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Borders Transport Corridors - Pre-Appraisal

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Jacobs UK Limited.
95 Bothwell Street
Glasgow, Scotland G2 7HX
United Kingdom
T +44 (0)141 243 8000
F +44 (0)141 226 3109
www.jacobs.com

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Executive Summary

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Background

The Scottish Borders Railway Feasibility Study was prepared by transport consultants Scott Wilson (now part of URS corporation) for The Scottish Executive in February 2000. This comprehensive study explored the viability of reopening the former Waverley Line between Edinburgh and Carlisle, and considered route option development along with the socio-economic impacts and cost benefit analysis as part of the study.

The Borders Rail Scheme was granted parliamentary powers to proceed in 2006 and the line between Edinburgh and Tweedbank was completed in September 2015 and is now fully operational. It is the UK's longest newly-constructed railway for more than 100 years. In the lead up to the 2016 elections, the Scottish Government made a manifesto commitment to "examine the feasibility of extending the Borders Railway to Hawick and Carlisle."

There have been longstanding calls for rail to be delivered to the Scottish Borders and also ongoing calls for general transport improvements across all transport modes in the Scottish Borders. The success to date of the Borders Rail Line has understandably strengthened this.

The Borders Railway has shown how investment in rail infrastructure can yield benefit for travellers, the environment, the economy and communities. The Programme for Government (2016-2017) stated that Transport Scotland will examine the case for an extension to the railway along with improvements to the A1, A7 and A68 with a study to identify Borders transport requirements and report by the end of 2017. Transport Scotland commissioned the Scottish Transport Appraisal Guidance (STAG) Pre-Appraisal stage of the Borders Transport Corridors Study in April 2017.

Purpose and Aims of the Study

The purpose of this study was to consider accessibility provided to Scottish Borders communities to link to the strategic transport networks, and identify where improvements are required. It is a multi-modal study and the case for extending the Borders Railway has been considered within the option-based approach to this work along with other potential, multi-modal solutions.

The specific aims of the study were to:

- identify cross modal problems and opportunities within the transport provision between the Scottish Borders and its key markets of Edinburgh, Newcastle and Carlisle;
- highlight where the study has identified the need for further investigation of issues; and
- recommend transport options which could be subjected to more detailed appraisal.

Methodology

The study was overseen by a Project Working Group, chaired by Transport Scotland and included representatives from the Scottish Borders Council and SEStran.

The study was undertaken using STAG principles which provide a clear framework to assess evidence-based transport problems, challenges and opportunities, including objective-led analysis that can be consistently applied in all transport appraisal contexts. The focus for this study was Pre-Appraisal and this stage is the essential starting point and sets the rationale for undertaking an appraisal in accordance with STAG – participation and consultation is vital to the process.

A multi-layered geospatial GIS tool comprising a range of demographic, economic, and traffic and transport datasets was developed to assist in the identification and understanding of problems and opportunities across the Scottish Borders transport and land use system, and provided a mechanism that supported the development of the Transport Planning Objectives (TPOs) for the study and Option Sifting process. The GIS tool was integrated into an online mapping tool, ArcStory, providing a visual presentation of the evidence-base. It allows the rationale behind a potential transport intervention to be presented in a clear, evidence led manner and provides the information required by a decision maker to make an informed and appropriate choice.

Socio-Economic Context

The socio-economic context of the study area has been established through analysis of existing key socio-economic datasets and has considered key topics such as population, the labour market, deprivation and property.

Data analysis for the Scottish Borders has been presented against two geographic levels: National level and Scottish Rural Average (SRA) comparator area – specifically developed for this study and comprises Aberdeenshire, Argyll & Bute, Angus, Dumfries & Galloway and Highland council areas.

A summary of the key points from the socio-economic profiling is shown in Table 1 and Table 2 below.

Table 1: Demographics, Summary of Key Points

- Population growth in the Scottish Borders between 2011 and 2015 was lower than both the SRA comparator area and national averages.
- Population aged 65 and over in the Scottish Borders is higher than the national average, potentially leading to extra pressures on health services.
- Settlement population marginally increasing and decreasing over time.
- A large number of qualified people having attained Level 1 or above qualifications.
- High car availability suggesting that the Scottish Borders could be experiencing public transport connectivity problems, or equally residents have higher levels of disposable income.
- Average house price in the Scottish Borders (£170,000 in 2017) is higher than both the SRA comparator area (£164,000 in 2017) and national average (£169,000 in 2017) suggesting the region is an attractive place to live.
- Concentrations of deprivation in Galashiels, Selkirk and Hawick.
- The Scottish Borders has the highest proportion of total households in the lowest council tax bands. compared to the SRA comparator area and Scotland as a whole.

Table 2: Economics, Summary of Key Points

- Of people in the Scottish Borders aged between 16 and 74 in employment in 2011, 70% were economically active (either in work or actively seeking work) which was very similar to the SRA comparator area and national rates. The current economically active rate in the Scottish Borders could be lower than the 2011 rate due to an ageing population.
- On average, households in the Scottish Borders took home less income than the SRA comparator area and national average, potentially reflecting poorer access to higher paid employment or equally resulting from the larger retirement population.
- The Jobseeker's Allowance claimant rate and those claiming key benefits of any type is lower in the Scottish Border compared to the SRA comparator area and Scotland as a whole.
- There are proportionally more Scottish Borders residents employed in the 'Agriculture, Energy & Water' industry compared to the SRA comparator area and Scotland as a whole.
- There are proportionally more employees whether they are resident or otherwise in the Scottish Borders in the 'Public Administration, Education and Health' industry compared to the SRA comparator area and Scotland as a whole. Similarly, there is a higher proportion of people employed in Manufacturing in the Scottish Borders than across both comparator areas.
- There was a net increase of 160 business sites in the Scottish Borders between 2011 and 2014, with the largest increases in the Professional, Scientific and Technical Activities, and Primary Industries sectors. Conversely, the largest decrease was in the Wholesale, Retail and Repairs industry.
- Key employers (by staff size) in the Scottish Borders tend to operate in the manufacturing and pharmaceutical industries.
- Overall, business start-ups, closures and survival rates across the Scottish Borders indicates a strengthening labour market giving workers the confidence to move between employers and also the confidence to start new businesses. The broader economic backdrop has also likely supported business creation with increased GVA across the region.
- Scottish Borders GVA increased by 12% from £1.75bn to £1.96bn between 2011 and 2015 which could be reflecting growth in higher skilled businesses, in particular in the Professional, Scientific and Technical Activities, and Primary Industries sectors.

- The Scottish Borders has relatively good upload and download speeds compared to the SRA comparator area. However, Superfast and Ultrafast broadband provision lags behind Scotland as a whole.
- Since the opening of the Borders Railway in September 2015, tourism related activities have increased significantly, including visitor attraction numbers, tourism accommodation bedstock and transport use levels.

Transport Context

The transport context of the study area has been established through analysis of existing key traffic and transport datasets and has considered key topics such as transport supply and demand, travel patterns, and road and public transport accessibility.

A summary of the key points from the traffic and transport analysis is shown in Table 3 below.

- Lack of bus services travelling east-west linking Scottish Borders towns with the Galashiels Transport Interchange, resulting in increased journey times.
- There is reasonable PT journey time accessibility along the main north-south corridors, including the A7 and A68, however, accessibility analysis highlights a potential problem with public transport service provision / frequency travelling east-west.
- The Scottish Borders and SRA comparator area have much lower levels of public transport usage compared to Scotland as a whole, with only 5% using bus or rail compared to 14% at the national level.
- Bus service provision along key strategic corridors (A1, A68 and A7) is frequent providing a reasonable level of service.
- Edinburgh is served well by bus from the main population centres within the Scottish Borders, but less so from Kelso and Jedburgh.
- Newcastle has a poorer level of bus service provision from the Scottish Borders than Carlisle.
- It is possible for the working age population in Galashiels and Hawick to complete a full working day in Carlisle using bus as travel-to-work mode. For the working age population in Carlisle, it would not be possible to commute by bus to either Hawick or Galashiels and work a full 8-hour day.
- Analysis of 2011 Census Travel-to-Work shows higher levels of homeworking in the Scottish Borders compared to the SRA comparator area and Scotland as a whole.
- Borders Rail has experienced significant growth in passenger numbers and is primarily used by commuters.
- Analysis from the online public engagement survey shows that car is the most dominant mode (57% car driver; 6% car passenger) for interchange along the Borders Rail Line, potentially indicating problems with connectivity and integration with other transport modes such as bus or active travel.
- Single tracked sections of the Borders Rail Line are affecting punctuality and reliability
- Patronage levels have increased at every station along the ECML between Berwick-upon-Tweed and Edinburgh between 2010 and 2016. Further increases could potentially lead to capacity issues should this growing trend continue
- The majority of trips on the Scottish Borders road network are commuter through-trips
- Significant growth in LGV movements within the region (increases above 25%), likely reflecting growth in home-based internet shopping and the rise of the white van.
- The number of road traffic accidents, including severity, have decreased between 2010 and 2014 across the Scottish Borders network. The main clustering of accidents is around the ‘horseshoe’ between Selkirk, Galashiels and Melrose, and south to St. Boswells.

Table 3: Traffic & Transport, Summary of Key Points

Problems, Opportunities, Issues and Constraints

The identification of Problems, Opportunities, Issues and Constraints has formed the basis of the development of the study.

Four separate exercises were undertaken to identify existing and future year problems and opportunities across the Scottish Borders transport and land use system:

- **Data analysis:** covering socio-economic data, and transport and traffic data collated from existing sources.
- **Analysis of SRM12 outputs and review of Cross Boundary Study Report Final (April 2017):** covering future year transport networks.
- **Policy review:** covering local, regional and national transport and planning policy documents related to targeted and planned economic and social development, and key transport infrastructure plans.
- **Stakeholder Engagement:** with a wide range of key stakeholders representing a diverse range of organisations.

Based on the analysis, policy review and stakeholder engagement, the following problems were identified:

PUBLIC TRANSPORT

- Unreliable public transport journey times
- Competition between public transport modes
- Lack of public transport ticket integration and interchange opportunities
- Lack of rail capacity
- Limited accessible public transport service provision
- Limited available funding for bus provision
- Constrained capacity (track and train) on Borders Railway corridor
- Long rail journey times to major destinations in Scotland and England
- Lack of park and ride capacity
- Lack of travel information
- Increased bus journey times on A8 corridor between Edinburgh Airport and city centre

ROAD

- Road safety [i.e. A1, A68 and A7]
- Availability and cost of fuel
- Road congestion, including A720 Edinburgh City bypass, M8 and M9 west of Edinburgh, M90 north of Edinburgh
- High volume of Goods Vehicles
- Lack of diversion routes
- Lack of sufficient roads maintenance
- Lack of freight facilities
- Lack of investment for transport network improvements leading to transport deficit in comparison with links between Inverness, Aberdeen and Perth
- Lack of high quality standard of roads
- High car dependency in the Scottish Borders
- Constrained road capacity [i.e. on A7, A68, A701]
- Poor road connections to NE England
- Transport deficit in comparison with links between Inverness, Aberdeen and Perth

SOCIO-ECONOMIC

- Lack of economic investment
- Lack of high value employment opportunities in the Borders
- Lack of higher education availability
- Lack of investment in tourism offering
- Lack of political ambition
- Net out-flow of workforce
- Socio-demographic issues such as ageing population and relatively long travel distances to high value jobs
- Through movements impact but do not contribute locally
- Land Use Planning may cause further capacity constraints on links to the Scottish Borders
- Long distances between employment, services and retail due to rural nature of the region

CONNECTIVITY

- Lack of access to digital and internet services
- Lack of east-west connectivity
- Lack of connectivity within the Borders
- Lack of southern cross-boundary connections
- Poor connectivity and accessibility to key gateways in SEStran area for both passengers and freight
- High cost of travelling

ACTIVE TRAVEL

- Lack of active travel infrastructure provision
- Local geography makes active travel unattractive
- Lack of safety measures for walking and cycling along strategic routes

Table 4: Identified Problems

Based on the analysis, the following **opportunities** have been identified:

Table 5: Identified Opportunities

SOCIO-POLITICAL

- Strong collaborative working between public sector and other relevant organisations
- External Funding Opportunities
- Borderlands Initiative seeks to deliver opportunities in rural areas of southern Scotland and northern England
- Opportunities for high quality education such as Heriot-Watt University Scottish Borders Campus in Galashiels and superior environmental quality
- High quality of life in the Scottish Borders

LEISURE AND TOURISM

- Developing tourism market
- Scottish Borders is attractive for active travel and tourism
- Carlisle Airport opening to passenger travel
- Eyemouth Harbour
- Visitor destinations along strategic routes

PUBLIC TRANSPORT

- Disused rail infrastructure still in place at some sections
- Increasing parking provision at Berwick station

ROAD

- Route management strategies covering ongoing maintenance and safe network operation between Edinburgh and North West England (A68/A7/A702) and North East England (A1)

ACTIVE TRAVEL

- Disused railway lines in green belts offering considerable opportunities for walking and cycling access

ACCESSIBILITY AND CONNECTIVITY

- Digital connectivity
- New technology can reduce impact of travel
- New Rail Stations at Reston and East Linton
- Reston Station and improvements to cross border services on ECML
- Build on Community Transport provision
- Investment in TransPennine Express services between Edinburgh, Newcastle and Manchester
- Edinburgh and South East City Deal for improving connectivity, creativity, inclusivity and business development
- Scottish Borders is attractive for active travel and tourism

ECONOMY AND DEVELOPMENT

- Local Development Plan aspirations
- Neighbouring employment opportunities
- Skilled local workforce
- Timber Peak for forestry industry
- Conversion of Tweedbank Industrial Estate to Central Borders Business Park
- Land Use Planning with approximately 10,000 homes allocated for Scottish Borders
- Scottish Borders 'Strategic Development Areas'
- Supporting opportunities for higher value employment, particularly in 'Knowledge Intensive Business Services'
- Borders Railway Investment Fund
- SESplan 'Cross Boundary Transport Contributions Framework'
- Borders Railway key driver of employment and residential opportunities
- West Coast Motors investment

Based on the analysis, the following **issues** have been identified:

Issue 1: Transport and Land Use in neighbouring Local Authorities

Committed and proposed developments located in Midlothian, particularly around the key transport corridors linking the Scottish Borders to Edinburgh, pose a significant issue for the current and future performance of the transport network. The routes of particular concern:

- A7, A68 and Borders Railway for Gorebridge, Newtongrange and Eskbank (Midlothian)
- A701, A702 and A703 towards the west for Straiton and Easter Bush (Midlothian)
- A1 and East Coast Main Line corridor, particularly at Blindwells and East Linton which is located between Edinburgh and the proposed Reston Station (East Lothian)

The A701 Relief Road scheme in Midlothian aims to relieve road performance issues on the existing A701 route, as well as providing a link to the A703 and A702. Whilst the scheme is likely to provide an improvement for road users between the Scottish Borders and Edinburgh, it is still identified as an issue as the study is unable to influence the outcome of the scheme.

Issue 2: Internet / Broadband Connectivity

Broadband connectivity is not directly within the remit of local, regional and national transport bodies. The study has, however, highlighted the significance broadband connectivity can have on reducing the need to travel, along with encouraging people and businesses to locate in the Scottish Borders.

Issue 3: Government Funding and Cuts

The study must work within the context of available budget and resource to Scottish Borders, SEStran and Transport Scotland, especially when public funds and resources are currently being stretched.

The following **constraints** have been identified:

Constraint 1: Physical Constraints

- Landscape

Settlements are sparsely located throughout the region as a result of the hilly topography. This topography constrains the ability to travel and to deliver public transport effectively. Difficult topography can also constrain potential infrastructure solutions due to higher delivery costs and environmental concerns

- Rail Network

Existing rail network constraints include lack of capacity most notably on approaches and junctions towards Edinburgh Waverley (including the station capacity itself) and timetabling.

