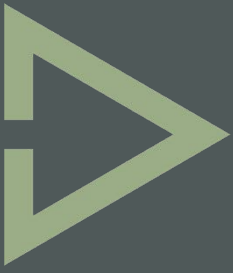


Green Heritage Transport Service Feasibility Study

Prepared for Inner Forth Futures



RECORD OF AMENDMENTS

This document has been issued and updated as follows:

Version	Description	Version No.	Approved By	Date
Draft	FOR COMMENT	1.0	CW / JP	09/08/2022
Final	ISSUED	1.2	CW / JP	15/09/2022

Table of Contents

1	Introduction.....	5
2	Methodology.....	6
2.1	Desktop Review	6
2.2	Stakeholder Engagement.....	6
2.3	Community Consultation.....	6
2.4	Options Appraisal	7
2.5	Workshop and Final Report	7
3	Policy Context	8
3.1	National Policy	8
3.2	Regional Policy	9
3.3	Local Policy	10
4	Local Context	12
4.1	Accessibility by Different Modes of Transport	13
5	Target Markets	33
5.1	Residents	33
5.2	Tourism	34
6	Stakeholder Engagement.....	40
6.1	Interview Findings.....	40
7	Community Consultation	44
7.1	Profile of Survey Respondents.....	44
7.2	Travel Patterns	44
7.3	Travel Behaviours	49
7.4	Attitudes Towards a GHTS	50
8	Solutions from Elsewhere	55
8.1	Local Pick-up Service Case Studies.....	55
8.2	Sustainable Tourist Destination Case Studies.....	58

9	<i>Options Identification & Appraisal</i>	59
9.1	Summary of problems & opportunities	59
9.2	Strategic objectives	61
9.3	Options	62
9.4	Options appraisal	67
9.5	Rationale for selection / rejection	69
10	<i>Preferred Option</i>	70
10.1	The Green Heritage Transport Service	70
10.2	Choice of Operating Regime	71
10.3	The Vehicle	72
10.4	Route and Timetable	73
10.5	Suggested Routes	74
10.6	Costs and Funding	76
10.7	Driver Licensing	76
10.8	Fares	76
10.9	Summary	77



1 Introduction

Ansons Consulting was commissioned by the RSPB on behalf of Inner Forth Futures (IFF) to undertake a feasibility study for the introduction of an electric Green Heritage Transport Service (GHTS) which aims to enhance the visitor experience to the Inner Forth area.

IFF is a partnership of local authorities, public bodies and charities. This study forms part of Climate FORTH (Furthering Our Resilience Through Heritage), which is a new project for the partnership. The development phase of this project was made possible by funding from the National Lottery Heritage Fund (NLHF) and this feasibility study was conducted to support the IFF's NLHF delivery phase application. Through Climate FORTH, the partnership is seeking to improve travel within the Inner Forth with the aim of supporting local and sustainable tourism. The project area includes parts of Stirling, Falkirk, Clackmannanshire and Fife that surround the Inner Forth. Key audiences for Climate FORTH include SIMD communities, young people (aged 14-25), and local businesses and social/community enterprises.

The proposed GHTS is intended to divert visitors from their cars during their stay in the Inner Forth to explore heritage and the landscape more widely by foot and wheel. This will help to support local action on moving to net-zero and showcase the Inner Forth as a 'slow travel' destination, where existing rail and bus links, potentially supported by new or different transport services and / or infrastructure, will result in increased footfall, benefitting local business and communities. Additional work to support this includes signage, cycle maintenance stations and a heritage toolkit.

The purpose of this report is to present an appraisal that will assist IFF in making a more informed decision about the feasibility of a number of options that will facilitate access to and around the Inner Forth area, including the option of offering a GHTS.

2 Methodology

This section provides a brief overview of the work which was carried out for this project.

- Sections 2.1 – 2.3 summarise how we gathered insights to build an understanding of the case for change.
- Section 2.4 describes how we conducted a high-level assessment of the feasibility, affordability and public acceptability of selected options and provides a rationale for selection or rejection of different options.

Subsequent sections of this report summarise the findings of this work.

2.1 Desktop Review

The purpose of the desktop research was to understand:

- The policy context;
- The target market and local context;
- The range of possible interventions; and
- Successes and lessons learnt from existing interventions across Scotland, and further afield where relevant.

Outputs from this review were used to inform the development of questions for stakeholder interviews.

2.2 Stakeholder Engagement

To build on the insights gained from the desktop research, we carried out semi-structured interviews with a selection of key stakeholders, including:

- Stirling Council
- Falkirk Council
- Cycling UK
- Recycle-a-bike
- Forth Environment Link
- Dunfermline and West Fife Local Tourism Association
- Clackmannan Cycle Hub

The interviews provided an opportunity for stakeholders to give feedback on a selection of options that have the potential to facilitate access to and around the Inner Forth area, including provision of a GHTS.

2.3 Community Consultation

Residents and visitors who had previously visited the Inner Forth area were asked to complete a survey detailing how they travel to and around the region, what influences how they travel and how likely they would be to use different modes of transport if they were available.

Respondents were also asked questions specifically relating to an electric vehicle pick up and drop off service to identify how the service could operate, how respondents would prefer to access it, along with how long they would be willing to wait for a pick-up service, and willingness to pay.

The online survey was live for two weeks from 15th June 2022 to 29th June 2022 and was promoted through IFF's social media channels, and via flyers in businesses and venues across the region. To incentivise people to complete the survey, two gift vouchers worth £25 each for Buy Social Scotland¹ were offered as a prize.

2.4 Options Appraisal

Evidence gathered from the work described above enabled us to identify and assess options for interventions in the Inner Forth region. We conducted an options appraisal, assessing each option against a set of metrics, to establish which option would be most feasible. The findings were compiled into a summary report, with rationale for the selection or rejection of interventions.

2.5 Workshop and Final Report

Outputs from the options appraisal were shared and reviewed with the client and other IFF Steering Group members at a virtual workshop, to obtain buy-in and agreement on the chosen option. The workshop was held at the end of July 2022.

Following the workshop, all findings and outputs were compiled into the final feasibility report.

¹ <https://www.buysocialscotland.com>

3 Policy Context

IFF has an ambition to divert visitors from their cars during their stay in the Inner Forth to explore heritage and the landscape more widely by foot and wheel. This has the potential to support a broad range of important policy outcomes, including those relating to social, environmental and economic sustainability.

For instance, through the proposed GHTS (or one of the alternative propositions identified in this report), IFF can help support local action on moving to net-zero and showcase the Inner Forth as a 'slow travel' destination, where existing rail and bus links, supported by the proposed GHTS, will result in increased footfall, benefitting local business and communities.

This section summarises key points from a review of local and national policy, to help show how IFF should shape its GHTS to ensure the outputs align with the wider policy context and maximise the potential for future funding applications to succeed.

3.1 National Policy

Scotland's Climate Change Plan 2018-2032

Committed to reduce emissions by 75% by 2030 (compared with 1990) and to net zero by 2045. Aims by 2032 include:

- Scotland's roads will contain no new petrol and diesel cars and vans;
- Passenger railways will be almost completely decarbonised;
- Car kilometres will have reduced by 20%; and
- Sustainable transport will be the instinctive first choice for people.

National Transport Strategy 2020-2040 (NTS2)

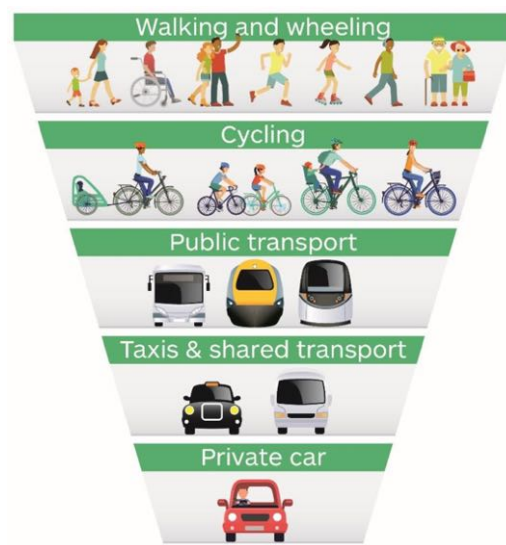
- Tourists from within the UK (including Scotland) mainly travel by road.
- People in Scotland's rural communities are witnessing deteriorating road networks as traffic increases, particularly at natural and cultural attractions.
- It is important that while Scotland continues to welcome visitors and benefit from the advantages tourism brings, tourists are encouraged to visit and travel within Scotland using more sustainable means.

Importantly, NTS2 states that transport options that focus on reducing inequalities and the need to travel unsustainably should be prioritised. In this light, the NTS2 includes both a sustainable investment (Figure 1) and a sustainable travel (Figure 2) hierarchy.

Figure 1: Sustainable Investment Hierarchy



Figure 2: Sustainable Travel Hierarchy



Scotland Outlook 2030: Responsible Tourism for a Sustainable Future

- Scotland's tourism sector will make a full contribution to the national ambition to become a net-zero society by 2045.
- Visitors can be helped to explore more of Scotland through user-friendly transport options, as well as routes and itineraries. This will require improved collaboration between Scotland's destinations, as well as enhanced planning and coordination between the tourism sector and transport operators.

Strategic Transport Projects Review 2 (STPR2)

STPR2 recommends building on existing programmes to deliver local, regional and national initiatives that raise awareness of sustainable transport options and encourage individuals to make the most appropriate transport choices for their journeys.

3.2 Regional Policy

SEStran Regional Transport Strategy – Draft (2022-2035)

The vision for the Regional Transport Strategy is for a South-East of Scotland integrated transport system that will be connected and safe, creating inclusive, prosperous, and sustainable places to live, work and visit, affordable and accessible to all, enabling people to be healthier and delivering the region's contribution to net zero emissions targets. Alongside this, SEStran aims to make sustainable modes of transport easier and more appealing to use and more accessible.

Strategic objectives include:

- Transitioning to a sustainable, post-carbon transport system;
- Facilitating healthier travel options;
- Widening public transport connectivity and access across the region; and
- Supporting safe, sustainable and efficient movement of people and freight across the region.

3.3 Local Policy

Local Transport Strategy for Fife (2006-2026)

Fife's vision is of an integrated and sustainable transport system which is accessible to all and contributes to a strong economy, strong community and healthy environment. Objectives include:

- To encourage walking and cycling for short trips and as part of an integrated journey to promote a healthier lifestyle.
- To work with passenger transport operators to develop an integrated public transport system.

Longer term priorities for active and sustainable travel include:

- Promoting public transport measures and services which fully integrate with safe and direct walking and cycling routes.
- Increase numbers of passengers using DRT services.
- Increase modal shift from car to bus and rail.

Falkirk Council Local Transport Strategy (2014)

Although now a little outdated, with a new version currently in development and expected to be published in early 2023, objectives in the Falkirk Council LTS include:

- To promote and increase the use of sustainable forms of transport to strategic employment development sites.
- To contribute to community regeneration through promoting social inclusion:
 - By promoting the provision of accessible transport options, particularly to disadvantaged, remote and socially deprived areas.
 - By maximising the opportunity to travel by alternative modes of transport to the car.
- To protect the environment by minimising the impact that transport can have on it and to improve health by promoting more active travel:
 - By encouraging more travel by foot, bicycle, motorcycle, bus and rail.

Stirling's Local Transport Strategy (2017-2027)

Stirling Council's objectives include:

- Encouraging and enabling more trips to be made by walking, cycling and public transport.
- Ensuring sustainable travel choices are at the heart of an integrated transport network.
- Minimising carbon emissions from transport.

Stirling Council Active Travel Action Plan (2017-2027)

The Active Travel Action Plan (ATAP) supports delivery of the Local Transport Strategy objective to encourage and enable more active and sustainable travel. The key objectives of the ATAP include increasing the percentage of people walking and cycling in Stirling. This will be achieved by:

- Improving walking and cycling facilities and routes.
- Promoting walking and cycling opportunities to residents and visitors.

Clackmannanshire Local Transport Strategy (2010-2014)

A new LTS is currently in development, but the existing strategy is still in use. Objectives include:

- Encourage people to adopt sustainable travel behaviour when travelling in and around Clackmannanshire.
- Reduce traffic growth, by encouraging greater use of public transport, walking and cycling.
- Increase the proportion of walking and cycling trips in Clackmannanshire.
- Increase the number of cycle parking areas at strategic locations.
- Expand the existing cycle network to provide coverage throughout Clackmannanshire.
- Increase bus patronage for travel to work and leisure.

Falkirk Area Tourism Strategy (2015-2020)

A key objective to improve the customer journey includes the following opportunities:

- Promoting and enhancing public transport as a sustainable way to get around the area.
- Improving the public transport links between visitor attractions, hotels, town centres and stations, including the provision of a regular hop-on visitor tour bus.
- Improving accessibility to the core path network by enhancing links to public transport hubs and key visitor attractions.
- Developing joint ticketing offers for transport and visitor attractions.

Forth Bridges Area Tourism Strategy (2019-2029)

The vision is that by 2030 the Forth Bridges area will be recognised as a sustainable, high quality visitor destination. Priorities include:

- Ensuring that visitors are aware of the ease of reaching and exploring the area by car, public transport, cycle, on foot or by boat.

Actions to achieve this include:

- Improve cycling infrastructure.
- Support the development of the Network Rail Forth Bridge Experience.
- Connect local path networks to existing walking routes.
- Trial a closure of Forth Road Bridge for a family cycling event.
- Establish self-guided and accompanied walking and cycling tours.
- Promote the area to cyclists in association with relevant organisations.
- Sustainable, public and low emission transport options to be promoted to visitors.
- Regular surveys to undertake sustainable travel baseline monitoring and frequent surveys of how visitors travel to the area.

4 Local Context

The Climate FORTH project area includes parts of Stirling, Falkirk, Clackmannanshire and Fife that surround the River Forth (Figure 3. N.B. The red line represents the core project area with the blue line depicting a wider engagement area.)

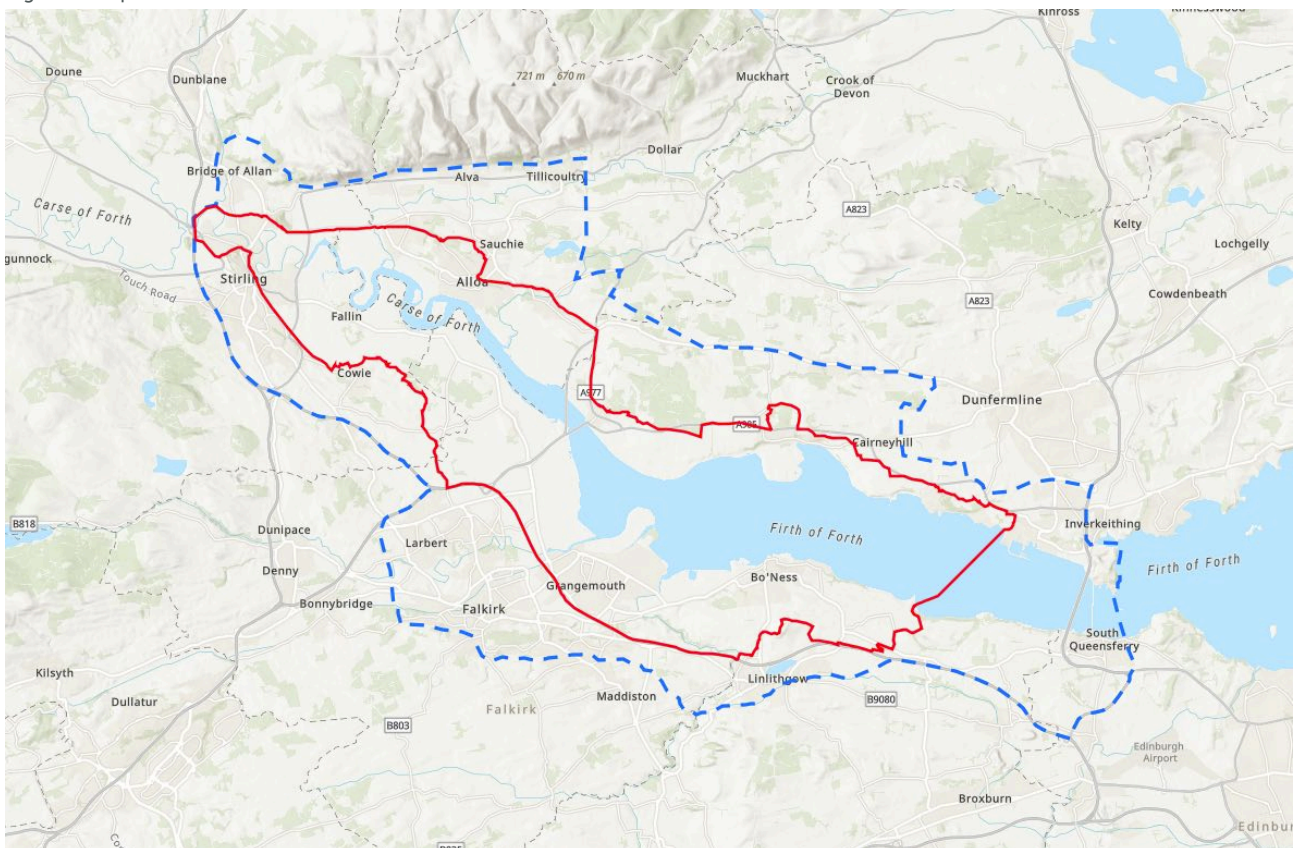
There are a number of waymarked walking trails within the project area in addition to routes designed and promoted by the IFF partnership through the Inner Forth Wandering and Windings² project. Existing waymarked routes vary in length from a few miles to multi-day walks and include the Forth Trail (5 miles), Skinflats circular (3.6 miles), Fife Coastal Path (117 miles) and the John Muir way (134 miles). The nine IFF Wanderings & Windings routes were designed as day long explorations of Inner Forth heritage.

The National Cycle Network (NCN) Route 76, also referred to as the Round the Forth cycle route, covers the project area from North Queensferry to Stirling, Stirling to Alloa, and Alloa to North Queensferry.

Train stations serve a majority of the Inner Forth area, with stations present at Bridge of Allan, Stirling, Larbert, Falkirk, Linlithgow, Dalmeny, North Queensferry, Inverkeithing, Camelon, Polmont and Alloa, supporting visitors to be able to access and move around the area sustainably from Edinburgh, Glasgow and Dundee.

There are also a number of bus routes providing services to and around the Inner Forth catchment.

Figure 3: Map of Inner Forth area



² See: <https://www.innerforthlandscape.co.uk/about/wanderings-windings>

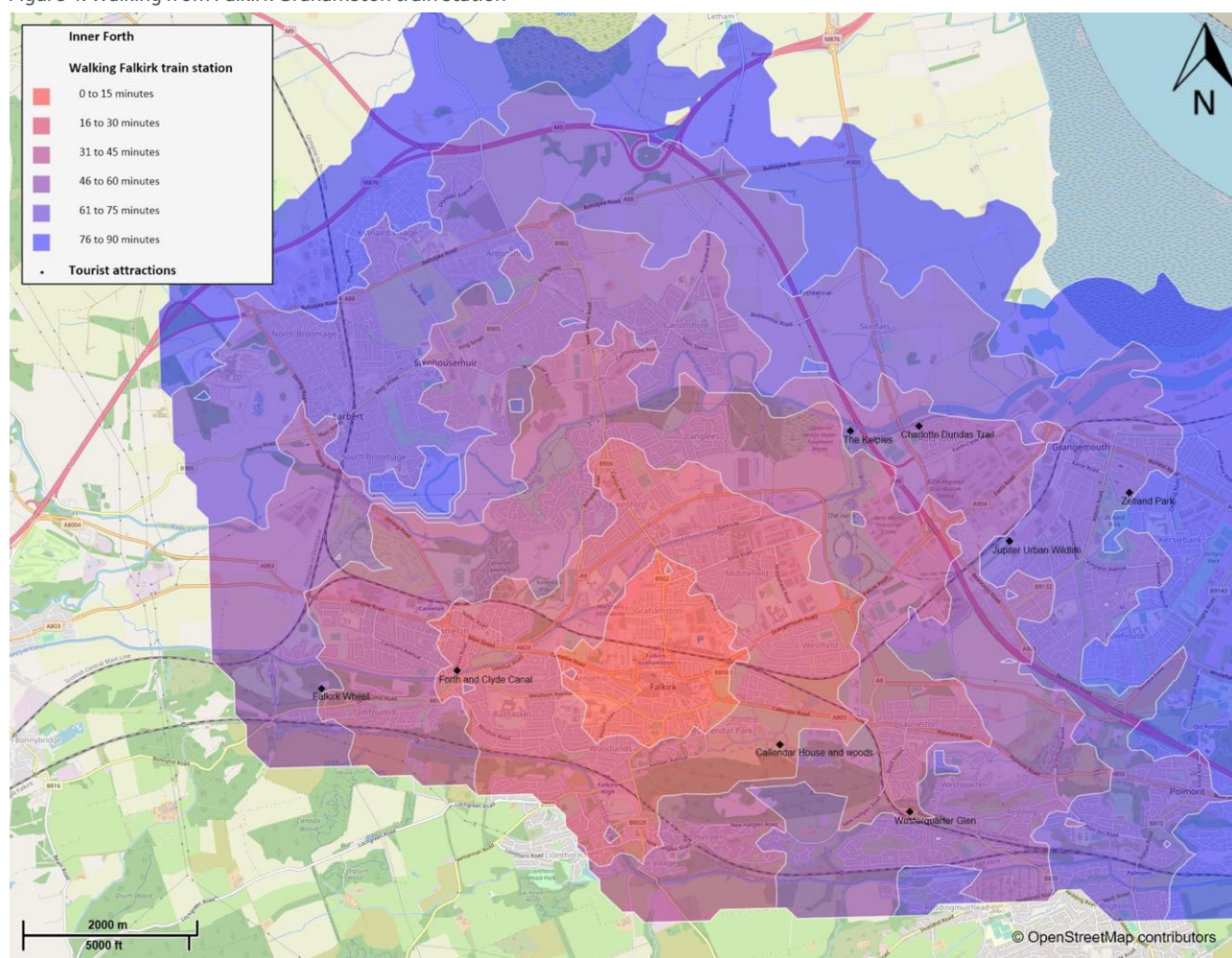
4.1 Accessibility by Different Modes of Transport

This section offers more detailed insights into the accessibility of Inner Forth by different modes of transport. Sustainable travel to the Inner Forth catchment area is possible by direct train from Edinburgh Waverley, Glasgow and Dundee, as well as bus and intercity coach services from a variety of locations. Once in the region there is varied access by sustainable and/or active modes between different attractions. These are outlined below.³

4.1.1 Walking

As Figure 4, Figure 5, Figure 6, Figure 7 and Figure 8 show, a reasonable area of the Inner Forth catchment can (in principle, at least) be reached within a 90-minute walk from train stations in some of the larger settlements. This puts a number of attractions within easy reach of visitors and residents alike.

Figure 4: Walking from Falkirk Grahamston train station



³ N.B. Information contained in this section draws on third-party mapping data and its accuracy cannot be guaranteed. 'Real-world' conditions for different modes have not been taken into consideration and the inclusion of different modes should not be taken as an indication that journeys by these modes are necessarily safe or practical.

