnership with communities. ▪ Facilitate independent walking, cycling, and wheeling for everyone, including an unaccompanied 12-year-old. ▪ Design places that provide enjoyment, comfort, and protection. ▪ Ensure access for all and equality of opportunity in public space. ▪ Ensure all proposals are developed in a way that is context-specific and evidence-led. ▪ Reallocate road space, and restrict motor traffic permeability to prioritise people walking, cycling, and wheeling over private motor vehicles.	

³¹ <https://www.transport.gov.scot/publication/cycling-by-design/>

³² <https://www.gov.scot/publications/designing-streets-policy-statement-scotland/>

³³ [Places for Everyone - Sustrans.org.uk](https://www.sustrans.org.uk/places-for-everyone/)

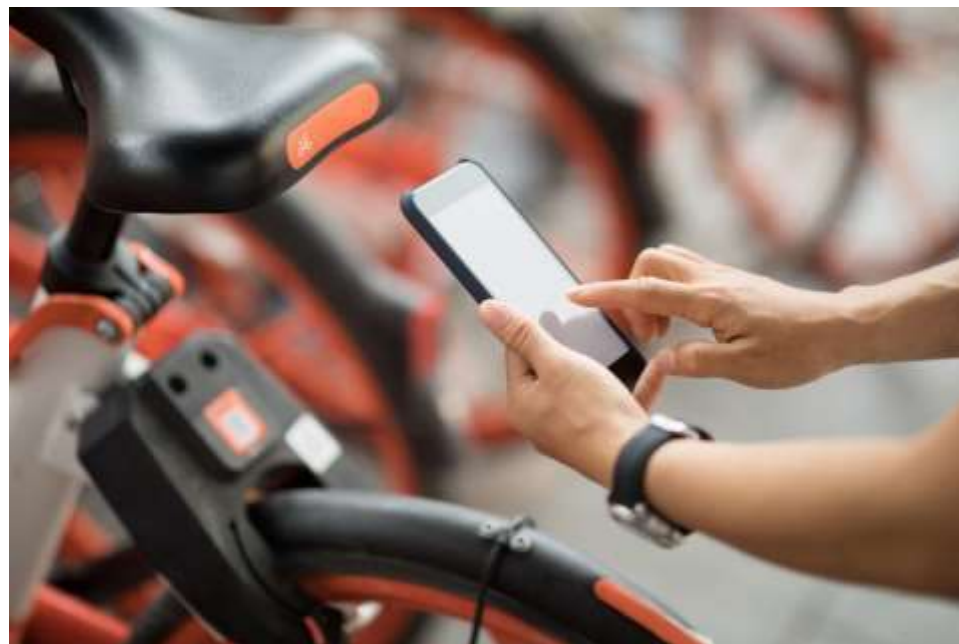
Creating successful places, in which people want to walk, wheel, and cycle requires **community involvement**. In providing new facilities, it will be important to work with the council and other relevant delivery partners and actively engage local communities and representatives of equalities groups so that the day-to-day needs and experiences of all members of our society, including those marginalised by disability, age and other differences are considered and incorporated. As well as our communities, it will also be important to consult with and engage the council roads, planning, environment, community planning and transport services, as well as network maintenance, at the earliest stage of the design process.

To encourage active travel and avoid car dependence becoming entrenched, **new development must be sustainably located**. As set out in Chapter 2, reflecting the specific geography and rurality of Shetland, it will be important to adopt the principles of a broadened ‘**20-minute neighbourhood**’ concept within our local planning policies and guidance, and seek to ensure new development is located in areas which can be served by sustainable and / or active travel means. The delivery of appropriate trip-end facilities such as cycle parking, showers and lockers should also be supported through the development planning process. Similarly, the provision of key services in outer island locations could also help minimise the need for travel and encourage walking and cycling.

Beyond infrastructure improvements, **promoting active travel and its benefits** within our communities can also encourage use. This could be achieved through multi-media promotion of active travel, walking and cycling engagement events, school-focused initiatives (including Bikeability), cycling skills courses and road safety campaigns. Clear signposting of walking, wheeling and cycling routes along with accessible maps and planning tools would also help to promote and encourage use. There would also be benefit in widening access to cycling, including e-cycles and adaptive cycles, through **grants to support purchase** and / or the delivery of a Shetland wide **cycle share scheme**. While rates of cycle ownership in Shetland are similar to the national average, in 2019, over two thirds of households did not have access to a bicycle³⁴. There has been a growth in cycle share schemes in Scotland in recent years, including at the city and regional level. According to the 2020 Scottish Bike Share Survey³⁵:

- **59%** of bike share users said that bike share had been a catalyst for them to start cycling again
- **66%** reported exercise / physical health benefits from using their bike share scheme

- **41%** reported mental health benefits as a reason why they choose to use bike share schemes
- **32%** said they used their cars less often as a result of bike share, with figures rising to nearly 50% amongst those using e-bikes



Given the rural nature of much of Shetland and the distances involved, enabling the **carriage of bicycles on buses** could also help encourage cycling, particularly as part of longer multi-modal journeys and may help open-up opportunities for cycle tourism. Wider research suggests that there is strong support for this measure, with a 2021 poll undertaken by YouGov for Cycling UK indicating that 44% of adults support an increase in spaces for bikes on rural and island bus services with just 13% opposing it.³⁶ Bike buses were successfully introduced by Borders Buses with 23 bike-friendly vehicles now operating with space for between 2-4 bikes each.³⁷ These have enabled people to combine bike

³⁴ Scottish Households Survey, Table 8, Number of bicycles available for private use by households: 2019

³⁵ <https://www.como.org.uk/documents/bike-share-annual-report-scotland-2020>

³⁶ <https://www.cyclinguk.org/article/get-board-go-further-bike-and-bus>

³⁷ <https://www.bordersbuses.co.uk/bike-friendly-buses>

and bus journeys, providing a wider range of destination options and enabling longer distance travel.

6.4 RTS Policies

1. We support and encourage an increase in walking, wheeling and cycling participation in Shetland for environmental, accessibility and health reasons
2. In line with Scottish Government, we commit to rebalancing the spend in transport to support active and sustainable travel
3. We support the principle of the proportionate reallocation of road space from general traffic to walking, wheeling and cycling as a means to promote safer active travel and encourage use of active travel modes
4. We support the principle of reducing speed limits in our communities
5. We support the principle of improving the management and enforcement of traffic and parking around our schools to deliver safer routes to schools
6. We support a network of traffic free or quiet way routes to connect our communities
7. We will support and continue to develop the case for long distance walking and cycling routes
8. We support the integration of active travel and public transport connections, including the principal of carrying bikes on buses and the delivery of mobility hubs where appropriate
9. We support the upgrade of cycle parking at all of our public buildings, transport interchanges, and key on-street locations
10. Our policy is to ensure active travel infrastructure is designed to a high quality in accordance with the most up-to-date best practice and design guidance appropriate to the Shetland context as this evolves to meet the needs of all users
11. We support the integration of active travel and public transport in the planning of all new developments.
12. We will seek the implementation of initiatives which widen access to cycle ownership and /or hire through cycle sharing schemes (including e-cycles) and wider education programmes, including school-based initiatives
13. Our active travel network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of



7: Improving the Quality and affordability of, and access to our bus services



7. Improving the quality and affordability of, and access to our bus services

7.1 What is this theme?

To realise our aspirations to decarbonise transport in Shetland, it is essential to improve the overall quality and accessibility of our existing bus network to make it more attractive to current and prospective users.

Currently, there are inconsistencies in both the quality of bus services and the degree to which they are accessible to all users. Where individuals are excluded from accessing the bus due to physical or other barriers, inequalities result. Often, those affected are the most vulnerable in society, such as the elderly, those with disabilities, young people and those on lower incomes.

Enhancing the quality of provision would help make buses more appealing, particularly to non and infrequent users who must be encouraged to use the service more regularly. Improving accessibility would also open-up access to a wider range of people in Shetland, helping to reduce inequalities and ensure that we transition to a decarbonised transport network in an inclusive manner.

This theme therefore explores options to enhance the quality and accessibility of our bus network. A range of means are possible, including enhancements to waiting facilities and vehicles; improved information both prior to and during the journey; and enhanced ticketing options.

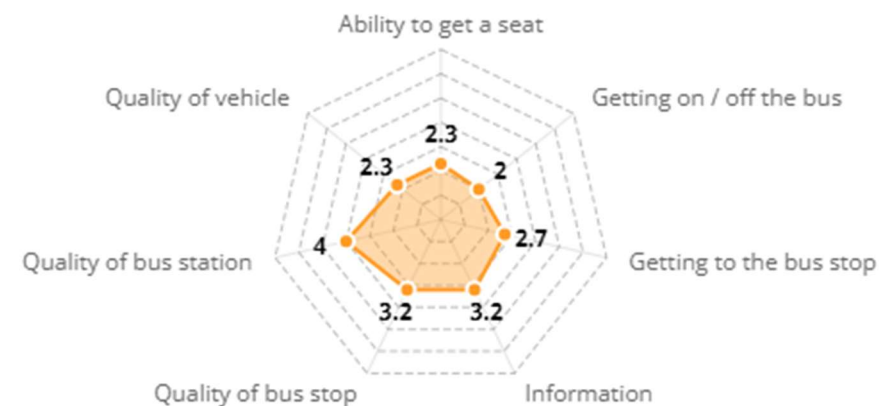
7.2 What problems are we setting out to address?

In the engagement undertaken to inform the development of the RTS, a range of issues with the quality and accessibility of our bus services was identified.

In terms of waiting facilities, 31% of respondents to the RTS survey indicated that they were dissatisfied with **facilities at Viking Bus Station** and 20% were dissatisfied with the **quality of bus stops** more generally. Overall, these aspects scored 4 and 3.2 respectively on a scale where 1 is equal to 'very satisfied' and 7 is equal to 'very dissatisfied'. Comments on these aspects were also provided in the open text survey responses:

"There needs to be a proper waiting room at Viking Bus Station".

"Shocking state of bus shelters / no waiting room or toilets at bus station".



Average levels of satisfaction with different aspects of Shetland bus services where 1= Very satisfied and 7 = Very dissatisfied (Source: Internal Transport Survey, figure made with Livegap Charts)

While there was previously a waiting room at Viking Bus Station, this facility was sold by the Council and converted by the new owners into a café and there is now only outside seating which is only partly sheltered. The lack of waiting facilities can be a particular deterrent to bus travel for older people, people with disabilities, children and those on lower incomes (who may not be able to afford to pay for refreshments and wait in a café), particularly during the winter months. The issue is further heightened because of the relatively low frequency of bus services, meaning that bus users can have a longer period of time than they require in Lerwick. This was reflected in the open text responses to the survey:

"Yell needs more than one bus a day to and from Lerwick. When you've travelled from North Yell to a hospital appointment, it is a very long wait on a winter day (with no access to an indoor waiting room) for the return bus!"