Constraint 2: Institutional Boundary Constraints – Policies, Revenue and Funding

- Scottish Border with England

Given the Scottish Borders sits on the border between Scotland and England, this will naturally pose challenges in delivering cross-border transport schemes. This is attributable to differences in the appraisal and delivery mechanism of transport schemes such as STAG and WebTAG; planning policies; sources of funding and the many stakeholders involved. In general, this is seen as a constraint, however The Borderlands Initiative presents the opportunity to enable and further formalise cross-boundary cooperation, as well as provide a joined-up approach to deliver cross-border transport schemes

- Regional Boundaries

Regionally, the most significant constraint is between the local authorities of the Scottish Borders, Midlothian, East Lothian and City of Edinburgh. Transport improvements between the Scottish Borders and Edinburgh are dependent on the cooperation with Midlothian and Edinburgh local authorities.

- Revenue and Capital Funding

A notable constraint is the funding of transport improvement schemes in Midlothian (connecting to Edinburgh) which could benefit Scottish Borders users. This is a concern for Midlothian as they are unlikely to benefit from Scottish Borders users passing through the council area to get to and from Edinburgh

The SESplan Proposed Development Plan 2018-32 proposes to prepare a 'Cross-Boundary Transport Contributions Framework' which is aimed at helping fund the transport improvements needed to achieve growth in the region; and mitigate the most significant cumulative and cross-boundary impacts at specific hotspots on the network. The funding of regional cross-boundary transport schemes is a constraint for the study, as well as this proposed Cross-Boundary Transport Contributions Framework' by SESplan which the study should take cognisance of

Constraint 3: Bus Deregulation and Funding

The study must take into account the regulation of bus services and associated constraints with this. The Scottish Borders has a history of bus services being supported by the local council because of unprofitable routes. These are often vital transport links to the communities they serve, however services are constrained by the funds available. The study has taken cognisance of this, along with the expected changes West Coast Motors taking over First Borders services will have on the delivery of bus services in the study area.

Transport Planning Objectives

The Transport Planning Objectives (TPOs) are focussed on reflecting the identified problems and opportunities, as well as expressing the outcomes sought for the study. The TPOs also take cognisance of established local, regional and national policy directives, plans and strategies.

The TPOs for the study are:

- **TPO 1: Improve interchange with and between sustainable transport modes.** Focus is on alleviating the problems and addressing the opportunities, including those affecting the overall public transport network, connecting bus & rail and further integrating active travel in the Scottish Borders
- **TPO 2: Improve journey times, reliability and safety to employment, key services and leisure.** Focus is on alleviating problems related to connecting travel modes, road network performance, as well as providing more reliable and efficient travel for residents to access key services and employment opportunities.
- **TPO 3: Integrate transportation and land use opportunities to capitalise on the built and natural environment.** Focus is on alleviating problems that act as barriers to linking key development areas with a good transport network while maintaining the high quality natural environment of the Scottish Borders, which is a key attractor of visitors to the area.
- **TPO 4: Reduce business transport costs for economically competitive sectors.** Focus is on improving the competitiveness of local businesses in the Scottish Borders, by helping to alleviate key problems such as transport related costs and transport network integration. The outcome could be one that promotes the local economy by providing improved accessibility to the transport network for businesses to efficiently and effectively access key markets and high skilled workforce.

Option Generation, Sifting and Development

Option generation has been informed by four key tasks helping to encourage new potential options in addition to those which have been proposed for some time:

- outcomes from a comprehensive review of relevant policy documents;
- options challenge workshops;
- discussions with the Project Working Group; and
- suggestions from stakeholders.

A wide ranging list of 21 individual strategic multi-modal options which could meet the Transport Planning Objectives and help alleviate the identified problems and address the potential opportunities across the Scottish Borders transport and land use system were generated and recommended for either the upcoming Strategic Transport Projects Review (STPR) or further development by partner organisations and third parties.

The recommended multi-modal options have been categorised into the following option types:

- **Accessibility** covering service provision and physical accessibility;
- **Active Travel**, including dedicated active travel network and cross boundary measures;
- **Freight**, including for movements on the road network and internal forest roads;
- **Park and Ride**, including new sites and increased capacity of existing sites;
- **Public Transport**, including bus provision and service improvements and integration of bus and rail timetables, as well as service and infrastructure improvements to the Borders Rail Line, new rail infrastructure and services;
- **Road**, including improved maintenance, new infrastructure and programme of safety measures

The full list of options is shown in Table 6 opposite and shown indicatively (where possible) for illustrative purposes only in Figure 1.

Option	Type	Title	Description
1	Accessibility	Increase Bus Services to Strategic Health Service Facilities	Increase bus service provision between Scottish Borders and Borders General Hospital and other strategic health facilities [e.g. Edinburgh Royal Infirmary]
2	Accessibility	Improve Physical Access to Strategic Public Transport Services	Improve physical accessibility to public transport through infrastructure and on public transport vehicles for people with mobility or sensory impairment on strategic routes
3	Active Travel	Strategic Active Travel Network	Implement a strategic active travel network and cross-boundary active travel measures [e.g. Peebles - Edinburgh], including provision around key services and public transport interchanges
4	Freight	Freight Route	Implement a freight route signage strategy, including the provision of specific real time Satnav route information
5	Freight	Develop Forestry Route Network	Improve network of internal forestry tracks as well as its connections to roads and railway, including 'low-tech' timber pickup facilities
6	Park and Ride	Increase Park and Ride Provision	Increase capacity of existing Park-and-Ride sites and implement new Park-and-Ride schemes for all modes at strategic locations [e.g. Interchanges and Key Employment Areas]
7	Public Transport	Express Bus Services	Provision of express bus services to key external markets (Edinburgh, Newcastle and Carlisle, including airports)
8	Public Transport	East-West Bus Services	Increase number and frequency of east-west bus services, including extending timetable into evening
9	Public Transport	Borders Railway Extension – South/West	Extend the Borders Railway to Hawick and / or Carlisle
10	Public Transport	Railway Extension – South/ East	Extend the Borders Railway towards East Coast Main Line (ECML) via Berwick-upon-Tweed
11	Public Transport	Enhanced Rail Services	Increase the frequency, capacity and service quality of the existing Borders Railway [e.g. service capacity, bike storage, Wi-Fi, reliability and punctuality]
12	Public Transport	New Rail Stations	New rail stations on the existing Borders Railway
13	Public Transport	Extension of Borders Railway Services	Link Borders Railway and Fife Circle, providing interchange at Edinburgh Gateway; West Edinburgh; and potential future link to Glasgow
14	Road	A1 Dualling	Complete the dualling of the A1 south of Edinburgh to the Scottish Border
15	Road	A1 Safety Measures	A1 package of safety measures and improvements [e.g. average speed cameras, climbing lanes and junction improvements]
16	Road	A68 Capacity Enhancement	A68 capacity enhancement measures, such as partial dualling, bypass and overtaking lanes
17	Road	A68 Safety Measures	A68 package of safety measures and improvements [e.g. average speed cameras, climbing lanes and junction improvements]
18	Road	A7 Capacity Enhancement	A7 capacity enhancement measures, such as partial dualling, bypass and overtaking lanes
19	Road	A7 Safety Measures	A7 package of safety measures and improvements [e.g. average speed cameras, climbing lanes, junction improvements and appropriate diversionary routes]
20	Road	Secondary Network Safety Measures	Package of safety measures and improvements to second-ary road network performing strategic function
21	Road	Enhanced Service and Rest Areas	Service areas to include facilities for HGV rest stops, electric vehicle charging points, tourist facilities and coach layover

Table 6: Recommended Multi-Modal Options for Further Consideration

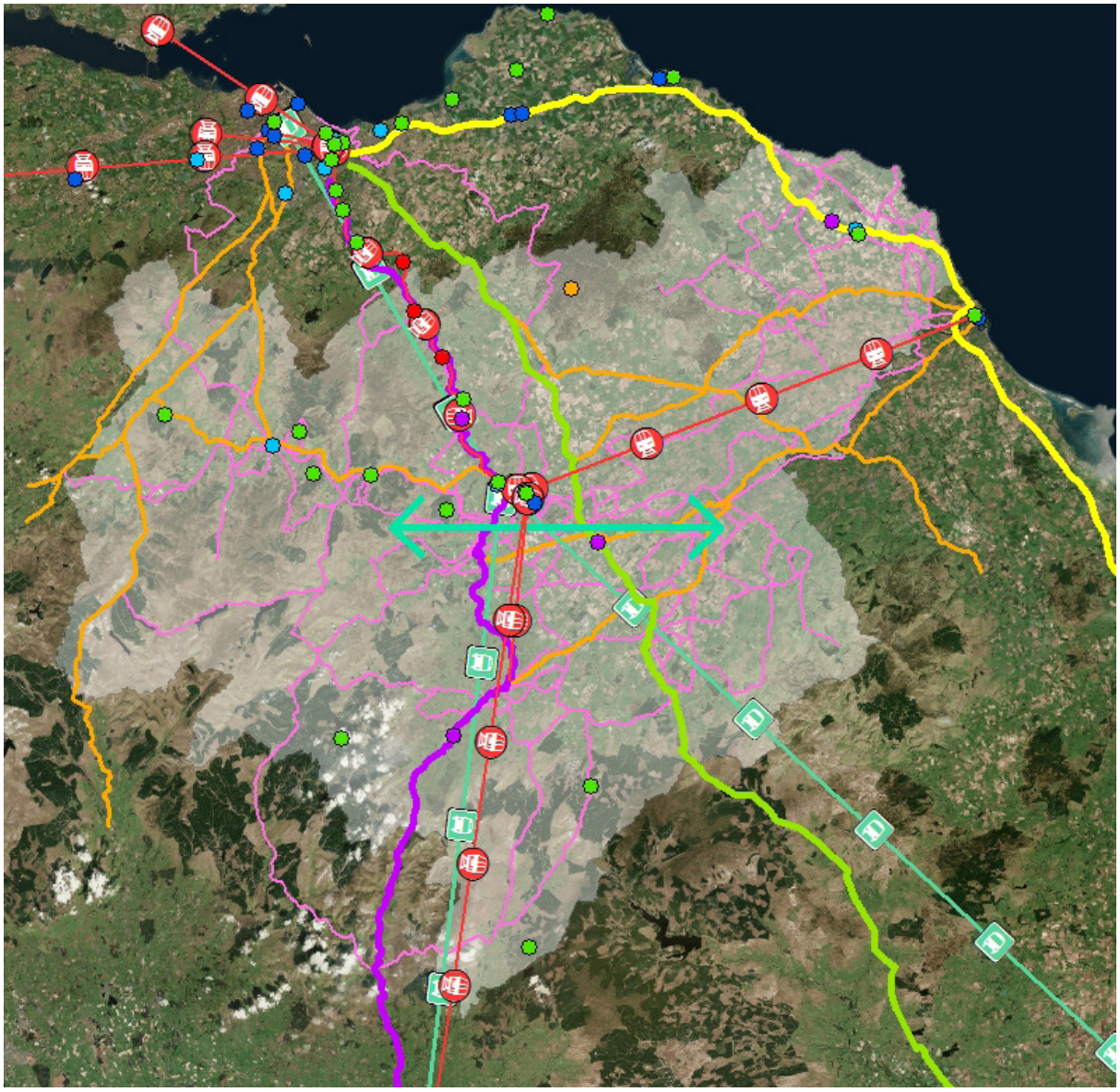

Figure 1: Recommended Multi-Modal Options (indicative locations for illustrative purposes only)

Recommendations and Next Steps

The Borders Transport Corridors – Pre Appraisal study has set the context for the appraisal of transport options for the Scottish Borders and for its key strategic connections to Edinburgh, Newcastle and Carlisle.

In line with STAG guidance, it has identified the key transport problems, opportunities, issues and constraints within the study area, which have formed the basis for objective setting and the generation of a wide range of options to be appraised in STAG Initial Appraisal (Part I).

The purpose of the initial appraisal would be to undertake an initial qualitative appraisal of the recommended options from Pre-Appraisal. This would include an assessment of:

- the likely impacts of the options against the Transport Planning Objectives;
- the likely impacts of the options against STAG criteria [i.e. Environment, Safety, Economy, Integration, and Accessibility and Social Inclusion];
- options against established policy directives; and
- feasibility, affordability and public acceptability of the options.

It is also recommended that a comprehensive review of the existing SRM12 model is undertaken in any subsequent appraisal work to determine its appropriateness in providing the quantitative basis in which to test the generated options, but also to maintain consistency in modelling approach throughout later stages of the appraisal.

Introduction

01

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1.1 Background

The Programme for Government (2016-2017) stated that Transport Scotland will examine the case for an extension to the railway along with improvements to the A1, A7 and A68 with a study to identify Borders transport requirements

The Scottish Borders Railway Feasibility Study was prepared by transport consultants Scott Wilson (now part of URS Corporation) for The Scottish Executive in February 2000. This comprehensive study explored the viability of reopening the former Waverley Line between Edinburgh and Carlisle, and considered route option development along with the socio-economic impacts and cost benefit analysis as part of the study.

The Borders Rail Scheme was granted parliamentary powers to proceed in 2006 and the line between Edinburgh and Tweedbank was completed in September 2015 and is now fully operational.

It is the UK's longest newly-constructed railway for more than 100 years. In the lead up to the 2016 elections, the Scottish Government made a manifesto commitment to "examine the feasibility of extending the Borders Railway to Hawick and Carlisle."

There have been longstanding calls for rail to be delivered to the Scottish Borders and also ongoing calls for general transport improvements across all transport modes in the Scottish Borders. The success to date of the Borders Rail Line has understandably strengthened this.

On road infrastructure, the A1 Action Group campaigns for the route to dualled. One of the key priorities of the Scottish Government investment has been on maintenance and operation of the A1 to ensure effective connections to the strategic road network in England. The focus has been on ensuring the safe and efficient operation of junctions on an individual basis; strategic road safety assessments have recently resulted in the installation of a range of low cost remedial measures.

In Autumn 2014, in response to a UK Government offer to undertake a joint study to explore A1 dualling, Transport Scotland stated it would consider the merit of dualling the remaining third of the A1 in Scotland when outcomes from the corridor study on potential high speed rail routes to Scotland and patronage figures for the Borders Railway became available. This data will enable an accurate assessment of traffic flows on cross border roads and the impact potential further dualling of the A1 would have.

There has also been campaigning in relation to the A7. The A7 Action Group has historically called for by-passes at Hawick and Selkirk. The Action Group produced a new action plan in 2015 entitled "2015 Onwards – A Continuing Vision" which sets out infrastructure improvements that community councils across the route would like to see. A comprehensive review of the A7 action plan has recently been completed by Transport Scotland.

The Borders Railway has shown how investment in rail infrastructure can yield benefit for travellers, the environment, the economy and communities.

1.2 Purpose and Aims of this Study

The purpose of this Pre-Appraisal was to consider accessibility provided to Scottish Borders communities to link to the strategic transport networks, and identify where improvements are required. It is a multi-modal study and the case for extending the Borders Railway has been considered within the option-based approach to this work along with other potential, multi-modal solutions.