Figure 5: Walking from Alloa train station

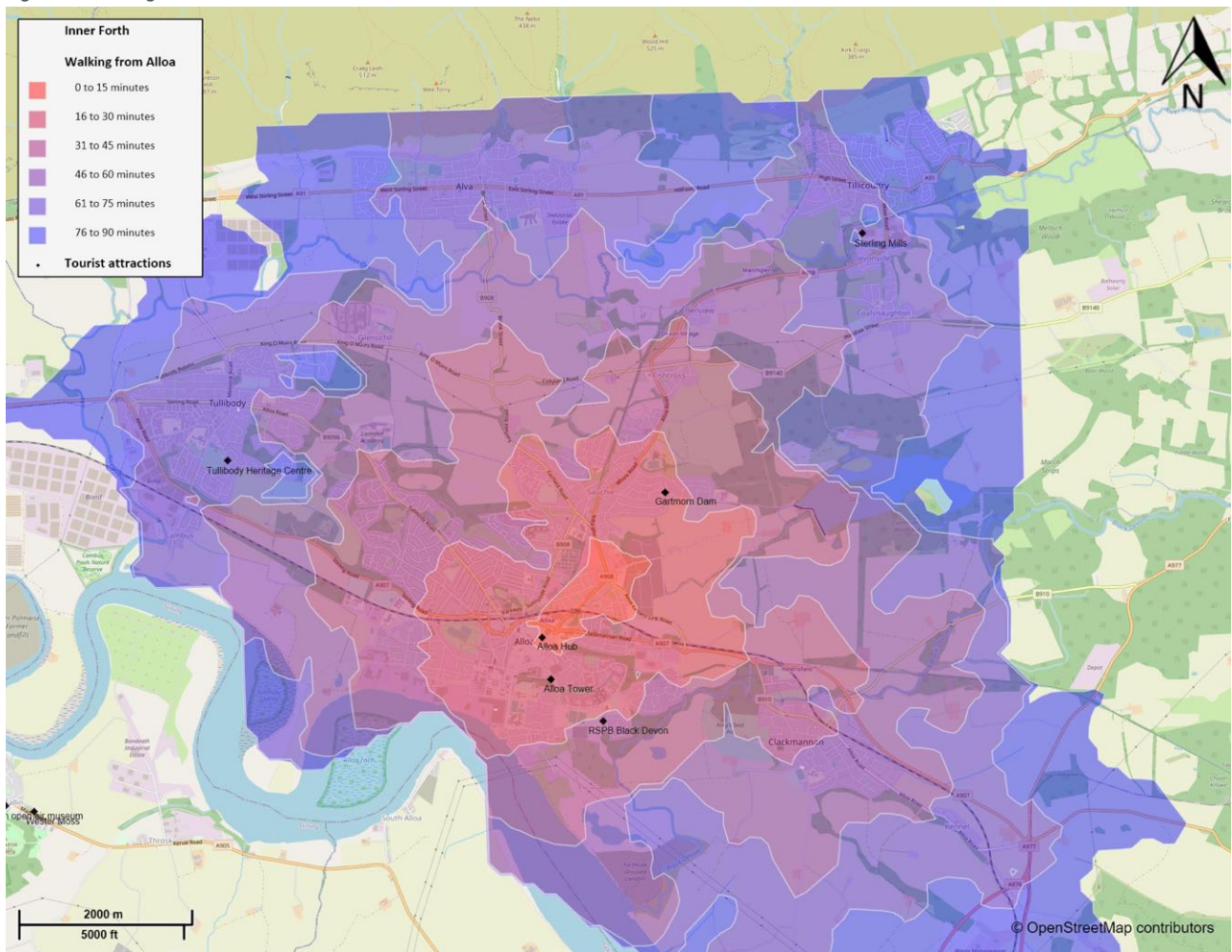


Figure 6: Walking from Stirling train station

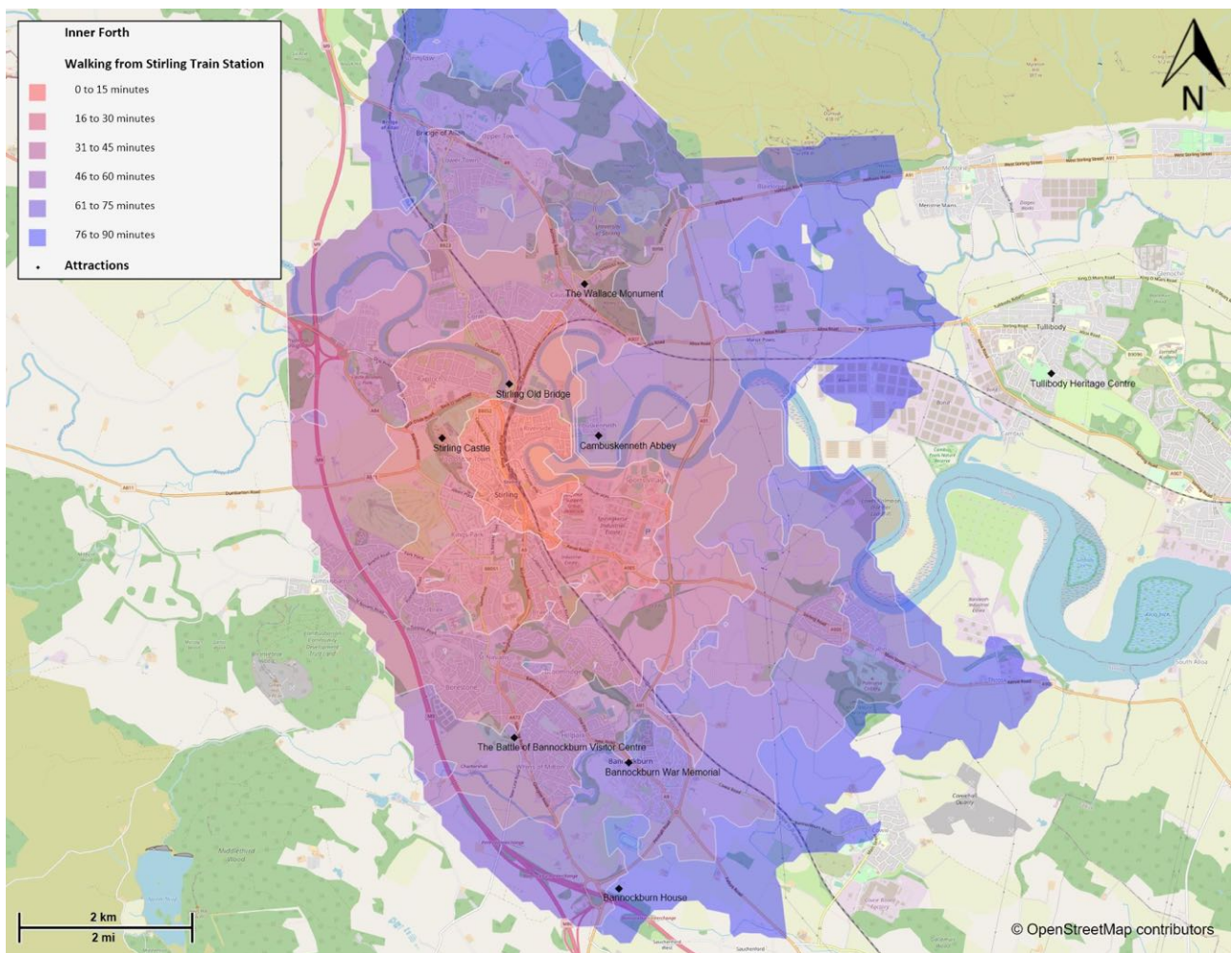


Figure 7: Walking from Linlithgow train station

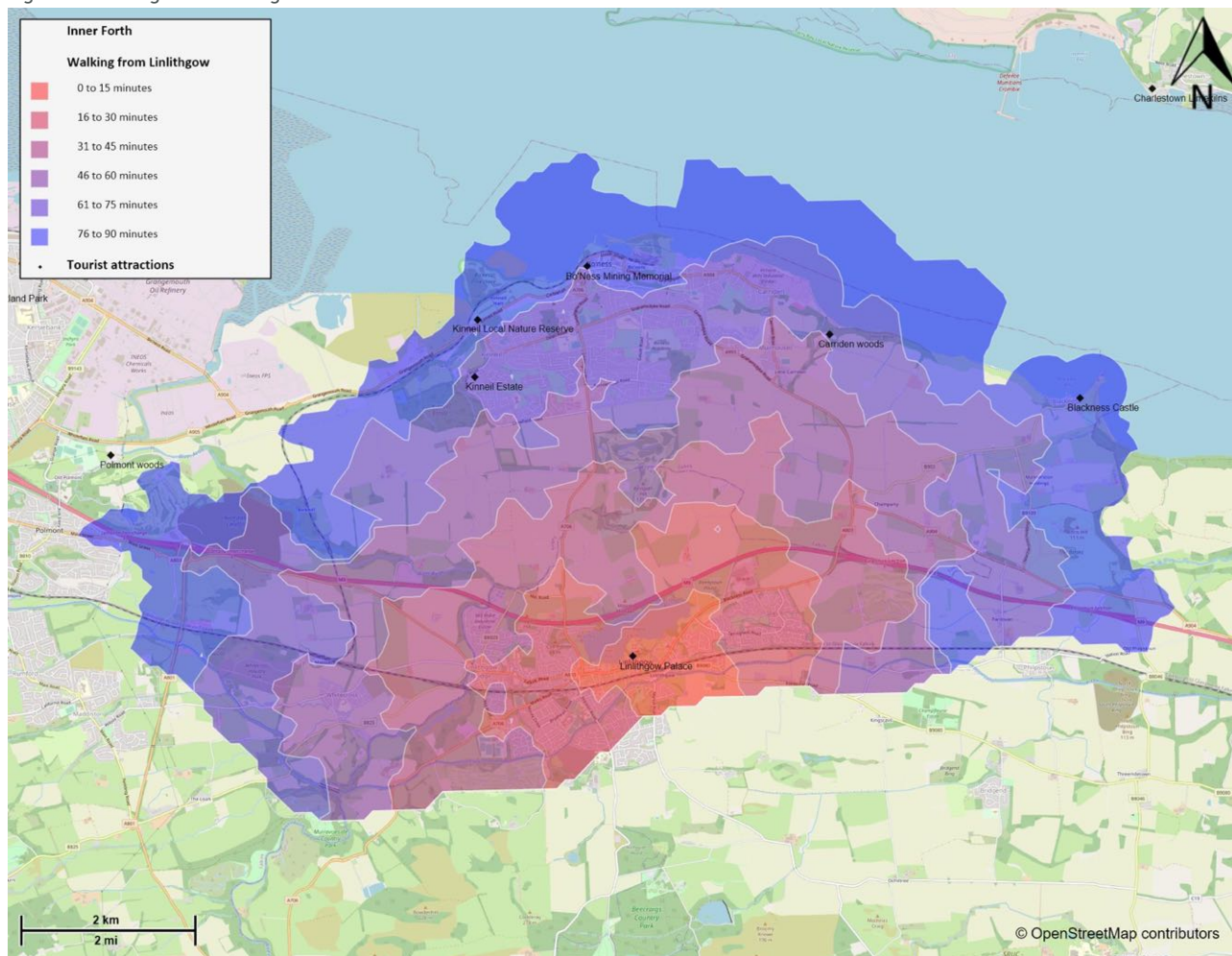
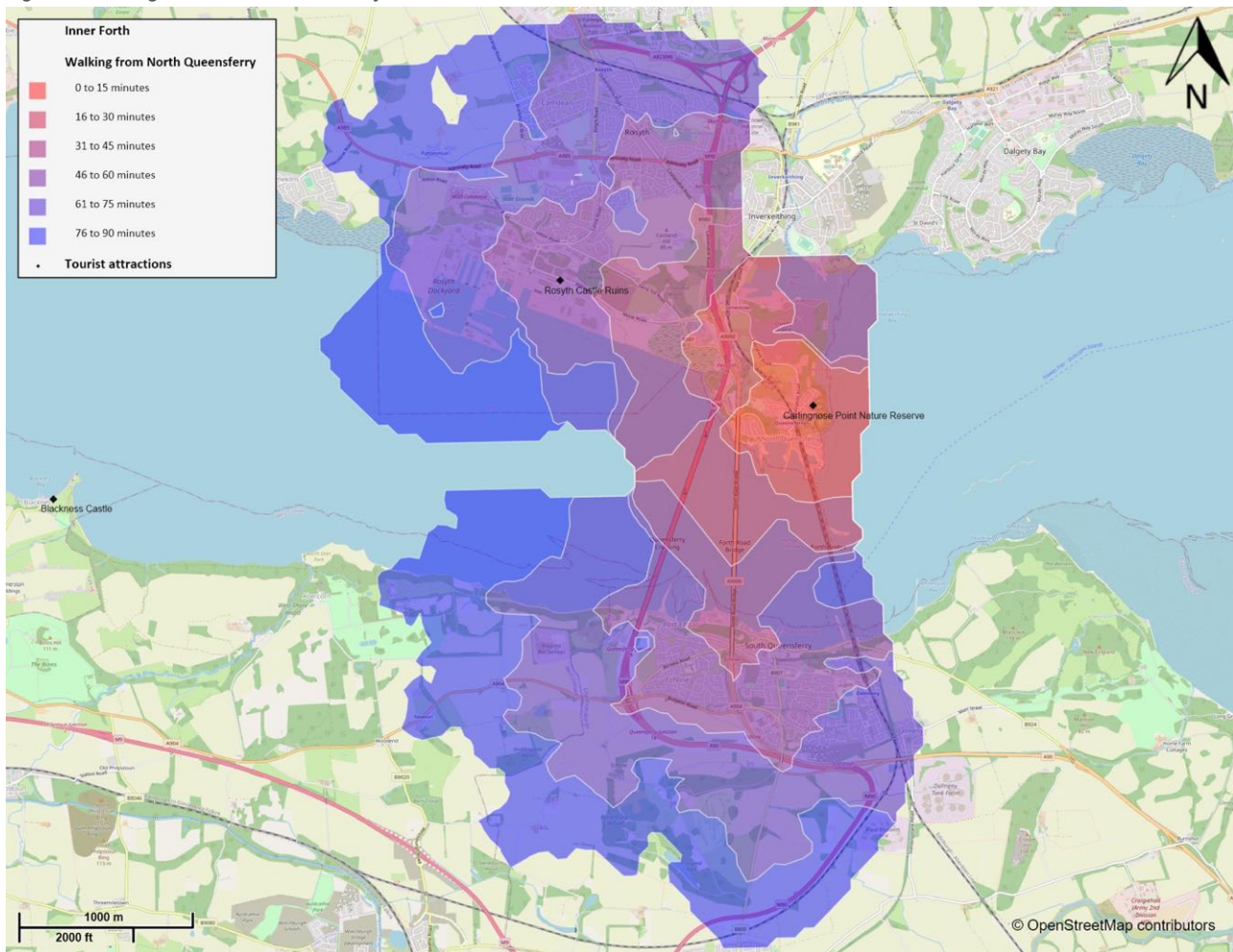


Figure 8: Walking from North Queensferry train station



Other settlements within the Inner Forth area also offer a range of suggested walking routes, as highlighted on the IFF website⁴. The website also includes the 'Wanderings and Windings' heritage trails⁵, which allow people to walk or cycle around a wide area of the Inner Forth region over a number of days.

A lack of train stations to the north of the region, between Alloa and Inverkeithing, limits accessibility via walking to attractions between these destinations.

⁴ See: <https://www.innerforthlandscape.co.uk/explore/walking-cycling>

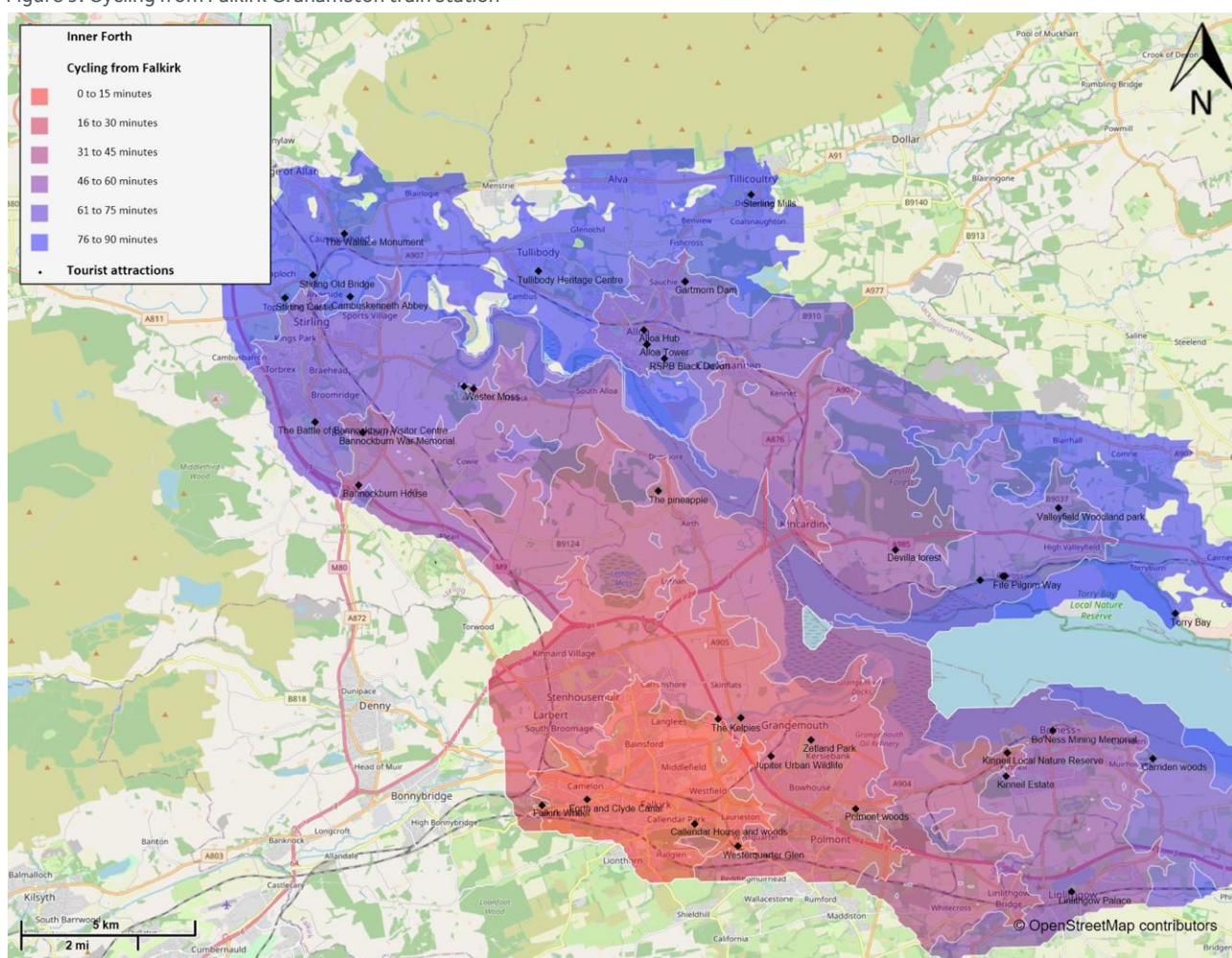
⁵ See: <https://www.innerforthlandscape.co.uk/about/wanderings-windings>

4.1.2 Cycling

Figure 9 to Figure 14 suggest a substantial area of the Inner Forth can – in principle – be reached within reasonable cycling times⁶ of key rail hubs. The maps show an ‘in-principle’ catchment for cyclists departing from Falkirk, Alloa, Stirling, Linlithgow and North Queensferry railway stations, although real-world cycling considerations, such as cyclist experience and confidence, traffic speeds, road widths and path surfacing and gradient will also influence how far people can typically reach by bike within a given timeframe.

The area benefits from sections of National Cycle Network Routes 76, 754, 764, 765, 767 and 768 passing through it, all of which offer a mixture of quiet road and traffic free routes for cyclists.