Comments about the lack of appropriate infrastructure at bus stops in rural areas were also received during the consultation. Stakeholders noted that there is a lack of shelter / seating at many rural bus stops, which acts as a deterrent given the often inclement weather in Shetland. In addition, where shelter / seating is provided, it was noted that it often does not meet accessibility standards, meaning that certain groups in our society are unable to access these facilities. Similarly, it was highlighted that there is a lack of footways / dropped kerbs at many stops which physically prevents access for some individuals. The varying quality of onboard facilities on buses was also identified as an issue,

particularly with respect to disabled facilities. As noted in Chapter 4, a high proportion of services are operated with minibus vehicles for which current accessibility regulations are less stringent and, as such, many are not suitable for those with reduced mobility:

“Disabled provision varies. Some of the older design buses have smaller spaces for wheelchairs or the poles are in the way which makes it difficult”.

“Accessibility of smaller services is an issue as I cannot take my family member due to the bus being inaccessible to wheelchair users”.

“Very few of the feeder bus services are accessible – on some of them, the driver has to take out the back seat. There are quite a lot of routes that disabled users cannot get on”.

In addition to physical barriers, the requirements inherent in undertaking independent travel via public transport can also pose challenges for particular groups in our society, such as those with sensory and cognitive impairments. In order to widen access and reduce transport inequalities, it is therefore vital that the needs of all users are considered when we are developing and designing the bus service.

Issues were also identified with the available **information** on public transport services, both prior to, and during the journey. A range of problems was identified, including bus timetables being too difficult to interpret; information being inaccessible for some protected characteristics groups, such as those with visual, hearing, or cognitive impairments; a lack of awareness of ZetTrans’ travel App; there being no journey planner on the App and a lack of ‘live tracker’ information both within the App and at ferry terminals / bus stops. These issues, along with the lack of a consistent brand for buses in Shetland, were felt to be a particular deterrent to tourists and infrequent users using the bus service:

“It would be good if greater consideration was given to visitors using the [bus] service... there [should be] a system in place to announce the next stop. Dial-a-ride service requires to be more visitor friendly also, it would benefit from an online booking facility and greater and more clear advertising that this must be done in advance. Feeder services require to show clearly on timetables at which point change is made, even having that stop in bold would help... consider having printed route maps which can be affixed to each bus stop showing the route map with large maps of all Shetland made for display at the Viking Bus stance, Holmsgarth Ferry Terminal, Sumburgh Airport and Visit Scotland offices.”

“Consideration should be given at every point in planning a service how someone who has never seen / used [the service] before can understand it... invest in a well written website which is ... user-friendly, ...easy-to-use online booking systems which are visitor friendly, and present the information to show how travel can be integrated”.

7.3 What sort of things could we do to address these problems?

To ensure we transition to a low carbon transport network in an equitable manner, it is important that our bus network is **accessible to all users**. In terms of physical access, there is a need to implement improvements at both bus stops and on vehicles in order to enable easy boarding and alighting.

At bus stops, improvements may include the provision of dropped kerbs; new sections of footway; accessible shelters; and appropriate seating. Enhancing **personal security** at bus stops and during journeys may also be important in some locations. This is particularly crucial in encouraging bus use amongst certain vulnerable groups in our society who may feel uncomfortable travelling by bus (e.g., women, disabled users, young people, older people, etc). Providing lighting and / or CCTV may assist in alleviating concerns although consideration would need to be given as to what is appropriate, particularly in rural locations where excessive lighting should be avoided due its potential to cause environmental and amenity disturbance.

As set out in Chapter 4, most of our bus services start and / or terminate at **Viking Bus Station** in Lerwick and bus frequency is generally low. In addition, in some locations, the time between the first and last bus serving each stop can be too long i.e., meaning that individuals must spend longer than they wish in Lerwick due to the frequency of return services (see Chapter 8 for further discussion on this). The provision of appropriate waiting and other facilities at Viking Bus Station, such as seating and accessible toilet facilities, and potentially left luggage and refreshment options, as well as wider improvements in accessibility would make bus use more accessible to a wider range of users and enhance overall journey quality. In some locations, there may also be merit in delivering mobility hubs, physical spaces that combine public transport interchange with active travel facilities, shared mobility solutions, and other ancillary services in order to facilitate and encourage multi-modal active and sustainable journeys.



In designing and delivering new bus stop infrastructure and facilities both in Lerwick and more widely, it is important to follow the most **up-to-date equalities design guidance**. This may include, for example, *Inclusive Mobility*, the Department for Transport's best practice design guidance on access to pedestrian and transport infrastructure³⁸. We would also work with the Council and other relevant delivery partners and actively **engage the local community**. This would include consulting with interest groups focused on improving disabled access, as well as users of the transport environment, so that the day-to-day needs and experiences of all members of our society are considered and incorporated. As well as the local community, it would also be important to consult with and engage the council planning, environment and transport services, as well as network maintenance teams, at the earliest stage of the design process.

³⁸ <https://www.gov.uk/government/publications/inclusive-mobility-making-transport-accessible-for-passengers-and-pedestrians>

In addition to improving our bus stops and stations, it would also be beneficial to improve the overall **quality and accessibility of vehicles** used across our network. In line with our aspirations to transition to a low carbon economy we will explore opportunities to provide low or zero emission vehicles (see Chapter 11) and, to help encourage cycling, we will consider the potential of enabling the carriage of bikes on buses (see Chapter 6) Over the lifetime of the Strategy, it is also possible that connected autonomous vehicles (CAV)³⁹ will increasingly be used as part of the bus network (see Chapter 12 for further information on CAVs).

In order to support more vulnerable groups to use our bus services, there would be benefit in exploring the potential of providing **enhanced staff training and a chaperoning service**. The delivery of new flexible Demand Responsive Transport (DRT) services may also provide opportunities to widen access in this respect, with DRT often seen as a less daunting travel option compared to more traditional fixed route bus services. Whilst there are several existing DRT services in Shetland, the increasing availability of 'enhanced' DRT solutions, which use app-based booking systems, direct messaging, dynamic vehicle scheduling, and GPS vehicle tracking, could present opportunities to enhance and further expand DRT options. These systems could conceivably provide a better, more flexible service at a lower cost to ZetTrans than traditional fixed timetable contracted services. The delivery of DRT supported by smart technology (as well as Mobility as a Service - see Chapter 12) is identified as a recommendation which would provide benefits for Shetland within STPR2 and such solutions have been trialed in other rural locations as an alternative to traditional scheduled bus services (see Ready2Go Around Inverurie case study example). While DRT offers opportunities, it will also be important that the introduction of any new DRT service is properly managed so as to avoid any potential negative impacts on existing transport services, including taxi operators.

Where scheduled bus services and DRT services are not viable, taxis may provide the only alternative to ensure people have access to the transport that they require. The number of wheelchair accessible taxis in Shetland is also relatively low as previously noted. In addition, during the consultation undertaken to inform the 'Case for Change', it was noted that there is currently no text-based booking option for those with hearing difficulties. To ensure all users are able to

³⁹ An autonomous vehicle is one that is able to operate and perform functions without human intervention while connected vehicle technologies allow vehicles to talk to each other and to the infrastructure around them.

access services, opportunities to **enhance our taxi provision and provide more accessible options** could be explored.

It is also essential that everyone has access to the **information** they need to be able to plan and make journeys. To be accessible to all, travel planning information should be available in a wider range of formats, including online sources, dedicated apps, traditional paper copies, large print, braille and audio. To encourage further public transport use, developing an integrated transport network map with bus, ferry and air routes and DRT operating areas could significantly improve the awareness of service operation and the possible connectional opportunities

Options to enhance our app and the potential of providing real time information at Viking Bus Station and selected bus stops / ferry terminals could also be explored. In addition, it would be beneficial to ensure that easy-to-read and accessible information on travel options is displayed at all transport interchanges / mobility hubs as well as high quality wayfinding information on the network itself.

Case Study: Ready2Go Around Inverurie⁴⁰

Ready2Go Around Inverurie was an 'enhanced' DRT bus service covering Inverurie and the surrounding area. The service was introduced by Aberdeenshire Council in August 2021 on a pilot basis and replaced a number of scheduled bus routes. Ready2Go offered a flexible service that allowed users to travel when it was convenient for them and unlike the council's other DRT schemes, customers were able to book Ready2Go at any time via a *Ready2Go App* downloadable via the Apple or Google Play Store. An evaluation of the pilot project suggested that while the cost to the council of providing the service was high, bus patronage had increased as a result of its introduction and the service had contributed to a range of positive social and economic benefits, including reduced social isolation / loneliness; improved personal independence and higher levels of participation amongst some protected characteristic groups who previously found traditional bus travel challenging (including people with autism, learning difficulties, and young people more generally); reduced unemployment; and physical and mental health benefits.



Given that ZetTrans' bus services are entirely subsidised and considering the self-contained nature of transport provision within Shetland, there would also be a case for exploring the development of a **single and easily recognisable brand for travel** and transport across the archipelago. This branding could be used across our public transport network, including on all bus and bring consistency and ensure quick identification for passengers. Consistent branding could also be used across all travel information and timetables, including the ZetTrans Travel App, other web-based sources and paper-based information.

Our public transport network should also be **affordable for all**. Opportunities could therefore be explored to provide more affordable fares for those groups most in need. This could take the form of targeted reductions in fares; redefining the tariff structures; or indeed free passenger fares. At present, all public transport journeys in Shetland are payable separately; there is no integrated ticketing between modes (e.g., bus and ferry) or discounts for multi-leg journeys. To make journeys which involve interchange more convenient and less costly, the potential of providing multi route ticket acceptance and reduced end-to-end fares for journeys entailing more than one leg could be examined. Enhancements to integrated contactless ticketing, or smartcard integrated ticketing could be developed and emerging opportunities around Mobility as a Service (MaaS) could also be explored (See Chapter 12). Integrated contactless ticketing (with fare capping) is easy for passengers to use without requiring download of an app or the pre-purchase of tickets and could help increase use by tourists and infrequent users.