The specific aims of the study were to:

Identify cross modal problems and opportunities within the transport provision between the Scottish Borders and its key markets of Edinburgh, Newcastle and Carlisle;

Highlight where the study has identified the need for further investigation of issues; and

Recommend transport options which could be subjected to more detailed appraisal in Scottish Transport Appraisal Guidance (STAG) Part I

1.3 Other Documentation

Associated Reports and Technical Notes prepared to support the Borders Transport Corridors – Pre-Appraisal include:

- Briefing Paper setting out a comprehensive understanding of the study area, including key trends and observations, "Briefing Paper – Data Trends and Key Observations, June 2017."
- Technical Note detailing the traffic and transport data, socio-economic data and policy documents which have been collated and used in the study, "Datasets Technical Note, August 2017."
- Report providing a comprehensive summary of the outcomes from the stakeholder engagement exercise, "Stakeholder Engagement Summary Report, August 2017."
- Technical Note providing a comparative review of the relevant LATIS transport models and identifying an appropriate model to support the evidence base of problems and opportunities, "Review of LATIS Transport Models, September 2017."
- Summary Paper listing the identified problems and opportunities across the Scottish Borders transport and land use system, "Summary of Problems and Opportunities, September 2017."
- Technical Note outlining the methodology used to develop the Transport Planning Objectives (TPOs), and listing the TPOs for the study, "Transport Planning Objectives Technical Note, October 2017."
- Technical Note providing a comprehensive summary of the option generation and sifting process, as well as a clearly defined audit trail of the decision making process, "Option Generation and Sifting Technical Note, November 2017."

This document forms the **Borders Transport Corridors – Pre Appraisal Report, March 2017**. Its main purpose is to document the process and present the analysis and findings from the STAG Pre-Appraisal stage of the Borders Transport Corridors Study.

1.4 The Structure of the Report

Following this introductory chapter, the remainder of the report is structured as follows:

Chapter 2: Methodology

Chapter 3: Geographic, Social, Economic & Transport Context

Chapter 4: Stakeholder Engagement

Chapter 5: Analysis of Problems, Opportunities, Issues and Constraints

Chapter 6: Objective Setting

Chapter 7: Option Generation, Sifting and Development

Chapter 8: Recommendations and Next Steps

Methodology

02

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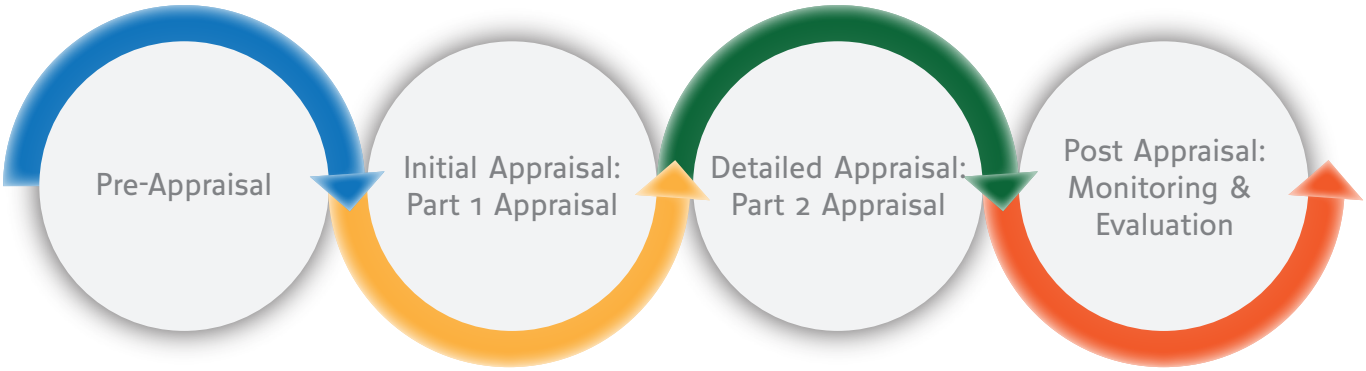
2.1 Scottish Transport Appraisal Guidance

The study has been undertaken using Scottish Transport Appraisal Guidance (STAG). STAG supports the Scottish Government's purpose, which is to **"focus Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth,"** by providing a clear framework to assess evidence-based transport problems, challenges and opportunities, including objective-led analysis that can be consistently applied in all transport appraisal contexts.

STAG is one process comprising four phases as shown below:



The focus for this study is **Pre-Appraisal**. This first phase is the essential starting point and sets the rationale for undertaking an appraisal in accordance with STAG – participation and consultation is vital to the process.

There are many key principles which underpin STAG, including:

- **Robust Pre-Appraisal provides the foundation to the whole process** since it promotes the analysis of opportunities during Pre-Appraisal in parallel to the identification of transport problems.
- **Objective-led rather than solutions-led** which avoids pre-conceived solutions being brought forward without considering other options which may meet the identified problems or opportunities.
- **Does not prioritise between options** but rather it is an aid to decision makers to allow them to make informed choices. STAG may provide an initial rationale for investment and it is important that the STAG outcomes are revisited as the Business Case for an intervention develops.

2.2 Key Tasks

Six key tasks were undertaken as shown below. Task outcomes are described in subsequent chapters:

Figure 2: Key Tasks

Data Collation and Collection

To gain a comprehensive understanding of the study area, including the geographic, social, economic and transport context, as well as the Scottish Borders transport system and its linkages and connectivity to key external markets of Edinburgh, Newcastle and Carlisle

Stakeholder Engagement

To engage with a wide range of appropriate stakeholders in the identification of problems and opportunities, and the development and assessment of potential solutions

Analysis of Problems & Opportunities

To undertake an assessment of problems and opportunities across the Scottish Borders transport and land use system

Objective Setting

To develop Transport Planning Objectives that reflect the problems and opportunities, and express the outcomes sought for the study

Option Generation, Sifting & Development

To generate the widest possible set of options which could alleviate the identified or perceived problems and address the potential opportunities across the Scottish Borders transport and land use system. Sift the option long list down to a short list for further work.

Reporting

To clearly document and present the analysis and outcomes from the study, including recommendations on transport options which could be subjected to more detailed appraisal

2.3 Data Collation and Collection

No new data collection was undertaken as part of the study. However, four data collection exercises were commissioned separately by Transport Scotland prior to the study commencing:

- Borders Railway Passenger Travel Survey, March 2017.
- Borders Buses Passenger Travel Survey, May 2017.
- 24hr Automatic Traffic Count (ATC) surveys (various locations), March / April 2017.
- Road Side Interview (RSI) surveys (various locations), March / April 2017.

Data collated from existing sources covering transport policy, socio-economic data, and transport and traffic data is provided in Appendix A to this report.

2.4 GIS Tool and ArcStory

A key part of the methodology is a multi-layered geospatial GIS tool comprising a range of demographic, economic, and traffic and transport datasets.

A localised version of this tool has been developed to assist with key tasks in this pre-appraisal including the identification and understanding of problems and opportunities across the Scottish Borders transport and land use system, and to provide a mechanism which supports the development of the Transport Planning Objectives (TPOs) for the study and Option Sifting process.

Key outputs from the GIS tool have been integrated into an online mapping tool, ArcStory, which provides a visual presentation of the evidence-base. It allows the rationale behind a potential transport intervention to be presented in a clear, evidence led manner and provides the information required by a decision maker to make an informed and appropriate choice.

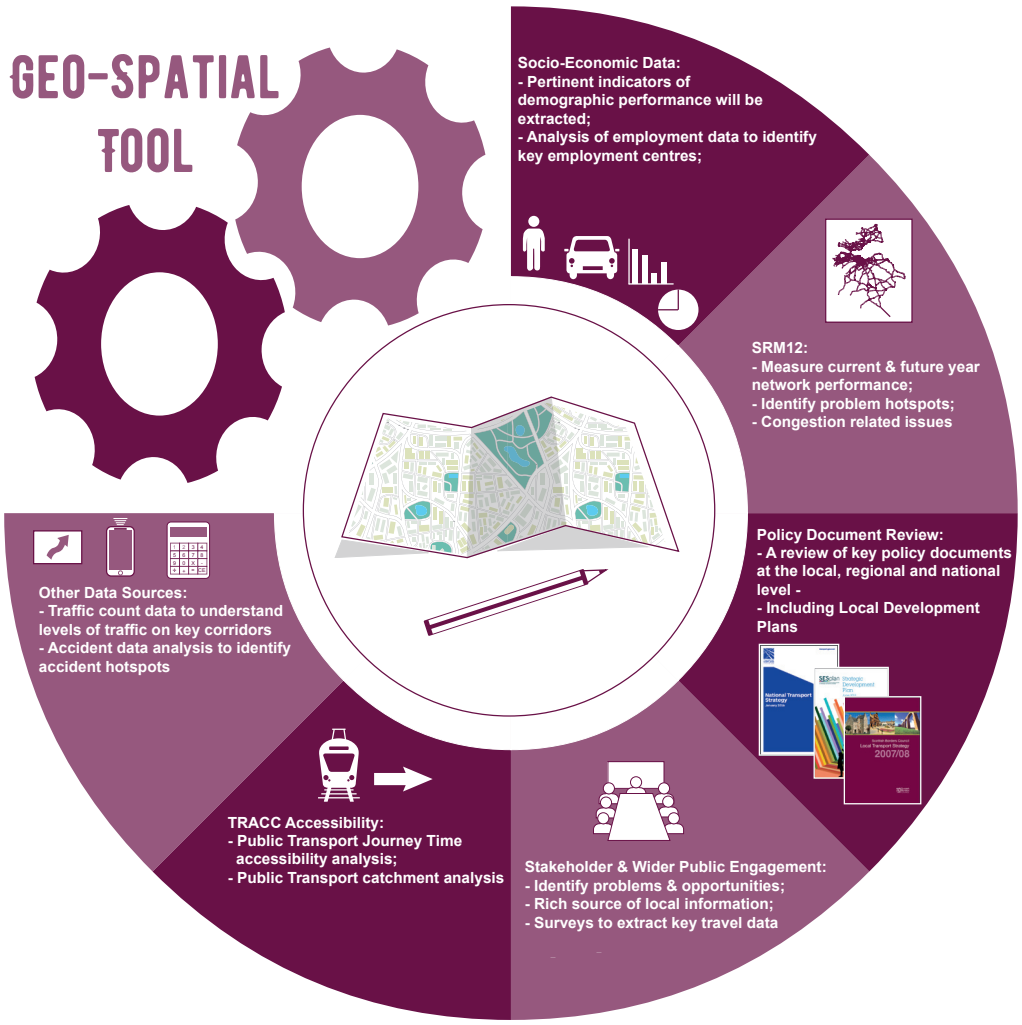


Figure 3: Geo-Spatial Tool

2.5 SEStran Regional Model 2012

The study has been informed by the existing **SEStran Regional Model 2012 (SRM12)**, used in the SESplan Cross Boundary and Land Use Appraisal (April 2017) – referred to as "Cross Boundary Study" hereinafter – to identify potential, future year problems across the Scottish Borders transport network. SRM12 was identified as the most appropriate transport model to assist in informing the study and no new modelling has been undertaken.

SRM12 is a strategic multi-modal transport model covering the south east of Scotland, including the six Local Authorities within the Strategic Development Planning Authority for Edinburgh and South East Scotland (SESplan) area. The model contains the road and public transport network, and service supply, reflecting 2012 travel conditions. SRM12 is capable of forecasting changes in travel demand and travel patterns over time, identifying potential impacts of new developments and assessing the benefits of proposed transport investment and policies. Forecast assumptions are provided in Appendix B to this report.

Where options within this study have been identified for further consideration, modelling can be undertaken as part of the Scottish Transport Project Review (STPR) to assess them in detail. For those options identified as being out of scope due to being a more localised intervention, these can be modelled in micro-simulation software, if the Scottish Borders Council wish to progress them.

In addition to looking at SRM12, the SESplan Cross Boundary Study, for which the SRM12 model was developed to appraise, was also reviewed to inform this study on the impacts on the transport network as a result of cross boundary trips from non-committed development. This is discussed further in Section 5 of this report.

The modelled road and rail network coverage in the Scottish Borders and beyond is shown in Figure 4 below.

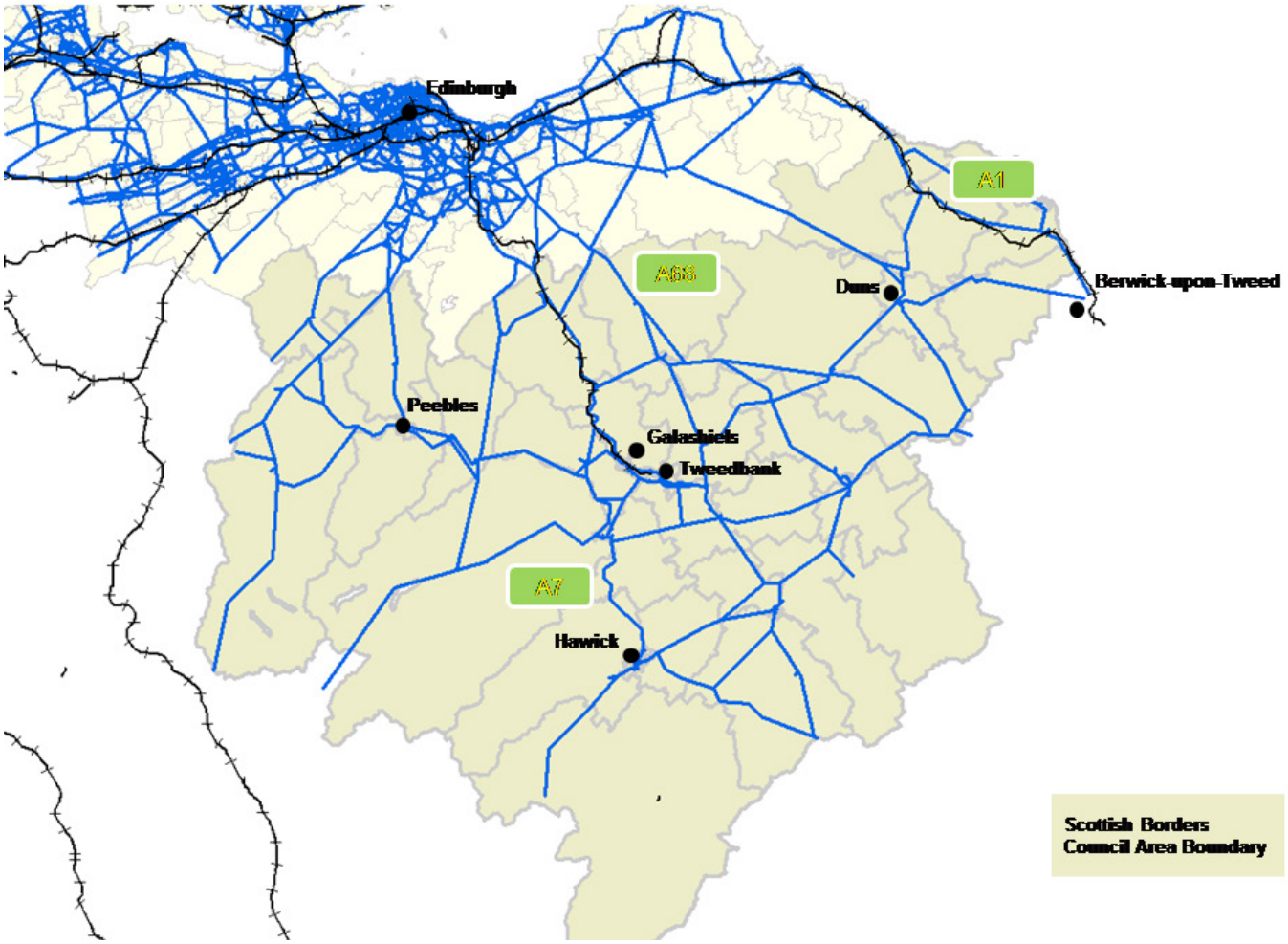


Figure 4: SRM12 Road and Rail Network Coverage, Scottish Borders and beyond

Geographic, Social, Economic, and Transport Context

03

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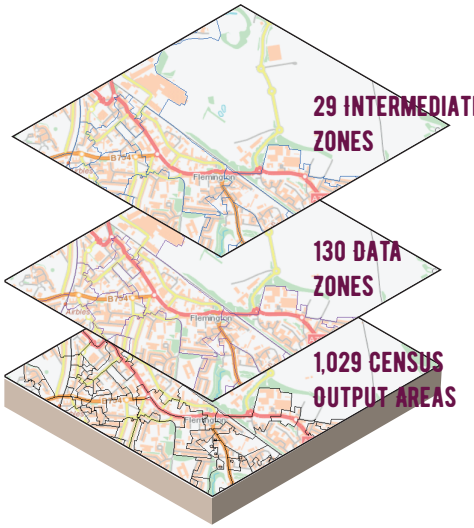
3.1 Introduction

This chapter summarises the geographic, socio-economic profile and transport context of the study area and considers key topics such as population, the labour market, deprivation and property.