Figure 9: Cycling from Falkirk Grahamston train station



⁶ Cycling speed is calculated at 16 Km/hr and walking speed 4.8 Km/hr

Figure 10: Cycling from Alloa train station

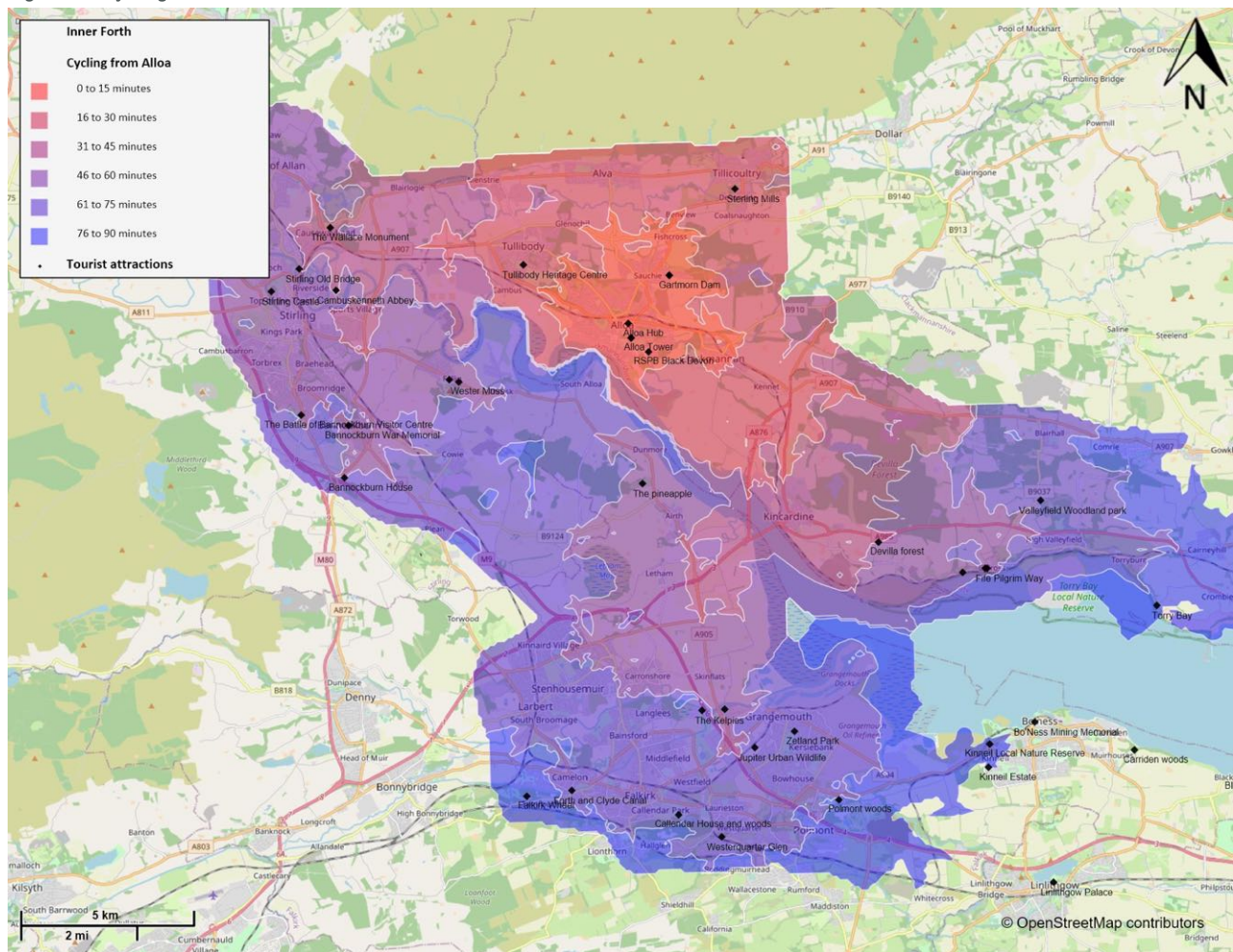


Figure 12: Cycling from Linlithgow train station

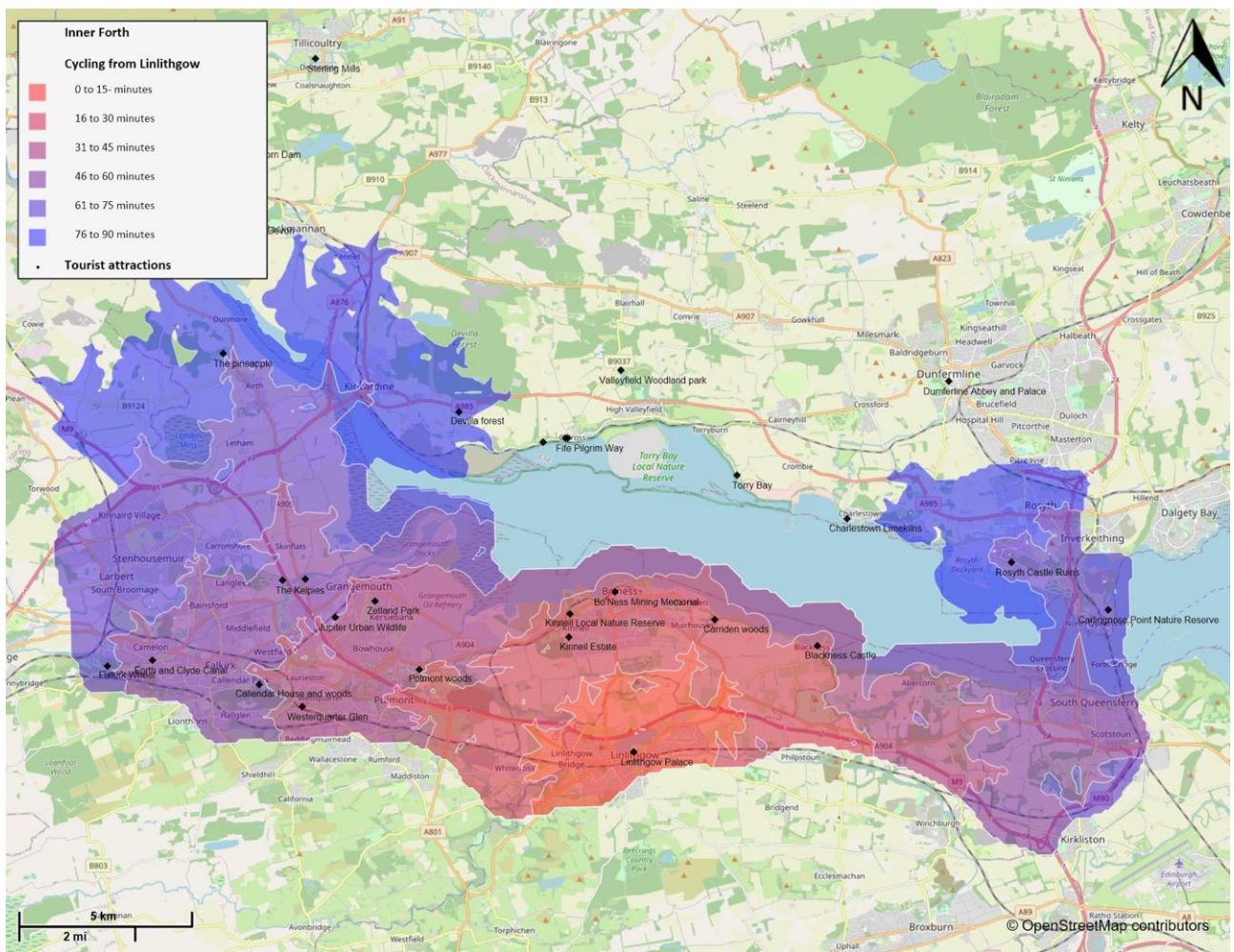


Figure 13: Cycling from North Queensferry train station

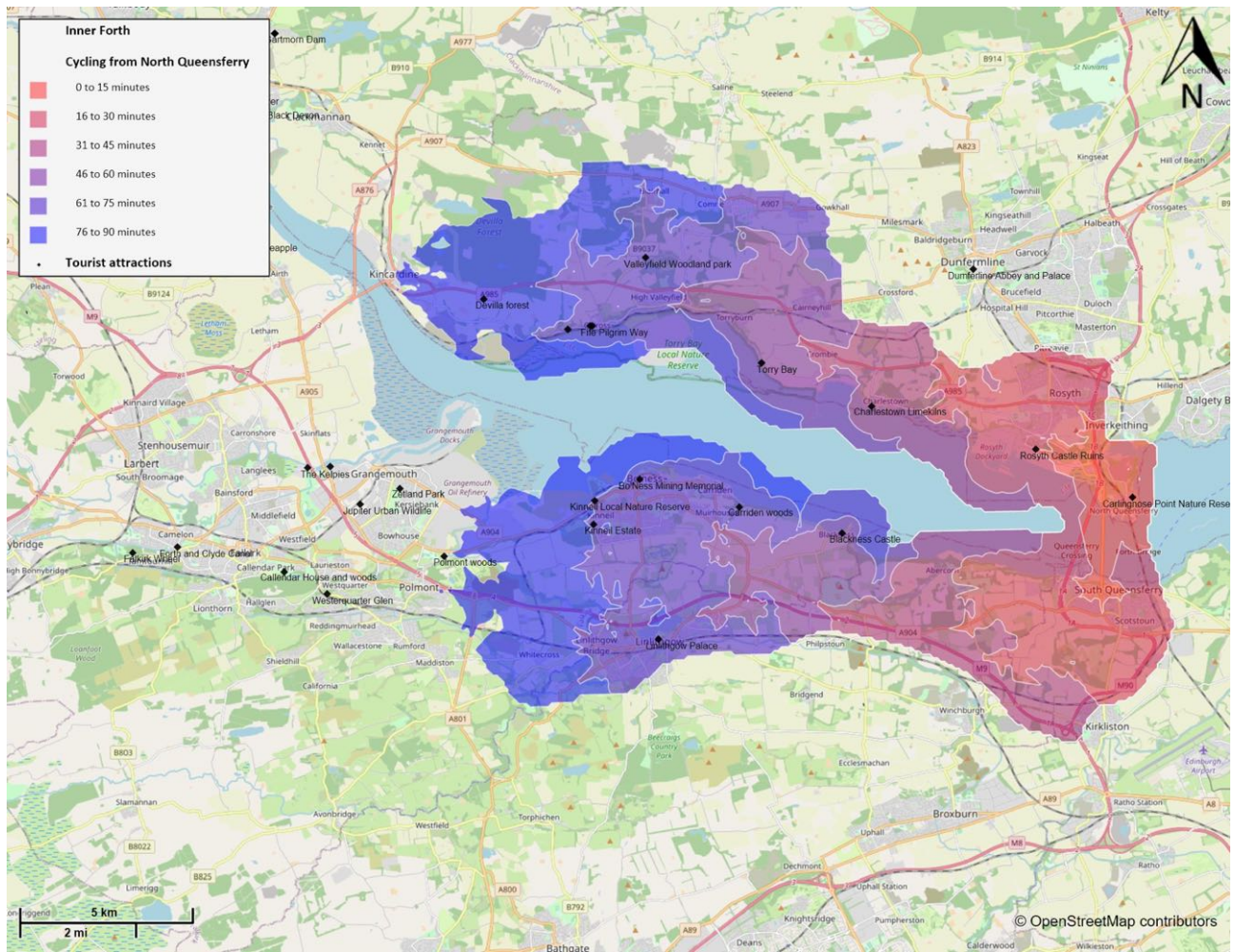
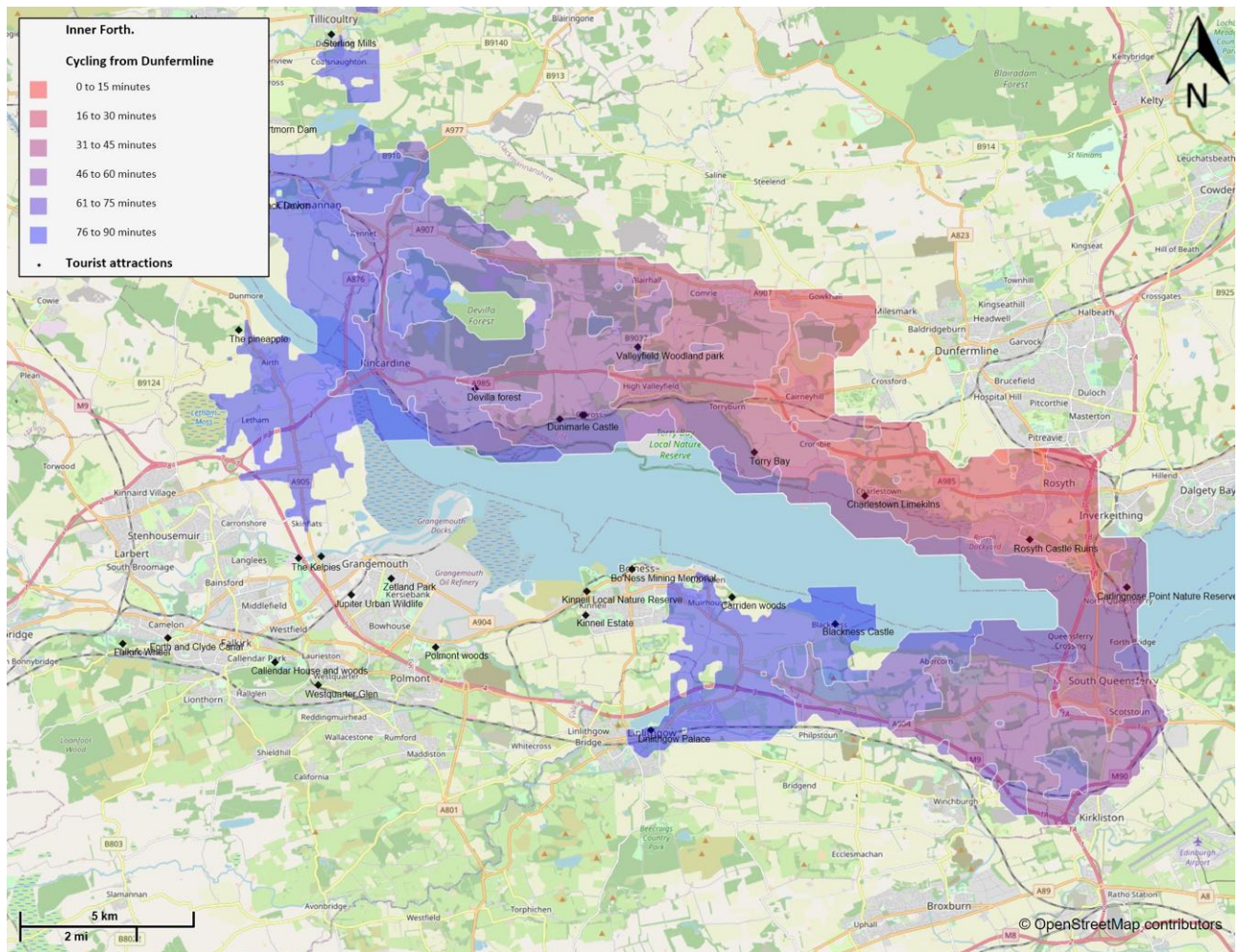


Figure 14: Cycling from Dunfermline train station



4.1.3 Travel by Train

Figure 15 shows the rail network linking to the Inner Forth region⁷. From this, it is clear the southern aspect of the Inner Forth catchment area is supported by a range of stations that provide reasonable access to the Inner Forth area. In contrast, the northern section of the Inner Forth catchment is not as well served, making sections of this area less accessible by rail.

Figure 15: Rail network map showing Inner Forth region

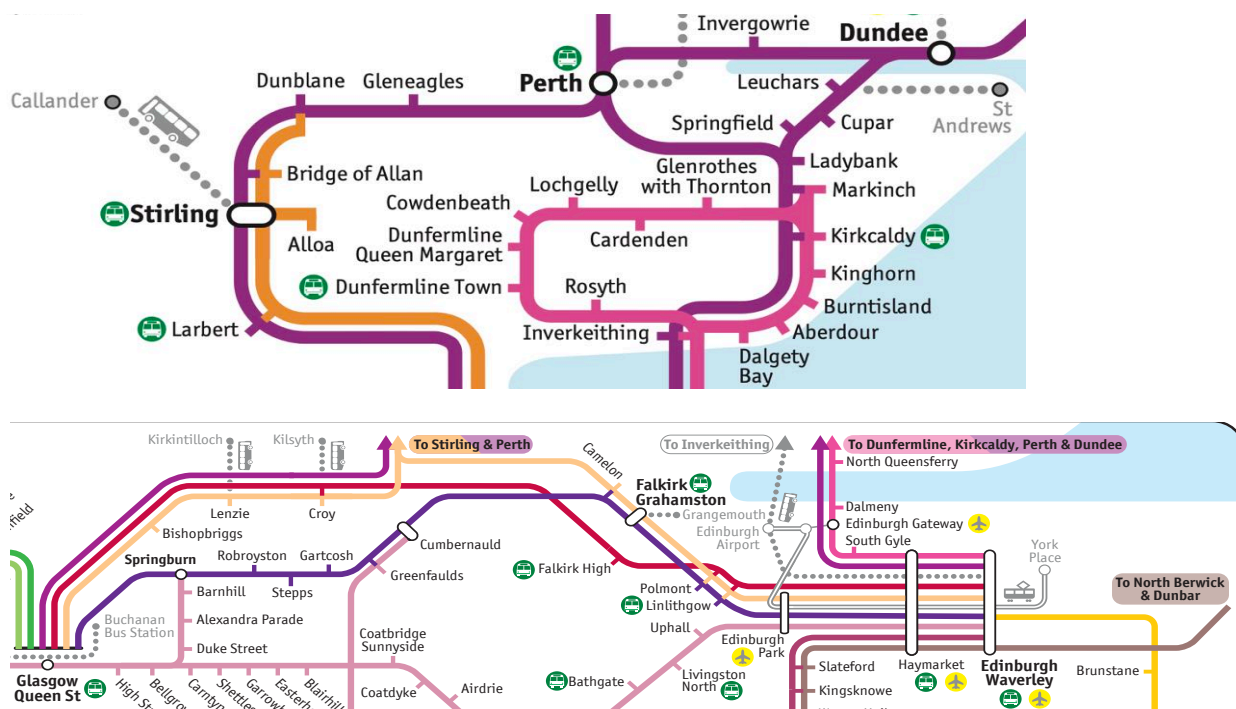
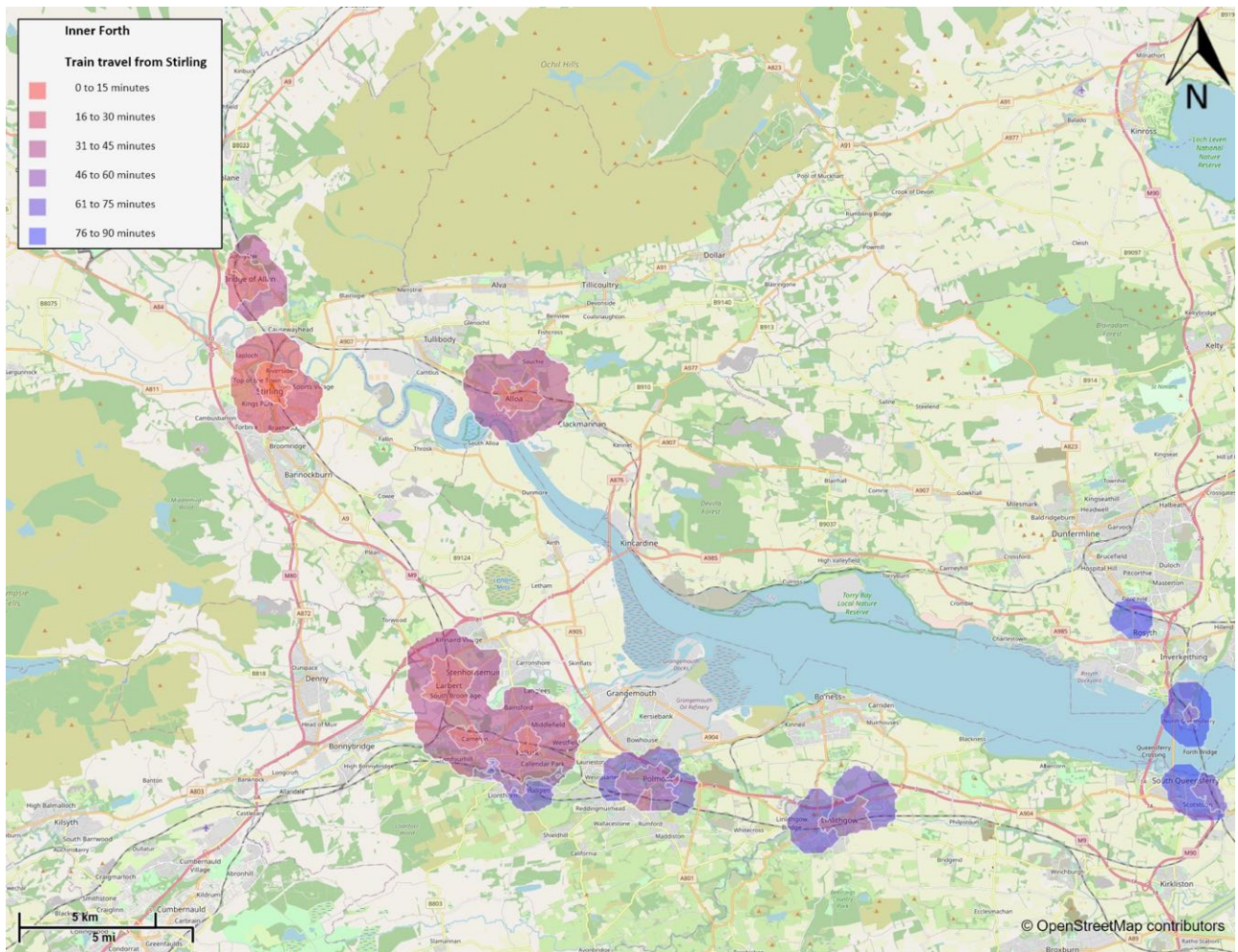


Figure 16 shows train travel times from Stirling train station to other stations within the Inner Forth area. All train stations within the Inner Forth area are accessible from Stirling train station within 75-90 minutes' journey time (and vice-versa).

⁷ Source: <https://www.scotrail.co.uk/plan-your-journey/our-routes>

Figure 16: Train travel from Stirling train station



4.1.4 Bus Travel

Figure 17 to Figure 22 show bus travel from key locations across the area in relation to visitor attractions. As these figures show, regional bus services provide access to a wide area, with many visitor attractions accessible by bus within a 90-minute (or less) journey time.