7.4 RTS Policies

14. Our bus network should be fully accessible to all.
15. Our bus network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors
16. A minimum level of facilities should be defined and provided at our bus station and stops, ferry terminals, and airfields and airports
17. Our bus network should provide a high quality onboard experience
18. Public transport (bus, air, and ferry) information should be fully accessible and provided in a variety of formats to meet the specific needs of all users
19. Our public transport network (bus, air, and ferry) should aim to be affordable for all

⁴⁰ It is noted that Ready2Go Around Inverurie was a pilot scheme and is no longer in operation

8: Extending Bus Connectivity



8. Extending bus connectivity

8.1 What is this theme?

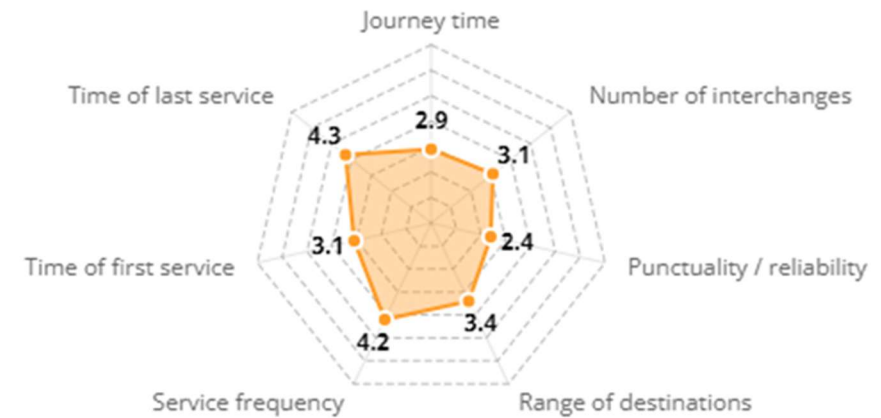
Currently travelling by bus is not a viable option for some journeys in Shetland due to a lack of, or too few bus connections, inconvenient timetabling and / or excessively long journey times, particularly in comparison to car travel. This means that people without access to a car may be unable to make the journeys they would wish to, whilst others have to travel by car, and may be forced to own one, even if they would prefer not to.

Providing bus services in rural areas, where population density is low, is inherently challenging. Low passenger numbers makes provision costly, and it is difficult to provide services which can directly compete with the convenience and journey times provided by the private car. However, to address inequalities and realise our aspirations to decarbonise transport in Shetland, it is essential that travelling via public transport becomes a viable and more attractive option for a larger proportion of journeys.

This theme therefore explores options designed to enhance bus service connectivity, including improving bus frequency; extending the operating hours of existing bus services; providing additional bus routes (including flexible DRT); enhancing public transport integration; and providing discounted taxi journeys for selected journeys where public transport options are otherwise unviable.

8.2 What problems are we setting out to address?

As discussed in Chapter 4, bus frequency in Shetland is generally low and, in some locations, the length of time between the first and last buses serving each stop can be (i) very short i.e., not sufficient to enable a full 09:00-17:00 working day or an afternoon in Lerwick; or (ii) too long i.e., meaning that individuals must spend a full day at their destination when they would like to return earlier. These issues were identified during the data analysis undertaken to inform the RTS and are shown graphically in Chapter 4. In the RTS public survey, these issues were also raised, with the 'time of the last bus service' and 'service frequency' achieving the lowest levels of satisfaction with average scores of 4.3 and 4.2 respectively on a scale where 1= very satisfied and 7 = very dissatisfied (see figure overleaf). In addition, of those who said there were things about the bus service which prevented them using it more frequently, 66% identified 'service frequency' and 49% identified 'time of the last service' as major issues.



Average levels of satisfaction with different aspects of Shetland bus services where 1= Very satisfied and 7 = Very dissatisfied (Source: Internal Transport Survey, figure made with Livegap Charts)

Comments on these aspects were also provided in the open text survey responses, with many respondents noting that **low service frequency** makes travel by bus impractical. It was noted that the **limited number of services** running to / from some **locations** (e.g., just two a day) places a restriction on activities with this meaning that those travelling by bus often have either too long or too short a time at their destination.

"I think the main issue is frequency of buses and the range of times available. I know some areas only have a bus in the morning and one in the evening. It does not offer enough flexibility to encourage people to choose the bus unless they do not have another option".

"[bus services are] infrequent...the first and last services are fine if you live near a main bus route, but planning is difficult when there is only a bus ever 3-4 hours within that. It probably is not possible at all if you do not live near a bus route".

"If you get a bus from very remote areas you have to be in town all day, which puts people off social travel".

"Currently I can get the bus to town around 10am with a feeder service. However, I cannot get back until the 5.10pm service in the late afternoon. This makes for a long day!"

The lack of bus services at certain times of day has a particular impact on those who do not own or have access to a car and therefore have more limited alternative means of transport. This too was reflected in the open text survey responses:

"I would like to be able to travel around more easily and more frequently. Losing my licence on health grounds has resulted in me becoming very isolated and my mental health has suffered... I cannot access any hairdressing or dental service"

"Young people are hardest hit by the lack of public transport services. They are either too young to drive or cannot afford a car. Availability of frequent, cheap bus services which do not take an hour to make a 20-minute car journey would give our young people much more freedom to participate in sports, meet with friends etc without relying on parents for transportation".

Respondents also noted that there is a **lack of buses in the evening** which limits access to social activities. Several comments were also made about the **bus service not catering for those working shifts** which fall outside of the standard 09:00 – 17:00 work pattern:

"I would use the bus more to go to events / nights out in Lerwick if there was a later return bus both during the week and at weekends".

"[The] bus service timetable is very restrictive as [it is] poor in terms of frequency of services and pretty non-existent in evenings, which means it is not currently a sustainable alternative to travel by car".

"[The] service is only of use if you work 09:00-17:00. I work shifts and either cannot get to work on time and / or cannot get home using public transport. It is also cheaper to take the car if there are two or more of you travelling".

The **need to travel into Lerwick** for onward travel and the resultant long journey times was also identified as an issue:

"Very hard to get anywhere apart from to Lerwick, without going via Lerwick. This makes it impossible not to use a car".

"None of the bus services can get me to and from work as these are all focused on people going to and from Lerwick".

The **lack of integration** with ferry and air services was also identified as an issue. Whilst it was recognised that there is a bus connecting to Sumburgh

Airport, a number of comments were made about the poor integration with flight check-in / arrival times. As noted in Chapter 4, this is in part because making the corresponding changes to the bus times when airlines change the flight times is not always straightforward and / or can take time to implement.

"I would be delighted to use a bus that got me to the ferry at commuter times (in my case 07:00 and 18:00), but there is no mainland service that I could catch that fits in with the time I work and/or time/place I could catch".

"Buses to the airport take too long from Lerwick and are too infrequent and do not always link in well with plane departures and arrival times".

"Better integration between the Sumburgh bus and flight check in / arrival times would encourage me to use the bus rather than a car"



8.3 What sort of things could we do to address these problems?

In order to decarbonise transport in Shetland and provide sustainable, affordable access for all, bus services will need to play a pivotal role.

A combination of **new bus services** or **increased frequencies** on existing bus services could open up new travel opportunities, enhance access to key services and help to reduce car dependency. It is important that services are responsive to

the needs of our population and there may be a requirement for services to / from locations other than Lerwick and / or **later or earlier services** in some instances (e.g., for leisure purposes or for access to shift related employment). There are also parts of Shetland that could benefit from additional **direct or express / limited stop bus services** to help reduce journey times and make public transport more appealing in comparison to car travel.

Enhancing **integration between** bus services (e.g., between feeder and mainline services) and between different transport modes (e.g., bus and ferry, bus and air, and bus and cycling / walking/ wheeling) will also be important in encouraging a shift towards more sustainable transport options. As noted in Chapter 4, very few of our inter-island ferry services are met with a connecting bus service, with the result that car travel is often the only viable option for users. Long wait times between bus services can also be a significant impediment to bus use. Providing new connecting services and reducing the wait times between existing routes would make public transport more attractive for a wider range of users and journeys. The availability of integrated ticketing options (see Chapter 7) as well as improved waiting facilities (see Chapter 7), would also enhance the appeal of public transport and help encourage higher levels of use.

In some locations, it may not be viable to provide scheduled bus services due to low demand and the provision of **flexible DRT** or 'enhanced' DRT services⁴¹ may be more appropriate (see Chapter 7 for brief discussion on DRT solutions and Case Study example). The Transport (Scotland) Act 2019 provides new powers in relation to buses, including the ability to introduce Bus Services Improvement Partnerships, local franchising and new/extended powers for local transport authorities to provide bus services to meet social needs. The application of these powers may be appropriate in order to assist in delivering the enhancements to the bus network required and could be explored as part of the suite of potential interventions to improve public transport provision.

It is not always feasible to provide scheduled bus services or DRT to meet the needs of all users. In locations where bus services are not viable, people will be dependent on private cars and / or taxi services, with the latter the only option for those unable to drive due to e.g., age, disability, or generally not having a license. Such options carry high costs and can lead to restricted access where transport services become unaffordable. In such instances, **discounted taxi journeys** may

provide the only viable alternative to ensure people have access to affordable transport and are not unfairly disadvantaged from a transport perspective.

8.4 RTS Policies

20. We will continue to support and develop the delivery of a financially and operationally sustainable bus network in Shetland (including staffing and succession planning) that contributes to the delivery of the Council's Climate Change Strategy
21. We will aim to widen public transport connectivity to key locations and transport interchanges in order to provide new travel options and alternatives to the private car
22. We support measures to reduce social exclusion for those without access to a car
23. We support the principle of new models of rural public transport provision, including enhanced Demand Responsive Transport
24. We will explore the application of bus related powers granted through the Transport (Scotland) Act 2019 to support the delivery of an enhanced bus network in Shetland

⁴¹ Enhanced DRT solutions use app based booking systems, direct messaging, dynamic vehicle scheduling and GPS vehicle tracking

9: Connecting our Islands



9. Connecting our islands

9.1 What is this theme?

The inter-island air and ferry services play a fundamental role in connecting our island communities to Mainland Shetland and, in some cases, each other. Indeed, over many years, these services have shaped the economies and societies of the isles, as well as influencing how public services are delivered to them. These services fulfil a key role in addressing disadvantage for island communities.

Our **ferry network** is, for the most part, built around the principle of operating over the shortest sea crossing using broadly standardised infrastructure. Benchmarked against elsewhere in Scotland, we typically operate more frequent services over a longer operating day. However, this means that island economies and residents' lives have developed around this connectivity meaning that the other islands and Mainland are now closely interlinked and interdependent. Indeed, given this level of social and economic linkage, despite continuing to offer comparatively high levels of ferry services, the barrier presented by the sea crossing is, paradoxically, more significant for Shetland than for some less well-connected islands in Scotland. Indeed, in certain communities, there is a strong, and long-standing desire amongst some for the replacement of ferries with fixed links (tunnels or bridges between islands).

The ferry routes to **Fair Isle, Foula, Papa Stour and Skerries** are focused more on providing essential personal and supply-chain connectivity to Mainland than high-volume commuting and day-to-day opportunities like the other routes. The needs of each of these islands varies in turn and their ferry services are carefully adapted to meet their local circumstances.

Internal air services to Fair Isle and Foula operate in a very challenging environment, where weather and limited daylight hours in winter combine with challenging topography to constrain the level of service that can be offered. Nonetheless, they play a critical role in facilitating passenger travel, supplementing the supply-chain role largely delivered by the ferry.

This theme recognises the critical role played by our inter-island transport services, and the challenges faced by each of our individual island communities in working around the connections offered. It explores how the connectivity and cost barriers faced by island communities can be reduced or overcome entirely.

9.2 What problems are we setting out to address?

As alluded to in the introductory section, the type and scale of problems on the internal ferry network vary by route type. The engagement undertaken to inform the development of the RTS, together with the significant body of recent work on the inter-island air and ferry services has provided a clear indication of the problems of greatest magnitude.