The analysis undertaken has been based on a review of many existing data sources covering socio-economic data, and transport and traffic data. Some of the datasets contain limitations and this should be borne in mind when interpreting the results. The most recent datasets available for each source has been used.

- Datasets are made available at various geographic levels because of the need to provide complete anonymity when reporting socio-economic data. The diagram below shows the three geographic levels.



- Many of the socio-economic datasets are based on the 2011 Census and will not reflect any development and / or transport infrastructure changes which may have occurred since 2011 such as the opening of the Borders Railway in September 2015. Therefore any impacts on transport and travel trends will not be reflected in these datasets.

Data analysis for the Scottish Borders has been presented against two geographic levels: National level and Scottish Rural Average (SRA) comparator area – specifically developed for this study and comprises Aberdeenshire, Argyll & Bute, Angus, Dumfries & Galloway and Highland council areas. The key shown below is used to identify analysis at each geographic level.

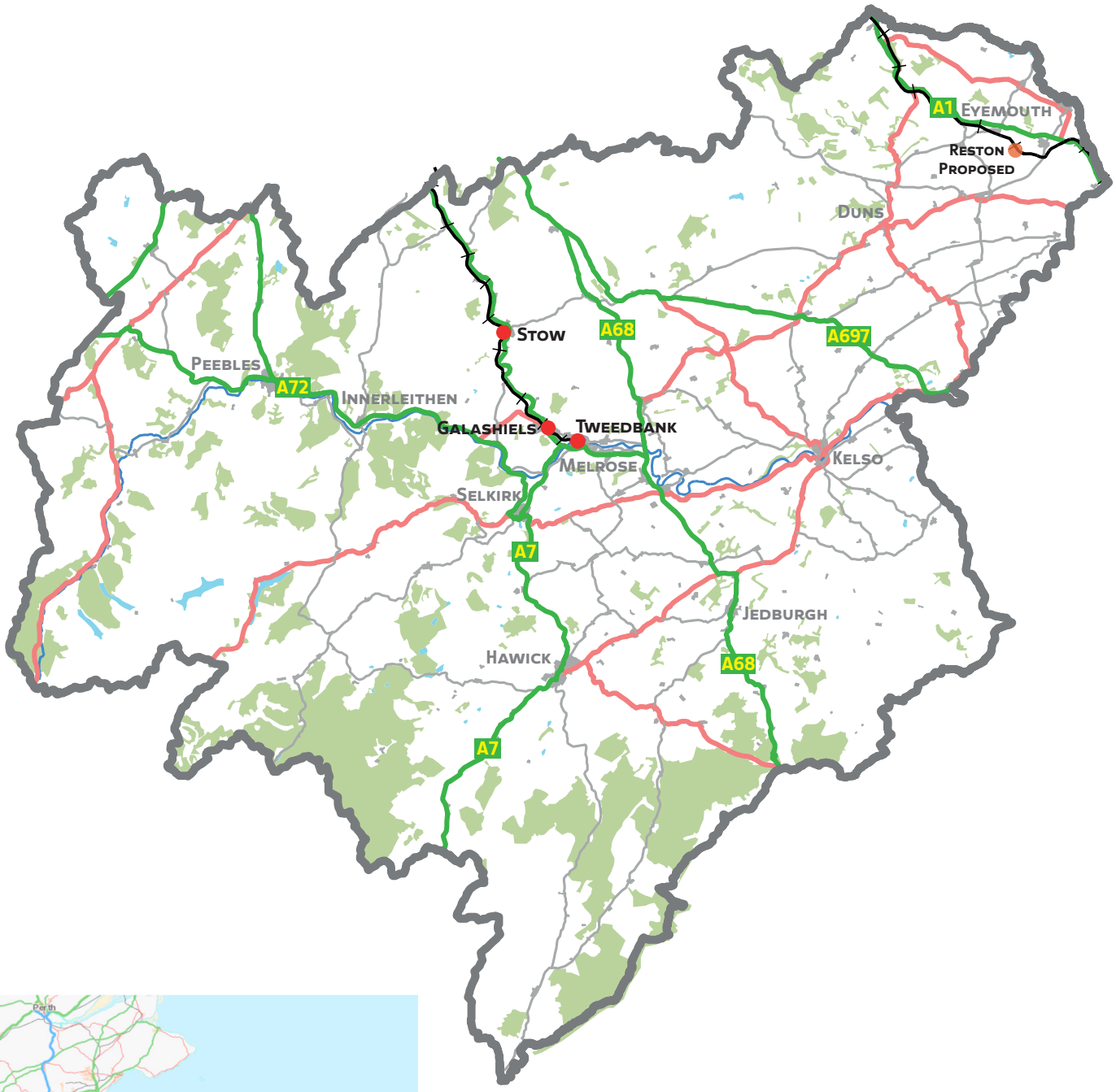
3.2 Geographic Context

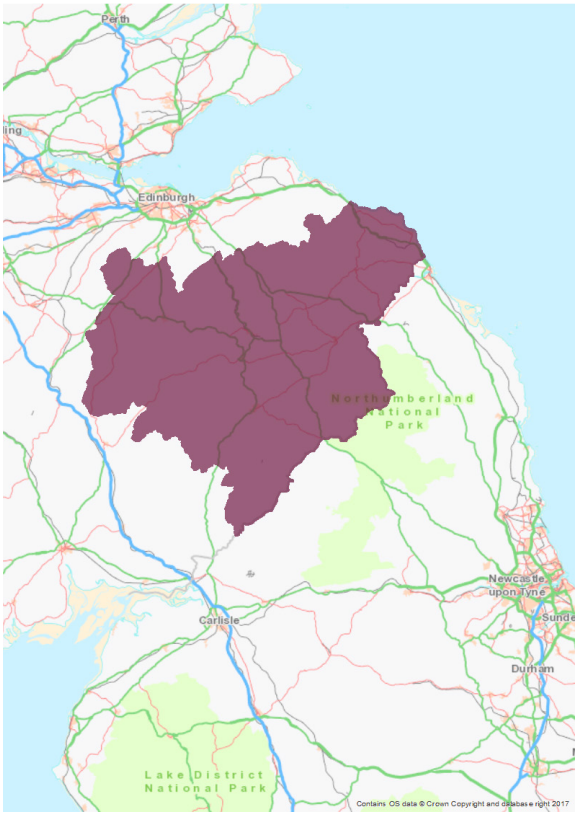
The Scottish Borders covers an area of 1,800 square miles and borders the City of Edinburgh, East Lothian and Midlothian to the north; West Lothian, South Lanarkshire and Dumfries and Galloway to the west; and Northumberland to the south.

The region is extremely rural and in places quite hilly, with sparsely situated settlements. The River Tweed passes through the central Borders from west to east, acting as the Border between Scotland and England for part of its course in the eastern part of the study area. The population of the Scottish Borders in 2015 was 114,030 and due to the rural nature of the region, has a population density of 60 per square mile.

Most of the largest settlements are located in the heart of the region, the largest of which is Galashiels and is historically the centre of the tweed industry. In 2015, the population of Galashiels was 14,994. There are ten settlements that have a population of over 2,000 which are shown on the map overleaf.

There are three main road corridors running north to south: the A1 passes through the east of the study area, the A7 and A68 corridors serve the central Borders, and three rail stations in the region; Stow, Galashiels and Tweedbank on the Borders Rail Line.





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3.3 Social Context

This subsection discusses the demographic profile of the study area and considers key indicators, including population, education, deprivation and property.

Demographics are often seen as a barometer of economic health and attractiveness of an area. Locations which experience a constant level, or indeed an increased growth in the working age population, are often considered to be in better economic health than areas in which there is an ageing population.

3.3.1 Population (NOMIS 2015)

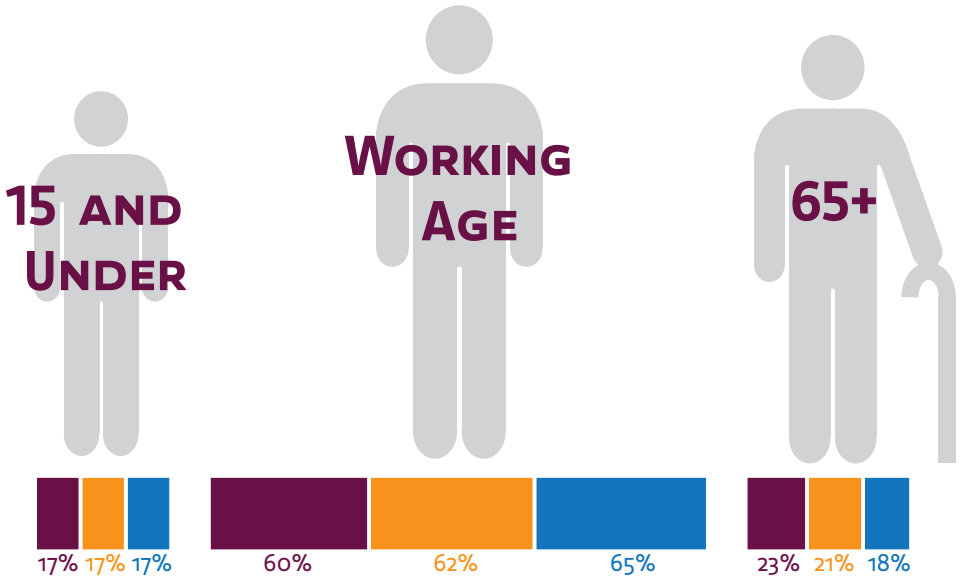
In 2015, the population of the Scottish Borders was 114,030, a very small increase **(+0.1%)** since the 2011 Census. Over this same period, both the SRA comparator area and national populations increased by **0.8%** and **1.4%** respectively, highlighting that the Scottish Borders was experiencing lower growth. Whilst growth is relatively low, it is important to identify which age demographic is showing positive or negative growth.

3.3.1 Population Age Structure (NOMIS 2015)

The population age structure of an area is an important factor in determining economic health. For example, an ageing population tends to lead to greater dependency on the working age population and services in the area, and a low working age population indicates lower economic wealth and would reduce the overall attractiveness of the area for businesses to locate.

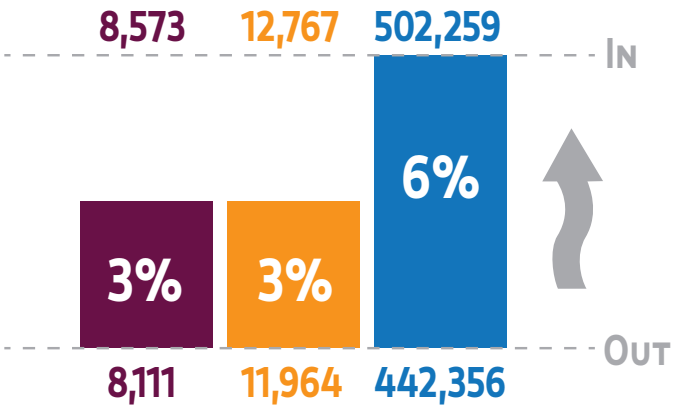
As can be seen in the diagram opposite the population age structure of the Scottish Borders is similar to the SRA comparator area and national figures. However, it is worth noting that there are more people in the over 65 age category in the Scottish Borders.

Since 2011, only the over 65 age category has shown an increase. The Scottish Borders and the SRA comparator area showed a **12%** increase and a **10%** increase at the national level. This suggests a decline in the working age population and, should this continue, it could affect political ambitions of increasing economic growth within the Scottish Borders. Furthermore, an increasing ageing population could put a strain on local services such as health in the future.



3.3.3 Migration (NOMIS 2011)

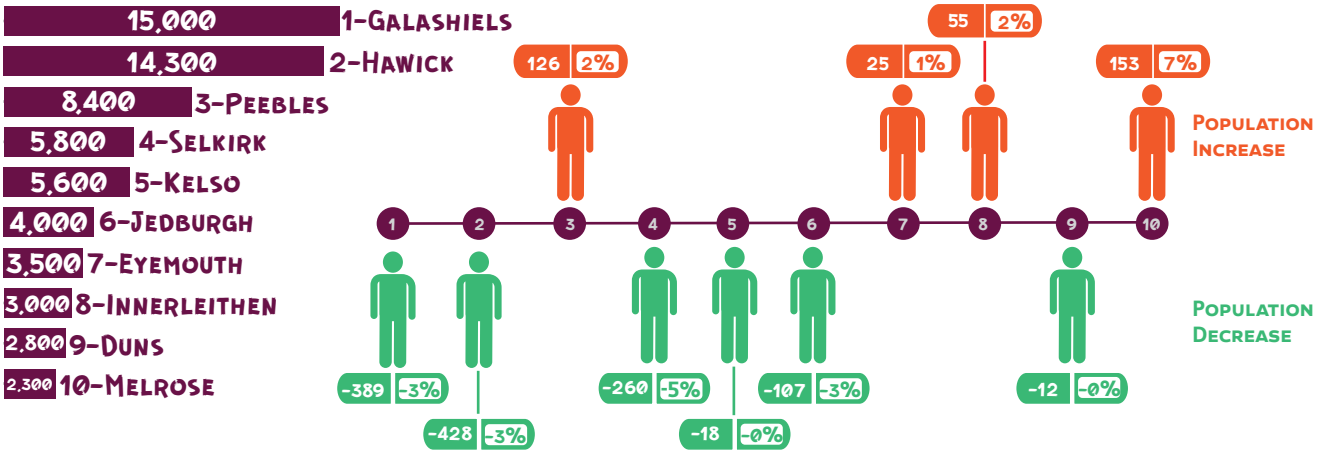
The migration statistics for the Scottish Borders showed a net increase in population of 462 **(3%)** in 2011. This trend is consistent with the SRA comparator area **(3%)** but **3%** lower the national trend. Without further supporting information it is difficult to determine the characteristics of migration and the key drivers behind the statistics.



3.3.4 Settlement Population Change (NOMIS 2015)

The graphic below shows the population of the ten largest settlements in the Scottish Borders, ranging from Galashiels and Hawick (largest settlements) to Duns and Melrose (smallest settlements).

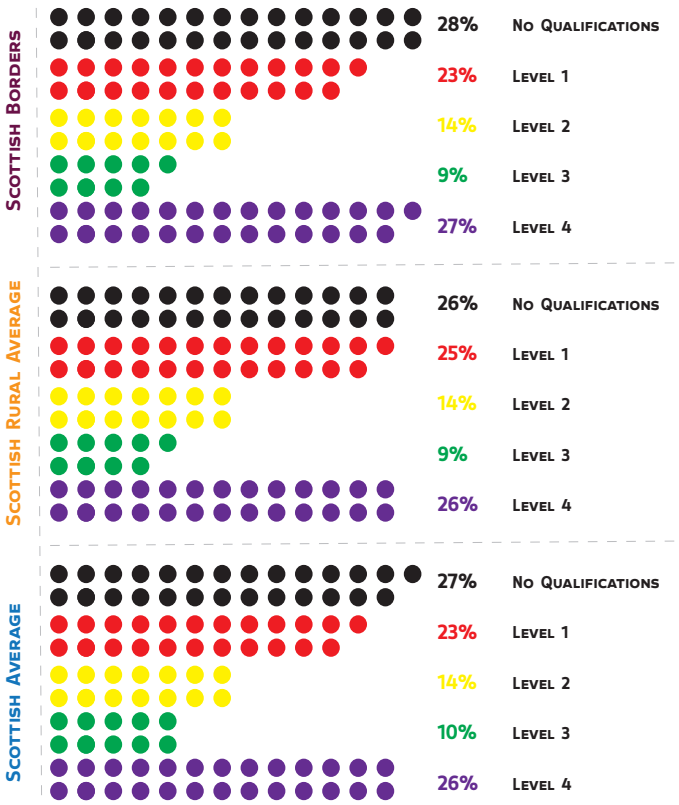
Only four settlements have seen an increase in population from 2011 to 2015. Overall, the population change over time has remained quite steady with only marginal decreases or increases.