Figure 17: Bus travel from Falkirk Grahamston train station

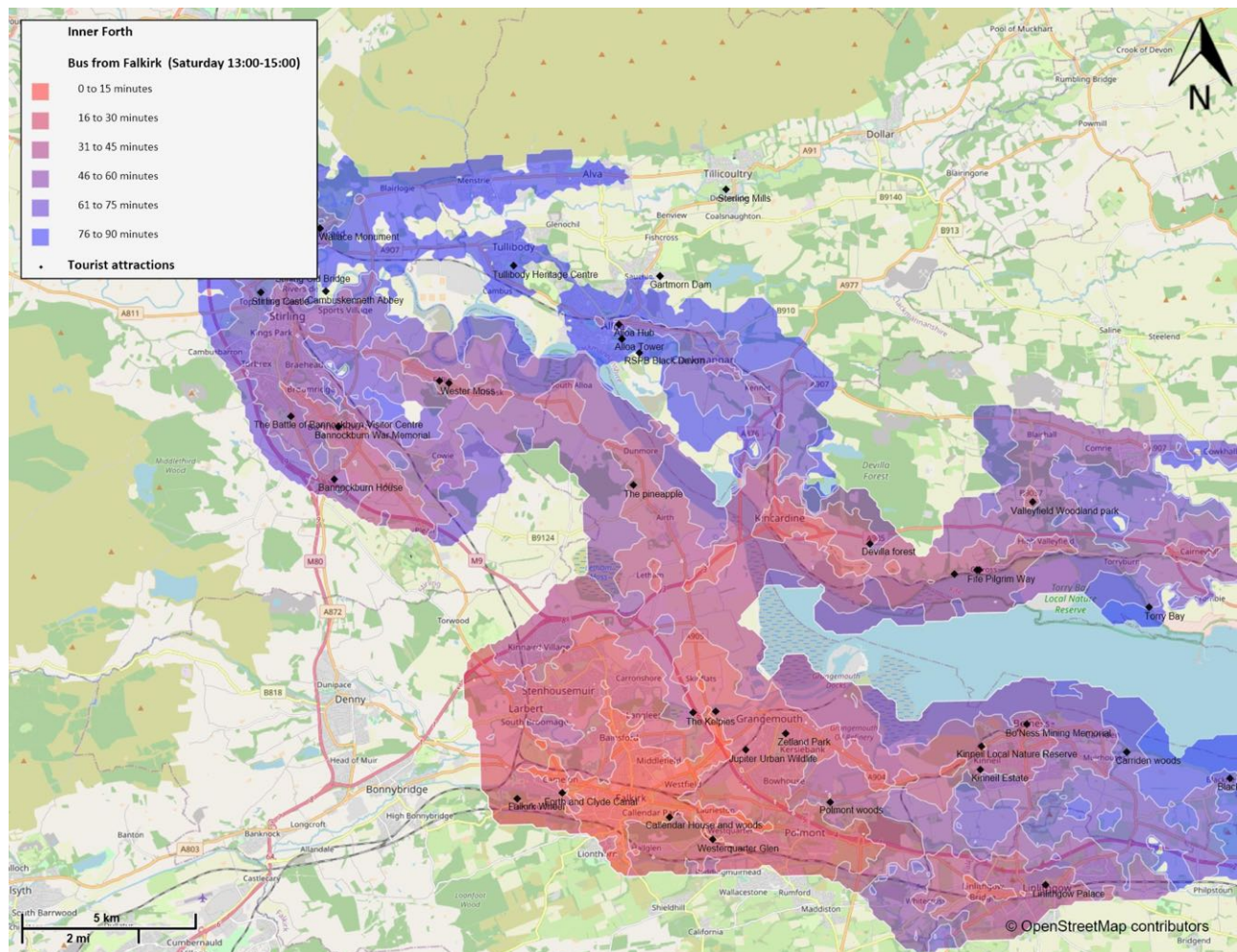


Figure 18: Bus travel from Alloa train station

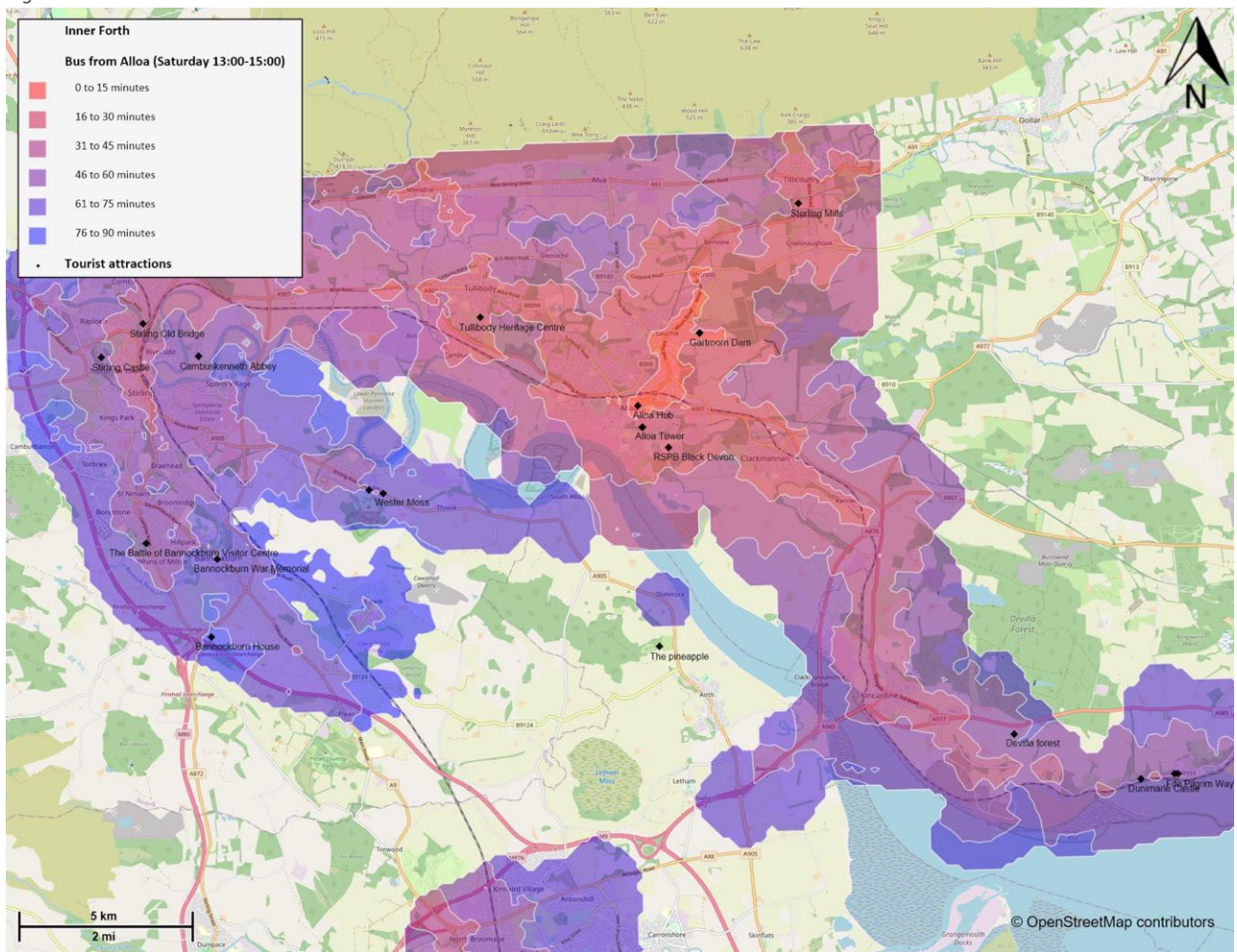


Figure 19: Bus travel from Stirling train station

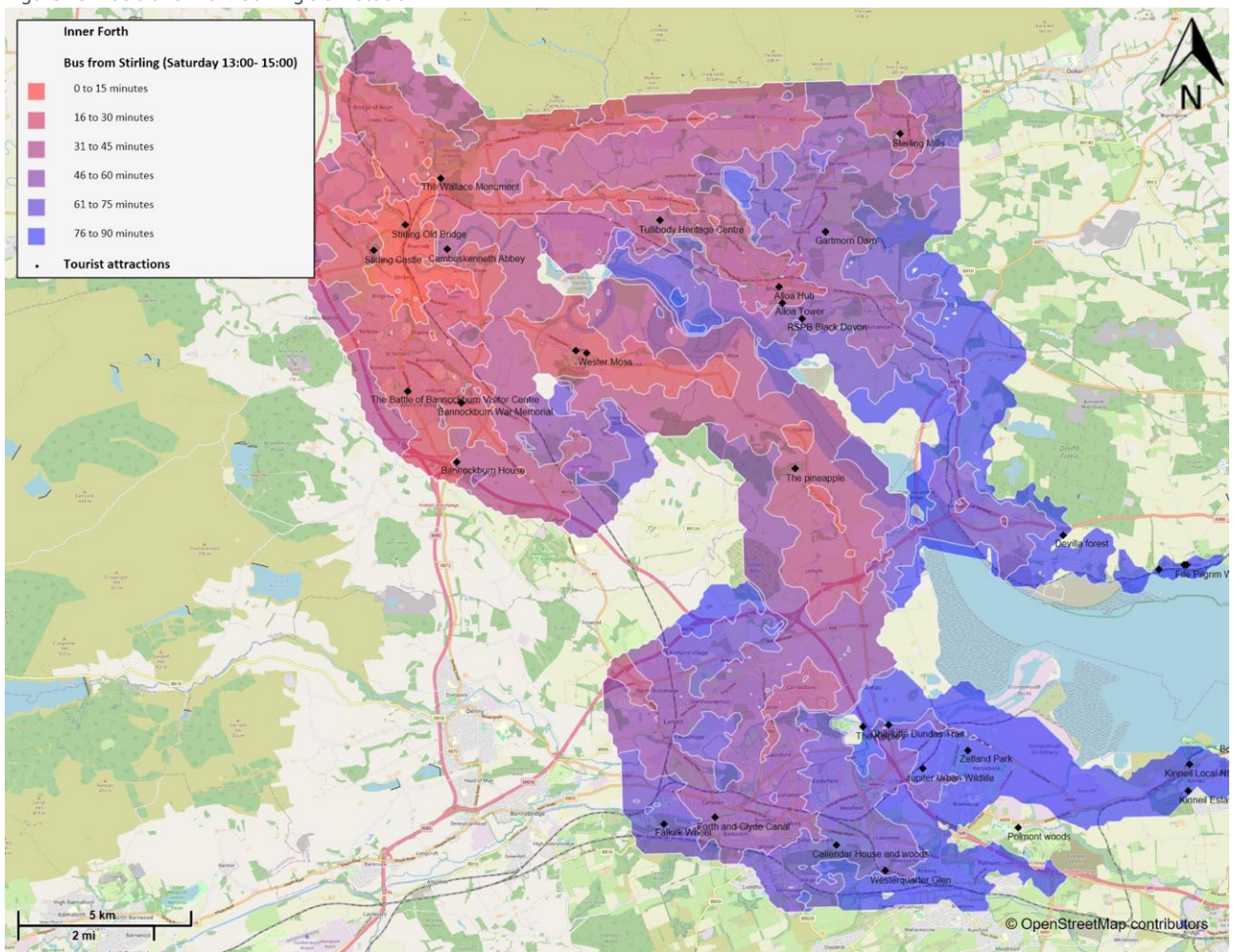


Figure 20: Bus travel from Linlithgow train station

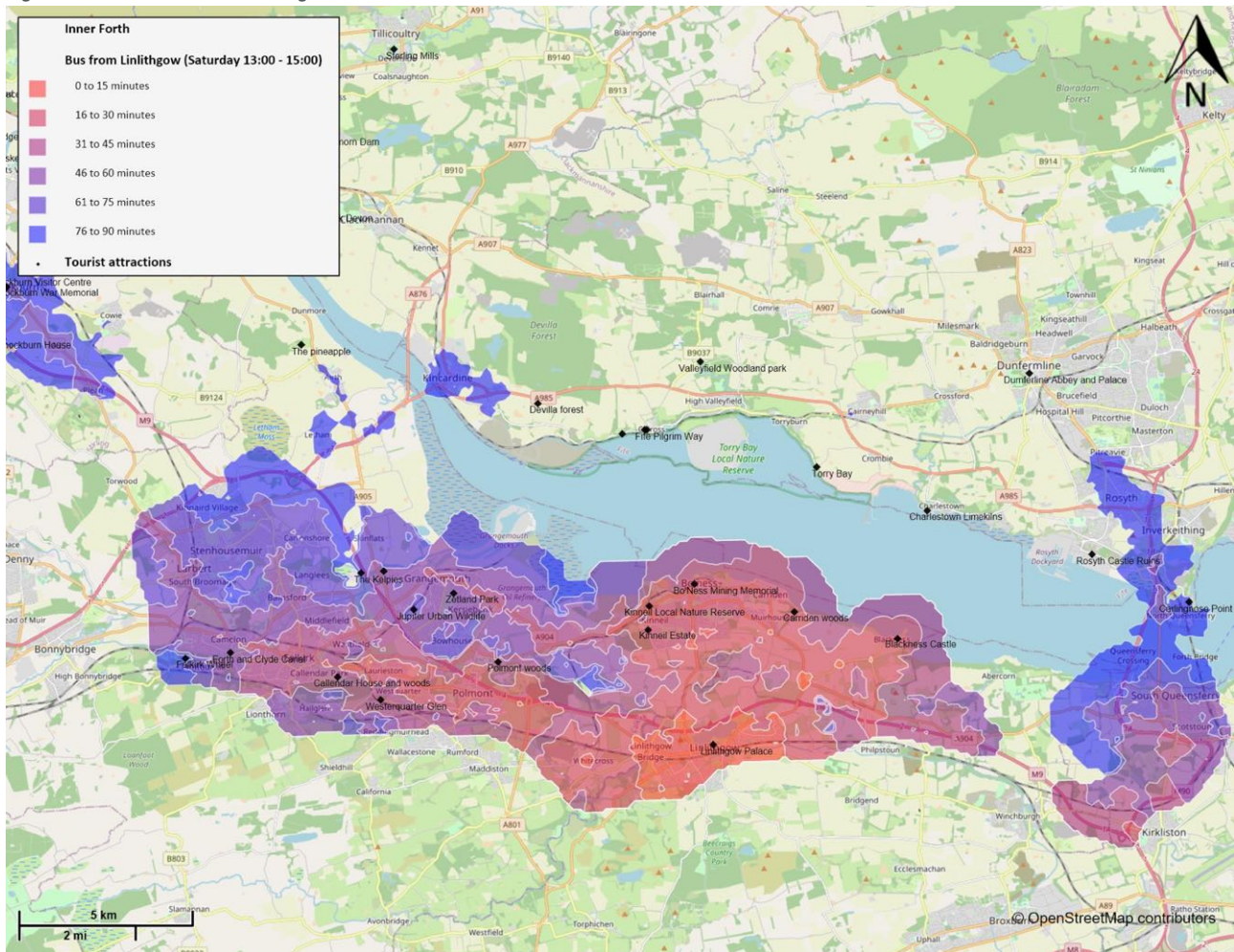


Figure 21: Bus travel from North Queensferry train station

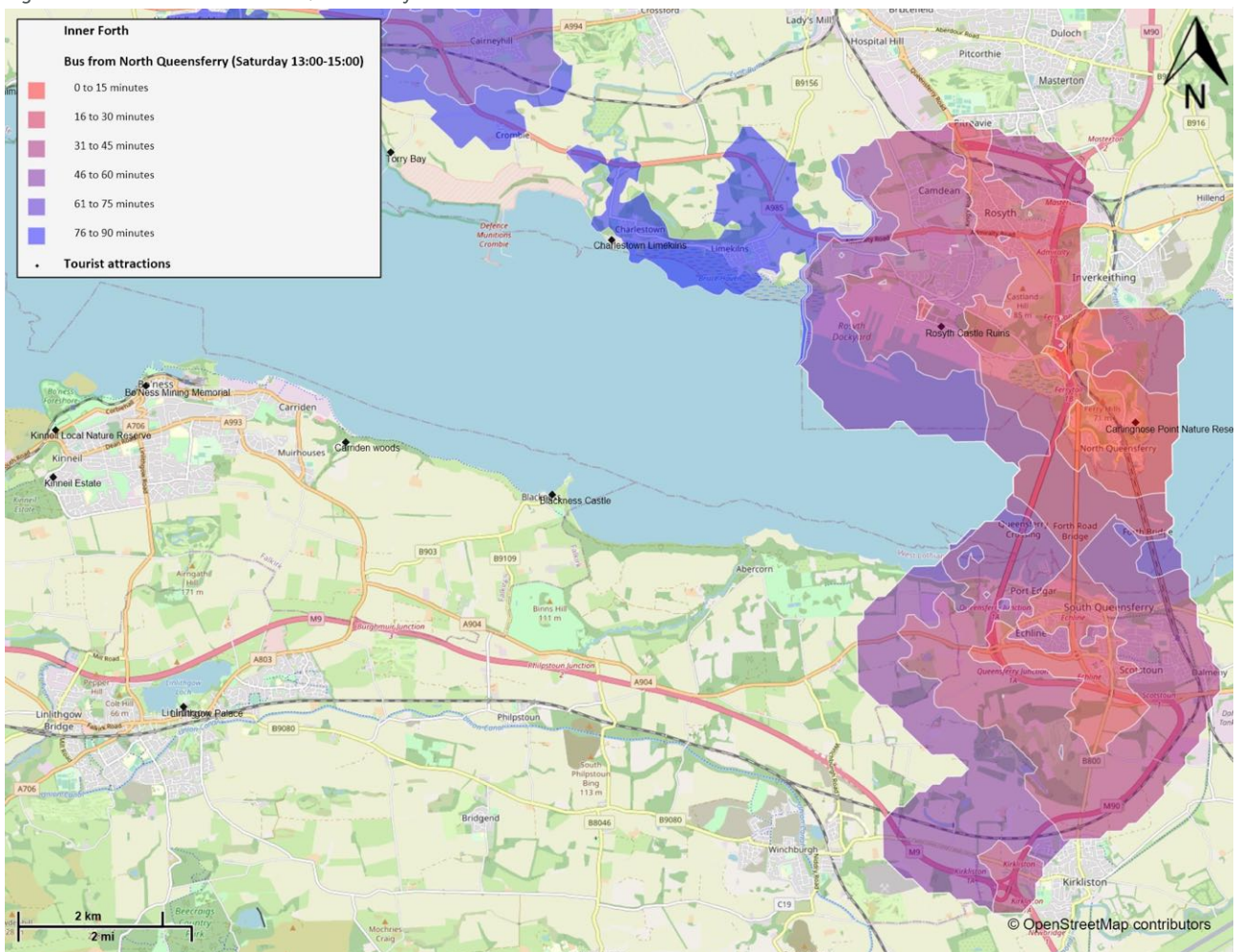
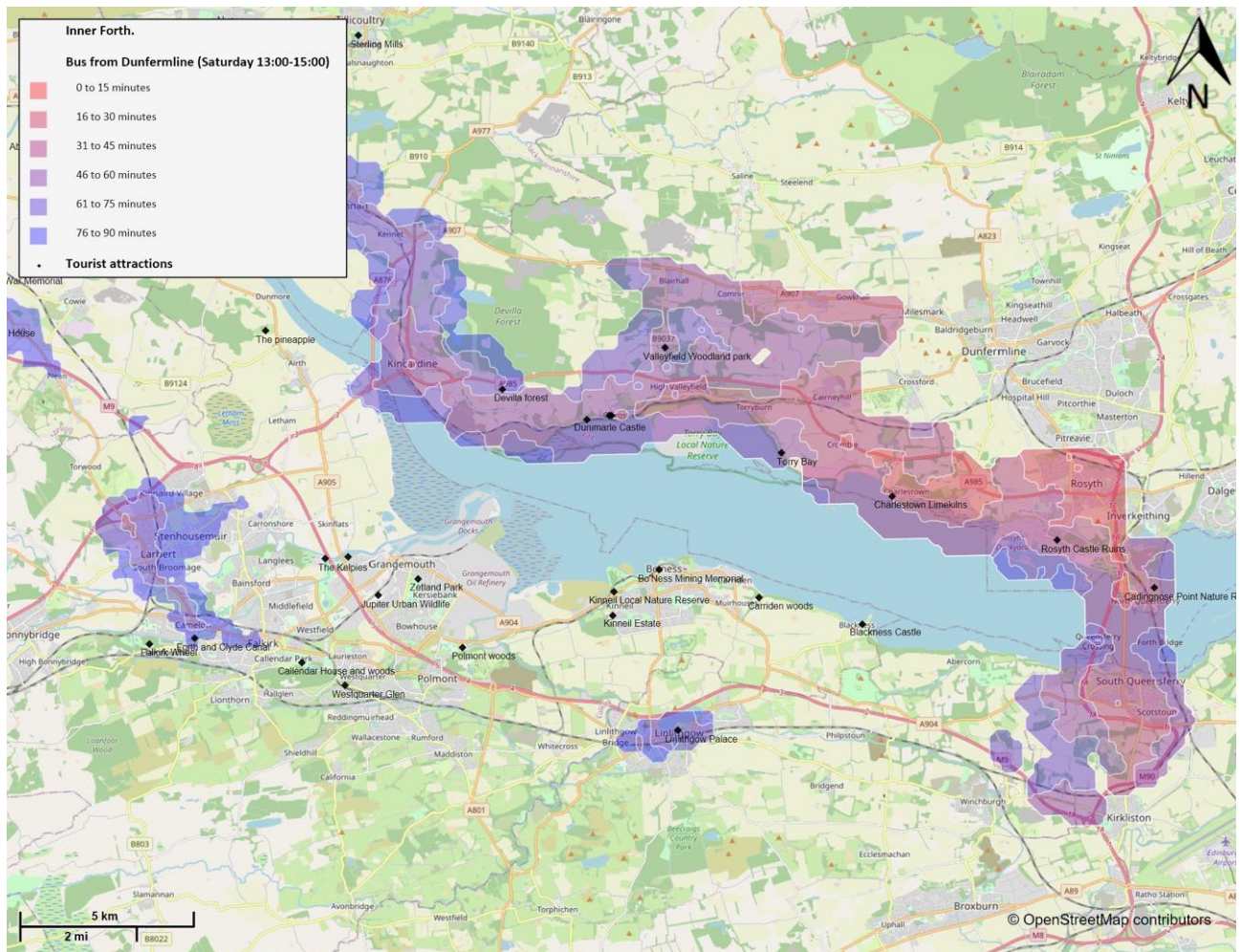


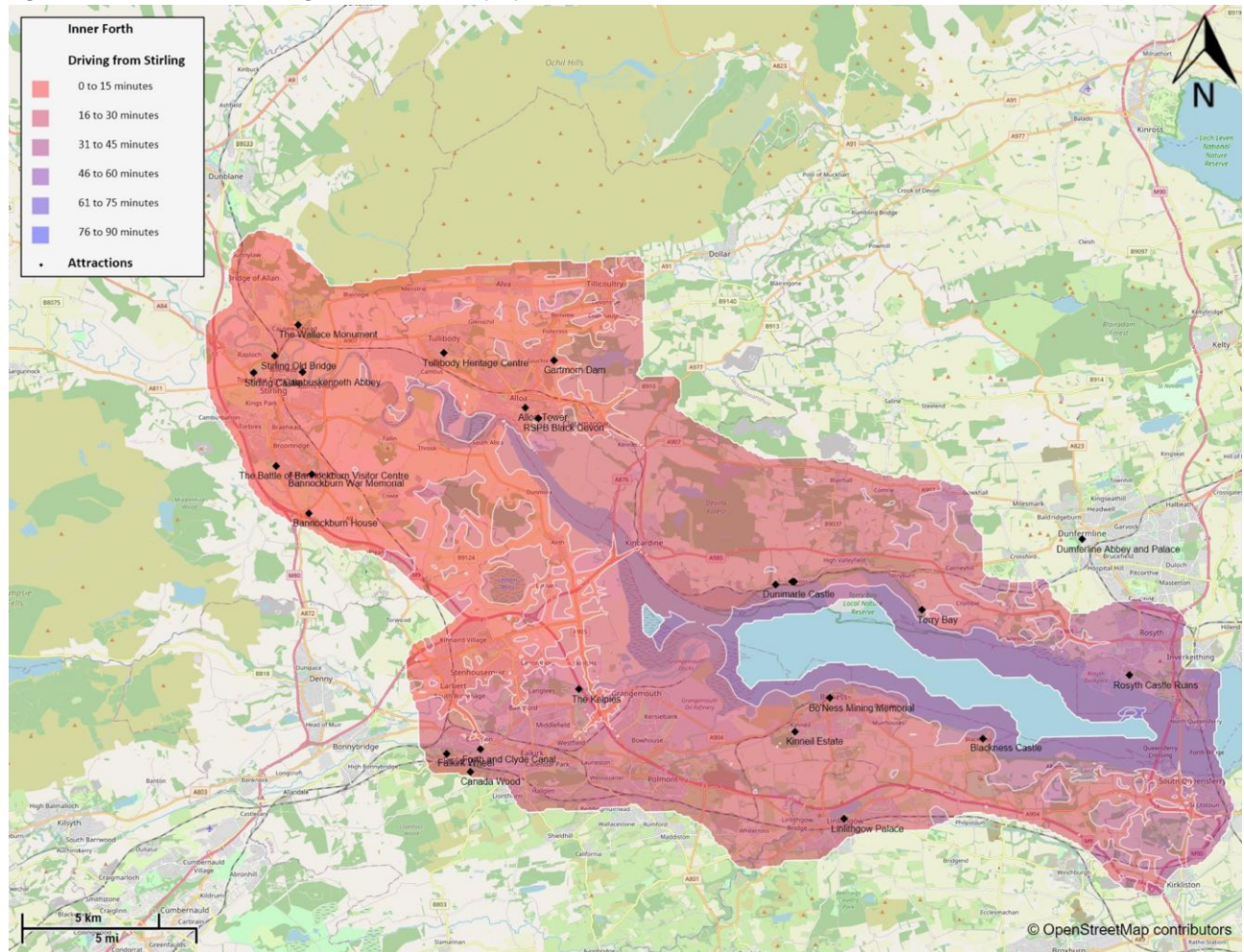
Figure 22: Bus travel from Dunfermline train station



4.1.5 Car Travel

Figure 23 shows that from Stirling the wider project area can be reached within a 45-minute drive time (and vice versa). This gives an indication of how the GHTS could run, including wait times/ journey times to different areas and attractions within the Inner Forth area. It also helps illustrate how promotion of active and sustainable access to and around the Inner Forth area will need to compete with the perceived convenience and speed of car-based journeys.

Figure 23: Drive time from Stirling (Inner Forth wider project area)



5 Target Markets

This project aims to explore the feasibility of a Green Heritage Transport (or alternative) service and identify additional measures with the potential to influence the travel behaviour of both tourists and local residents, with a view to fostering more positive social, environmental and economic outcomes for the Inner Forth area. This section provides an overview of some of the key characteristics of these target markets.

5.1 Residents

The Inner Forth area covers parts of four county boundaries Falkirk, Stirling, Clackmannanshire and Fife. It is not possible to obtain data for the Inner Forth area alone, and so resident data includes the entirety of these four counties (N.B. part of the wider engagement area for this project lies within other Local Authority boundaries, such as West Lothian, but only the core project area has been included in this overview).

Table 1 summarises a selection of population statistics for each of these counties. With a combined population of over 660,000, local residents offer a clear target market for leisure trips to and within the Inner Forth area.

Table 1: Population statistics for counties in Inner Forth region⁸

Location	Population	Economically Active
Falkirk	155,990	71%
Stirling	90,247	68%
Clackmannanshire	51,442	68%
Fife	365,198	68%

Table 2 provides an overview of how residents of Falkirk, Stirling, Clackmannanshire and Fife typically travel to work or study.

Table 2: Travel to work or study by mode⁹

Home	Car (all)	Train	Bus, Minibus, Coach	On foot	Bicycle	Other
Falkirk	61%	5%	9%	15%	1%	1%
Stirling	50%	3%	11%	19%	1%	1%
Clackmannanshire	60%	2%	9%	17%	1%	1%
Fife	55%	3%	12%	18%	1%	1%

⁸ 2011 Census Data

⁹ 2011 Census Data

In all cases, most residents travel to work or study by car (category includes shared cars and taxis), with walking and bus, minibus or coach being the next most common modes. Bicycle journeys are negligible across all settlements. The category "other" includes people who work from home. Encouraging these commuters to walk and cycle for leisure within the Inner Forth area may help to foster more active and sustainable commute trips.

Table 3 summarises households without access to a car for private use and access to one or more bikes for private use in each county.

Table 3: Households with car and bike access¹⁰

Location	HH with access to one or more bikes	HH with <u>no</u> access to a car
Falkirk	33%	21%
Stirling	45%	18%
Clackmannanshire	41%	23%
Fife	33%	26%

From Table 3 it is clear that a significant proportion of households in the region do not have access to a car or van, and in all cases a higher proportion of households have access to at least one bike. For households without access to a car, the nature and extent of active travel infrastructure and the sustainable travel services in the Inner Forth area are likely to be very important as they will shape how easily and often residents can access essential goods and services, and travel throughout the region for leisure.

5.2 Tourism

The Inner Forth region is a popular day trip destination which appeals to the domestic Scottish and UK market. Even before the COVID-19 pandemic, the tourism profile of the Inner Forth was dominated by domestic visitors, with approximately 78% of overnight visitors being from Scotland and Great Britain¹¹.

Statistics on tourist numbers to the Forth Valley region, which includes Clackmannanshire, Falkirk and Stirling, state that there were 8,807,000 visitors between 2017 and 2019, of which 683,000 were overnight trips. Fife received a higher number of visitors between 2017 and 2019, with a total of 9,347,000 visitors, where 705,000 were overnight stays¹².

A high proportion of overnight domestic visitors (approximately 33%) travel to the Fife and Forth Valley region to visit friends and family, which may help explain the reason for the average spend per day (£63) being below the Scottish average of £69. Just under half of all overnight domestic visits to Fife and the Forth Valley in 2017-2019 were made by people over the age of 55¹³.

¹⁰ Annual Cycling Monitoring Report 2021 (Cycling Scotland, 2021)

¹¹ Visit Scotland Insight Department Factsheets: Fife and Forth Valley 2019 (Visit Scotland, 2021)

¹² Ibid.

¹³ Visit Scotland Insight Department Factsheets: Fife and Forth Valley 2019 (Visit Scotland, 2021)

The most popular activities for domestic day visitors to the region included visiting family, eating out and going for a walk or long hike.

VisitScotland has identified future trends for tourism, with one of the 'Mega Drivers to 2030' being that travellers are looking for ways to reduce their carbon footprint, with destinations that can demonstrate their green credentials increasing in popularity¹⁴.

5.2.1 Visitor Attractions

The Inner Forth area has a number of natural, cultural and built heritage tourist attractions. The top free visitor attraction in 2019 in the Forth Valley was The Helix, which connects local communities with 27km of path network and is home to the Kelpies. Stirling Castle was the most visited paid for attraction in 2019 within the Forth Valley, which is managed by Historic Environment Scotland. In Fife, the most visited free attraction within the Inner Forth project area is Devilla Forest, which is an area popular with cyclists and dog walkers¹⁵.

Table 4 outlines key visitor attractions and their accessibility by active and sustainable modes¹⁶.

¹⁴ Trends 2020 Travelling Towards Transformational Tourism (VisitScotland, 2020)

¹⁵ Visit Scotland Insight Department Factsheet: Fife and Forth Valley 2019 (Visit Scotland, 2021)

¹⁶ N.B. Information sourced from a desktop review and accuracy cannot be guaranteed. 'Real-world' conditions for different modes have not been taken into consideration and the inclusion of different modes should not be taken as an indication that these journeys are necessarily safe or practical.

Table 4: Selected Tourist Attractions in the Inner Forth

Tourist Attraction	Location	Category	Accessibility by Active and Sustainable Travel	Active and Sustainable Travel Facilities
Battle of Bannockburn Memorials and Visitor Centre	Stirling	Historic	The visitor centre is a 12-minute cycle from the centre of Stirling. Bus from Stirling bus station located next to the train station takes 12 minutes to Milton Brae with a 3-minute walk to the visitor centre.	Bike racks are available at the visitor centre.
Bannockburn Heritage Trail	Stirling	Historic	Starting at Bannockburn War Memorial Bus 38 from Stirling bus station to Cross (15 minutes).	No bike parking available.
Bannockburn House	Stirling	Historic	20-minute cycle from Stirling train station.	No bike parking available.
Old Stirling Bridge	Stirling	Historic	17-minute walk or a 9-minute cycle from Stirling Train Station.	No obvious cycle parking provision for people with their own bikes. nextbike provision location.
Wallace Monument and Abbey Craig	Stirling	Historic	Direct bus from Stirling bus station to Wallace monument car park taking 11 minutes. 23-minute cycle from Stirling train station to the Wallace Monument.	3 Sheffield bike racks are available next to the café. nextbike provision within walking distance (Causewayhead roundabout)
Cambuskenneth Abbey	Stirling	Historic	19-minute walk from Stirling train station. 9-minute cycle on route 76.	No bike parking available.
Stirling Castle	Stirling	Historic	15-minute walk from Stirling train station.	5 Sheffield bike racks are available next to the ticket office.
Kings Knot	Stirling	Historic	11-minute walk from the train station on established pavements.	No bike parking available.
Stirling University	Stirling	Cultural	Direct bus from Stirling bus station every 30 minutes, including Uni Link bus. 16-minutes cycle from Stirling train station.	Number of covered bike racks available throughout the campus, along with a Nextbike station on campus.