Ferry – short, higher-volume routes (Bluemull Sound, Bressay, Whalsay and Yell)

The key **weekday** issue on most of these routes is **vehicular capacity** at peak commuting times (particularly Whalsay and Bluemull Sound) and when the service reduces to a single vessel for weekly drills and maintenance. Modest growth in demand has been exacerbated by the increased physical size of vehicles, meaning that most of the Shetland fleet can actually carry fewer cars than their published capacity suggests. Whilst only a handful of sailings per day will generally be full, they are typically in a concentrated period and can act as a significant barrier to travel for e.g., employment. For example, on the Symbister – Laxo / Vidlin route, utilisation analysis highlights that the vehicle deck on the 07:50 departure from Symbister (the main commuter service) is routinely full. The next ferry is not until 08:30 and thus too late for an 09:00 start to the working day in Lerwick. On Bluemull Sound, the triangular service means that capacity can be capped by demand on a single leg, even if there is space on the preceding or following leg. This issue of vehicular capacity came through strongly in the open text responses to the survey.

"I would like to move to Whalsay but the lack of availability of spaces on the ferry at peak times and weekends prevents us from visiting as often as we like and makes us doubt moving our family to the island.."

A more recent but very prominent issue on these routes is **weekend service frequency (particularly Saturday)**. Until 2013, a two-vessel service operated on the Bluemull Sound, Whalsay and Yell Sound routes, but this was reduced to a single vessel service given the urgent imperative for spending reductions across the Council. However, island residents had built their lives around these services and the loss of the second vessel on a Saturday in particular has significantly inhibited travel opportunities. By way of example, between 2012 and 2014, Saturday sailings on the Whalsay route were reduced by 37% and Sunday sailings by 20%. This also exacerbated weekend vehicle deck capacity issues, with cars per sailing on that route increasing by 25% on a Saturday and 30% on a

Sunday. The level of reliable connectivity provided on a Saturday in particular significantly constrains other island residents' activities on Mainland.

"I live on Whalsay and the ferry travel at weekends is pathetic, especially for people travelling to sporting events with children".

The **cost of fares** is also a recurring issue for island residents. Whilst Shetland internal ferry fares are low when benchmarked across other routes in Scotland, Shetland is a very centralised economy and there is therefore a need to travel more frequently for employment, leisure, business, health and other reasons than in other island contexts. Moreover, people do not make relative comparisons of this nature, rather focus on the absolute level of fares around which they have built their lives. With the cost of living on an island already higher than Shetland's mainland (and significantly higher than the Scottish mainland), cost of travel is a 'push' factor in out-migration, and one that may be exacerbated by recent energy, fuel and general inflation. It is also an issue for equalities, in particular in addressing the inequalities of outcome caused by socio-economic disadvantage and generally for disadvantage of island communities compared with other locations.

"Cost is the biggest issue...the resident discount helps but it is still very costly [to travel by ferry], especially with surprise internal ferry trips."

"Ferry fares are so expensive - there needs to be a better costing for island residents, who need the ferry to get to work, school, education and training. It seems very unfair to cost in an expensive car ferry fare to go for a medical appointment or to access leisure activities"

Several aspects of **journey quality**, including the presentation of timetables, booking, public transport integration and landside facilities such as toilets and waiting rooms were highlighted as problems in the 'Case for Change'. Of particular importance however is **disabled access** to several of the older Shetland vessels, which are not step-free. Indeed, on several vessels, the passenger accommodation is below the waterline.

Ferry – infrequent, lower-volume routes (Fair Isle, Foula, Papa Stour and Skerries)

The problems experienced on the routes to Fair Isle, Foula, Papa Stour and Skerries vary significantly from the short, high-volume routes. A key issue is the **number of sailing days**, with none of these islands having a daily service. This generally works well for **Fair Isle and Foula** where on-island human resource is

limited and the air service is the main mode of travel, with the ferry service fulfilling a largely supply-chain role. Overall though, weekend connectivity for these islands is limited to one summer Saturday return flight per week.

Wednesday (winter) and Tuesdays and Thursdays (summer) are non-sailing days for Skerries and Tuesday and Thursday (winter and summer) are non-sailing days for **Papa Stour**, and these islands no longer have a compensating air service. This limits travel opportunities and can lead to stranding on Mainland for island residents or on Papa Stour / Skerries for visitors for up to two nights in the event of a ferry cancellation. Mainland contractors in particular will price these risks in when visiting these two islands, further increasing the cost of living.



Given the long distances across open seas for three of these four routes (Papa Stour being the exception), there is a strong preference for **island-based vessels**, providing the flexibility to work around weather windows and community needs. Both Fair Isle and Foula have island-based vessels, but Skerries does not, and this is seen as a constraint on the island's development. Where vessels are island-based, there is an ongoing challenge in maintaining crew numbers and appropriate certification – one of the means of doing this is to code vessels as workboats, which limits them to carrying 12 passengers.



Reliability is of course an issue when using comparatively small vessels on long open sea crossings. This heightens the need for island-based vessels which can be operated on a flexible basis.

All of the challenges with operating services combine to limit the **available time on Shetland mainland and on-island each day and week**. Personal travel, supply-chains and service delivery have evolved around the available travel connections, but it nonetheless remains the case that undertaking a trip from one of these four islands requires planning and can be time consuming, expensive and subject to short notice delay and cancellation.

Taking the ferry network as whole, the Council's Carbon Management Plan estimated that the inter-island ferry fleet accounts for 47% of total Council energy usage.⁴² As the fleet also operates entirely on hydrocarbon-based fuels, the

ferry service is therefore a significant net emitter of greenhouse gas emissions.

There are a range of **other route specific problems** on both the short, high-volume routes and the infrequent, low volume routes, but addressing these would be a matter for a business case rather than a more systematic review like an RTS.

Inter-island air service

As noted, the inter-island air service is constrained by the operating environment, layered on top of which are the strict rules regulating commercial aviation, including e.g., pilot hours, aircraft maintenance schedules, available ground crew on island airstrips, Visual Flight Rules (VFR) operating procedures and a range of other parameters which govern take-off, in-flight operations and landing.

The internal air services are operated with much valued flexibility, working around weather windows where practicable. However, even with such flexibility, flights are **regularly cancelled or operated late or early** where this is possible. They are therefore difficult to plan around, and **winter connectivity** in particular can be a significant problem for Fair Isle and Foula. For example, the Fair Isle OBC noted that, in 2017, there was neither a flight nor ferry connection to / from the island on 61% of days in that year.⁴³

The Britten-Norman Islander aircraft are also limited to 8-9 passengers and thus there is a firm cap on daily **capacity**. It is also worth noting that **disabled access** to the aircraft is challenging, which compounds the inadequacy of disabled access and facilities on the Fair Isle and Foula ferries.

Overall, the constraints with the air service, while difficult to overcome, combine with the limited ferry service to **limit travel opportunities for island residents**. This particularly affects **secondary school children** who leave the island for a minimum three weeks at a time, and sometimes longer if their flights on their designated return days are disrupted.

⁴² Shetland Islands Council Carbon Management Strategy Carbon Management Plan 2015 – 2020
April 2015

⁴³ Fair Isle Outline Business Case (ZetTrans, 2019), p. 50.

9.2 What sort of things could we do to address these problems?

Internal ferry services

On the short, high-volume routes, the issues of capacity and connectivity can be resolved in several ways in the short-term:

- Where there are **two vessels on a route** (i.e., Bluemull Sound, Whalsay and Yell Sounds), **both vessels could be in service more often**. The immediate step would be to restore the pre-2013 service reductions timetables, but this could ultimately be scaled-up to continuous two-vessel operation.
- The ferry service could be progressively scaled-up to **operate over a 24-hour period**.

Whilst each of these increments would improve overall connectivity, it is important to recognise that peak periods of demand are very often concentrated and such measures may not address capacity problems except where scaling-up to a two-vessel service at the weekend. There is therefore a case for **considering how demand could be managed**, and in particular how those who currently take their car on the ferry could be encouraged or incentivised not to do so.

The above notwithstanding, it may simply be the case that peak demand cannot be accommodated on certain routes. This presents a clear strategic choice in future route planning between **catering for larger or more vessels** (potentially operating on a **shorter sea crossing** where practical) or moving towards a **fixed link**. From a cost of travel perspective, it is possible to **reduce fares and / or reform the structure of the fares system**. However, there are significant complexities in how such a reduction could best be introduced as well as funding and potential capacity implications (given increased travel volumes) which would have to be thought through.

On the infrequent, low volume routes, the case for operating **additional sailings** could be considered, where these are wanted by the community. Intrinsically linked to this however is the **basing (or continued basing) of vessels in these islands** and investing in crew recruitment and training to ensure the continuation of this practice. This would ensure improved **flexibility** and **reliability** for current or future additional services.

It is a given that any future vessels will be fully Equalities Act 2010 complaint, but there is a wider case for **converting the two remaining Lo-Lo routes (Fair Isle**

and Foula) to Ro-Ro if this is technically practicable, accepting that this could be difficult to do in Foula.

Over the lifetime of the RTS, it will be necessary to **decarbonise the fleet**, either through the **progressive introduction of new low or zero emission vessels** or the **retrofitting of current vessels** where this a realistic proposition. This is discussed further in Chapter 11.

Internal air services

The internal air services were subject to an extensive Outline Business Case in 2018 which defined the future form and operation of the network. The OBC set out the significant complexities of expanding the air service, which will always be constrained by natural topographical and climactic conditions and island-based human resources.

Options for the air service therefore relate to relatively minor increments such as using the **second aircraft to operate additional flights** where there is demand and conditions permit; and potentially operating **additional Saturday services** and / or introducing **Sunday services** where resources permit.

9.3 RTS Policies

25. Our internal ferry network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors
26. We are committed to contributing to the sustainability of our island communities by reducing or removing the cost, capacity and connectivity barriers to personal and business travel, the delivery of public services and the movement of goods between our islands
27. We commit to ensuring the maintenance of the ferry fleet and associated infrastructure and to invest in these assets and crews to a level which ensures a continuing reliable and resilient service
28. We commit to ensuring the maintenance of the inter-island air service to at least its current level and to explore opportunities to improve the service where necessary and deliverable. As part of developing and implementing this policy, we will take cognisance of the activities being undertaken by the Sustainable Aviation Test Environment (SATE) located in Orkney
29. We will progress the feasibility and case for fixed links and act on the conclusions as part of our future wider inter-island connectivity planning across all modes of travel. Any fixed link should be implemented in



conjunction with a high-quality public transport offer, which incorporates provision for cyclists.

30. We will support island-based vessels and crews where safe, deliverable and practicable
31. We will ensure that all future ferry and aircraft replacement programmes will contribute towards the delivery of the Council's Climate Change Strategy
32. Inter-island services will move towards being fully accessible taking account of the needs of all users

10: Enhancing our External Connections and Supply Chain



10. Enhancing our external connections and supply chain

10.1 What is this theme?

Our air and ferry connections to the Scottish mainland are pivotal to the functioning of Shetland's economy and society. As well as facilitating travel for business, health, education, tourism and labour, they are also a critical link in our high-value supply-chain. Both the ferry and air services provided at present represent a compromise, balancing Shetland's needs with:

- Commercial imperatives and the operation of an extensive route network (air services)
- Available assets, public funding and the needs of our neighbours in the Orkney Islands (ferries).