3.3.5 Qualifications (Census 2011)

The level of education and skills attained by the working population will affect economic output and success of a region. Areas with a higher proportion of well qualified people tend to perform comparatively better in terms of occupation type, average wages, disposable income etc., than areas characterised by low educational attainment.

The qualification levels attained by residents of the Scottish Borders closely aligns with both the SRA comparator area and national trends, with **72%** having attained Level 1 or above qualifications. This indicates that the Scottish Borders is performing well against the comparator areas and that access to education may not necessarily be a problem within the region. It also indicates that there is a high level of qualified people within the Scottish Borders.

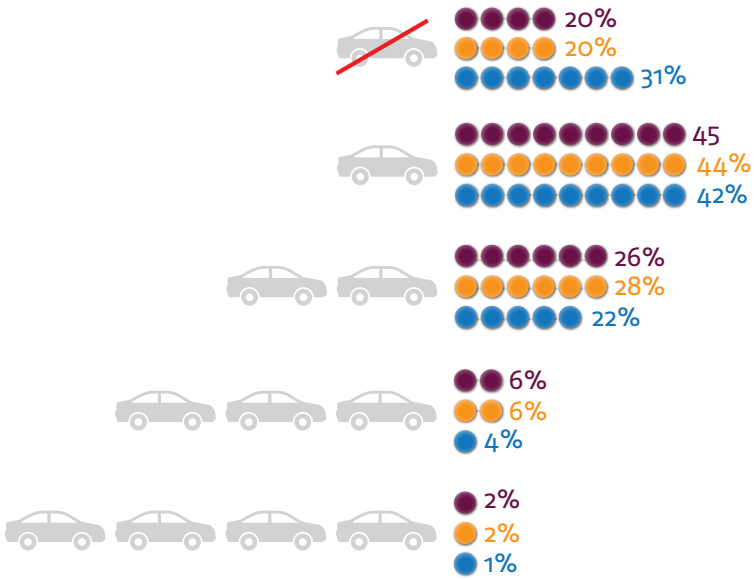


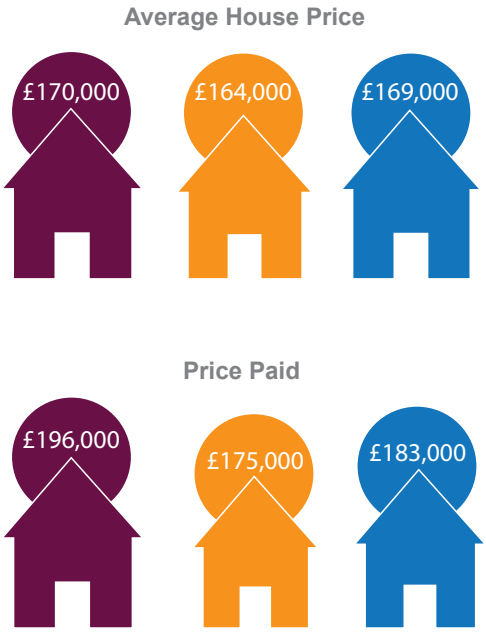
Level 1 qualifications: 1-4 O Levels/CSE/GCSEs (any grades), Entry Level, Foundation Diploma, NVQ level 1, Foundation GNVQ, Basic/Essential Skills
Level 2 qualifications: 5+ O Level (Passes)/CSEs (Grade 1)/GCSEs (Grades A*-C), School Certificate,
1 A Level/ 2-3 AS Levels/VCEs, Intermediate/Higher Diploma, NVQ level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First/General Diploma, RSA Diploma, Apprenticeship
Level 3 qualifications: 2+ A Levels/VCEs, 4+ AS Levels, Higher School Certificate, Progression/ Advanced Diploma, NVQ Level 3; Advanced GNVQ, City and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma
Level 4+ qualifications:
Degree (for example BA, BSc), Higher Degree (for example MA, PhD, PGCE), NVQ Level 4-5, HNC, HND, RSA Higher Diploma, BTEC Higher level, Foundation degree (NI), Professional qualifications (for example teaching, nursing, accountancy)

3.3.6 Car Availability (Census 2011)

Car availability is a measure which provides an estimate of the number of cars that are owned, or available for use, by one or more members of a household. It often indicates areas of high car dependency due to a lack of public transport accessibility, which is especially true in rural areas.

2011 Census data shows that households in the Scottish Borders have high car availability (**34%** of households having access to two or more cars) similar to the SRA comparator area **(36%)** – this is in line with expectations. **27%** of households in Scotland as a whole have access to two or more cars. These trends suggest that the Scottish Borders could be experiencing public transport connectivity problems, or equally residents have higher levels of disposable income.





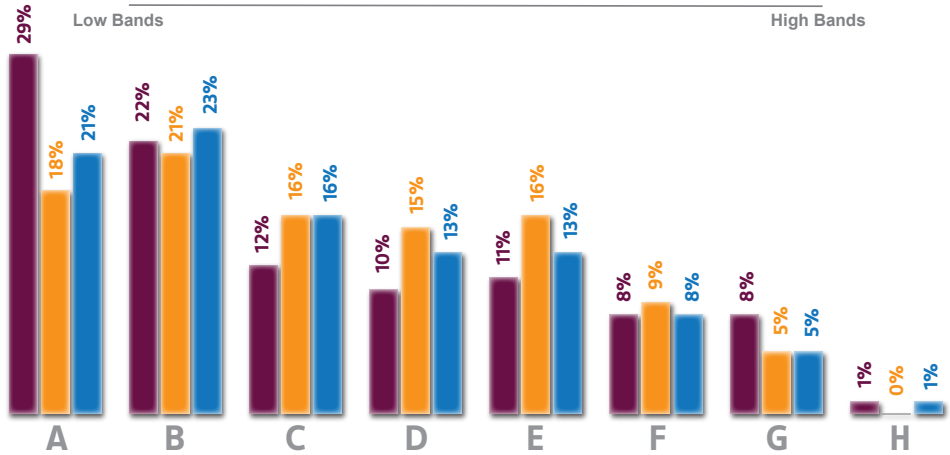
3.3.7 House Prices (Zoopla 2017)

The price of property reflects the balance between the demand to live in an area and the supply of different types of property. Areas with lower than average house prices are generally seen as less 'in-demand' than those with higher average house prices, which in turn affects development viability. Transport connectivity is one of the many factors that influence house prices, although obtaining empirical evidence to determine the extent of this influence remains challenging.

In 2017, average house prices and average house prices paid in the Scottish Borders were higher than both the SRA comparator area and national averages, as shown in the diagrams opposite. This trend suggests the region is an attractive place to live and the higher values could be reflective of improved transport connectivity [e.g. Borders Railway] potentially leading to increases in the supply and demand for housing.

3.3.8 Council Tax Banding (Scottish Statistics 2017)

Council Tax bands are a key indicator often used by local authorities to identify areas where more investment in public services and public transport provision are necessary. The chart opposite shows that the Scottish Borders has the highest proportion of total households within the lowest council tax band **(29%)** when compared to the SRA comparator area **(11%)** and national level **(8%)**. Overall, the region also has the highest proportion of total households in the lowest council tax bands (A to C). In general terms, people living in houses in these council tax bands are often more dependent on public transport to access employment and key services, such as education and health facilities.



3.3.9 Deprivation (SIMD 2016)

The Scottish Government regularly produces the Scottish Indices of Multiple Deprivation (SIMD) which:

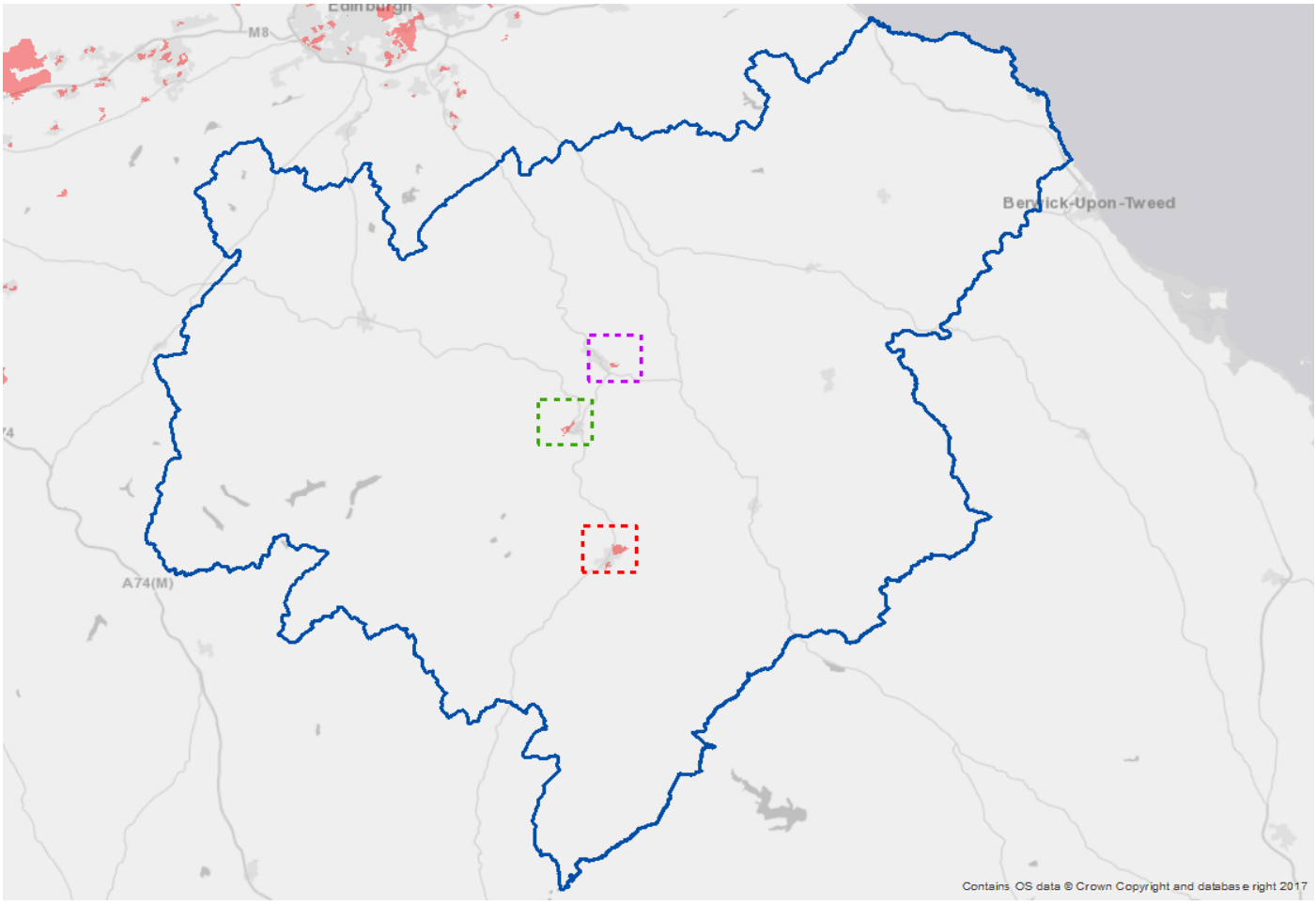
> identifies small area concentrations of multiple deprivation across all of Scotland in a fair way. It allows effective targeting of policies and funding where the aim is to wholly or partly tackle or take account of concentrations of multiple deprivation.

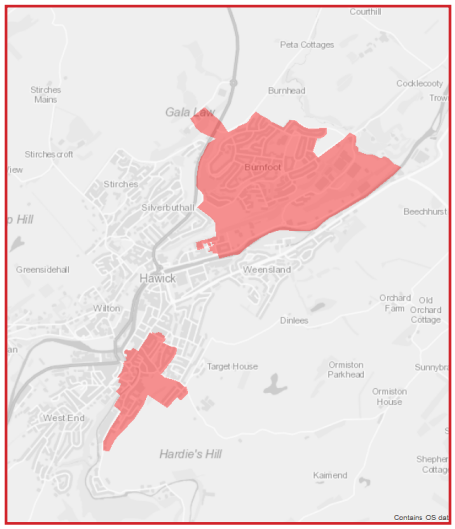
SIMD is the Scottish Government's official tool to identify areas of multiple deprivation in Scotland.

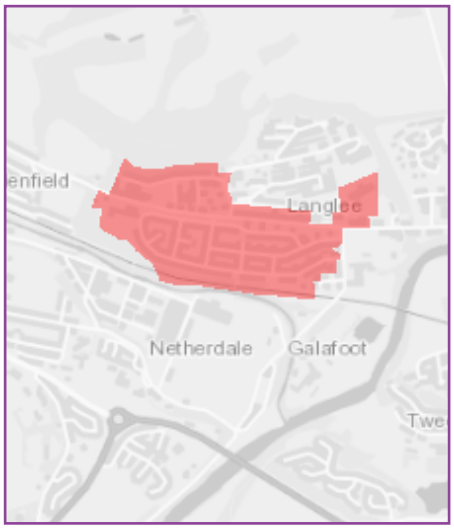
SIMD combines 36 indicators across nine domains: Geography; Population; Income; Employment; Health; Education, Skills and Training; Housing; Geographic Access to Services; and Crime.

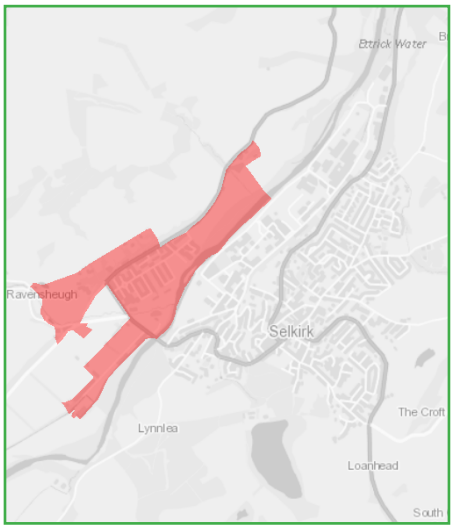
The generally accepted point at which an area is defined as deprived is when it is classified in the '20% most deprived'.

In 2016, the Scottish Borders had **eight** zones within the 20% most deprived areas in Scotland. Across the five local authorities that comprise the SRA comparator area, **69** zones fell within the 20% most deprived, an average of **14** zones per local authority. The deprived areas within the Scottish Borders are shown in the map below and are mainly located in and around Galashiels, Selkirk and Hawick.









Scottish Borders | Scottish Rural Average | Scotland

3.3.10 Summary of Key Points - Demographics

- Population growth in the Scottish Borders between 2011 and 2015 was lower than both the SRA comparator area and national averages
- Population aged 65 and over in the Scottish Borders is higher than the national average, potentially leading to further strain on health services
- Settlement population marginally increasing and decreasing over time
- A large number of qualified people having attained Level 1 or above qualifications
- High car availability suggesting that the Scottish Borders could be experiencing public transport connectivity problems, or equally residents have higher levels of disposable income
- Average house prices in the Scottish Borders are higher than both the SRA comparator area and national averages suggesting the region is an attractive place to live
- Concentrations of deprivation in Galashiels, Selkirk and Hawick
- The Scottish Borders has the highest proportion of total households in the lowest council tax bands compared to the SRA comparator area and Scotland as a whole

3.4 Economic Context

This subsection discusses the economic profile of the study area and considers key indicators including economic activity, income and employment.