Tourist Attraction	Location	Category	Accessibility by Active and Sustainable Travel	Active and Sustainable Travel Facilities
Fallin Open air mining museum	Stirling	Historic	18-minuytes cycle on route 76 from Stirling train station.	No obvious cycle parking
Kinneil Estate	Falkirk	Cultural	Bus 46 from Linlithgow Station Road to Kinneil House (16 minutes) then a 2-minute walk to the house.	No bike parking available.
Blackness Castle	Falkirk	Historic	From Linlithgow station 3-minute walk to Cross, Bus F49 to Square walk 4 minutes to Blackness Castle.	Bike parking available near ticket office.
Bo'Ness Mining Memorial	Falkirk	Historic/ cultural	Linlithgow Station Road Bus 46 to Salvation Army 21 minutes. Then 3-minute walk to Mining Memorial.	Forth bikes, bike racks and E chargers at Union Street carpark, near Bo'ness Custom House, Bo'ness Harbour and foreshore path and Bo'ness town centre trails
Linlithgow Palace and Loch	Falkirk	Historic	7-minute walk or a 4-minute cycle from Linlithgow train station to Linlithgow Palace.	2 Sheffield bike racks in the car park of the Palace.
Forth & Clyde Canal	Falkirk	Leisure	From Lenzie train station Walk 0.2 mile to Heath Avenue Bus X87 First Xpress to Ellisland Terminus (20 minutes) then 1-minute walk.	Towpath suitable for cycling and walking.
Falkirk Wheel	Falkirk	Culture	Bus 6 from Weir Street to Falkirk Wheel Visitor Centre 23 minutes. 14-minute cycle from Falkirk High to Falkirk Wheel on the NCR754.	Forth bikes are available at the Falkirk Wheel 10 Sheffield bike racks are available in the main car park for visitors travelling with their own bike.
Kelpies and Helix Park	Falkirk	Culture	10-minute cycle from Falkirk Grahamston station to the Kelpies.	Forth bikes are available at the Kelpies. Over 30 Sheffield bike racks within Helix Park.
Canada Wood	Falkirk	Nature	12-minute cycle from Falkirk High.	No bike parking available.
Charlotte Dundas Trail	Falkirk	Leisure and cultural	Bus 2 from Gala Bingo to Dalgrain Road 9-minute journey followed by a 5-minute walk 12-minute cycle from Falkirk town centre	The towpath is suitable for both walking and cycling

Tourist Attraction	Location	Category	Accessibility by Active and Sustainable Travel	Active and Sustainable Travel Facilities
Callendar House and woods	Falkirk	Leisure	7-minutes cycle from Falkirk	Grounds suitable for both walking and cycling
Polmont woods	Falkirk	Nature	12 minute bus journey from Gala bingo to Black Bull Inn. 19-minute walk from Polmont train station.	Polmont woods is situated next to the NCN 76 network
Westquarter Glen	Falkirk	Nature	Bus x38 from Gala Bingo to Mary square 7-minute journey followed by a 12-minute walk 15 -minute cycle from Falkirk	Cycle paths and mountain bike trails.
Carron Dams nature reserve	Falkirk	Nature	Bus 8 from Grahamston Station to Larbert High School 13-minute journey 13-minute cycle ride from Falkirk town centre	Cycle paths and mountain bike trails
RSPB Black Devon Wetland	Clackmannanshire	Nature	7-minute cycle from Alloa train station.	Bike racks at the end of the path near picnic tables
Tullibody Heritage Centre	Clackmannanshire	Nature	From Alloa train station 5-minute walk to Mar Place Bus 51 to Stirling Road (10 minutes) then walk 6 minutes.	No bike parking available.
Gartmorn Dam	Clackmannanshire	Nature	15-minute cycle from Alloa train station.	The route around the dam is suitable to cycle. Bike racks available.
Cambus Pools	Clackmannanshire	Nature	16-minute cycle from Alloa train station. 26-minute cycle from Stirling train station.	No bike parking available.
Fife Pilgrim Way & Fife Coastal Path	Fife	Adventure	50-minute cycle on route 76 from Alloa. From Alloa, Clackmannan Road Bus 8A to the Palace (30 minutes).	Bike parking available along route.
Dunfermline Abbey and Palace	Fife	Historic	10-minute walk or 3-minute cycle from Dunfermline Town train station to palace.	Bike racks in Monastery Street entrance.
Culross (Historic village, ruins of West Kirk)	Fife	Historic	50-minute cycle on route 76 from Alloa. From Alloa Clackmannan Road Bus 8A to the Palace (30 minutes).	No bike parking available. Covered bus shelter near entrance to the palace.

Tourist Attraction	Location	Category	Accessibility by Active and Sustainable Travel	Active and Sustainable Travel Facilities
Dunimarle Castle Gardens	Fife	Nature	53-minute cycle from Dunfermline Town station via route 76.	No bike parking available.
Rosyth Castle Ruins	Fife	Historic	14-minute cycle from North Queensferry train Station.	No bike parking available.
Sterling Mills	Clackmannanshire	Leisure	25-minute cycle from Alloa train station	Forth Bike station at Tillicoultry Devon Way next to Sterling mills.
Alloa Tower	Alloa	Historic	10-minute walk or a 3-minute cycle from Alloa train station.	No bike parking available.
Valleyfield Woodland Park	Fife	Nature	Bus 8A from Clackmannan Road to Newmills Bridge 36-minutes followed by 30-minute walk 54-minute cycle from Alloa via route 76	No obvious bike parking
Kincardine town	Fife	Leisure	30-minute cycle from Alloa via route 76	Start of Fife coastal path
Jupiter Urban Wildlife Centre	Falkirk	Nature	15-minute cycle from Falkirk Grahamston train station.	No bike parking available.
Zetland Park	Grangemouth	Leisure	25-minute cycle from Falkirk Grahamston train station via route 76.	An e-bike station is available within the Park. Bike parking unknown.
Charlestown Limekilns	Charlestown Limekilns	Leisure Historic	28-minute cycle from North Queensferry train station.	Formal provision unknown, but railings along Limekilns shore appear to offer informal bike parking opportunities.
The Pineapple	Falkirk	Historic	From Stirling, Bus F16 to North Green Drive (33 minutes).	No bike parking available.
Devilla Forest	Devilla Forest	Leisure Nature	From Alloa, Bus 8A to Westfield (49 minutes).	No bike parking available.

6 Stakeholder Engagement

Qualitative interviews with key stakeholders were carried out to explore strengths and weaknesses of the proposed GHTS and alternative services, and how any potential weaknesses could be overcome. For clarity, the points made by interviewees and noted in this section are subjective in nature.

Interviews were carried out via Microsoft Teams with representatives from key stakeholder and interest groups, including Stirling Council, Falkirk Council, Dunfermline and West Fife Local Tourism Association, Recycle-a-Bike, Forth Environment Link and Cycling UK Scottish Advisory Committee.

Interviews were structured around the following key areas:

1. Potential strengths and weaknesses of the GHTS concept;
2. How potential weaknesses could be overcome;
3. Identifying gaps in existing transport services and infrastructure; and
4. Barriers to entry level cyclists and if / how the GHTS could benefit these cyclists.

6.1 Interview Findings

Key themes which emerged from the interviews include:

- The broad GHTS is a worthwhile concept, although a number of reservations were identified.
- Needing to have a defined route that the service would operate on.
- The Inner Forth area needs to be packaged and promoted to ensure visitor numbers are maintained and continue to grow.
- Businesses and tourism organisations need to be supportive of visitors arriving by active travel.
- People have a fear of cycling on at least some roads due to traffic levels and the speed of vehicles.

The following sections summarise outputs from the interviews.

6.1.1 Strengths of Green Heritage Transport Service

The majority of interviewees agreed that the concept was a good idea, with one interviewee stating:

"The more innovative ideas in the area the better."

Interviewees identified the biggest strength as enabling visitors to explore a larger area, and to undertake longer one-way journeys, especially in areas with limited access via existing public transport networks. Additionally, interviewees noted that the concept would be positive for the local economy as well as the environment.

It was also mentioned that such a service would support mixed ability groups to be able to cycle as a group, with more experienced members of the group being able to undertake a longer ride whilst less experienced members use the transport service.

Interviewees noted that towns in the region have good active travel networks, but they are not joined up particularly well, and so a service connecting towns would be a benefit to the area.

Several interviewees mentioned that for a GHTS to be successful, it needs to be signposted and promoted in order to raise awareness of the service. Furthermore, the service would need to run parallel to walking and cycling routes, where convenient pick-up and drop-off locations can be arranged.

6.1.2 Weaknesses of Green Heritage Transport Service

A number of interviewees expressed concern around usage levels of a GHTS, noting that it will take time to build an audience. One stakeholder stated that the Inner Forth area currently doesn't have a large enough visitor market, with the footfall in the project area not high enough to warrant the transport service.

It was identified that there are gaps in the cycle infrastructure in the region along with limited battery life of e-bikes and a lack of charging points. Cost of the service was also raised as a concern, with one interviewee stating:

"The service would require at least two members of staff if the service was available all of the time."

Some interviewees suggested that limiting the service hours of the GHTS would help keep running costs down;

"Staffing cost would be reduced if the service only ran in the afternoons".

One interviewee mentioned that money would be better spent elsewhere as there would need to be an increase in cycle tourism before the GHTS had sufficient demand. It was also noted that the existing public transport infrastructure could be better utilised in place of implementing a GHTS;

"The service doesn't need a new vehicle - people should be encouraged to use public transport and should be allowed to carry bikes on transport for free if they are already paying for a seat."

Concerns were also raised around the reputation of such a service, particularly if it was a DRT service, as users would need a reliable way of contacting the driver or following the vehicle's progress along a route, to ensure they are able to make it to a designated pick-up point at a specific time – any perceptions of issues with the service, whether accurate or not, could negatively impact its future success, as noted by one interviewee:

"Any reliability issues would spread by word of mouth."

Real time information showing the location of the bus and it's estimated time of arrival could help to mitigate these issues.

It was also noted that there is currently a nationwide shortage of bus drivers, and existing routes are often cancelled at short notice. This could further impact the operation and reputation of a GHTS.

One interviewee stated that the increasing popularity of e-bikes could cause complications for a GHTS, due to them generally being bulkier and heavier than standard bikes, and so they may not fit on a rack or trailer or may reduce the number of bikes which can be carried. A further complication is the use of adapted cycles by people with disabilities – these can come in a variety of designs and sizes, and so would need more space for transportation.

6.1.3 Barriers to Active Travel in the Inner Forth

Interviewees noted that not all cycle routes in the region are well connected - the main missing links are connecting routes between towns. One interviewee noted:

"The route from Stirling to Falkirk is on roads with no off-road alternative."

Additionally, gaps in the public transport network were noted;

"There are not many train stations along the northeast Fife coastline, which makes travelling with bikes difficult."

Furthermore, several interviewees mentioned the limited bike spaces on trains and the fact that these sometimes cannot be booked.

It was highlighted that signage needs to be improved for the safe routes. However, it was also noted that the routes need to be enjoyable as well as safe to encourage people to want cycle. The Sustrans NCN Route 76 around the Forth has large sections through housing estates as they are the safest roads, however it is not possible to see the Forth on these sections of the route and therefore the route may not encourage people to cycle for leisure.

All stakeholders mentioned safety, or perception of safety, as the biggest barrier to encouraging more people to cycle for leisure, along with access to facilities such as bike parking and accessible routes. As highlighted by one interviewee:

"The biggest barriers to people cycling are often perceived barriers of their own capabilities."

There need to be clearly defined walking and cycling routes that are well signposted and highlight attractions to visit, and routes need to be perceived as safe and enjoyable. Some interviewees noted that there is limited funding for the maintenance of existing cycle routes. As one interviewee stated:

"A cycle route is only as good as its weakest section."

The availability of affordable bikes to purchase is a barrier to low-income families, additionally storage of bikes can be a barrier to bike ownership, particularly for those living in a flat. Several interviewees mentioned the shared bike schemes Forth Bike and nextbike which help to overcome the issues of bike ownership and storage, however there is a charge for these facilities which may not be accessible to low-income families. Furthermore, as highlighted by one interviewee, funding for these schemes is at risk and the available e-bikes have a limited battery life and a lack of charging points, limited the distance people can travel.

One interviewee stated that people would feel more confident if there was a breakdown service for bikes such as Forth Environment Link's Bike Medic service.

Accessibility issues for disabled people using adapted cycles was also raised as an issue; over 100 barriers have been identified in the Stirling area alone (e.g. bollards, kissing gates, narrow paths). Barriers are starting to be removed across the national cycling network by Sustrans, but there is more work to be done to identify and remove barriers on local routes.

6.1.4 Additional Considerations

Interviewees raised several additional considerations. For instance, there needs to be an understanding of who is responsible for the loading and unloading of bikes on a GHTS, whether this is the driver's responsibility or the passenger's responsibility. The service would also need to highlight if all bikes, including e-bikes and adaptive bikes, can be carried on the service and how many bikes are able to be carried.

It was also noted that the name of the service should be inclusive for everyone and relatable to the target audience. One interviewee stated:

"The name 'heritage' is predominately exclusive to the middle class."

Facilities also need to be available along active travel routes, with people needing to know they can stop for coffee and a comfort break, and securely store their bike at these locations. This presents an opportunity for businesses along the route, and these businesses need to be shown the potential of promoting active travel and being supportive of a service which enables it. Cycling and walking routes need to be established and promoted with rest stops and key locations to visit for both day and multi-day trips. This could be developed with local businesses that can offer facilities for walkers and cyclists. As one interviewee stated:

"Visit Scotland should advertise walking, wheeling and cycling to attractions. Travel to the attractions needs to follow the active travel hierarchy where driving is given the least promotion in order that visitors use alternative methods."

7 Community Consultation

An online survey was live from 15th June 2022 to 29th June 2022, which targeted residents and previous visitors to the Inner Forth area.

The aim of the survey was to understand how visitors travel to and around the region and if they would be likely to use different modes of transport. Among other things, respondents were asked to identify how a GHTS service should run, how long they would wait for the service, willingness to pay, and methods of accessing the service and payment.

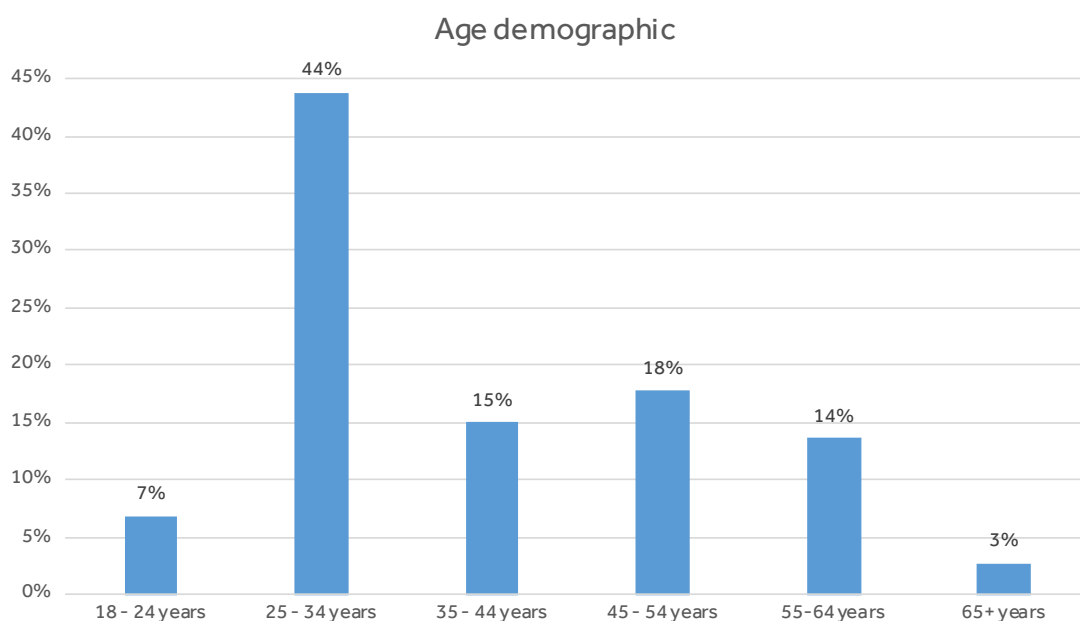
A total of 73 respondents completed the survey, with 145 partially completing the survey, representing a 50% completion rate. This response rate is low, meaning survey results cannot be generalised to a wider population.

7.1 Profile of Survey Respondents

Across all respondents:

- The gender split was 56% (n=41) male and 40% female.
- Respondents were across a variety of age groups, with the majority (44%, n=32) being aged 25-34 at the time of the survey (Figure 24).

Figure 24: Age Profile of Respondents



7.2 Travel Patterns

As Figure 25 shows, during their most recent visit, 33% (n=24) of respondents travelled to the Inner Forth by private car (as either the driver or passenger). 24% (n=17) of respondents cycled, of which 3% cycled with e-bikes. 16% of respondents walked, whilst 14% accessed the region by bus/ minibus/ coach, suggesting that the area is accessible by public transport. A further 7% (n=5)

travelled by multi-modal transport, with 3 respondents stating that they drove and cycled and 2 respondents stating that they drove and walked. No survey respondents travelled by train to the Inner Forth area, which may suggest a lack of awareness that many key attractions across the Inner Forth area can be accessed by train when combined with other active and sustainable modes.

Figure 25: Main mode of transport on most recent visit

What was your main mode of transport on your most recent visit to the Inner Forth area?

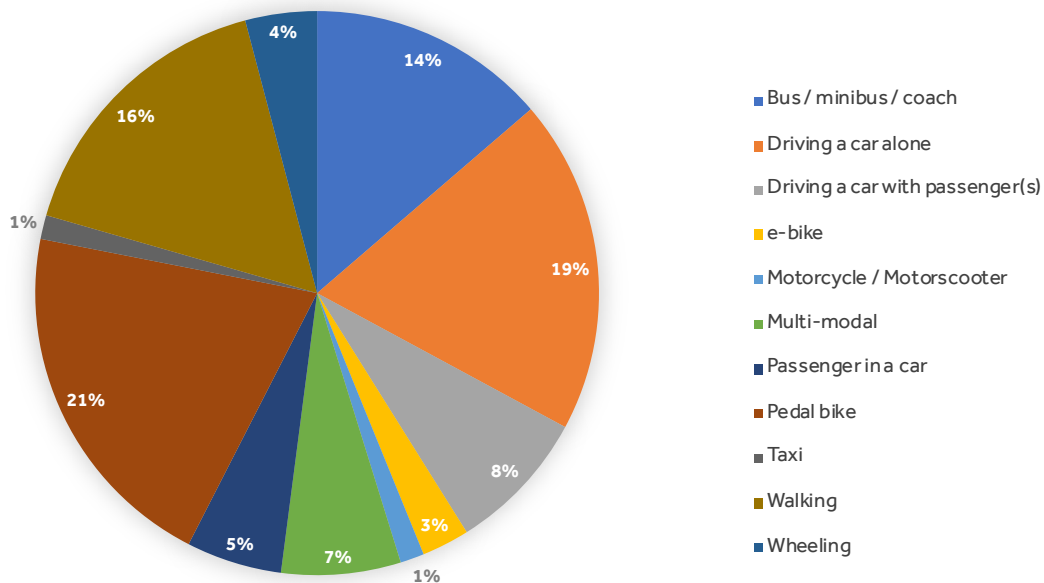


Figure 26 shows the postcode respondents travelled from and their mode of travel on their most recent visit to the Inner Forth region. Journey origins (i.e., postcode provided in survey) are represented by the small circles distributed across various areas of the map. The colour of each circle denotes the mode used by that person for their most recent journey.

The map indicates that the majority of respondents who live or travelled from a location within relatively close proximity of the Inner Forth region, travelled by bike or walking on their most recent visit. However, there are a few respondents in relatively close proximity to the region who travelled by car (as either the driver or passenger), and so there may be an opportunity to engage with this audience and reduce their reliance on car use.

Figure 26: Respondent postcodes by mode of transport



When asked about factors that influenced their travel choices, respondents noted a variety of considerations (N.B. Respondents could select more than one option).

As Figure 27 shows, the most popular factors that were seen to influence travel to the Inner Forth area include:

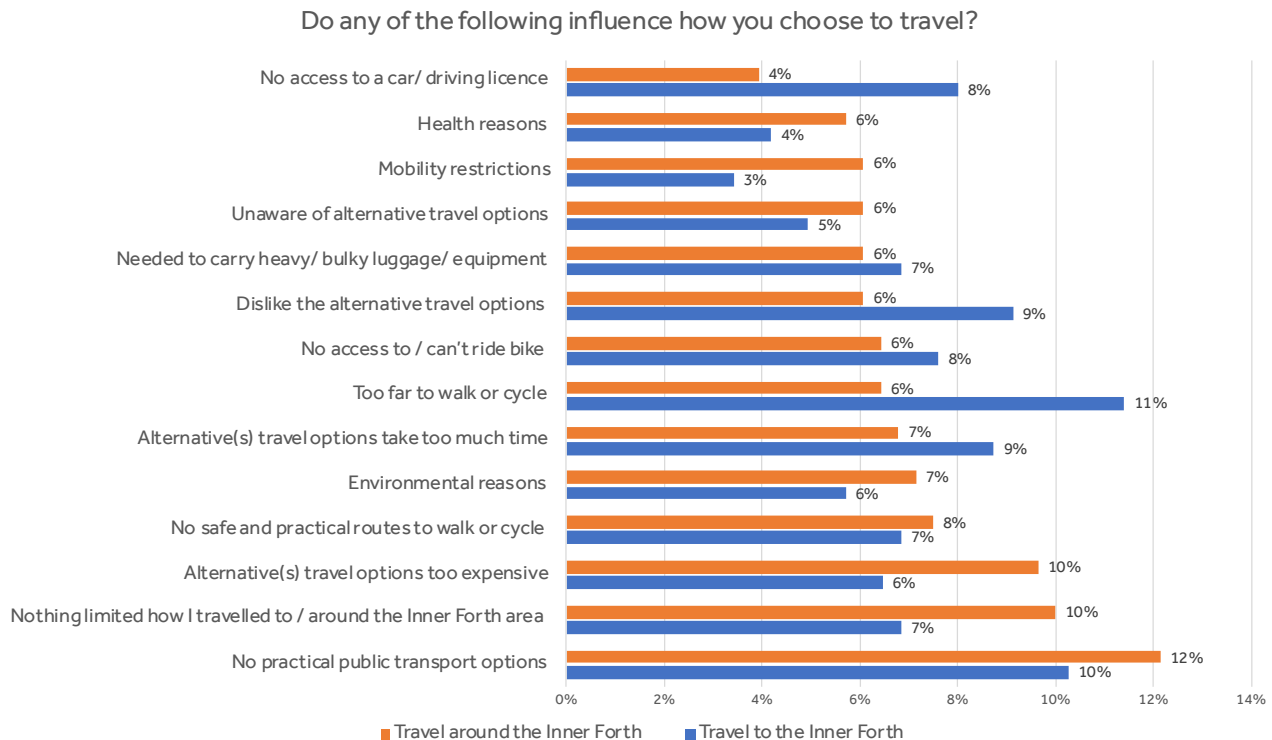
- Too far to walk or cycle (11%, n=30);
- No practical public transport option (10%, n=27);
- Dislike alternative travel options (9%, n=24);
- Alternative travel options take too much time (9%, n=23); and
- No access to a car/ driving licence (8%, n=20).

For travel around the Inner Forth area, the following factors were the most likely to influence travel behaviour:

- No practical public transport option (12%, n=34);
- Nothing limited how I travelled (10%, n=28);
- Alternative travel options too expensive (10%, n=27); and
- No practical routes to walk or cycle (8%, n=21).

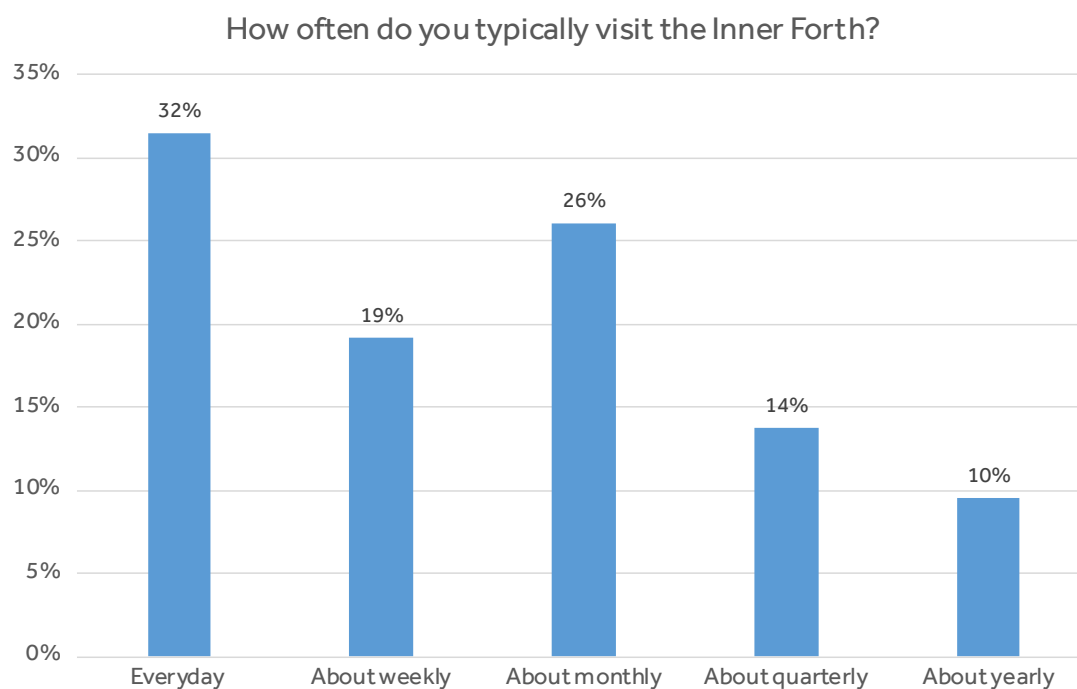
From insights presented earlier in this report, it is clear that many local residents live within a reasonable walking and/ or cycling distance of the Inner Forth area. In addition, there is evidence to suggest practical public transport options do exist, that link local and wider Scottish settlements with many of the established walking and cycling routes and key attractions found in the Inner Forth region. This suggests marketing and communication may have an important role to play in influencing how visitors access the Inner Forth area.