Shetland is exceptional amongst the wider publicly funded **ferry services** in Scotland. Firstly, our route to Aberdeen is by some distance the longest in Scotland and the only one which operates only overnight, making some form of sleeping provision essential. Secondly, Shetland is one of the few islands in Scotland (Islay and the Orkney Islands being the others) where there are significant outbound freight flows, driven by our buoyant aquaculture and livestock sectors. These flows are on occasions matched by the inbound project traffic (e.g., equipment for large-scale construction projects) required to maintain our successful economy. These two aspects of the service put significant pressure on capacity and require the operator of NorthLink Ferries, to balance an array of competing and very different demands.

The **air services** operated by Loganair provide access to Aberdeen, Edinburgh and Glasgow, allowing both day return trips from Shetland to the Scottish mainland and inter-lining onto connecting services provided by Loganair and their extensive range of codeshare partners. Air travel therefore serves a largely distinct market and does so within a wider Loganair route network across the UK, Ireland, Denmark, Norway and the Isle of Man.

Whilst this theme recognises the critical connections provided by our external air and ferry services, it also acknowledges that **neither ZetTrans nor Shetland Islands Council directly control these services**. It therefore sets out the

outcomes that we would like to see delivered over the period of the RTS, which will inform our future dialogue the Scottish Government and industry partners.

10.2 What problems are we setting out to address?

The type and scale of problems experienced by Shetland residents and visitors when using the external air and ferry services differ significantly between air and ferry, reflecting the different markets that they serve and the different form of connectivity provided.

Ferry services

The overwhelming issue of concern from a resident perspective is the **cost of travel**. For most people travelling to and from Shetland, the overnight journey means that a sole use cabin (individual or family group) is seen as essential (although a segment of the market will use sleeping pods or purchase a reclining seat). When combined with the passenger fare and potentially a car, a return journey can cost a resident almost **£450** (maximum) in peak season, and this despite the introduction of a 20% reduction in passenger and car fares in June 2018. The equivalent cost for a visitor would be around **£630** (maximum). For context, this compares to a maximum return fare of **£180** on the Oban – Castlebay route, the longest route in the Clyde and Hebrides network. Whilst reduced fares are on offer for travelling outwith peak season or in a lower category of accommodation, the absolute level of fares is a barrier to many Shetland residents making journeys and leisure or business tourists visiting the isles.

“Cost of travel and vehicle fares are far too high for a lifeline service”.

“The cost of getting off of the island is a major factor. Travelling as a family is too expensive and has resulted in us not leaving the island very frequently at all. I feel my children are missing out on a number of beneficial experiences and opportunities as a result.”

Passenger **capacity** is rarely an issue, but vehicle deck space and cabin availability are often under pressure. Overall, 46% of respondents to the 'External Travel Survey' undertaken to inform the RTS, stated that they would only travel if they could book both a sole use cabin **and** a space for their vehicle. The inability to get one or either is therefore a deterrent to, or block on travel. Low cabin occupancy can be an issue, where all cabins are booked, but bed occupancy is relatively low. This has been exacerbated post COVID-19 where

hostel style beds in cabins which are shared with strangers are no longer available.



Managing capacity is challenging for the operator, particularly when set against trend growth in demand. Whilst urgent travel is almost always accommodated, the typical 'booking to travel' period for Shetland residents is around six weeks, providing reduced scope for late notice travel. In peak season, visitors can also often book much of the space on the ferry as their journeys tend to be planned further in advance. Tourism is becoming an essential sector in Shetland and thus early booking is advantageous in terms of understanding forward tourism demand, but it also reduces space available for residents.

Capacity issues introduce particular problems for the **freight** industry. Much of the freight moving off of Shetland is high value and time sensitive, a significant proportion of which is being trans-shipped to England or Europe on the same day - securing a space on the vessel is therefore essential. A proportion of space on the passenger ferries is allocated to freight, whilst the two freight vessels offer additional lane meterage. The operator also works closely and successfully with haulage firms and their customers to balance competing demands. Nonetheless, there are occasions where demand exceeds supply and the operator has very

few levers for managing or changing the nature of demand and is thus faced with balancing the competing priorities of different sectors.

"Booking on the boat is becoming difficult... especially at peak times, school holidays, etc".

"Currently huge issue getting cabins and vehicles on boat, availability very poor in recent months (not just school holidays)".

"Please make more room for cars on the ferry and put freight on the freight boat".

The **Aberdeen – Kirkwall / Lerwick timetable** also represents a compromise between different markets including freight, island residents and visitors, and indeed between Orkney and Shetland. In particular, the ferry will leave earlier in both directions on evenings with an Orkney call. This can be unpopular with Shetland residents and businesses as it shortens the working / production day but is an essential trade-off in maintaining the early morning arrival times whilst delivering a valuable service to Orkney.

"The Lerwick to Aberdeen route goes through Orkney too often, resulting in longer journeys and earlier sailings for Shetland crossings and also reduces the numbers of cabins and car space available to Shetland passengers. I do not see the need to have so many journeys via Orkney when they already have several links to the mainland running daily".

"The early sailings on Sundays from Aberdeen home [to Shetland] are a limiting factor for sports groups, this could do with being a 19:00 sailing to improve access for these groups".

In the context of the long and exposed crossing which they operate, the NorthLink vessels are very **reliable**, with only 2.1% (27 sailings) cancelled in 2019, the majority of which were in the winter months. However, the freight vessels are marginally less reliable and much less **punctual** (as they cannot maintain the required service speed in inclement weather). This creates increased demand for travel on the Ro-Pax vessels amongst freight customers, adding to the demand on those sailings.

Air services

Shetland benefits from a well-established air service offered by a highly respected airline which is rooted in Scottish island communities. However, as is common across the airline industry, **services are subject to change at relatively short notice** based on commercial and operational needs and are

always **vulnerable to the wider macroeconomic trends** that periodically affect the aviation industry (e.g., the 2008 financial crises, the COVID-19 collapse in demand etc).

Outwith certainty of supply, the **cost of travel** was the main problem identified when travelling by air to and from Shetland. Air fares are set on a commercial basis, although island residents do benefit from the Air Discount Scheme (although it should be noted that island businesses do not). Shetland is overall a relatively low volume market served by comparatively small aircraft, which means that the absolute level of fares can be prohibitive, particularly for short notice travel and at peak times.

“Travel outwith Shetland by both air and sea needs to be much more affordable. As islanders, it is a necessary part of our lives to be able to travel to the UK mainland for any number of reasons. So often it feels like we are 'penalised' for when we choose to travel by having to pay such high fares - for example, booking a flight at short notice, or being subjected to higher fares when choosing to travel in 'peak' season.”



The comparatively small aircraft used mean that the **ability to book a seat** can on occasions also be a problem, particularly when booking at short notice. Whilst there is no formal published measure of flight capacity utilisation and latent demand, two thirds of respondents to the resident survey noted that they could not book on their preferred flight on at least one occasion in 2019. Approximately 1-in-7 respondents noted that this was a frequent occurrence.

As Loganair operate a fleet of aircraft across a network of routes, there is always a **risk of 'imported delay'** on services to Shetland, for example due to a flight being late taking off on its previous journey. This compounds any regular delays associated with e.g., weather, mechanical problems etc. Whilst data on reliability are incomplete, there is evidence both through flight data websites and the resident survey that reliability (both cancellations and punctuality) can be an issue for those travelling to and from Shetland by air.

“We need more reliable flights. It is far too likely that you will be delayed / cancelled by fog”.

10.3 What sort of things could we do to address these problems?

As noted at the outset of this theme, neither ZetTrans nor the Council can directly affect any element of the external air or ferry services. Our role is to promote community interests and aspirations to the respective operators and, in the context of the ferry service, the Scottish Government as the party which sets the Northern Isles Ferry Services Public Service Contract. The 'options' presented below therefore set out the types of investments and initiatives that we would like to see considered further.

Ferry services

We acknowledge at the outset the challenges which face NorthLink Ferries in terms of balancing the competing needs of different markets with a fixed asset base and tightly defined contract. The operator has worked closely with us, the Council and local businesses and stakeholders to balance different needs and maximise the benefit of these crucial services to the islands. We also acknowledge that the Northern Isles Ferry Services STAG Appraisal (2016) clearly highlighted the limitations of what could be achieved with current assets whilst still maintaining a reliable service.

First and foremost therefore, it is evident that a **vessel replacement plan for the current NorthLink vessels** must be identified through the ongoing Islands Connectivity Plan being undertaken by Transport Scotland. The proposal to introduce new **'freight plus'** vessels to replace the current freighters is a potentially useful start, but a clearly defined replacement plan for the current Ro-Pax vessels is required. This should consider the potential use of **Aberdeen South Harbour**.

The cost of ferry fares is clearly a key issue for our residents and visitors to Shetland. Whilst understanding the legal complexities around the Pentland Firth services, it is important for Shetland that the Scottish Government's commitment to introduce a **modified version of the Road Equivalent Tariff (RET) policy** is honoured. This should go hand-in-hand with vessel replacement planning to ensure that the benefits of fares reductions are not offset by capacity shortfalls.

Through the External Transport Forum, inputs into the next Northern Isles Ferry Services Contract (due to commence 2026 or 2028 if extended) and ongoing dialogue with partners, we can continue to **make the case for improvements to the current service**, including booking arrangements, capacity allocation, timetables and vessel and terminal facilities.

Air services

ZetTrans maintains a regular and productive dialogue with Loganair, including through the External Transport Forum. Through this engagement, we can continue to **make the case to Loganair for reduced fares, increased booking flexibility, additional flights and the introduction of more modern aircraft**.

We will also work with Loganair to continue to ensure that **external flight timetables are as well matched to bus services** from Sumburgh as possible.

We will also continue to work with the Scottish Government to make the case for **maintaining and extending the ADS scheme** and exploring legislatively compliant discount schemes for those travelling on business from Shetland.