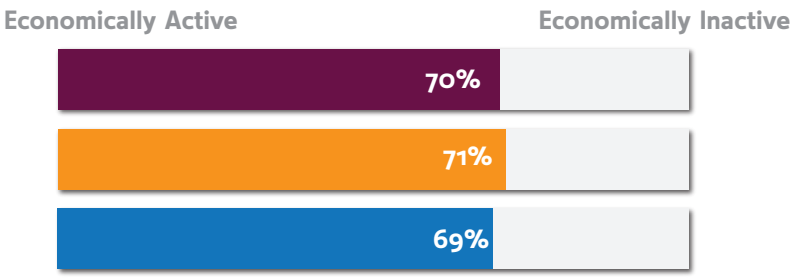
The overall attractiveness and success of an area to encourage people to relocate is often measured by wide ranging economic factors from levels of and type of employment to property prices and earnings. If an area, and in particular the population, is performing poorly in economic terms, then this could highlight potential problems with the transport network and connecting people with employment, or businesses with their markets.

3.4.1 Economic Activity (Census 2011)

The economic activity rate is a crucial indicator of the economic wellbeing of an area. The economically active are those defined as in work or actively seeking work, whilst the economically inactive are defined as those neither in work nor seeking employment, such as retirees, students, unpaid carers and long term sick.

Of people in the Scottish Borders aged between 16 and 74 in employment in 2011, **70%** were economically active (either in work or actively seeking work) very similar to the SRA comparator area rate **(71%)** and national rate **(69%)**. This broadly indicates that access to employment for Scottish Borders residents is similar to other areas within Scotland.

Approximately one fifth of residents in the Scottish Borders were in retirement **(19%)** in 2011, 4% higher than the national average. It is worth noting that since 2011, the population of those aged 65 and over has increased by **12%**. As a result, the current economic activity rate for the region may be lower than the 2011 rate because of this ageing population.



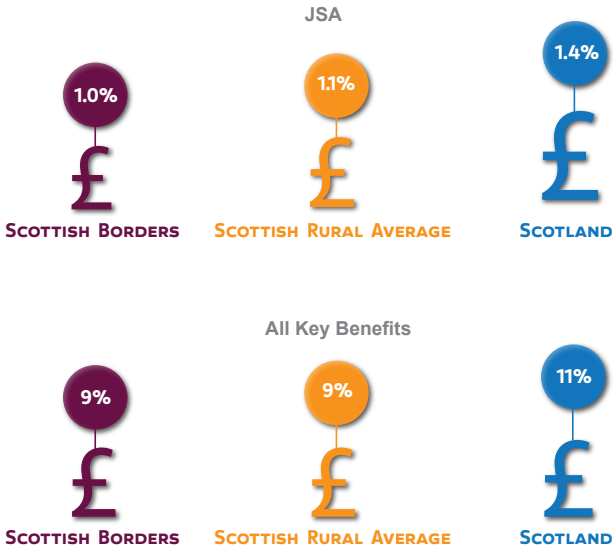
3.4.2 Household Incomes (Scottish Government 2014)

Analysis of Mean Gross Household Income per week shows a disparity in average household incomes for the Scottish Borders and the comparator areas. On average, households in the Scottish Borders took home £51 per week less than the SRA comparator area and £45 per week less than the national average in 2015. This disparity in earnings could be reflecting poorer access to higher paid employment located in, or outwith, the Scottish Borders, or equally resulting from the larger proportion of the population in retirement.

3.4.3 Benefit Claimants (Nomis 2015)

The proportion of the working age population claiming Jobseeker's Allowance (JSA) – an unemployment benefit which can be claimed whilst actively looking for work – is an important socio-economic indicator and is often used as a measure of unemployment in an area.

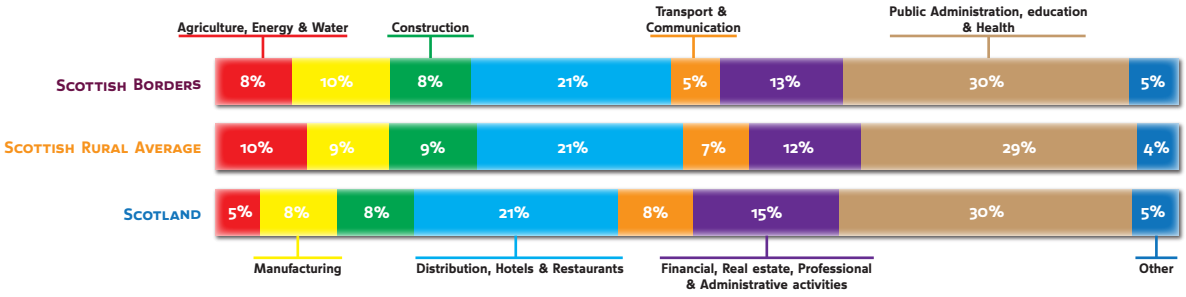
The graphic on the right shows the proportion of the working age population claiming JSA in each of the three geographic levels. The JSA claimant rate was lower in the Scottish Borders (1%) compared to the SRA comparator area (1.1%) and Scotland as a whole (1.4%). The proportion of the population claiming key benefits of any type was also lower in the Scottish Borders (9%) compared to Scotland as a whole (11%).



3.4.4 Industry – Residents (2011 Census)

The graphic below shows the range of industries that residents of the Scottish Borders, the five local authorities which comprise the SRA comparator area and Scotland as a whole are employed.

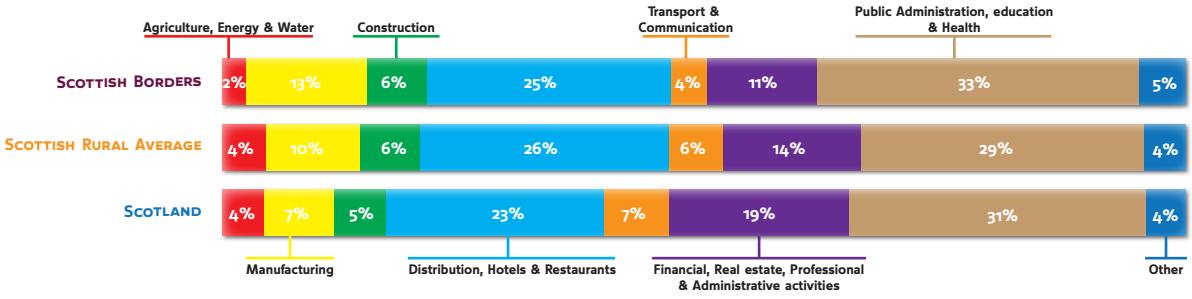
The highest proportion of working age residents are employed in **'Public Administration, Education and Health'** across all three geographic areas. Overall, there are very similar proportions of working age residents employed in each industry – one of the **largest differences** between geographic areas is in the **'Agriculture, Energy & Water'** industry. In the SRA comparator area 10% of working age residents are employed in this industry; 8% in the Scottish Borders and 5% across Scotland as a whole. This is in line with expectations given the rural nature of the Scottish Borders and the five local authorities which comprise the SRA comparator area.



3.4.5 Industry – Workplace (BRES 2015)

The graphic below shows the industries in which people are employed in each of the three geographical areas irrespective of whether employees are residents or otherwise in the area. Again there is close alignment between industries across all three geographic areas, with the highest proportion of employees in **'Public Administration, Education and Health,'** and **'Distribution, Hotels & Restaurants'** sectors.

There is a higher proportion of people employed in **Manufacturing (13%)** in the Scottish Borders compared to the SRA comparator area (10%) and Scotland as a whole (7%).

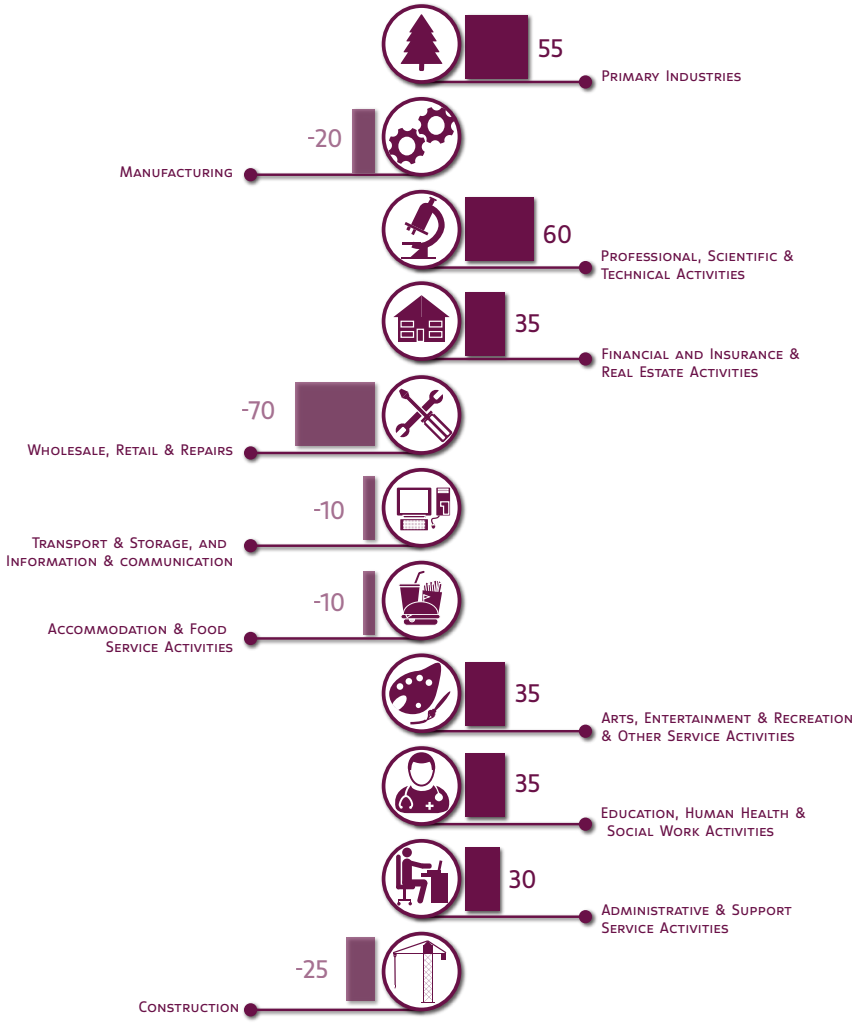


3.4.6 Business Sites by Industry (Nomis 2014)

The graphic on the right shows the change in the number of business sites by industry in the Scottish Borders between 2011 and 2014.

Overall there was a net increase of **160** business sites, with the largest increases in the Professional, Scientific and Technical Activities **(+60),** and Primary Industries **(+55)** sectors. Conversely, the largest decrease was in the Wholesale, Retail and Repairs **(-70)** industry.

These changes occurred before the opening of the Borders Railway in September 2015 and therefore this should be borne in mind when interpreting the results.

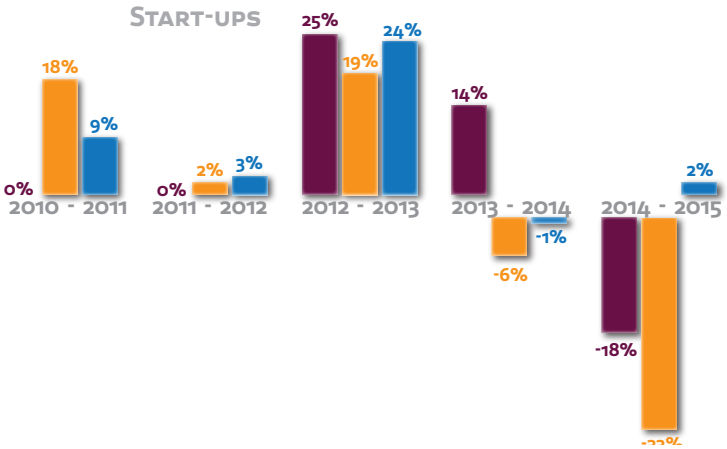


3.4.7 Business Start-ups, Closures and Survival Rates (ONS 2015)

Business Start-ups

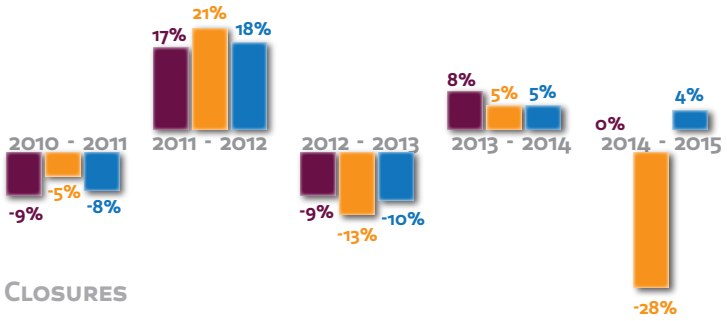
Business start-ups are an indication of the level of investment and entrepreneurial activity in an area. The number of annual business start-ups in the Scottish Borders increased from **315** in 2010 to **370** in 2015, a **17% increase**. The number of business start-ups across in the SRA comparator area decreased by **10%** but increased by **40%** in Scotland as a whole over the same period.

The diagram right highlights the new business start-up rate for each year since 2010. A significant increase in business start-ups in the Scottish Borders was evident in 2012 and 2013, which could be linked to the anticipation of the opening of the Borders Railway. There was a large decrease in particular in 2014 (18%) in the number of new start-ups compared to the previous two years.



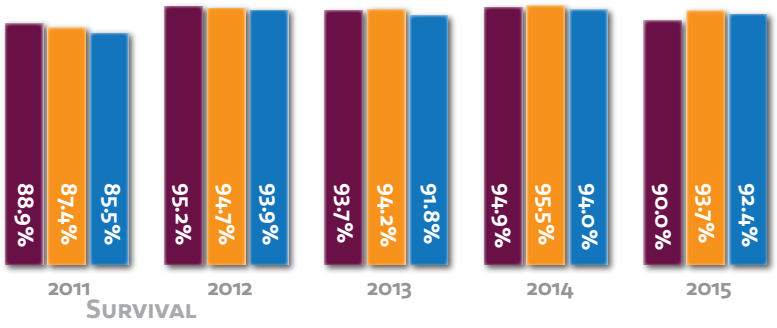
Business Closures

The number of business closures in the Scottish Borders between 2010 and 2015 increased by **5%**, similar to the increase in business closures at the national level **(7%)**. The SRA comparator area bucked this trend and experienced a decrease **(25%)** in the number of business closures. However, despite the increase in business closures across the Scottish Borders, there was a net increase in the number of businesses over the same six-year period.



Survival Rates

The graphic below highlights the one-year business survival rate from 2011 to 2015 in each of the three geographic areas. The business survival rates fluctuate in each of the three areas over this period, however, overall the rates increase over time. In the Scottish Borders, the business survival rate increases overall by **1.1%**, whereas the SRA comparator area and national business survival rates increase overall by **6.3%** and **6.9%** respectively.



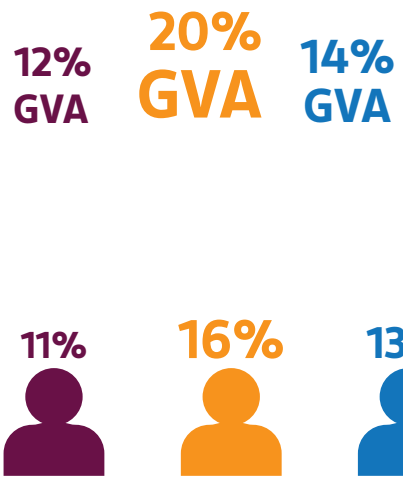
Overall, business start-ups, closures and survival rates across the Scottish Borders indicates a strengthening labour market giving workers the confidence to move between employers and also the confidence to start new businesses. The broader economic backdrop has also likely supported business creation with increased GVA (as described below). It should be borne in mind that the increase in business start-ups and survival rates could also be attributed to lower interest rates and the fall in oil prices which have reduced financing and input costs for businesses.