Figure 27: Factors Influencing Travel Choices



As Figure 28 indicates, 32% (n=23) of respondents visit the Inner Forth every day, and just under 50% of respondents visit about monthly or less frequently. Of those visiting every day, 48% walked on their most recent visit, 22% cycled, 13% travelled by car, and just 4% travelled by bus. In contrast, of those who visit on a weekly basis, 64% travelled by car (including as the driver, passenger, and by taxi), and 14% travelled by both bus and bike. Of those who travel to the region most infrequently (approximately once per year), 67% travelled by bus, suggesting public transport services are already viable options for at least some journeys.

Figure 28: Frequency of Visits

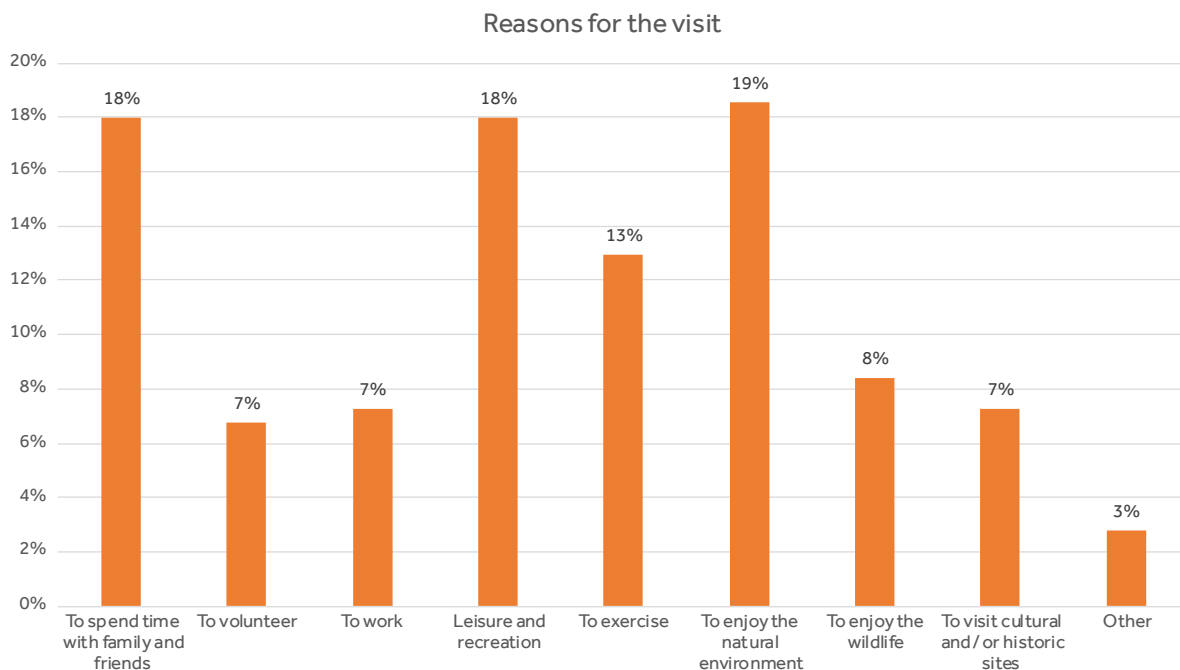


Top reasons given by respondents for visiting the Inner Forth catchment, as shown in Figure 29, include:

- To enjoy the natural environment (19%, n=33);
- Leisure and recreation (18%, n=32);
- To spend time with family & friends (18%, n=32); and
- To exercise (13%, n=23).

'Spending time with family and friends' implies that some people travel around the Inner Forth area as a group, which may have implications for the GHTS in terms of carrying capacity. In addition, enjoying the natural environment and leisure and recreation may be compatible with 'slow' travel, which could include, for instance, walking, cycling and public transport.

Figure 29: Reasons for Visit



Of those who travel to the Inner Forth region most regularly (i.e., every day), the most popular reason was for leisure and recreation (52%) and to exercise (52%), followed by enjoying the natural environment (39%). Surprisingly, only 30% of respondents who travel to the area every day do so for work. Of those who travel least frequently to the region (i.e., yearly), 67% do so to enjoy the natural environment, and 50% to spend time with family and friends. (Respondents could select multiple options.)

7.3 Travel Behaviours

Respondents were asked, if different travel modes were available, how likely they would be to choose these to travel to or around the Inner Forth (N.B. Respondents could select more than one option).

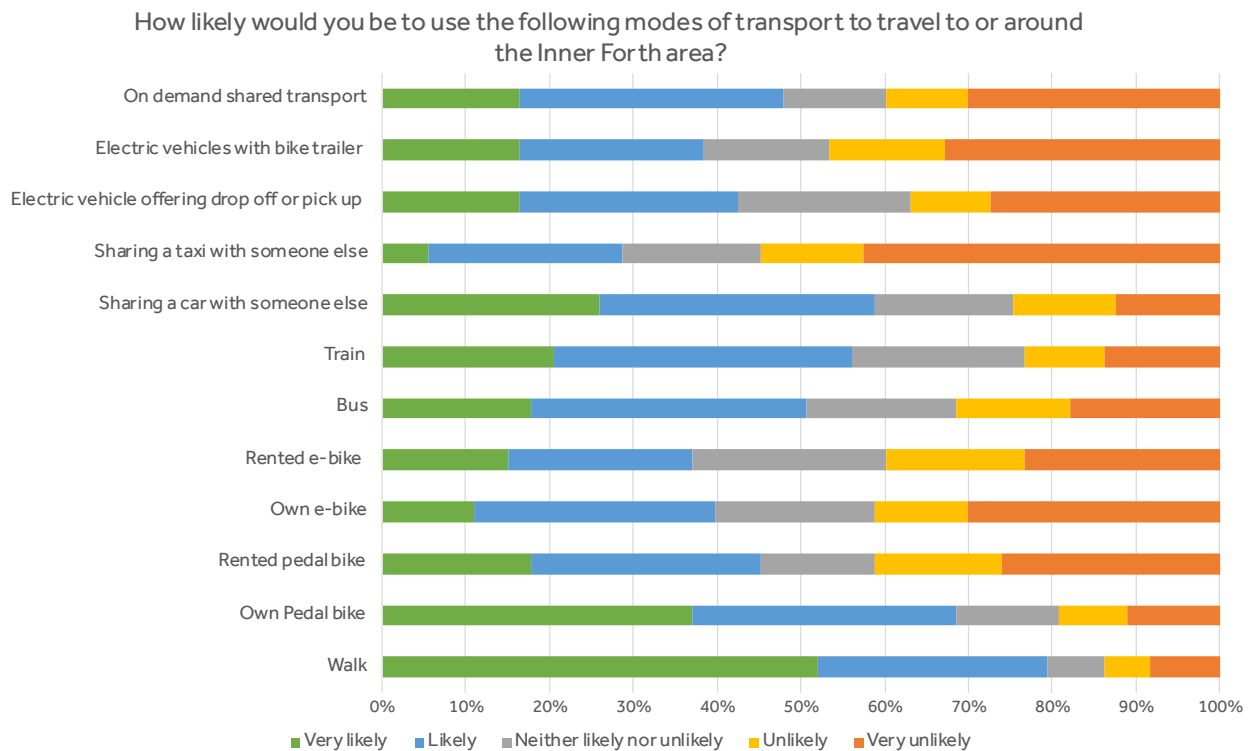
As Figure 30 shows, the majority of respondents felt they would be either very likely (52%, n=38) or likely (27%, n=20) to walk, with 37% (n=27) very likely and 32% (n=23) likely to use their own pedal bike. Respondents also stated that they would be likely to use public transport, with 56% (n=41) of respondents being either very likely or likely to use the train, and 51% (n=31) being very likely or likely to use the bus.

The mode of transport least likely to be used by respondents was sharing a taxi with someone else, with 42% (n=31) deeming it very unlikely. This may suggest some respondents do not like the idea of sharing a taxi with a stranger. In contrast, 59% (n=43) of respondents were either very likely or likely to share a car with someone else.

With regard to a GHTS, 48% (n=35) of respondents considered it to be very likely or likely that they would use on-demand shared transport, 42% (n=31) of respondents felt they would be very likely or likely to use an electric vehicle offering pick up or drop off services, and 38% (n=28) of respondents thought it very likely or likely that they would use an electric vehicle with a bike trailer.

However, 40% of respondents thought it would be very unlikely or unlikely that they would use on demand shared transport, 37% of respondents felt that they would be very unlikely or unlikely to use an electric vehicle offering pick up or drop off services, and 47% of respondents thought it very unlikely or unlikely that they would use an electric vehicle with a bike trailer. This suggests that there is less demand for an electric vehicle with a bike trailer, and more so for on demand shared transport and an electric pick up and drop off service, although the difference is marginal and so findings are inconclusive.

Figure 30: Likelihood of Using Different Modes of Transport



7.4 Attitudes Towards a GHTS

To gauge attitudes towards the provision of a GHTS, respondents were asked to consider whether a range of measures would encourage them to use an electric vehicle offering drop off and pick up services. As Figure 31 illustrates, the most popular measure was if the service user could specify a preferred pick up and drop off location with 63% (n=46) answering either very likely or likely to this measure. 61% of respondents felt they would use the service if it could be booked as and when needed.

Figure 31: Factors influencing likelihood of using an electric vehicle drop-off / pick-up service

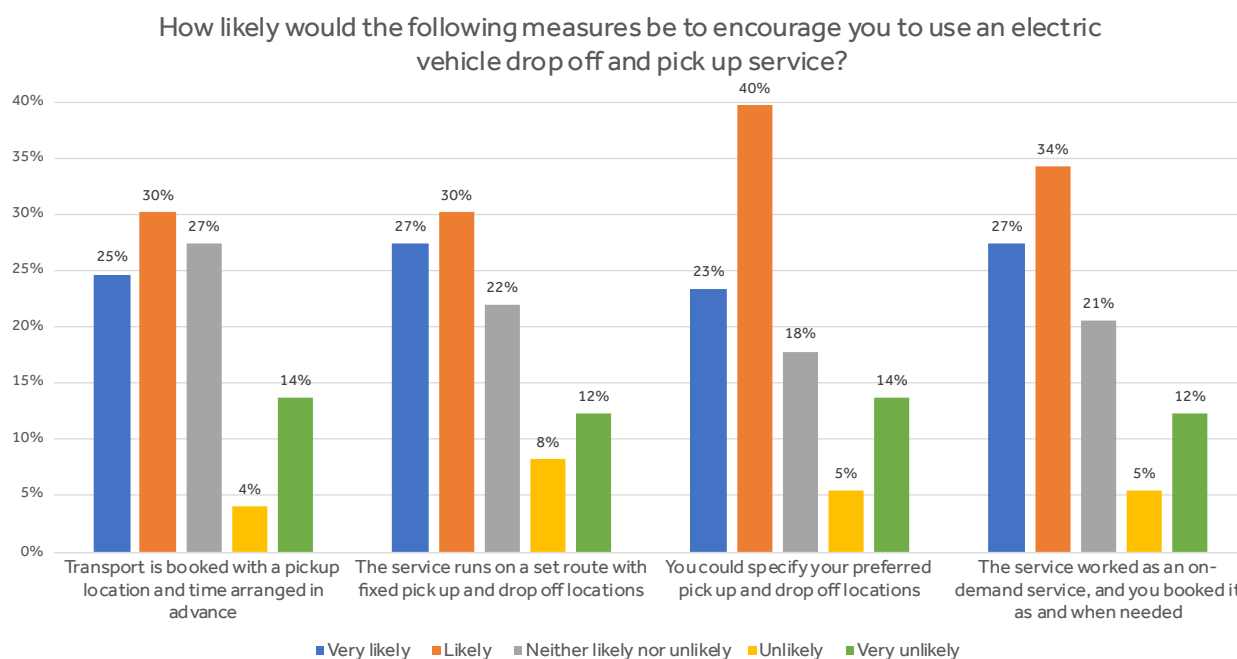
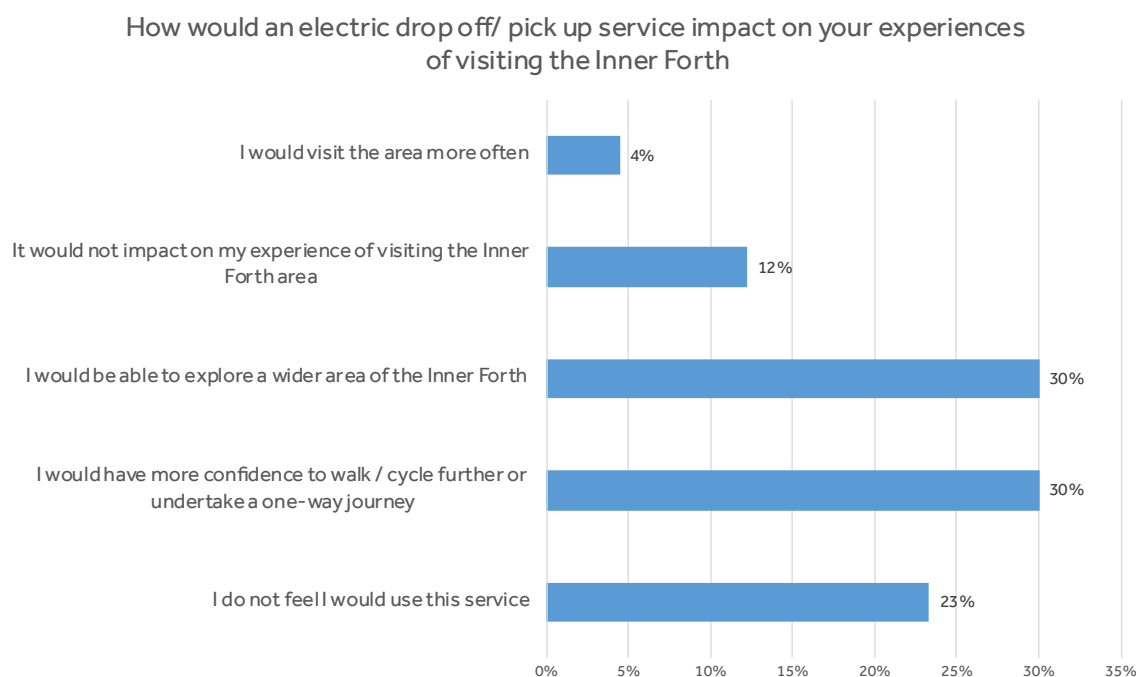


Figure 32 suggests that – if an electric drop-off/ pick up service was implemented – it could have a significant impact on how some people choose to visit the Inner Forth area. Notably, 30% (n=27) of respondents agreed they would both be able to explore a wider area and they would have more confidence to walk / cycle further or undertake one-way journeys. However, only 4% indicated that they would visit the area more often, and 23% (n=21) of respondents do not think they would use such a service.

Figure 32: Potential impact of an electric vehicle pick-up / drop-off service



As shown in Figure 33, when asked how long they would be willing to wait for an electric vehicle pick up service, 26% (n=19) responded 'I don't feel I would use this service'. 29% of respondents would be willing to wait less than 15 minutes with a further 25% willing to wait 16-30 minutes. If these sentiments reflect the views of a wider audience, it may make it operationally and commercially challenging to provide service levels that meet these expectations as the Inner Forth area is large and travel times between different locations can be high.

Figure 33: Willingness to wait

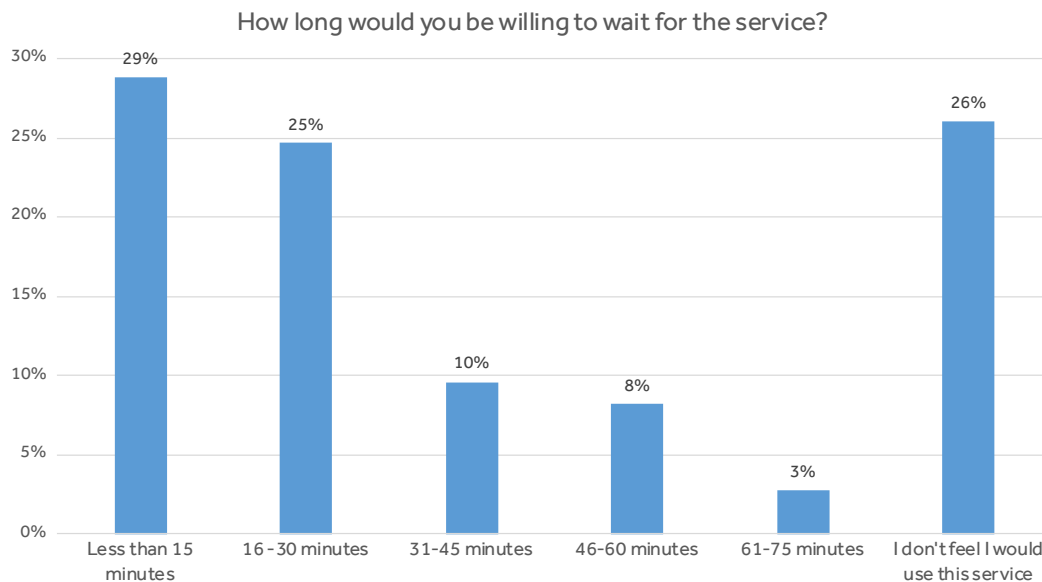
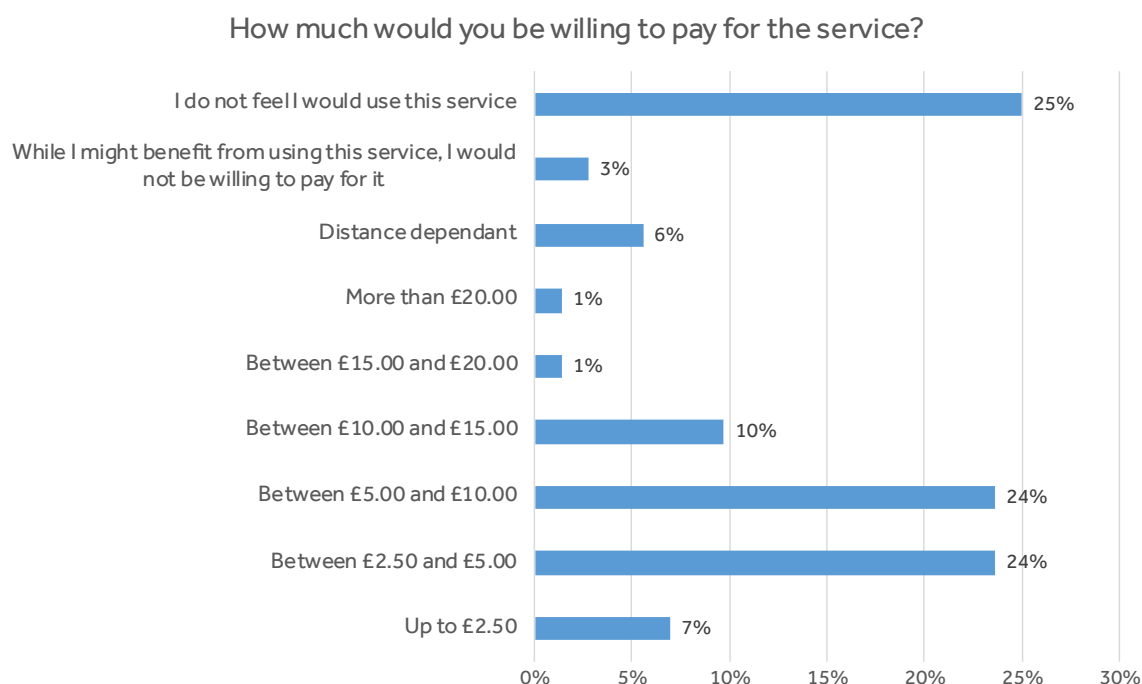


Figure 34 shows that 24% (n=17) of respondents indicated they would be willing to pay up to £10 to use an electric vehicle pick-up / drop-off service. However, the 31% of respondents who indicated a willingness to pay £5 or less may have unrealistic expectations, unless the service can be subsidised, and 25% of respondents did not think they would use such a service.

Figure 34: Willingness to pay



As shown in Figure 35, 52% (n=38) of survey respondents stated their preferred method of accessing a drop off and pick up service was through online bookings through an app or a website. A further 27% of respondents didn't think they would use this service.

Figure 35: Preferred method of accessing services

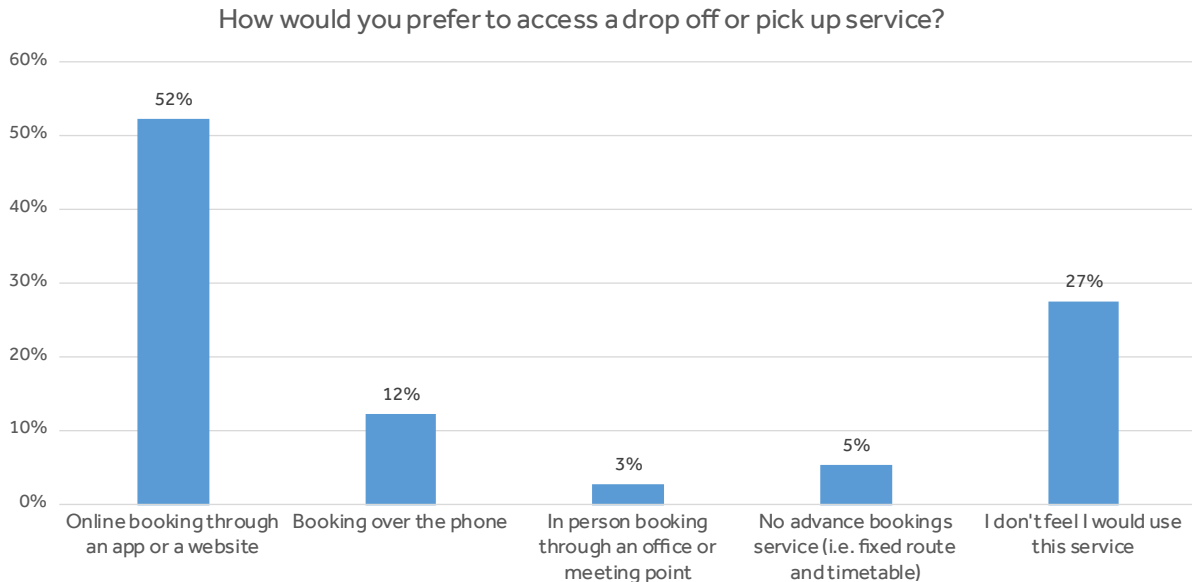


Figure 36 shows that of the respondents who think they would use a GHTS, 16% (n=25) would be most likely to use it at weekends, with 12% most likely to use it during the summer. With regard to the time of day, more respondents deemed it most likely that they would use such a service in the afternoon (8%), compared to the morning (3%) or evening (4%). Only 3% of respondents felt that they would use the service during the winter.