10.4 RTS Policies

33. The RTS supports improved connectivity with Scotland's mainland and further afield in the form of new connections, higher capacity, more flexible and cheaper travel
34. We will make the case to Scottish Government for new vessels for the Aberdeen – Lerwick / Kirkwall route and actively engage our communities and businesses in this process to ensure the most appropriate vessels for our routes
35. We will actively engage with our communities and businesses to define our requirements for the specification for current and future Northern Isles Ferry Services Contract and work with Scottish Government to deliver this
36. We will make the case to the Scottish Government and Loganair to reduce the cost, capacity and connectivity barriers for travelling to and from the Scottish mainland for our communities and businesses

11: Decarbonising our Transport



11. Decarbonising our transport

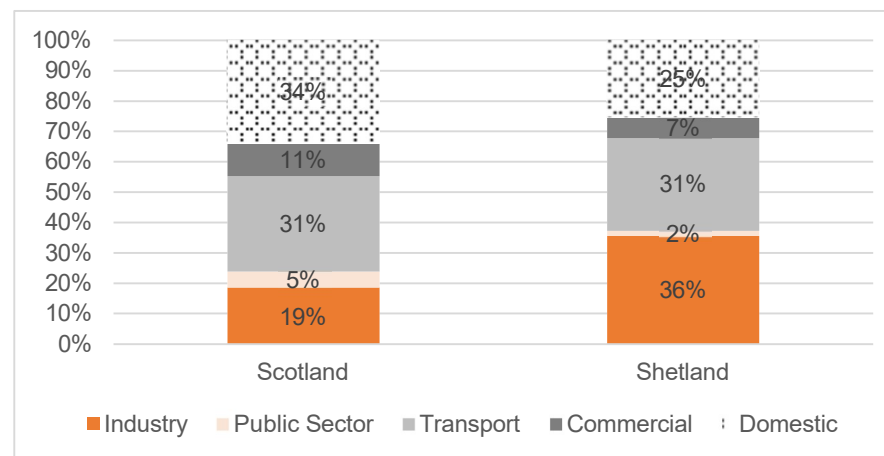
11.1 What is this theme?

As set out in Chapter 2, the Scottish Government has made a legal commitment to deliver net-zero by 2045 and has set two interim targets to reduce GHG emissions by 75% by 2030 and 90% by 2040. Shetland's transport sector is responsible for over 31% of our estimated CO₂ emissions with road transport accounting for the majority of this and significant additional CO₂ emissions generated by our internal air and ferry networks. To realise our aspirations to decarbonise transport, in addition to reducing the need to travel and prioritising active travel and accessible public transport connections (both of which will contribute to a reduction in vehicle kilometres reflecting the Climate Change Plan Update 20% reduction target), it is also essential that we transition to alternative fuel sources across our transport network. With this in mind, this theme explores the various alternative fuels which could play a role in our transition away from fossil fuels and the uncertainties associated with each.

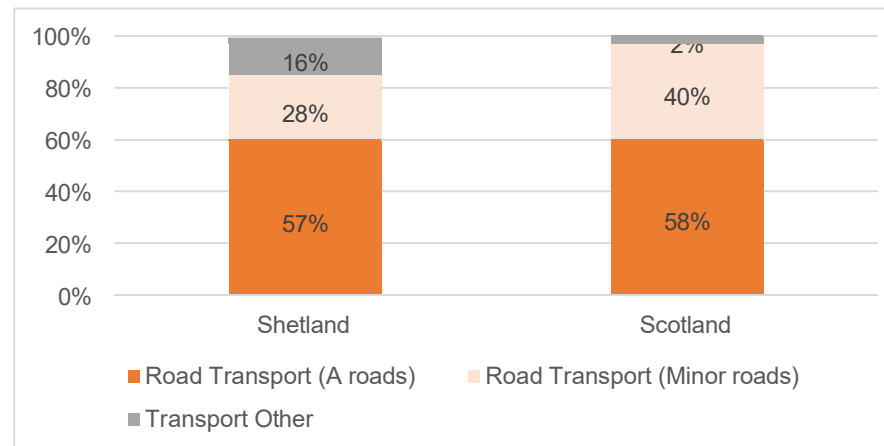
11.2 What problems are we setting out to address?

According to the most recent carbon emission data compiled by the UK Government⁴⁴, Shetland generated 6.8t per capita carbon emissions in 2019.⁴⁵ This is the second highest of all the local authorities in Scotland and is considerably higher than the Scottish average of 4.6t.⁴⁶ Overall, transport accounted for 31% of the emissions total (see top figure overleaf), the same proportion as at the Scottish level with road transport accounting for the majority of this (85%) (see bottom figure overleaf). However, the transport figure only includes road transport and 'other transport'; it does not include emissions generated by our internal air and ferry networks. The internal air service consumes around 76,000 litres of fuel per year⁴⁷ and therefore its CO₂ emissions are minimal in the context of other transport modes in Shetland. However, the Council's Carbon Management Plan estimated that our inter-island ferry fleet accounted for **47%** of total Council energy usage in 2013/14 (whilst dated, the

fleet mix has not changed since that year) and, since the fleet operates entirely on hydrocarbon-based fuels, its CO₂ contribution is therefore likely to be high.



Estimated proportion of CO₂ emissions generated by each sector in Scotland and Shetland⁴⁸



Breakdown of estimated CO₂ emissions generated by transport⁴⁹

⁴⁴ Local Authority territorial CO₂ emissions estimates within the scope of influence of Local Authorities 2019 (kt CO₂), Department for Business, Energy & Industrial Strategy

⁴⁵ Excludes large industrial sites, railways, motorways and land-use

⁴⁶ Local Authority territorial CO₂ emissions estimates (kt CO₂), 2019, Department for Business, Energy & Industrial Strategy

⁴⁷ SIITS Aviation Baseline Report, Shetland Island Council 2016, p29

⁴⁸ Local Authority territorial CO₂ emissions estimates within the scope of influence of Local Authorities 2019 (kt CO₂). Note: estimates include only emissions generated within the scope of influence of Local Authorities - excludes large industrial sites, railways, motorways and land-use.

⁴⁹ Local Authority territorial CO₂ emissions estimates within the scope of influence of Local Authorities 2019 (kt CO₂). Note: estimates include only emissions generated within the scope of influence of Local Authorities - excludes large industrial sites, railways, motorways and land-use.

11.3 What sort of things could we do to address these problems?

In order to reduce the carbon emissions generated by our transport networks, in addition to reducing the need to travel and encouraging the use of active and accessible public transport connections (both of which will contribute to a reduction in vehicle kilometres reflecting the Climate Change Plan Update 20% reduction target), there is also a need to transition to alternative fuel sources. In the road sector, a range of fuels are being proposed, including biofuels, hydrogen, synthetic fuels, and EVs. Of these, EVs are the most advanced, with a range of EVs already available on the market and electric buses now emerging across Scotland. There are numerous benefits to EV use, including zero tailpipe emissions and lower noise levels. However, there are also a number of factors hindering uptake. Despite lower running costs, EVs are currently significantly more expensive than petrol- or diesel-powered vehicles. This restricts market uptake and introduces inequalities in terms of access.

In addition, as discussed in Chapter 2, Shetland is behind Scotland overall and indeed other island authorities in terms of providing publicly available EV charging points. There are also concerns as to whether our electrical grid has sufficient capacity to support the transition to EVs. In order to encourage EV uptake, there would be benefit in providing local grants and incentives to support EV purchase. There is also a need to extend the EV charging network and undertake electrical grid capacity measures to support such improvements where required.

Although EVs have zero tailpipe emissions, it should be noted they still have significant whole life carbon impacts though manufacturing to disposal. More carbon is used in the production of an EV compared to an ICE car. An EV only goes into 'credit' against an ICE after a certain mileage which can be rather high and there are a number of factors which affect this including the energy source generating the electricity used by the EV. A further longer-term challenge for EVs is mineral dependency given the requirement for graphite, cobalt, lithium, manganese, and nickel, the supply of which is limited and sometimes is unstable areas of the world. Switching the technology of cars from fossil fuel powered to EVs also does not address wider environmental, social and equalities impacts associated with high levels of car dependency.



As noted in Chapter 2, all buses in Shetland are privately owned and the quality of **bus** vehicles varies considerably. Many of the buses used on our network are at the end of their operational life and are not environmentally friendly. In addition, as discussed in Chapter 7, the accessibility of our fleet could also be improved. Transitioning to low and zero emission buses would require significant capital investment and given the size and scale of the bus market in Shetland, it is likely that public sector investment would be required to support this change. To aid deployment, there would be merit in examining the potential of SIC and / or ZetTrans purchasing low / zero emission vehicles and leasing them to the operators. The Scottish Government has provided funding support for the transition to zero emission buses previously, most recently, via the Scottish Zero Emission Bus Challenge Fund (ScotZEB) and external funding options such as this could be explored. As well as reducing emissions and improving accessibility, investment in newer vehicles would also substantially improve the quality of the bus service, with improved onboard comfort and facilities, such as bike storage, CCTV etc (see Chapter 7). Such changes could be combined with the introduction of standard livery and a single ZetTrans travel brand (see Chapter 7) to further enhance the perception of bus service quality and encourage use.

Case Study – ORION Clean Energy Project

The ORION (Opportunity for Renewable Integration with Offshore) Project aims to harness the natural resources of Shetland – onshore and offshore wind and tidal and wave energy – to generate hydrogen and enable the



electrification of oil and gas installations in order to reduce emissions. The project has four objectives:

- produce local wind-powered green hydrogen in Shetland by 2025
- reduce emissions, targeting net-zero by 2030
- create and sustain up to 500 net-zero jobs by 2030
- create a buoyant and diverse economy for Shetland by 2035

Through Project ORION, there is therefore the potential for Shetland to become a leader in the field of hydrogen production and potential opportunities for the development and deployment of hydrogen as an alternative fuel.

In addition to private vehicles and buses, there is also a need to consider alternative fuel options for our air and ferry networks. As discussed in Chapter 2, many of the vessels in our internal ferry fleet are nearing the end of their operational life and there is an increasingly urgent need for a funded vessel replacement programme or alternative solution. To help deliver our climate change targets, zero or low emission vessels and wider opportunities such as more efficient hull designs and alternative anti-foul paints must be considered as part of this process. However, while EVs can be beneficial for passenger cars and buses, they are not currently practical for most shipping (although electric power may be viable for the shortest routes). There is potential scope for hydrogen to be used in heavier vehicles such as ferries (as well as larger vehicles like HGVs) as it can fuel longer distances and / or facilitate higher load capacities. There may also be specific opportunities in the deployment of hydrogen fuel sources in Shetland given our aim to have a prominent role in producing wind

powered green hydrogen over the next decade. To help deliver our climate change targets, it will be necessary to continue to monitor advances in ferry fuel technology and seek to progressively introduce new low or zero emissions vessels and / or retrofit our existing fleet where feasible and practical. Beyond the ferry fleet, there is also a need to support Council ports and Lerwick Port Authority in realising opportunities in offshore wind farm construction and operations and maintenance in order to support our wider climate change goals.



In the field of aviation, alternative fuel technology is in its relative infancy. Currently, electrification remains impractical for large carriers due to current battery technology. However, EV technology has been used on some shorter routes. For example, the neighbouring Orkney Islands are currently participating in the Sustainable Aviation Test Environment (SATE), which is focused on piloting low emission aircraft. A successful demonstration flight of a six-seater plane running on a hybrid battery and internal combustion engine was trialled in 2021, whilst another firm is developing hydrogen fuel cell technology. It is likely that further opportunities in this area will emerge as aviation technology improves and investment in alternative options increases. Over the life of this strategy, it will be necessary to continue to seek opportunities and monitor advances in this area. With respect to our internal air network, we will review alternative fuel options on a regular basis and in the external context, we will work with Scottish Government and Loganair to promote and advance alternative aviation fuel technologies.