3.4.8 Gross Value Added (Nomis 2015)

Gross Value Added **(GVA)** is a productivity metric that measures the contribution to an economy, producer, sector or region. GVA provides a monetary **value** for the amount goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production.

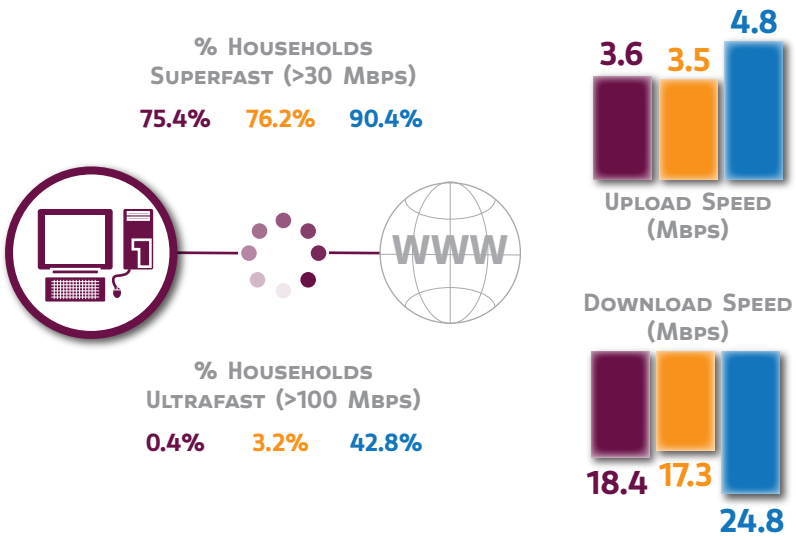
Scottish Borders GVA increased from **£1.75 billion to £1.96 billion (12%)** between 2011 and 2015, accounting for **2%** of Scotland GVA. This increase is less than the Scotland GVA increase **(14%)** and SRA comparator area GVA increase **(20%)** over the same period.

GVA per head of population in the Scottish Borders increased by **11%, from £15,438 per head** in 2011 to **£17,196 per head** in 2015. Again this increase is less than Scotland GVA increase **(13%)** and SRA GVA increase **(16%)**. However, GVA increases are evident year on year since 2011 indicating that the Scottish Borders is contributing positively to the local and national economies. The increases could be reflecting growth in higher skilled businesses, in particular in the Professional, Scientific and Technical Activities, and Primary Industries sectors.



3.4.9 Broadband Connectivity (thinkbroadband.com 2017)

Broadband connectivity is an important factor for many seeking to relocate home or business. Especially in today's world where increasing numbers of people work from home, and as small independent enterprises and local businesses are on the increase. As such broadband connectivity is an important factor in helping to stimulate economic growth in an area.



Analysis of broadband connectivity statistics indicates that the Scottish Borders has relatively good upload and download speeds compared to the SRA comparator area. This is highlighted in the graphic below. However, the number of households with Superfast and Ultrafast broadband provision lags behind Scotland as a whole. This most likely reflects a lack of broadband infrastructure in the region and highlights a problem area where further investment may be required to help the Scottish Borders achieve its economic growth objectives.

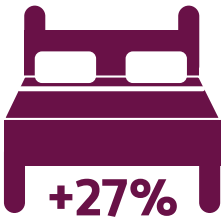
3.4.10 Tourism (Scottish Borders Council 2017)

Tourism is a key sector in the Scottish Borders local economy, contributing **£194 million** and employing approximately **4,000 people**. The region is well known for its production of woollen and tartan products and, as such, many of the key employers in the area are within this industry. Tourism contributes significantly to the local economy with many tourist attractions in the area such as the Tweed Valley Forest Park and annual events such as the Common Ridings.

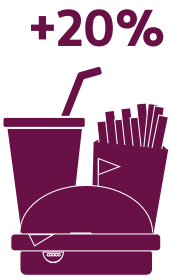
The 'Tourism - Economic Impact and Business Opportunities' paper was presented to the Scottish Borders executive committee in January 2017. This paper summarised the findings of the 2016 release of the Scottish Tourism Economic Assessment Monitor (STEAM) report. This was the first report to compare the impact of opening the Borders Railway on tourism related activities in the Scottish Borders between the first half of 2015 (before the opening of Borders Railway) and the first half of 2016 (after the opening of Borders Railway).

The report found that the rise in tourism related activity was significant and for the first time in ten years all categories[1] measured had improved. The graphics below highlight the main findings from the STEAM report showing the change in tourism related activities which can be directly attributed to the opening of the Borders Railway.

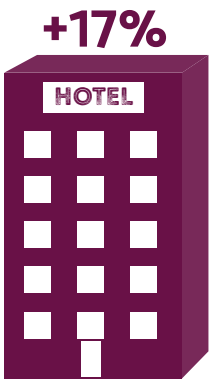
[1] Visitor attraction numbers; tourist accommodation bedstock; events attendance; occupancy levels; accommodation tariffs; macro-economic factors; visitor expenditure levels; transport use levels; and tourism-specific economic multipliers



Number of visitor days in Hotels and B&B



Rise in Visitor spend on Food & Drink



Visitor Spend on accommodation

Rise in overall visitor spend

Increase in the Number of days Visitors stayed in the Borders

+8%

Increase in Tourism related Employment

3.4.11 Tourist Accommodation

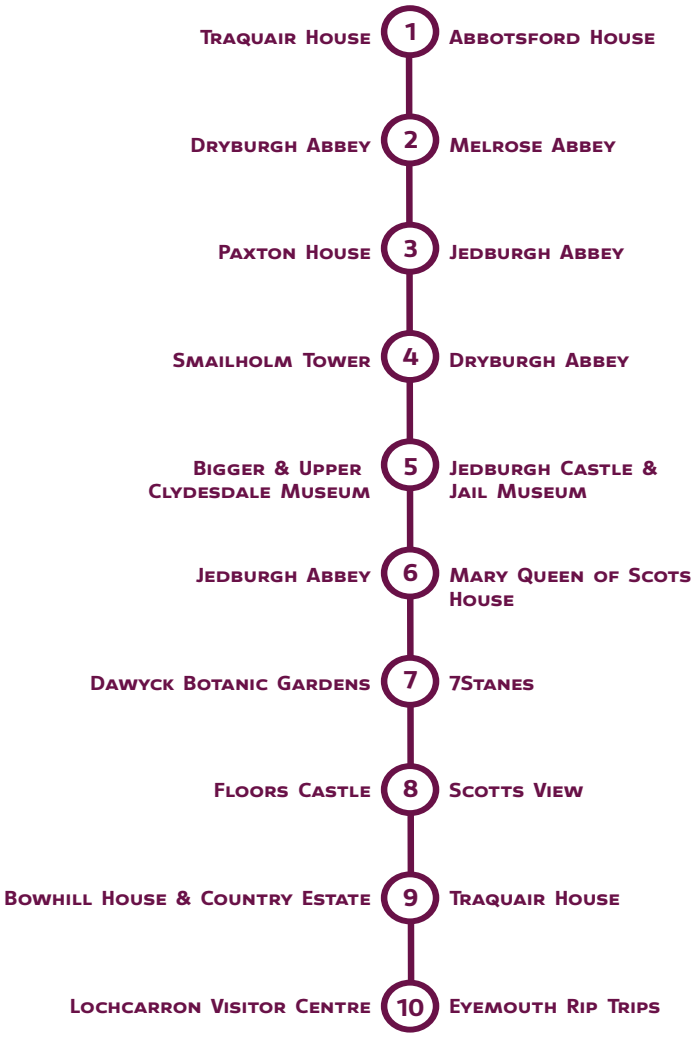
VisitScotland.com offers a free of charge opportunity for businesses to have listings on their website and it is the responsibility of the business to communicate with VisitScotland to take advantage of this offering. In addition to this free promotional opportunity, businesses can also apply for funding from the VisitScotland Growth Fund[2] which can help businesses build their digital capability and markets. Funding is available between **£10,000 and £40,000** and can provide up to **50%** funding for approved marketing activity.

The tables to the right highlight the number of hotels, B&B and Inns currently advertising on VisitScotland.com and TripAdvisor.co.uk. There are some noticeable differences in the total number of hotels, B&B's etc. listed on each website, potentially indicating that some hoteliers listed on TripAdvisor.co.uk are unaware of the free of charge service to be listed on VisitScotland.com and / or unaware that the onus is on the hotelier to approach VisitScotland and take advantage of this offering.

VisitScotland	
Accommodation	**Number**
Hotels	42
B&B and Inns	117
Other	189

TripAdvisor	
Accommodation	**Number**
Hotels	54
B&B and Inns	193
Other	401

2 http://www.visitscotland.org/pdf/VSGrowth-Fund-criteria-conditions-May2017.pdf



3.4.12 Tourist Attractions (2015)

The graphic to the left highlights the main tourist attractions in the Scottish Borders as listed on VisitScotland.com and TripAdvisor.co.uk. There are also some other large tourist attractions not listed here, including Tweed Valley Forest Park (347,000 visitors[2]); Teviot Watergardens (154,000 visitors[2]); and Heart of Hawick (140,000 visitors[2]).

In 2017, Borders Buses started operating the CitySightseeing Scottish Borders bus service, the route takes in some of the most popular tourist attractions in the Scottish Borders with direct links to Galashiels and Tweedbank railway stations (see below). Services such as this have helped increase access to tourist opportunities in the region which have been brought about by the opening of the Borders Railway.

[2] 2015 visitor numbers

3.4.13 Summary of Key Points – Economics

- Of people in the Scottish Borders aged between 16 and 74 in employment in 2011, 70% were economically active (either in work or actively seeking work); current economically active rate could be lower due to an ageing population
- On average, households in the Scottish Borders took home less income than the SRA comparator area and national average, potentially reflecting poorer access to higher paid employment or equally resulting from the larger retirement population
- The Jobseeker's Allowance claimant rate and those claiming key benefits of any type is lower in the Scottish Border compared to the SRA comparator area and Scotland as a whole.
- There are proportionally more Scottish Borders residents employed in the 'Agriculture, Energy & Water' industry compared to the SRA comparator area and Scotland as a whole
- There are proportionally more employees whether they are resident or otherwise in the Scottish Borders in the 'Public Administration, Education and Health' industry. Similarly, there is a higher proportion of people employed in Manufacturing in the Scottish Borders compared to the SRA comparator area and Scotland as a whole
- There was a net increase of 160 business sites in the Scottish Borders between 2011 and 2014, with the largest increases in the Professional, Scientific and Technical Activities, and Primary Industries sectors. Conversely, the largest decrease was in the Wholesale, Retail and Repairs industry
- Key employers (by staff size) in the Scottish Borders tend to operate in the manufacturing and pharmaceutical industries
- Overall, business start-ups, closures and survival rates across the Scottish Borders indicates a strengthening labour market giving workers the confidence to move between employers and also the confidence to start new businesses. The broader economic backdrop has also likely supported business creation with increased GVA across the region
- Scottish Borders GVA increased by 12% from £1.75bn to £1.96bn between 2011 and 2015 which could be reflecting growth in higher skilled businesses, in particular in the Professional, Scientific and Technical Activities, and Primary Industries sectors
- The Scottish Borders has relatively good upload and download speeds compared to the SRA comparator area. However, Superfast and Ultrafast broadband provision lags behind Scotland as a whole. Further investment may be required to help the region achieve its economic growth objectives
- Since the opening of the Borders Railway in September 2015, tourism related activities have increased significantly, including visitor attraction numbers, tourism accommodation bedstock and transport use levels

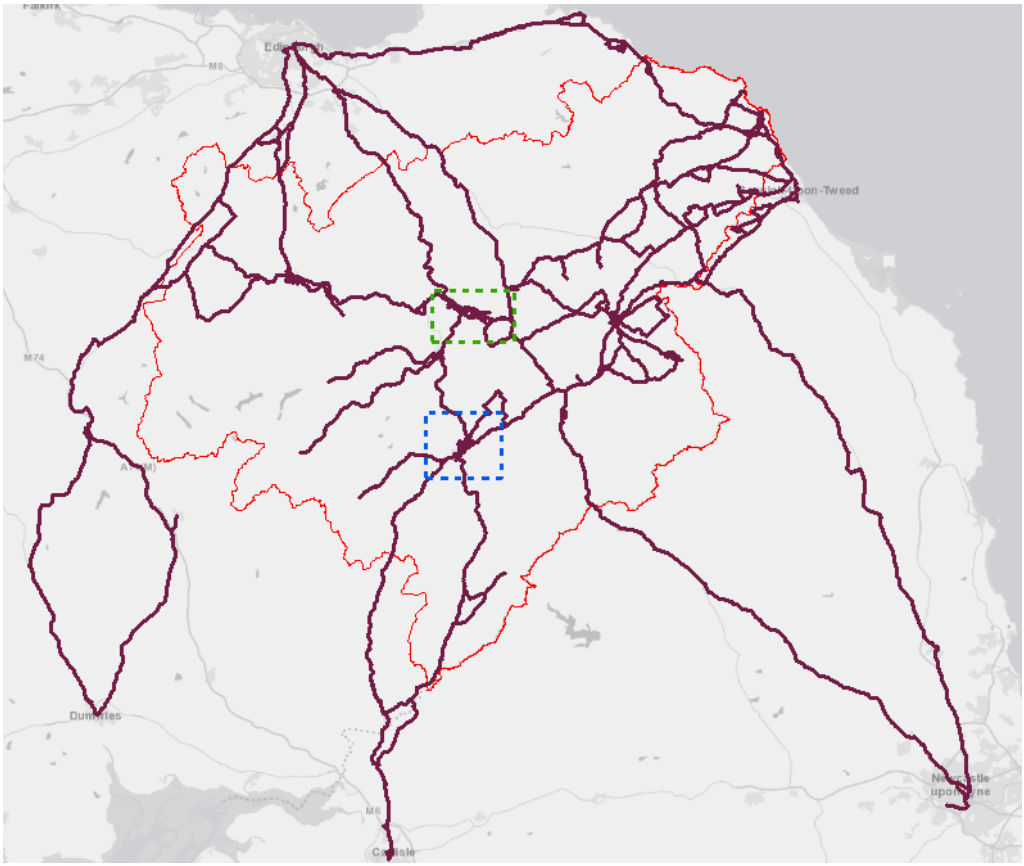
3.5 Transport Context

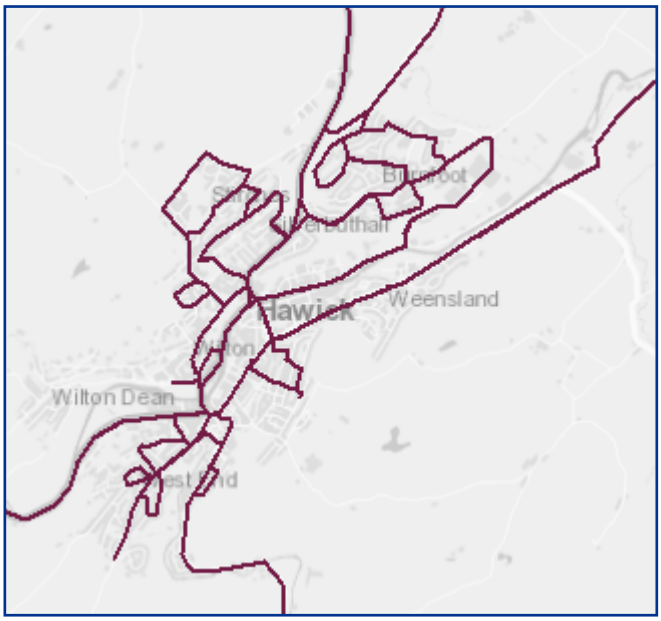
3.5.1 Transport Supply and Trends

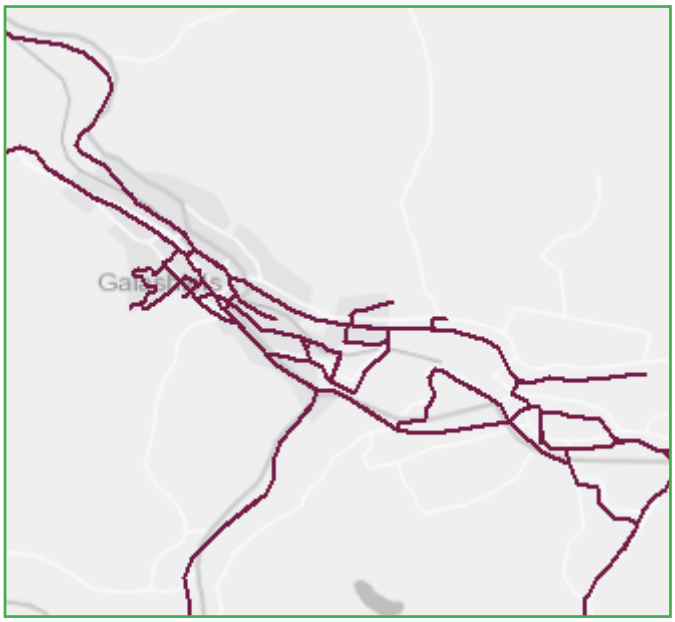
Having established the socio-economic context, and recognising that transport is a key enabler of economic growth, it is necessary to establish the transport context to assist in the identification of problems and opportunities. This subsection focuses on reviewing the existing level of transport supply and trends within the Scottish Borders and along its strategic connections to Edinburgh, Newcastle and Carlisle.