Figure 36: Likely timings of service use

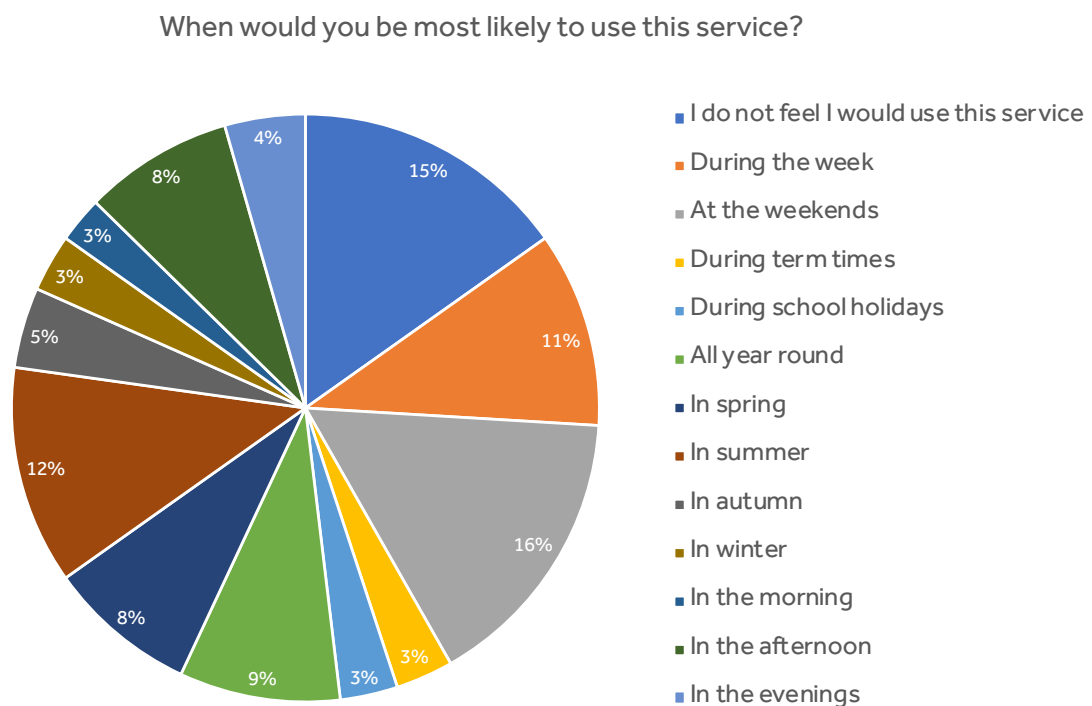
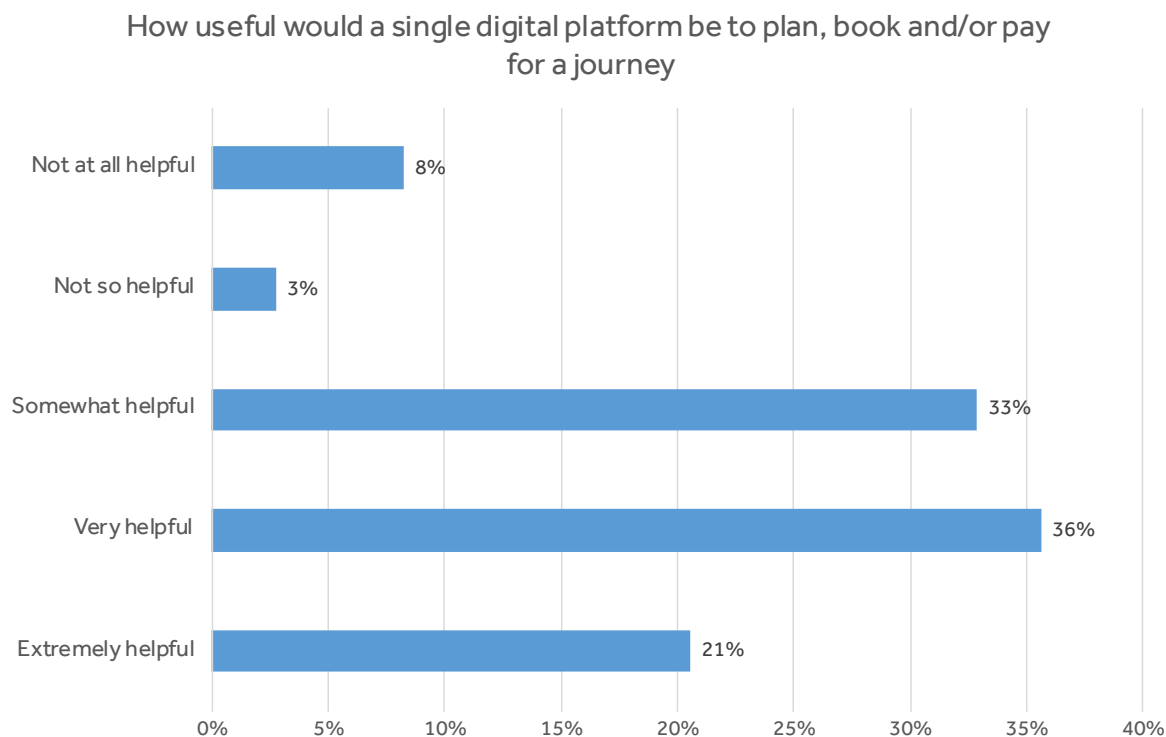


Figure 37 shows 57% (n=41) of respondents indicated that a single digital platform to plan book and/ or pay for a journey would be very helpful or extremely helpful. Only 11% of respondents answered, 'Not so helpful' or 'Not at all helpful'. There may be an opportunity to link in with current Mobility as a Service (MaaS) pilot projects being run by Regional Transport Partnerships SEStran and Tactran, which involve this kind of digital journey planning.

Figure 37: Utility of a single digital journey planning platform



8 Solutions from Elsewhere

Other locations across Scotland and further afield have responded in a variety of ways to the challenges of supporting and encouraging visitors and locals to use active and sustainable transport to travel to and around their region. The following selection of case studies have been compiled to help illustrate how some of the more relevant examples from elsewhere might apply to the Inner Forth context.

8.1 Local Pick-up Service Case Studies

8.1.1 Alistair's Taxis



Based in Fort William, Alistair's Taxis offer a taxi service and mountain bike transport in the highlands of Scotland via two 8-seater taxis with Thule box trailer. Each vehicle can accommodate up to eight bikes and luggage. They also offer city and airport transfers from anywhere in the UK and specialise in providing transport for long distance cycling routes such as the West Highland Way and Coast to Coast.

<https://www.alistairstaxis.co.uk/mountain-bike-transport>

8.1.2 Ace Taxis



Ace Taxis are based in Fochabers, which is a 10-minute drive from Elgin in Moray. They offer taxis that are equipped with bike racks and can transport bikes, luggage, and passengers across Scotland. They work in partnership with twelve major Scottish Tour Operators and all luggage is fully insured. <https://acetaxismoray.co.uk/luggage-transfer/cycling/>

8.1.3 SLM cycle transport



SLM cycle transport, based in Lanarkshire, operate across Scotland and the north of England. They offer transport for cyclists, golfers and walkers via a modern minibus and purpose-built trailer with space for up to 7 bikes. Bikes are not insured when being transported and therefore it is recommended that the cyclist holds separate insurance for their bike. Pricing is charged relative to the location of pick up and drop off point from Lanarkshire.

<https://slmcycletransport.co.uk>

8.1.4 Ricky's Bicycle Tours



Based in Edinburgh, Ricky's Bicycle Tours offer a private shuttle service for cyclists. The service will take passengers and their bikes from Edinburgh to any location around Scotland and back and offers airport/station transfers. They also provide hire bikes and a variety of guided cycling tours.

<https://www.rickysbicycletours.co.uk/bike-transport-shuttles/>

8.1.5 Taxisaver



Based in Inverness, Taxisaver offers transport for up to 16 passengers and bikes to destinations across Scotland, using a minibus and trailer. They offer airport/station transfers and will do short and long journeys.

<https://www.taxisaver.co.uk/cheap-taxi-transfers-inverness-our-services/mountain-biking-bike-transport/>

8.1.6 Advanced Taxi Hexham



Advanced Taxi Hexham operates in Northumberland and Newcastle. Their Hadrian's Wall taxi service takes walkers between any two points on Hadrian's Wall, as well as offering a transfer to/from the train station or accommodation. A cycle transfer service is also available to transfer cyclists and bikes wherever they need to go.

<http://www.advancedtaxi.com/hadrians-wall-service/>

8.1.7 Ride and Hike



A pick-up and drop-off service for walkers and cyclists along the Taff Trail in mid-Wales, a popular 55-mile walk and cycle route. Ride and Hike is operated by Taxi in Brecon and offers a 6-seater vehicle with bike trailer which can hold up to 6 bikes. The service is designed to take walkers and cyclists to their starting location, although pick up at the end of the day can also be booked for walkers. There is also a luggage transfer service for longer trips. Pricing is between £7.5 and £10 per bike.

http://www.thearchesbaileysbarn.co.uk/activity_providers/item/843/Ride_Hike.html

8.1.8 Bikes on Buses Moray



In Moray, Stagecoach buses 31 and 32 ran between Forres, Kinloss, Findhorn and along the coastal route to Elgin and accommodated cyclists with an exterior bike rack on the back of the bus, at no extra cost. The driver secured the bike to the bike rack. The buses could carry three adult bikes with space for two children's bikes on racks inside the bus. This scheme was funded by Hitrans, Moray Council and the Bus investment fund.

This initiative aimed to encourage more tourist cycling in Moray, provide a link between the town and the coastal cycle paths, and offer a service to those arriving by train.

Although relatively simple and cost-effective in concept, in practice, the scheme faced significant challenges, initially with getting formal permission from the Vehicle and Operator Services Agency. Although a solution was eventually identified, the approved racks were not robust and were prone to accidental damage. For these reasons, the initiative was discontinued.

8.1.9 Bike Friendly Borders Buses



Borders Buses have 23 bike friendly vehicles, with either 2 (single decker) or 4 (double decker) spaces for bikes, enabling active travel for passengers across the network. Services with this capability include the X62, X95 and 253.

Passengers are expected to securely store bikes themselves, with an easy-to-use rack and strap system. A 'how to' video is available on the Borders Buses website.

Due to bike spaces being on the bus, rather than external storage, disabled passenger access takes priority.

8.1.10 Breadalbane Explorer



The Breadalbane Explorer was an award-winning hop-on hop-off minibus service with bike trailer, to transport walkers and cyclists around a circular route in rural Perthshire. Two minibuses were available throughout the summer season (May to October) on Tuesdays, Wednesdays and Sundays on a scheduled timetable for a 4-year period. Adult day tickets cost £10, and a single ticket cost the same as a standard bus fare. Scottish bus passes and concessions were valid for all journeys.

Despite being very popular, this service is no longer in operation. It is assumed this is due to lack of funding, but further details were not available during the study period.

8.2 Sustainable Tourist Destination Case Studies

8.2.1 Werfenweng SAMO-Card



With a resident population of around 1,000, Werfenweng is nestled in the Austrian Alps, just under 30 miles from Salzburg. The town has been working for many years to put various innovative forms of mobility in place to enable tourists, recreational users, and residents to reduce car travel to and within the area.

This means there are now over 100 different mobility options offered to visitors in both summer and winter seasons, to encourage visitors to travel sustainably to and around the village. As well as offering 12 shared e-cars for rent, there:

- Is a shuttle bus connecting visitors with the nearby railway station at Bischofshofen;
- Is one electric taxi (including a free night-service);
- Are electric bikes/ mountain bikes/ scooters; Segways; Renault Twizys; as well as regular bikes, scooters, and tandems.

Once visitors have purchased a smart 'SAMO-Card' (they cost €10 each), access to all the mobility options is free. SAMO stands for 'Sanfte Mobilität', or 'gentle mobility'. The local tourist website promotes the SAMO-Card as offering visitors a holiday from the car. If they arrive by bus or rail or exchange their car keys at the tourist information centre, visitors are entitled to receive the SAMO-Card, which also enables holders to gain free access to other visitor attractions, including hiking tours, Nordic walking, ice skating, llama trekking and snowshoe tours.

A significant reason for Werfenweng's success is that it has integrated the provision of shared car services into the overall management, promotion, and development of the destination, rather than simply offered them as stand-alone services that are not embedded into the wider tourist offer.

8.2.2 Alpine Pearls Car-free Holidays



Alpine Pearls is an umbrella organisation covering 19 Alpine villages across Italy, Switzerland, Germany, Austria and Slovenia, with a focus on green mobility. All of the villages are easily accessible by train and bus and offer car-free mobility and public transport upon arrival. They have also turned certain areas into car-free or low-traffic zones. This enables tourists to experience beautiful locations without traffic noise and exhaust fumes.

Marketed as 'soft mobility' (sustainable, climate-friendly and easy on the environment whilst moving about in the outdoors), each destination offers car-free holidays to tourists and guarantees full mobility. The mobility options available include station transfers, shuttle services, hiking and ski buses, taxi services, e-cars, bicycles and e-bikes.

Alpine Pearls also offer Guest & Mobility cards, which allow free access to local public transport services and offer discounts on events.

9 Options Identification & Appraisal

Preceding sections of this report have captured outputs from qualitative and quantitative assessment of the issues that exist in relation to access to and within the Inner Forth area.

Large parts of the Inner Forth region are accessible by active and sustainable modes, but there are some gaps in the infrastructure. For example, access by train and bus to the northeast region is limited, making it more difficult for walkers to explore the attractions in this area. This area may be more accessible to cyclists, but cycle duration and conditions may mean only competent cyclists would be willing to undertake the journey. This is also dependent on the limited space for bikes on trains and the quality and quantity of cycle paths linking settlements, which have been identified in interviews as insufficient. Survey results, however, suggest that very few people travel to, and around, the region by train and so more may need to be done to promote this as a viable option.

Interviews with stakeholders also indicated that the Inner Forth area needs to be packaged and promoted as a destination, helping to ensure visitor numbers are maintained and continue to grow, and that local businesses and tourism organisations need to be overtly supportive of visitors arriving by active travel.

Survey results suggest that, although most respondents drove to the Inner Forth region for their most recent visit, a significant proportion also cycled, and so there may be potential to not only better support those who already cycle, but also encourage others to do so. Results also suggest that the train is not currently marketed as a viable option for travel to and within the region. Furthermore, respondents indicated that they may be relatively low demand levels for a GHTS.

9.1 Summary of problems & opportunities

Key points that have emerged from this analysis include:

5. Why is change needed?

- To increase the proportion of visitors who travel to and around the Inner Forth area using active and sustainable modes.
- To encourage visitors to engage with the wider Inner Forth area, rather than just visitor hot spots.
- To encourage visitors to stay longer and spend money in the local economy.
- To enable residents to visit more of the region by active and sustainable modes, which can support improved health outcomes.
- To improve accessibility for groups who may currently have limited travel horizons, such as those with disabilities, or young people.
- To reduce the reliance on car use in the region, and so reduce the impact visitors have on climate change and air quality.
- To influence attitudes and behaviours towards cyclists in the region, with the aim of improving safety, and perceptions of safety, for cyclists and potential cyclists.

6. Where do things need to change?

- For all but locally based visitors, journeys to the Inner Forth area are likely to generate more carbon emissions than journeys within the area. This therefore means that a focus on the journey to the area is essential, alongside a more local perspective.
- The northern aspect of the Inner Forth area has poor public transport coverage relative to the south.
- The southern aspect of the Inner Forth area has better public transport provision but there may be low awareness of the public transport options.
- The E-bike hire network in the region is good, but area wide coverage would be beneficial.
- Beyond the most popular attractions in the region (e.g. the Kelpies, Stirling Castle, etc.) there may be low awareness of other attractions in the area, and so improved promotion of additional attractions may be advantageous, including explicit reference to how these attractions can be reached using active and sustainable modes (as appropriate).

7. What factors might impact on the delivery of potential interventions?

- Fragmentation of information and promotions across a wide range of channels and sources makes it difficult for visitors to the Inner Forth area to identify high-quality itineraries and plan journeys using active and sustainable modes to and around the area.
- Variable coverage and quality of signage and other directional information can make it difficult to navigate around the active and sustainable transport networks in the Inner Forth area, thereby creating a potential barrier to visitors using these modes more often.
- Variable quality/ coverage of walking, cycling and public transport routes across the area.
- Concerns by pedestrians/ cyclists about their capacity to travel on foot or by bike over longer distances or with groups of mixed abilities.
- Consistent, visible 'buy-in' from key trip attractors is currently lacking – e.g., promotion of active / sustainable modes to their target markets; provision of secure cycle parking; discount to people who arrive on active / sustainable modes; introduction of car parking charges; etc.
- The Inner Forth is a large geographic area, meaning there would be long journey times for any new bus service that operated across the whole area. This may therefore require more than one vehicle operating at the same time.
- The area crosses several local authority boundaries, which tends to make it more difficult to achieve regional change due to the sometimes competing interests and different priorities of different parties.
- Uncertainty related to demand levels for different services, therefore making revenue forecasting difficult.
- Scottish or UK legislation impacting ability to implement certain measures, e.g., bike racks on public buses.
- Scottish or UK fiscal policy may make it challenging to sustain ongoing funding and may be challenging to operate services without ongoing subsidy from the public sector, unless this can be generated from other sources (e.g., revenue from introduction of parking charges at key sites).

8. What changes could potentially make a difference?

- User engagement and communications – raise awareness about and promote the Inner Forth region as a 'packaged' destination that is (largely) accessible by active and sustainable modes.
- Better information about and promotion of how to travel to and around the area (and key destinations within the area) using active and sustainable modes.
- Improved signage and travel information.
- Development of more itineraries for visitors, that set out routes and points of interest that can be reached from a train or bus station on foot, by bike / e-bike or by bus.
- Selected active and sustainable travel route improvements.
- More comprehensive bus route network / coverage.
- Improved access to e-bikes.
- Increased space for bikes on trains.
- Introduce / coordinate parking controls across the Inner Forth area (public parking sites only, although some private providers may be supportive, especially if income generated supports provision of better active and sustainable travel infrastructure / services). Reinvest some / all parking revenue back into improving walking, cycling, wheeling and public transport across the area.
- Active and visible support from local businesses and tourism operators.

9.2 Strategic objectives

The issues to address form the basis of a set of high-level planning objectives that articulate what IFF is aiming to achieve. These objectives are summarised below:

- **Objective 1:** Enable and encourage visitors of all kinds (including disabled and disadvantaged visitors) to engage with the wider Inner Forth area, rather than just existing visitor hot spots.
- **Objective 2:** Increase the proportion of journeys that use active and sustainable modes to access cultural, historic or scenic attractions within the Inner Forth area.

These objectives have been carefully crafted to ensure they are measurable. Metrics for these objectives include:

- Visitor counts at attractions.
- Visitor travel surveys (including a focus on mode/s used during last visit; perceptions of risk associated with sharing road-space with cars; etc).
- Traffic counts (by mode) at key sites and along key routes (e.g. cycle counters on cycle routes).
- Desktop review of information available from Inner Forth visitor attractions about active and sustainable travel options and a qualitative assessment of (for example) the consistency, quality and depth of travel information provided across the area.

9.3 Options

The following sections provide an outline description of the different options available.

9.3.1 Green Heritage Transport Service

A GHTS would be a new service that consists of a vehicle (ideally, electric) which can be used to transport both people and bikes around the Inner Forth region. The service could operate as Demand Responsive Transport (DRT), or it could operate as a hop-on hop-off service on an agreed route and timetable. The introduction of a GHTS would involve investment in one or more new (electric / internal combustion engine) vehicles equipped with either bike racks and/or a trailer.

Strengths:

- May encourage pedestrians / cyclists to undertake a longer one-way journey.
- Mixed ability groups can plan a trip with some members using the GHTS for support.
- Potential to increase footfall to business and attractions in the Inner Forth, particularly those that are further afield, as visitors have the reassurance they can make a return journey.
- A dedicated service for cyclists and walkers, which doesn't appear to exist in the region.
- Set route and timetable (if this model is used) enables users to plan ahead.

Weaknesses:

- May be seen to be in competition with existing public bus and DRT services, or even with taxis.
- Journey and wait times could be long due to the size of the region.
- Operational issues if a DRT model is adopted – journey and wait times could be long due to the size of the region.
- On a Demand Responsive model where the service only operates when it has been requested there needs to be a guarantee that the service will be paid for, in case of no-shows. Pick up locations need to be well-known locations (i.e., a destination rather than a point along a road) in order that there is no confusion.
- A fixed route/ schedule service may not meet traveller needs in a timely way, therefore making them less likely to use the service.
- There may be need for both a rack and trailer, depending on who will be using the service, e.g., users with e-bikes or adapted bikes would likely need a bike trailer as this would allow more space for larger bikes. This would, however, require the operator to be informed of user requirements in advance.
- E-bikes and adapted cycles can be heavy and hard to carry. As a result, there needs to be an understanding of who is responsible for loading and unloading bikes. Additionally, passengers need to be made aware if their bikes are insured in advance of using the transport service.

Risks and uncertainties:

- Likely demand levels are unknown.
- A GHTS is likely to be expensive to set up and operate.

9.3.2 Taxi with bike rack/trailer

This would involve a local taxi service offering bike transport via a bike rack or trailer. This could operate as a traditional taxi service (i.e., pre-booked for transport from one location to another), or as more of a shuttle service to drop users off at the start of a particular cycling route, with the option for pick-up at the end to be booked separately.

Strengths:

- Provides flexibility and an on-demand service for users. They could be transported between destinations, or from an agreed endpoint of their journey.
- May give people confidence to undertake a longer one-way journey on foot or by bike.
- Add-on to an existing business, therefore more likely to be financially sustainable in the long-term, as it doesn't rely on one source of demand.
- Relatively cost-effective, compared to a new GHTS.

Weaknesses:

- Would only be able to transport small groups.
- Requires agreement and investment in suitable equipment by one or more local taxi operators.
- Would require the taxi operator/s to have appropriate insurance for any damage to bikes, or for users to have insurance.
- Depending on the type of equipment used (i.e., a bike rack or trailer), the type and number of bikes able to be transported may be limited.
- E-bikes and adapted cycles can be heavy and hard to carry. As a result, there needs to be an understanding of who is responsible for loading and unloading bikes.

Risks and uncertainties:

- There is a risk that very few, or no taxi operators agree to offering this service.
- The service provision could be fragmented across the region, depending on the locations of taxi operators who agree to provide the service. Given the distances involved, it may make sense for multiple operators from across the area to support this model, to help ensure transport services are provided in a timely and relatively cost-effective way.

9.3.3 Scheduled public bus with bike rack/trailer

The existing public bus network could potentially be encouraged to accommodate cyclists, either with provision of bike racks on the back of buses or potentially, inside buses.

Strengths:

- For the most part, public transport provision in the region via the public bus network, is reasonable to very good.
- Add-on to an existing business, therefore more likely to be sustainable in the long-term, as it doesn't rely on one source of demand.
- May be relatively cost-effective, compared to a new GHTS.

Weaknesses:

- A limited number of bikes can be transported at one time.
- E-bikes and adapted cycles can be heavy and hard to carry. As a result, there needs to be an understanding of who is responsible for loading and unloading bikes.
- Would involve training for bus drivers.
- Use of external bike racks on buses requires formal permission from the Vehicle and Operator Services Agency.

Risks and uncertainties:

- Experience from elsewhere (e.g., Moray) suggests that it can be difficult for operators to get approval to carry bikes on the outside of buses, so there is a risk that approval will not be granted unless a suitable design can be found, or bikes can be stored inside the bus (such as the Border's Bike buses).
- It may be difficult to establish a joined-up approach across the region, due to cross-boundary related issues between local authorities and bus operators.

9.3.4 Demand Responsive Transport

Existing, publicly funded DRT services within local authority catchments in the Inner Forth area could potentially be adapted to enable visitors to the Inner Forth to access selected locations. This may, for instance, entail adapting existing service provision (e.g. coverage areas; booking processes; etc) and to equip DRT vehicles with a bike rack or trailer to accommodate cyclists.

Strengths:

- DRT service is already provided for residents in local authorities across the region, such as Stirling and Fife.
- Add-on to existing DRT services, therefore, may be more likely to be sustainable in the long-term.
- Provides flexibility for users.
- May enable people to undertake a longer one-way journey.
- Mixed ability groups may be able to plan a trip with some members using the DRT for support.
- Could offer a bespoke service for cyclists and walkers, which doesn't currently exist in the region.

Weaknesses:

- Local authority DRT budgets are very likely to already be committed and limited in scale, making changes to how services are provided difficult to achieve.
- Coverage across the Inner Forth area is likely to be limited.
- Journey and wait times could be long due to the size of the region.
- There may be need for both a rack and trailer, depending on who will be using the service, e.g., users with e-bikes or adapted bikes would likely need a bike trailer as this would allow more space for larger bikes. This would, however, require the operator to be informed of user requirements in advance.

- E-bikes and adapted cycles can be heavy and hard to carry. As a result, there needs to be an understanding of who is responsible for loading and unloading bikes. Additionally, passengers need to be made aware if their bikes are insured in advance of using the transport service.
- On a Demand Responsive model where the service only operates when it has been requested there needs to be a guarantee that the service will be paid for, in case of no-shows. Pick up locations need to be well-known locations (i.e., a destination rather than a point along a road) in order that there is no confusion.

Risks and uncertainties:

- It may be difficult to establish a joined-up approach across the region, due to cross-boundary related issues between local authorities and bus operators.
- Demand levels are unknown.

9.3.5 Increased provision of e-bikes

This option involves expanding on the existing e-bikes offering in the region (e.g., via Forth Bikes).

Strengths:

- There is already a well-established e-bike hire scheme in the region, and so would not be starting from scratch.
- Could help to make a larger area of the Inner Forth more accessible to a wider market.
- Relatively cost-effective, compared to a new GHTS.
- Enables groups with mixed abilities to cycle together and reach destinations that are further away.
- Potentially less complex to deliver than some other options.
- E-bikes can be adapted for disabled users, but this would complicate delivery.

Weaknesses:

- There is a lack of joined up cycling infrastructure in the region, and of good quality, off-road cycle routes. Many people choose not to cycle due to perceptions of it being unsafe, with this view perpetuated by some of the available infrastructure being insufficient, forcing cyclists to share space with cars and larger vehicles.
- There is a lack of facilities to support cyclists at attractions across the region. For example, many attractions do not have bike racks.
- Can be difficult to secure long-term funding to support ongoing operation of e-bike hire schemes.

Risks and uncertainties:

- Demand levels are unknown.
- Without a comprehensive, destination-focussed package of marketing and communications, use of additional e-bikes may not increase.

9.3.6 Mobility as a Service

This option involves provision of Mobility as a Service (MaaS) via a digital platform that offers integrated journey planning for trips to and within the Inner Forth area, and potentially, the ability to book and pay for journeys by different modes of transport.