11.4 RTS Policies

- 37. We will support the delivery of Shetland's Climate Change Strategy
- 38. We support the implementation of measures which facilitate the decarbonisation of the vehicle fleet in Shetland and between Shetland and the Scottish mainland, including cars, buses, commercial vehicles, aircraft and ferries
- 39. We will seek to support the roll out of EV charging infrastructure to support decarbonisation of car-based travel
- 40. We note that EVs are not a zero-carbon option and recognise the risks associated with lower EV running costs. We therefore support measures (subject to equality impacts) to prevent renewed growth in private car travel, and to encourage the use of alternative modes in line with the NTS2 Sustainable Travel Hierarchy and national car kilometre reduction targets
- 41. We will seek to support the roll-out of other alternative fuels to promote the decarbonisation of our transport network, ports, ferry terminals, airports and airfields.

12: Embracing New Technologies



12. Embracing new technologies

12.1 What is this theme?

This RTS has been developed at a time of considerable change in the transport sector. As well as the evolving policy context, there are a range of new and emerging technologies which offer potential new ways of providing and accessing transport services. Many of these emerging technologies are at an early stage of development, but over the lifetime of the RTS, there is potential that they will become more widely available. This theme therefore explores current thinking and development around a number of emerging technological solutions, including Mobility-as-a-Service (MaaS), connected and autonomous vehicles (CAVs), and micromobility, and considers how they may be applied in the Shetland context.

12.2 What opportunities may be presented over the lifetime of the strategy?



As noted in Chapter 7, currently all public transport journeys in Shetland must be paid for separately and there is no integrated ticketing within / between modes. Making the process of booking and paying for public transport, as well as other sustainable transport modes as easy as possible can encourage people to travel more sustainably

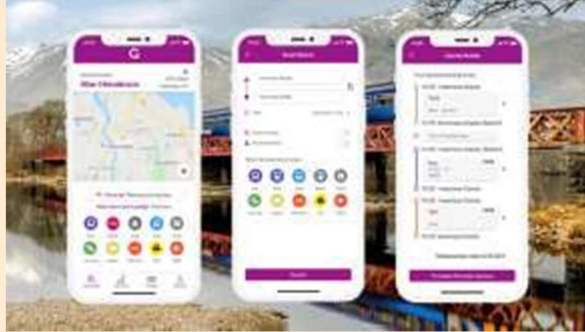
and enhancements to integrated contactless ticketing, or smartcard integrated ticketing could be explored in this regard (see Chapter 7). Related to and expanding upon these aspects, **MaaS** may provide further opportunities in this regard. Rather than buying the means of transport itself or purchasing transport services in a series of distinct packages, MaaS envisages users buying transport services (including public transport, pool car usage, access to active travel, taxi, demand responsive transport, etc.) as packages based on their needs. The concept moves away from relying on personally owned models of transport towards being able to access various modes of transport through a single platform. The fundamental components of MaaS are:

- **Multi-modal:** integration between multiple modes of transport including public transport, active travel, and shared mobility solutions
- **Payment solutions:** users are able to pay for their travel across a range of modes directly through the MaaS platform with integrated multi-modal ticketing solutions in-built
- **One platform:** for everything including travel information, booking, ticketing and payments
- **Integration:** bringing together customers, transport providers, public sector, payment processors, telecommunication companies and the platform owners
- **Digital:** an online platform supported by telecommunications technology
- **User focused:** centred around demand from customers and personalised to their needs

MaaS is still an emerging concept and is yet to be widely implemented. However, options which are built upon the principles of MaaS have been developed, such as the pilot HITRANS Go-Hi MaaS App which was available in 2021 (see Case Study). MaaS could be used as a platform for the retail of digital tickets in Shetland and its implementation could make it easier to purchase and combine transport options, helping to create an integrated sustainable travel system. This would provide benefits for all users, including those with disabilities through the ability to access to information and opportunities to customise / request support for their journey. However, the rural nature of Shetland with its highly dispersed population outwith Lerwick will also present challenges. It is important to acknowledge that an issue with any web-based shared mobility scheme in Shetland, such as a MaaS platform, is that mobile phone reception and broadband speeds across the islands can be variable. Overall, whilst ZetTrans can play a facilitating role in the delivery of MaaS, there is a need for government and bodies like MaaS Scotland to guide and shape MaaS provision to ensure its successful delivery. This will include encouraging operators to engage with MaaS and facilitating an open data environment. Introduction of new digital based transport and accessibility schemes will also require careful consideration of the needs of people with protected characteristics to engage with the technology. **CAVs** may have an increasingly prominent role over the lifetime of the RTS, although there are several major legal and practical challenges associated with introducing a fleet of fully autonomous vehicles in Shetland over the next 20 years. Automated features are however already present in cars available on the market today, such as automatically regulating a safe distance to the vehicle ahead, lane assist technologies, blind spot detection or cameras and sensors when cars are reversing.

Case Study – HITRANS Go-Hi MaaS App

The Highlands and Islands Transport Partnership (HITRANS) launched a pilot MaaS branded App in 2021. The Scottish Government funded 'Go-Hi' App, which was developed in partnership with the MaaS technology firm Mobbileo, allowed users to plan, book and pay for an end-to-end multimodal journey in a single transaction using their smartphone or desktop device. The platform provided access to a wide range of travel services in one place, including buses, trains, bikes, taxis, DRT services, car clubs, air travel, and car hire.



Higher levels of automation are also being developed and piloted with advances in this market with major stakeholders competing to develop fully automated or 'driverless' vehicles. This is an attractive concept as it **has the potential to revolutionise the way people can be transported, i.e., driving time could be spend productively engaging in other activities and the need for a driving license could disappear**. There is also scope for automation to provide efficiency gains with respect to freight transport via truck platooning or drones being utilised for last-mile deliveries. The use of automated bus services would also provide a major cost saving, allowing for greater bus-km to be operated for a given budget and helping to overcome some of the issues associated with bus driver shortages. The outcomes of the CAVForth Project (see Case Study) may provide specific learning in this respect.

Automation could also potentially benefit air and sea transport operations as follows:

- **Sea:** There is potential for seagoing vessels to operate with smaller crews where functions are automated or operated remotely. Whilst this is unlikely to be adopted immediately, changes may occur over the life of the strategy and could provide opportunities in relation to both the NIFS and internal Shetland ferry services.

Case Study – CAVForth

The CAVForth Project which ran between May 2023 and February 2025 used a fleet of five fully autonomous buses to provide a scheduled bus passenger service between Edinburgh and Fife, across the road bridge.



While there was a driver onboard, the vehicles were operating at autonomous vehicle level 4 which means drivers were not expected to touch the controls whilst the vehicle is in autonomous mode. The route involved a range of infrastructure, including bus and train stations, mixed single carriageway roads, 50mph motorway and dedicated bus lanes.

- **Air:** Automation can be used to enhance safety checks of aircraft prior to take off which aids workers and pilots in managing the flight by replacing certain manual tasks, and air traffic control to monitor the status of all flights. Airports have also implemented automated baggage handling and screening systems which helps to improve safety and remove human error.
- **Delivery services:** Drones have been used to deliver parcels in place of more traditional delivery systems. For example, Royal Mail completed a two-week trial in October 2021 using a large twin-engine drone to deliver mail to North Ronaldsay in Orkney. The drone was able to accommodate up to 100kg (220lbs) of post and as an Uncrewed Aerial Vehicle (UAV) was able to fly in poor weather conditions. This type of technology could be highly beneficial for islands such as Fair Isle, Foula, Papa Stour and Skerries.
- **Airborne inspections:** To observe vehicles prior to trips taking place to ensure there are no safety issues. This could assist workers at e.g., airports and ferry ports to carry out manual checks remotely.

There are clear benefits to automation within the transport sector. However, there remain many issues to overcome. There are concerns, for example, about how and where liability lies, specifically in situations such as traffic collisions. In addition, it is important that automation contributes to other policy goals, including reducing carbon emissions. Given that automation is market led, it is important that there is a policy intervention and a legal framework to ensure it is implemented at a gradual and sustainable rate and in a manner that seeks to deliver overarching policy objectives.



There may also be opportunities around micro-mobility i.e., the use of small, lightweight vehicles including cycles, e-cycles, electric scooters and electric skateboards. To help reduce demand on our road network and contribute to the Scottish Government's 20% reduction in road kilometre target, we could examine the potential of delivering a formal **car-share** (where people with similar

destinations travel together in one vehicle) and / or **car club** scheme (where people access shared vehicles via a management company). Research suggests that car clubs can contribute to a wide range of policy goals, including reduced carbon emissions and mileage. For example, according to the 2021 Scottish Car Club Survey⁵⁰:

- 32% of car club users had reduced their car miles since joining
- 16% had got rid of their private car since joining the club and 27% said they would have bought a car if they hadn't joined the car club
- 55% of car club users agreed that membership allowed them to travel places which wouldn't be accessible otherwise, suggesting membership had opened up access to opportunities which were previously unavailable
- 38% stated that they used the service when there were no suitable public transport options, suggesting car clubs can be an important option in more rural locations like Shetland where providing traditional public transport options can be challenging
- Car club members typically have higher use of sustainable modes than the national average, with 49% using public transport and 36% cycling at least weekly (compared to 25% using bus / 9 % using train and 6% cycling for

their commute / 7% cycling for pleasure at least once a week at the national level)

- Overall, Carbon emissions from car club cars are 37% lower than the average UK car

In the RTS Survey, there was clear support for both formal car share and car-club options, with **75% of respondents stating that they would consider car-pooling and 79% stating that they would consider joining a car club**. In addition to examining formal car-pool / car share schemes, there is also an opportunity to **explore options to improve some of our informal car-pooling sites** which have developed organically, for example at the turn-off of the A970 for Scalloway. These sites are used by residents who have established informal car-pooling arrangements with e.g., colleagues or friends. Some are lined and marked, whereas others are gravel only. However, the sites are not managed or charged and are focused on car-pooling i.e., there are no dedicated connecting bus services. Enhancing such locations could further encourage use and lead to lower rates of car use and reduced vehicle kilometres. Enhancements could include provision of more secure facilities (i.e., marked car parking bays and CCTV), providing park and choose (P&C) options (i.e., a dedicated bus service and / or active travel routes to / from the site to selected destinations), the provision of cycle parking and other ancillary services. Where public transport interchange options are provided, there may also be opportunities to upgrade such to dedicated mobility hubs.



⁵⁰ Document > Car Club Annual Report Scotland 2021 (como.org.uk)

Beyond car-pooling and car share, there may also be opportunities around **e-scooters** and **e-skateboards** in the coming years. A number of cities in Europe operate e-scooter sharing schemes. Similar to cycle share schemes, these are usually dockless with users able to track, reserve and unlock scooters via their smartphone and payment on an annual, monthly, daily or per-trip basis. In the UK, it is currently illegal to ride an electric scooter on a footway or road. However, **e-scooter trials are currently being undertaken in 31 regions across England** and it is anticipated that these will establish the foundations for regulations enabling scooter use and open-up opportunities for the delivery of scooter sharing schemes. Such options could be explored independently in Shetland or combined with cycle and e-cycle share schemes.

12.3 RTS Policies

42. New and emerging technologies will be monitored for their applicability in the Shetland context
43. We will embrace the opportunities provided by new technology to improve our provision of transport services across Shetland, including the adoption of new technology on our ferry and air services
44. We will keep opportunities for the more widespread use of connected and autonomous vehicles under review and identify any actions required to facilitate their safe introduction in Shetland
45. We will support opportunities to better serve our remote island communities through adopting new technological solutions
46. The RTS supports the development of car sharing services across the region to reduce the need for personal car ownership
47. Provision for future innovative personal transport such as e-scooters will be considered within the design of our active travel network



13: Enhancing network efficiency



13. Enhancing network efficiency

13.1 What is this theme?

The efficient movement of people and freight requires a high-quality transport network which is well maintained and fit for purpose. This theme focuses on how we plan to support the safe, resilient, and efficient movement of people and freight across our transport network. The theme explores current road maintenance activities, road safety measures and network resilience issues as well as measures to reduce car travel.

13.2 What problems are we setting out to address?

Our transport network connects our communities, providing a means to access key services, including employment and education, health services, transport interchanges, and leisure opportunities. Our road, air and ferry networks are also vital for the transport of freight. As discussed in Chapter 2, we are a major exporter of goods, with the aquaculture and fishing industries accounting for a significant proportion of total exports. Produce generated by these industries is often time sensitive and is transported via road, along with our internal and external air and ferry connections, to markets elsewhere in Scotland, the UK and further afield. Given the time sensitive nature of such commodities, it is essential that our transport networks provide high quality, reliable and resilient routes to market. The increase in the frequency of severe weather events linked to climate change brings a new requirement to monitor our network and assets from the perspective of resilience to the impacts of climate change.

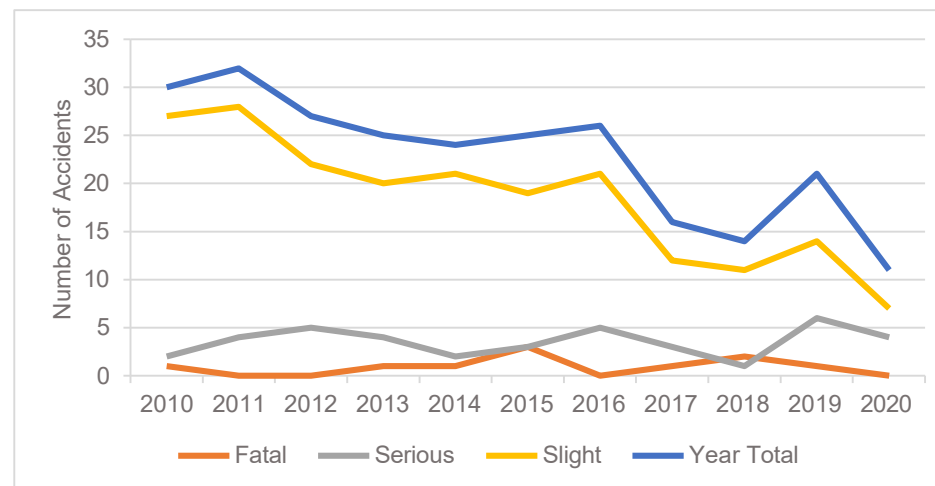
13.3 What sort of things could we do to address these problems?

Maintaining our road network is vital to support the safe, reliable and resilient movement of both people and freight across Shetland. As the Statutory Roads Authority, the Council is responsible for planning the maintenance and development of all roads in Shetland as well as other transport assets, such as walking, wheeling and cycling routes and the winter maintenance programme.

To maintain **network efficiency**, it is vital that our assets continue to be maintained in line with our current maintenance programme. Additional maintenance activities will be supported where they contribute to the aims of the

RTS, including, for example, climate change adaption, enhanced safety or increased maintenance of active travel routes. The latter is an important issue, with good quality surfacing and clear sightlines (e.g., unaffected by vegetation) vital for both pedestrian and cycle safety as well the accessibility of routes for wheelchair users and those with visual impairments. In some cases, maintenance operations lead to road works and delays which negatively impact network performance. To help minimise disruption, information on road closures will continue to be shared with ZetTrans and published via Shetland Islands Council's website⁵¹ and the Scottish Road Works Register⁵².

The number of reported collisions to Police Scotland on our road network decreased by 63% between 2010 and 2020. This demonstrates a general trend towards improving road safety primarily through safer vehicles. It is important to build upon this success through exploring further **road safety measures** across Shetland. These should be targeted at locations with collision clusters. Whilst it is important to minimise the number of incidents that occur, the priority is to reduce the number of casualties and interventions should focus on delivering this. As discussed in Chapter 12, automation may also have a role to play in making our roads safer and more efficient via truck platooning.



Accidents in Shetland 2010 - 2021

⁵¹ <https://www.shetland.gov.uk/roads-footpaths/road-closures-weekly-road-works-report>

⁵² <https://www.roadworksscotland.org/>

The majority of collision clusters on Shetland's main roads have now been addressed through measures such as junction improvements, bend improvements, traffic calming and anti-skid surfacing. The collision reduction effort is now concentrated on route treatments with signage, road markings and cats' eyes improved along roads such as the A968 and A970.

There will also be a need to adapt to be **resilient in the face of the impacts of climate change**. Increased sea levels and more extreme weather events will have a considerable impact on how we live and work and we must ensure that our transport networks are able to accommodate these changes. We will work with the Council to understand network resilience issues and climate change adaption requirements and assist with making the case for investment where there is a strategic rationale for doing so.

In addition to regular maintenance, sustaining network efficiency may also necessitate targeted infrastructure investment. For example, where merited by traffic volumes and journey time reliability, it may be necessary to upgrade sections of existing single-track roads to two-way carriageways in some locations. Such issues will be identified via the Council's Strategic Road Network (SRN) Programme. This programme identifies areas of the core road network where larger-scale investment is required beyond that offered via the regular maintenance schedule. The objectives of the SRN programme are to deliver:

- Roads that support low energy travel and active travel
- Road connections that cater for the vehicles and communities that need to use them so that people and businesses can achieve key outcomes
- Roads that make journeys as safe as possible
- Roads that minimise journey times
- Roads that strike the best balance between investment costs and ongoing maintenance costs

13.4 RTS Policies

48. All our transport networks must be maintained to a high standard to ensure the reliable and efficient movement of people and goods and the delivery of services across Shetland
49. Incremental improvements to our road network are supported where there are safety, efficiency and environmental benefits, specifically in relation to single track roads
50. The RTS recognises the need to consider how climate change may affect our transport networks and services and the associated risks this brings and those responsible should form appropriate action plans in response
51. Our transport networks should continue to have an overarching focus on safety with a view to reducing road traffic casualties in particular



14 Monitoring and Evaluation



14. Monitoring and Evaluation

It will be crucial to monitor the RTS to understand its success in delivering the Strategy Objectives. A set of KPIs linked to the Strategy Objectives has therefore been defined and set out below. The KPIs closely reflect those developed for the purposes of monitoring the National Transport Strategy 2. These will be used to measure the change in the performance of the transport system in Shetland against the baseline initially established within the ZetTrans Case for Change prior to the implementation of the RTS.

Monitoring reports will be produced on a two-yearly basis setting out the transport and behavioural trends against the KPIs.

Strategy Objective 1 - To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups to / from the rest of Scotland

- Barriers to travel to / from the rest of Scotland include physical access, lack of accommodation / vehicle deck capacity on ferries, and seating on aircraft. This is manifested by people not travelling to the rest of Scotland as often as they would like – missing out on e.g., family, social and sporting events.
- Annual travel volumes through Sumburgh Airport and on NorthLink Ferries are regularly published and can be monitored
- Residents' and business' experience and perception of barriers to travel to / from the rest of Scotland will be monitored in a biennial Shetland Travel / Transport survey

Strategy Objective 2: To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups within Shetland

- Barriers to travel within Shetland include physical access, constraints imposed by the public and active travel networks, a lack of vehicle deck capacity on ferries / ferry timetables and seating on aircraft. This is manifested by people not travelling around Shetland as often as they would like – missing out on e.g., employment, education and training opportunities, family, social and sporting events.

- Travel volumes on Shetland's buses, ferries and aircraft will be monitored annually
- Residents' and business' experience and perception of barriers to travel within Shetland will be monitored in a biennial Shetland Travel / Transport survey

Strategy Objective 3: To facilitate and encourage safe walking, cycling and wheeling for everyone, including for leisure and tourism

- The strategy seeks to increase levels of walking, wheeling and cycling in Shetland
- The Scottish Household Survey Travel Diary provides partial information around the levels of walking and cycling by Shetland residents. The level of, and attitude to walking, wheeling and cycling will be monitored in a biennial Shetland Travel / Transport survey
- A network of cycle counters will be installed at key locations, maintained and monitored

Strategy Objective 4 - To improve alternative, more sustainable travel options in Shetland for all including those without access to, or who would prefer not to use a car

- Success in meeting this objective will see a mode shift from car-based travel, and increased societal participation from those without access to a car
- Supply-side measures here could include annual bus kilometres operated in Shetland, annual road traffic and walking and cycling participation
- The Scottish Household Survey Travel Diary provides partial information around the levels of non-car based travel by Shetland residents, and also household car availability. The level of, and attitude to car use and alternatives to car use will be monitored in a biennial Shetland Travel / Transport survey

Strategy Objective 5 - To transition towards an environmentally and financially sustainable, post-carbon transport network

- Success in meeting this objective will be a low carbon transport sector which is on a financially sustainable footing with respect to capital and revenue funding and human resources
- The composition of the car, bus, ferry and aircraft fleet by fuel type will be regularly monitored, as will the number and quality of publicly available EV charging points
- The UK Department for Business, Energy and Industrial Strategy publishes local authority greenhouse gas emissions by sector including a split of transport by mode. These, and any other bespoke Shetland net-zero statistic will be monitored.
- Although an inward-facing matter, SIC and ZetTrans will monitor capital and revenue expenditure with respect to active travel, bus, road, ferry and air travel. Vacancy rates and unfilled posts across the transport sectors will also be monitored.

Strategy Objective 6 – To support safe, resilient, and efficient movement of all people and freight across Shetland

- This objective seeks to improve the transport networks in Shetland from the perspective of safety, resilience and efficiency
- Road-based casualties by severity and type local authority level are regularly published and will be monitored
- Ferry cancellations (external and internal)
- Monitoring of incidents on the road network, including in relation to severe weather events
- Residents' and business's perception of the efficiency and resilience of the network will be monitored in a biennial Shetland Travel / Transport survey