Strengths:

- Provides better (e.g. integrated) travel information about existing transport options to users.
- Can be tailored to offer itineraries, etc.
- May increase user confidence in using active and sustainable modes of transport and make these journeys more convenient.
- Regional Transport Partnerships Tactran and SEStran are currently trialling a MaaS platform in their areas, which overlap with the Inner Forth. There may be an opportunity to extend these pilot projects, so the MaaS platform covers the Inner Forth area.

Weaknesses:

- May be expensive to implement.
- Only benefits those in community with access to digital platforms.
- Limited to existing transport provision.

Risks and uncertainties:

- Currently only been implemented as a pilot in Scotland, meaning its utility is still being evaluated.
- Demand levels for MaaS are unknown.

9.3.7 Route improvements – walking & cycling

Improvements to signage and provision of cycling related equipment and facilities. IFF is already working with partners to deliver this option, and so it has not been considered further in our work.

9.4 Options appraisal

Table 6 presents an options appraisal matrix, summarising the key dimensions of different options. Options are displayed along the x axis, with key metrics on the y axis.

The following approaches and assumptions have been made for each of the key metrics during scoring:

- Strategic objectives – ability of the option to meet the strategic objectives outlined in this report.
- Policy fit – ability of the option to align with national, regional and local policy.
- Estimated cost – financial cost of implementing options based on existing research and knowledge.
- Value for money – estimated cost of implementation and operation versus predicted use.
- Feasibility – ease of implementation, and how much is within IFF's control.
- Affordability – cost to users per journey, using a single public bus ticket as a baseline.
- Public acceptability – based on interview and survey results, and acceptability of existing services.
- Risk level – anticipated level of risk to RSPB/IFF, including financial, political, reputational, environmental, and level of control over third parties.

Scoring represents an estimation of the impact, positive or negative, of implementing each option. The rating key for the options appraisal matrix is shown below in Table 5.

-3	-2	-1	0	+1	+2	+3
Strong Negative Impact	Moderate Negative Impact	Slight Negative Impact	Neutral Impact	Slight Positive Impact	Moderate Positive Impact	Strong Positive Impact

Table 5: Options appraisal matrix rating key

Key Metrics	Options						
	GHTS (DRT Service)	GHTS (Hop-on Hop-off Service)	Taxi with rack/trailer	Public bus with rack/trailer	Demand Responsive Transport	Increased provision of e-bikes	Mobility as a Service
Strategic objectives	+3	+3	+1	+2	0	0	+1
Policy fit	+2	+2	-1	+3	+2	+3	+1
Estimated cost	-3	-3	+2	+1	-2	-1	-2
Value for money	-2	-2	+1	+1	-2	-1	-2
Feasibility	+1	+1	0	-1	+1	+2	-1
Affordability	-1	-1	-2	0	0	0	0
Public acceptability	+1	+1	+1	+1	+1	+1	+1
Risk level	-2	-2	-1	-1	-2	0	-2
Score:	-1	-1	1	6	-2	4	-4

Table 6: Options appraisal matrix

9.5 Rationale for selection / rejection

Following discussion with the IFF steering group, it was agreed that the GHTS would be taken forward as the preferred option, despite the findings of this study suggesting that alternative options may be more viable. This decision was made on the basis that IFF will have full control of delivering a GHTS, but would not have full control over other options, which may cause complications with implementing a pilot and securing funding. Also there was a strong willingness to provide a service for walkers, cyclists and wheelers, which therefore excludes the increased provision of e-bikes, as well as maintenance concerns and the need to provide added value on top of existing services.

Taking this into account, the following section outlines the potential scope of a GHTS and highlights any challenges and considerations. A public transport expert (Lee White of Sterling Transport Consultancy) was employed to provide guidance and insight.

10 Preferred Option

Sterling Transport Consultancy was instructed by Ansons Consulting to provide an assessment of the public transport related elements of the GHTS feasibility study. The GHTS feasibility study has been developed for the RSPB on behalf of Inner Forth Futures (IFF) to investigate the viability of introducing an electric transport service, which aims to enhance the visitor experience, to the Inner Forth area. This assessment considers the target market for such a service and the likely area(s) of operation and uptake and considers the practical issues of how such a bus service could be delivered.

10.1 The Green Heritage Transport Service

The GHTS as proposed would be a local bus service as defined by the Transport Act 1985¹⁷, due to separate fares being charged and accommodation being available to the public. This is irrespective of whether the route is 'demand responsive' or using a fixed route.

This definition triggers the need for the service to be 'registered' with the Scottish Traffic Commissioner. This will require the details of the route and timetable to be clearly defined. The Traffic Commissioner will also seek to ensure that spare vehicles are available in case of breakdown or another emergency. The formality of registration will require the acceptance of Scottish Concessionary bus passes for elderly and disabled users and young people under 22 (free at point of use). In turn, the lost income is compensated for, but only partially. Registration could also allow access to limited government grants related to operating costs, but not to the current support offered for bus services in the post covid world. These grants are related directly to the operation of a public bus route and are not dependant on where the RSBP or partners collect its funding from.

The process of registration also imposes a time lag before the service can start, the route or timetable be changed or the service ceases to operate. Normally at the start, the service would incur a delay of 14 days for local authority consultation and a 42-day waiting period for the registration to become active (56 days in total). The route must then operate for a period of at least 90 days, irrespective of whether it is a daily / once a day / once a week operation. There is a further process to change or cancel the service registration, which takes 28 days (local authority liaison) and 42 days (70 days in total). Only after the 70-day process has been fully completed can the route cease to operate.

If car parks, etc. (including private land) are to be relied upon for turning and pick up / set down purposes, then written permission for access will need to accompany the registration submission.

Whilst the service operator will conduct the actual registration process and collect the operational grants, etc. from government, IFF will need to be aware of the timescales involved and limitations this imposes in terms of variations and changes to the service. A fee of £60 applies to any registration or variation thereafter. This fee reduces to £13 if the partners decide on Section 22 permit operations¹⁸. It is expected that this fee would be included in the service operator's tender price.

¹⁷ <https://www.legislation.gov.uk/ukpga/1985/67/contents>

¹⁸ Permits issued under section 22 - community bus permits

10.2 Choice of Operating Regime

The key choice facing IFF is to determine how the service will be operated. The need for the service to become a registered local bus service offers only three possibilities:

10.2.1 Bus operator

A commercial bus and coach operator undertakes to operate the route through a contract with the RSPB or one of the partner bodies.

This would entail an already licensed operator providing a suitable vehicle and driver on a to be agreed schedule. The operator would be responsible for insurance and maintaining the vehicle.

10.2.2 Taxi operator

A commercial taxi operator undertakes to operate the route through a contract with the RSPB or one of the partner bodies.

This would be a similar approach to option 1 but with the local authority licensing the vehicle and driver as opposed to the national authorities. In addition, a Special Restricted PSV operator's licence will be required from the Traffic Commissioner, but this should be a formality for an established licensed taxi operator, or already in their possession.

Taxis with less than 8 seats (excluding the driver) can operate local bus services, but with a regulatory regime somewhat simplified when compared to over 8-seater buses, which fall under the same requirements as full-sized buses. Whilst the route would still need to be registered and the requirements of that process adhered to, the accessibility requirements are more limited in scope and operators / drivers are more likely to be available through the current taxi industry. Again, a suitable route / operating area would need to be defined. Should a demand responsive approach be followed it is highly likely that taxi operators would have, as a minimum, an established booking and payment system. Costs would be commensurate with the smaller vehicles used. It should be noted that "shared taxis" running on common travel corridors with passengers paying separately, as practised in some non-UK cities and in Belfast, are technically not legal in Scotland and would be trapped by the bus service requirements highlighted in this report. The pool of available drivers is also likely to be wider than for mainstream buses as a car licence with trailer is a more likely combination than for PSV category D drivers¹⁹.

10.2.3 "Self-operation"

The RSPB or one of the partner bodies operates the service directly, either through a restricted operator's licence or through a Section 22 community bus permit on a not-for-profit basis.

The Section 22 permit for running a local bus service would need to be obtained by a specific entity within the Inner Forth Futures group. A Section 19 permit²⁰ will be required for any community bus operations outwith the bus service proposal. As the vehicle is under 16 seats (excluding the driver) this is suitable for a small bus permit. The permits are vehicle specific for Section 19 but not for Section 22, with each permit allowing the operation of only one vehicle. The bus must only display

¹⁹ <https://www.gov.uk/psv-operator-licences>

²⁰ Permits issued under section 19 - relating to the use of vehicles by educational and other bodies

the permit for which type of use it is undertaking at that time, so a mechanism would be required to ensure the drivers are following this requirement.

The chosen operator should satisfy itself that the vehicle is fully DDA²¹ / PSVAR²² compliant, as local bus services must meet these standards; the supplier should be able to supply the relevant certification.

The operator will need to have maintenance arrangements in place, and this should be formalised by contract and roadworthiness confirmed as part of a regular interval maintenance inspection. The records of repairs and inspections will be required to be retained for at least two years.

The key to the Section 22 permit (and Section 19 – non bus service community operations of passenger vehicles) operations is the 'not-for-profit' test. Being a charity is not a full justification to allow a permit as opposed to operator's licence operations. It will need to be shown (i) that any financial surpluses are distributed into the organisation or (ii) that the former EU short distance exception to full operator's licencing, "the under ten-mile rule", applies. In terms of (i) the operator would need to stand ready for an audit or be ready to demonstrate the cash flow trail from the bus operation and for (ii) a limited area of operation would be essential. There appears to be no issue in meeting these requirements, but the operator would need to regularly review when actual financial information starts to flow. The accounting system would need to be able to record revenue income alongside normal accounting for incurred costs. It will be important to show that items included in other cost lines (e.g., charging electricity or diesel fuel) is itemised fully for transparency.

10.2.4 Additional comments

Irrespective of the delivery proposal followed, the key to the proposition being cost effective will be to maximise the use of the vehicle(s) / driver(s) on days when the proposed service does not operate. Given the nature of Section 22 permit operations and the need for the Inner Forth Futures operator to find additional work for the vehicle(s), option 3 is not recommended. Bus and Taxi operators will, in all likelihood, have access to a pool of other work to ensure maximum efficiency, especially if the service is based around weekend and school holiday operation. Given the pilot nature of the service, taxi-bus operations would appear to provide a cost-effective test of concept.

10.3 The Vehicle

As the route is a local bus service, the Public Service Vehicle Accessibility Regulations (2005)²³ will apply to the vehicle. The nature of the proposed service suggests an electric minibus is the most likely vehicle to be used.

Based on work elsewhere and a brief review of the bus fleets in the area, it is unlikely that electric minibuses suitable for bus service operations are in plentiful supply in lowland Scotland. This would have clear impact on the ability to receive a good commercial proposition from operators. Recent work in Wales has confirmed a capital cost per vehicle of £90k to £100k for the supply of a basic van converted to bus specification.

²¹ Disability Discrimination Act

²² Public Service Vehicles Accessibility Regulations

²³ <https://www.legislation.gov.uk/ukxi/2005/2988/made?wrap=true>

Euro 6 low emission van to bus conversions are also available with capital costs circa £25k to £30k lower than for the full electric option. This lower capital cost would be negated over time by the higher running costs of a diesel vehicle.

The addition of a trailer has implications for driver licensing (see below). The trailer will also prevent any reversing manoeuvres being conducted in service. This point is a question in the service registration process and will be picked up if a reverse is required. The route (or chosen area if a demand responsive service is proposed) will need to avoid this issue.

10.4 Route and Timetable

As the service is to be seen as a pilot, key to effective delivery will be a clear scope for the service and assessment of the target audience. If the service is to follow a fixed route, the Traffic Commissioner as industry regulator will impose strict reliability requirements (buses to arrive at 'timing points in a window of 1 minute early to 5 minutes late) that may not be fully compatible with the "slow travel" concept being evolved here. For demand responsive services, the reliability requirements are more relaxed with buses having to arrive with a customer not more than ten minutes earlier and not more than ten minutes later than the time specified in the booking.

Should a demand responsive proposal be advanced, the booking system would need to be established. Experience of recent such schemes funded by the UK Department for Transport has seen typical software set up costs of £30k to £50k and operational booking costs of £10k to £25k per year. Some local authorities in the study area are known to have booking systems for their own demand responsive bus services so exploring synergies with these operations and taxi operators with established booking systems would be highly recommended.

Experience of demand responsive services that serve the public at large suggests that 'zoning' is critical to enabling the service to operate effectively and ensure waiting times are (i) as short as possible and (ii) capable of hitting the service reliability requirements. This implies zones of no greater than 5km from a central point for small 1 or 2 vehicle operations with an absolute limit of around a 10km diameter zone for a single vehicle if demand is expected to be very low, the area is extremely rural, or the group of likely users is well known. A positive example from England is in rural Lincolnshire where demand responsive services based on roughly 10km diameter zones connect at fixed times with main bus and rail services in market towns. A further example is rural Warwickshire where the operating zone is sparsely populated but has on its periphery a small number of key destinations (2x town centres, 2x railway stations and 3x major employment sites including the area NHS hospital). Travel is allowed point to point within the zone and to/from the external key destinations. A blend of this model of operation and the Lincolnshire approach could be usefully employed here as the local transport 'hubs' are self-defining and the likely destinations also capable of being established in advance. A carefully designed pilot scheme zone with operating hours also fully considered would have the best chance of showing proof of concept within the likely available budget.

Irrespective of the operational concept, should an EV be deployed, range and on road charging opportunities would need to be considered. Also, the need for drivers' meal breaks to comply with the regulations that control driver's working time would need to be allowed for. Typically, these would need to be 30 minutes every 4 to 5.5 hours. The operator would need to allow time for vehicle maintenance, so 7 days per week working would not be practical nor meet formal requirements for regular safety inspections which are needed typically every 4 to 6 weeks.

The timetable should be aligned to days where higher levels of demand are likely to occur. Tourism data from other projects suggests that Fridays to Mondays and School Holidays are most likely to have higher levels of use.

In terms of the specifics of the route, the traffic uncertainty created by the Kincardine Road bridge suggests that separate north / south operations, whether responsive or fixed route, would be required to ensure reliability is maintained.

It is also suggested that the route(s) should focus on, as a pilot, a small number of key transport nodes and destinations.

10.5 Suggested Routes²⁴

Considering the above, it is suggested that a key transport hub within the Inner Forth region is chosen as the base for a GHTS, allowing the service to link up to the rail network.

For example, a route that starts from Linlithgow train station could be considered. This station does not have easy access for pedestrians and cyclists to nearby attractions due to the M9 acting as a barrier and so could benefit from a service providing access to these local attractions, and which also provides direct access to NCN route 76 and the Foreshore path which goes from Carriden to Blackness Castle and on to North Deer Park in Abercorn.

For illustrative purposes, as shown in Figure 38, an approximately 24 km circular route from Linlithgow station, which includes stops at attractions such as Kinneil Estate, Kinneil Local Nature Reserve, Bo'ness town centre attractions, Carriden Glen and Blackness Castle, would take upwards of 35 minutes not including drop-offs/pick-ups. Accounting for approximately 10 minutes at each stop would give a total journey time of roughly 90 minutes. It is important to note that it is unclear whether there is sufficient space at or near Blackness Castle for a GHTS with trailer to turn around without reversing. The same may apply to other locations.

Also, by way of illustration, an alternative route could originate from Falkirk Grahamston station, as shown in Figure 39. To include the majority of attractions local to Falkirk, an approximately 34 km circular route would take upwards of 1 hour 9 minutes not including stops. Attractions included in this route consist of Callendar House, Westquarter Glen, Zetland park, the Kelpies, the Falkirk Wheel and Falkirk Tunnel. As noted above, these locations may not have sufficient space for a GHTS to turn around, and so this will need to be investigated. This route also provides direct access to NCN route 76 and the Forth and Clyde Canal path.

²⁴ Please note, we haven't audited these routes or carried out a detailed assessment of their viability. Therefore, it is strongly recommended that IFF engage with prospective GHTS operators in advance of any procurement exercise to secure insights and advice on route options and service models, etc.

Figure 38: Suggested route Linlithgow

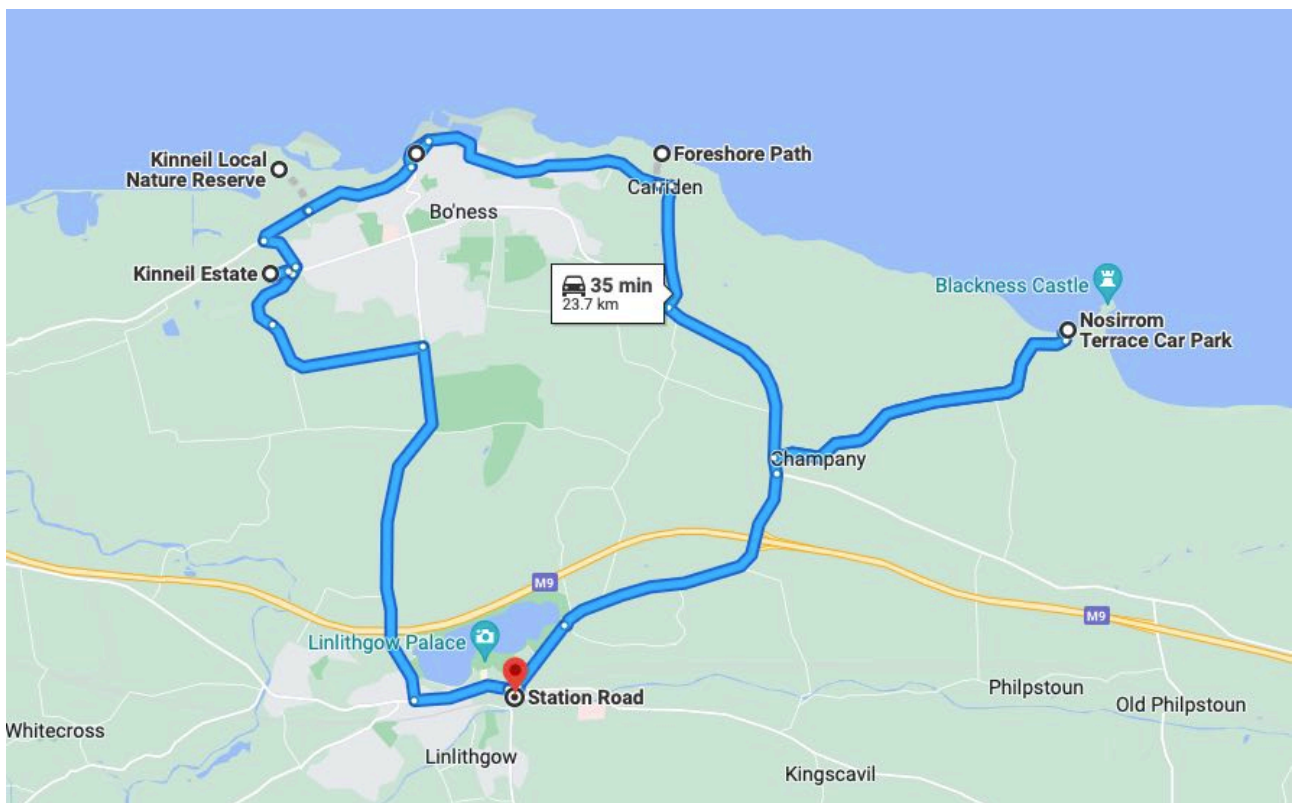
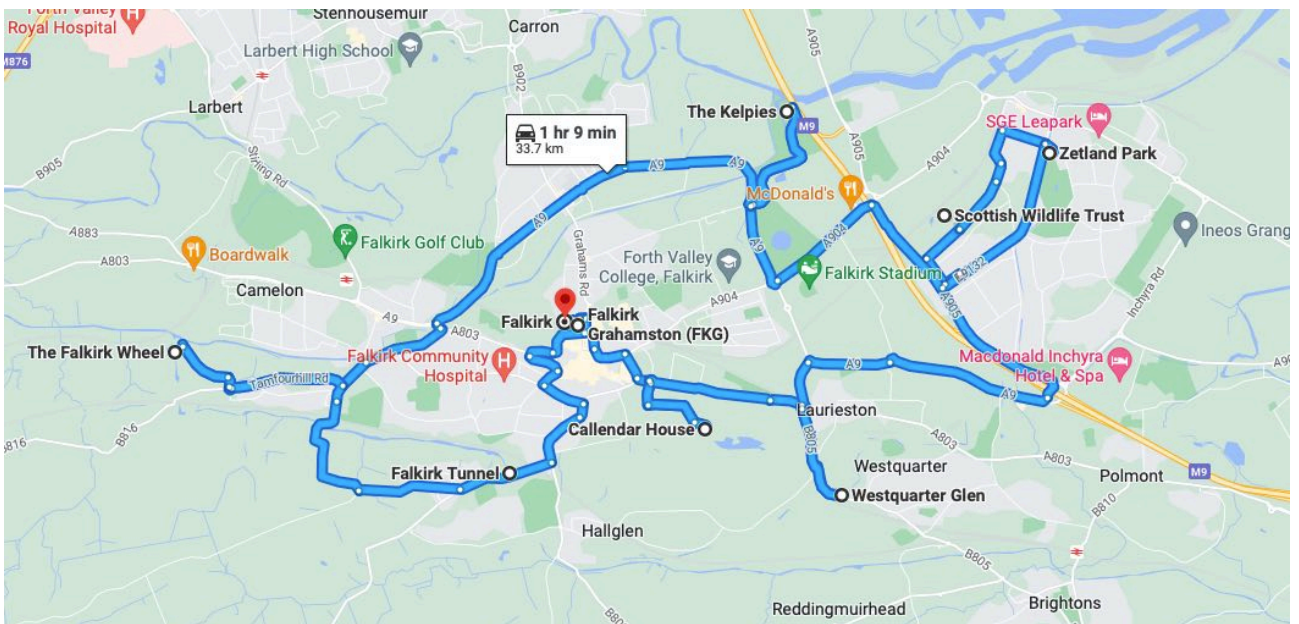


Figure 39: Suggested route Falkirk



10.6 Costs and Funding

Sterling Transport Consultancy's experience in terms of minibuses and DRT schemes elsewhere suggest that operating costs for typical schemes, with the bus operating an 8-12 hour day, are £25-£35 per hour of operation per bus. If vehicle purchase costs are included, this hourly rate would rise to £30-£40 per hour of operation per vehicle, dependant on vehicle specification and financing. This would be fully reliant on the opportunities to spread the fixed cost of vehicle purchase across other work, as discussed in the commentary on operating regimes above.

Assuming that two buses are running concurrently over a six-week period for two summer seasons, the following estimated operating costs could be expected per year:

- 6 days per week service - £20,160
- 5 days per week service - £16,800
- 4 days per week service - £13,440

Although these costs are based on Sterling Transport Consultancy's expertise, market conditions may cause bidding operators to quote significantly different costs. Early market testing is highly recommended. Additional costs may also be incurred, such as those related to marketing and promotion of the service, and so on.

A number of government grants are available to bus operators. It is understood that these would not be imperilled by the use of Lottery or other similar funding.

10.7 Driver Licensing

Although a matter for the operator, driver licensing will be relevant to this service proposal due to the need for a category D + trailer license. Authority for PSV drivers to drive buses towing a trailer has not been automatically granted since 1997. Given the high turnover of PSV drivers seen in the industry (data from TfL suggests an employee turnover of up to 20% per annum for bus drivers in London by way of example)²⁵ it is highly unlikely that a pool of 'trailer qualified' drivers will be readily available. Providing the additional training will increase costs and extend timescales for delivering the service. As noted above, the potential for taxi drivers to have a trailer entitlement to their car licence and therefore their taxi licence is higher than for PSV drivers.

10.8 Fares

Given the nature of the proposal options for the fare structure, it will be important to consider the longer-term prospects for the service. Free operation has been suggested, however, unless high levels of longer-term funding can be guaranteed the sustainability of the service would be doubtful. To commence on a free basis and then seek to introduce a fare is likely to be difficult to sustain. Free travel for young people (under 22), elderly and disabled people is already in place in Scotland and would need to be accepted on the bus service. This represents a significant incentive for these groups to try the service. In turn, the operator would be provided with government funded compensation for the revenue lost. As the level of compensation is based on the adult fare levels,

²⁵ Extrapolated from the London Mayor's 2020 Decision No. MD2592 <https://www.london.gov.uk/decisions/md2592-bus-driver-retention>

charging a market fare will trigger a high level of compensation and allow for promotional and other discounts to be applied as local circumstances dictate.

10.9 Summary

The proposed bus service will be a local service as defined by the Transport Act 1985 and so requires registration. A proposal to 'self-operate' would have significant delivery and operational challenges. Operation of taxi-buses by an outsourced taxi operator would appear to offer the most cost-effective method to 'pilot' the service using smaller vehicles. The route proposed would ideally be focused on a transport hub and link to destinations within a circa 10km radius. Separate operations north and south of the Firth are recommended to avoid reliability issues precipitated by delays on the Kincardine Bridge. The route will need careful consideration to give sufficient focus to its marketability. A focus on a small number of transport hubs and attractions is recommended to ensure the service is manageable and can meet user expectations.

It is highly recommended that early engagement with service operators is conducted before going to market, to discuss potential delivery and route options, to enable a clear and tightly defined tender process.