3.5.2 Transport Supply and Trends

The main bus operator in the Scottish Borders is Borders Buses. There are many other operators within the region providing approximately 240 bus services with network coverage shown below.







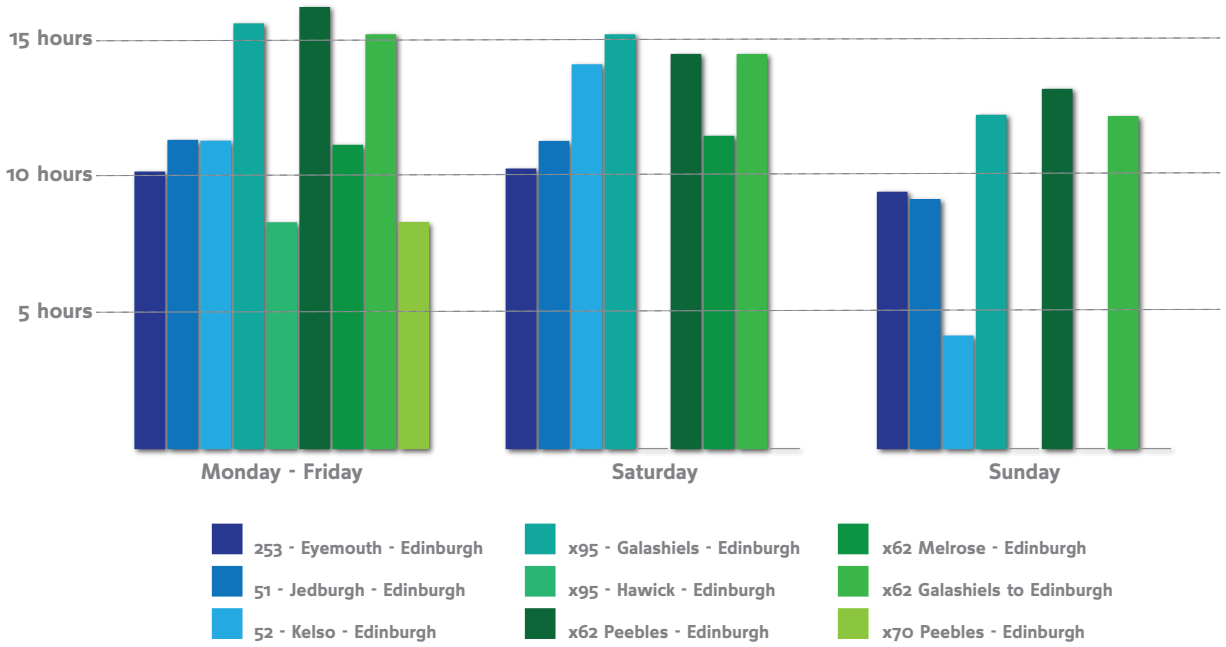
3.5.3 Bus Services to Edinburgh

There are currently six services that operate between the Scottish Borders and Edinburgh. The majority of these services are found in the west of the Borders connecting Galashiels and Peebles with Edinburgh. A summary of existing timetables from several towns within the Scottish Borders to Edinburgh, including Eyemouth in the east to Peebles in the west, are provided in Appendix C to this report.

The chart below shows the time that could be spent in Edinburgh when travelling from those Scottish Borders towns. The analysis is based on the first and last available services to and from Edinburgh.

Key points are:

- Bus service provision to and from Edinburgh is reasonable between Monday and Saturday, but drops off significantly on Sunday.
- A significant amount of time could be spent in Edinburgh when travelling by bus from each of the towns. This makes a working day possible in Edinburgh for many Scottish Borders residents of working age who live in the more populated central region between Peebles, Galashiels and Melrose.
- People travelling to Edinburgh from Jedburgh, Kelso or Eyemouth would have much less time available to spend in Edinburgh than people travelling from Galashiels or Peebles. This is most likely a reflection upon the geography of the Scottish Borders and that service frequencies are much higher for towns closer to Edinburgh.



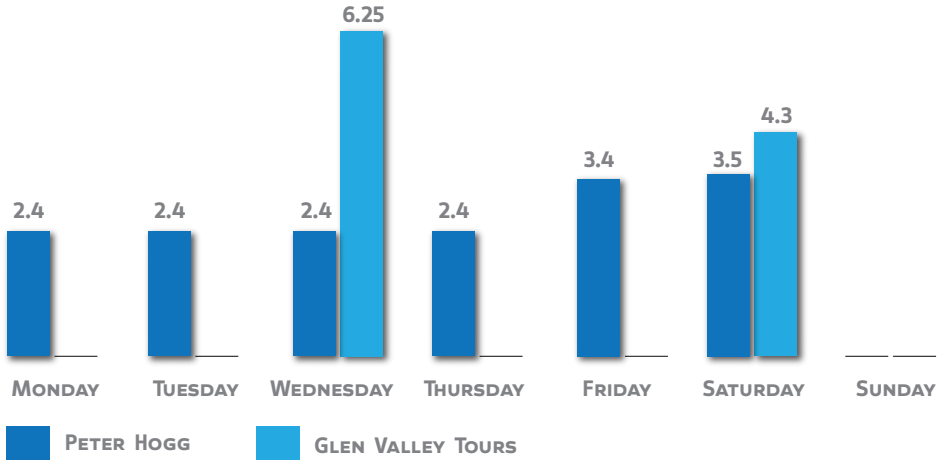
3.5.4 Bus Services to Newcastle

There are currently only two bus services that provide linkages to Newcastle from the Scottish Borders.

One of these services runs once a day between Monday and Friday from Kelso (during Kelso school term time) or from Jedburgh (out with school term time and on Saturdays). This service, in effect, provides an off-peak service to Newcastle. The other service provides an off-peak Wednesday and Saturday service only, providing travel opportunities from Coldstream and Kelso to travel in to Newcastle.

The chart below shows the time that could be spent in Newcastle using either of these services. The analysis is based on the first and last available services to and from Newcastle.

It can be clearly seen that travel on Wednesdays and Saturdays would provide a reasonable amount of time (between four and six hours) which could be spent in Newcastle.

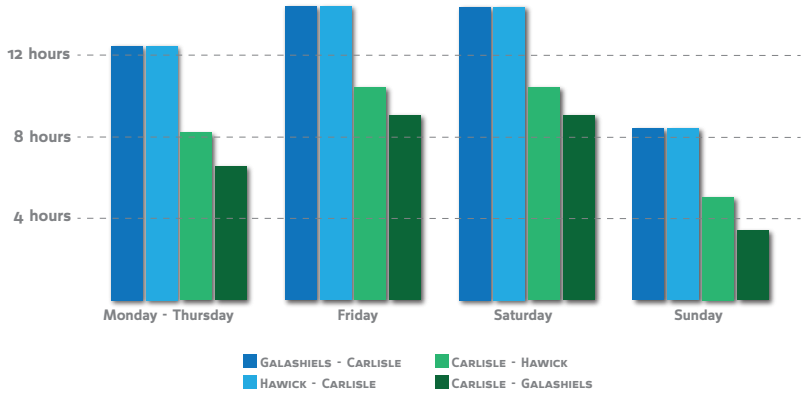


3.5.5 Bus Services from Galashiels / Hawick to Carlisle

Carlisle is served by a long strategic bus service seven days per week running from Edinburgh via Galashiels and Hawick. A summary of the exist timetable is provided in Appendix C to this report.

The chart below shows the time that could be spent in Carlisle using this service. The analysis is based on the first and last available services to and from Galashiels / Hawick and only direct services are considered to ensure a consistent baseline for comparison reasons.

From the chart, it can be determined that it is possible for the working age population in Galashiels and Hawick to complete a working day in Carlisle using bus, although this would be a long day (over 12 hours). For the working age population in Carlisle, it would not be possible to commute by bus to either Hawick or Galashiels and work a full 8-hour day.



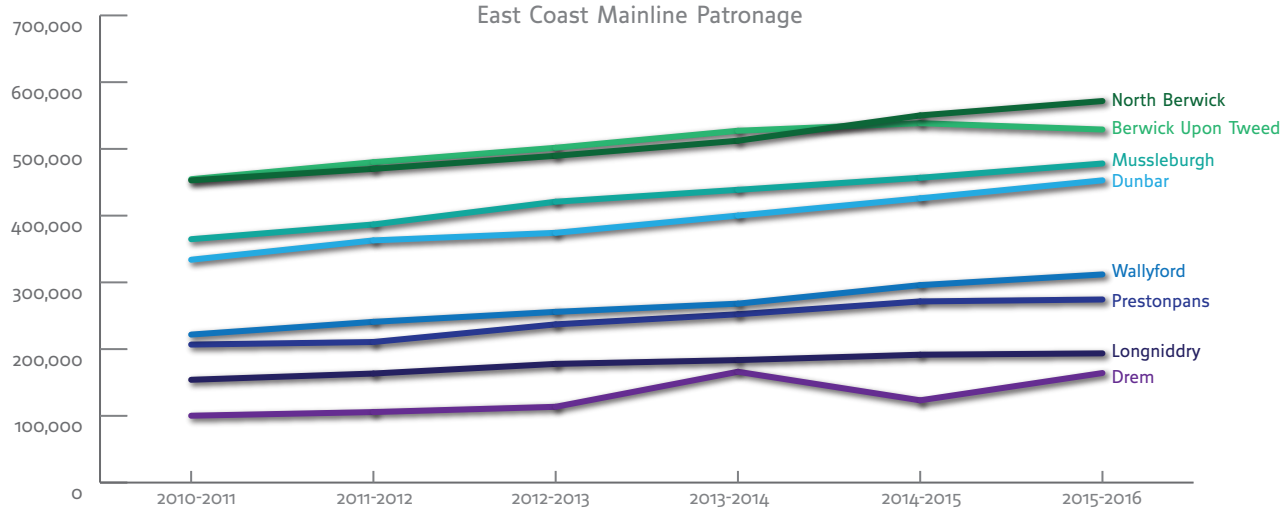
3.5.6 Existing Rail Services

There are two rail lines which run through the Scottish Borders; the East Coast Main Line and the Borders Rail Line.

3.5.7 East Coast Main Line

The East Coast Main Line (ECML) passes through but does not stop in the Scottish Borders because there is no railway station within the council area. This could change in the future with the proposed reopening of a railway station at Reston, allowing residents of the Scottish Borders to access rail services north towards Edinburgh and south across the border into England. The chart below illustrates the change in patronage on the ECML since 2010.

Rail boardings obtained from the Office for Rail and Road (ORR) shows that patronage levels have increased at every station along the route between Berwick-upon-Tweed and Edinburgh between 2010 and 2016, with Drem in particular experiencing a **39% increase**. Such increases along the line could potentially lead to capacity issues resulting from any further development in the area or through further rail mode shift.



3.5.8 Borders Railway

The Borders Railway opened in September 2015 and covers a distance of 35 miles linking stations in the Scottish Borders to Edinburgh. As part of the construction of the line, three stations were opened in the Scottish Borders at Stow, Galashiels and Tweedbank.

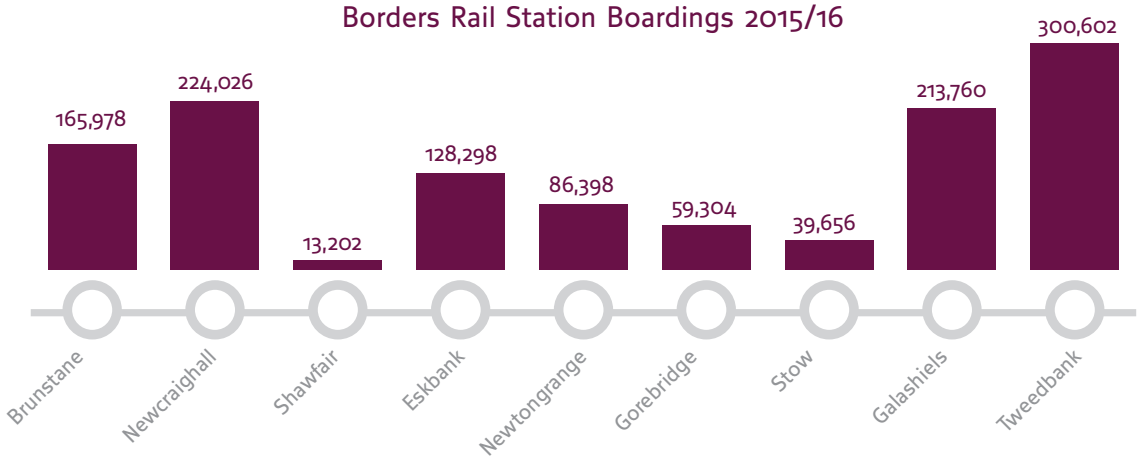
The rail line provides access to Edinburgh and beyond and is served with a half hourly service until 8pm during the week and weekend and hourly after 8pm until Midnight from Tweedbank and Galashiels and hourly from Stow. Journey times from Tweedbank to Edinburgh are approximately 55 minutes. The Borders Railway has only been fully operational for 24 months and analysis of available passenger numbers has shown that the route overall is performing above forecast patronage levels. Even though patronage levels overall have exceeded forecasts, there have been problems with service reliability, including cancellations and punctuality, with one of the main reasons being the single tracked sections along the line. For the period covering 20 August 2017 to 16 September 2017, the number of services arriving on time was under just under **50%** and out of 73 terminating stations across Scotland, Tweedbank ranked **47th** for service punctuality [i.e. arriving within five minutes of scheduled time].

3.5.9 Borders Rail Station Boardings

The chart below shows the Borders Rail station boardings, obtained from (ORR), between 2015 and 2016. As expected, stations at the beginning of the rail line in the Scottish Borders [i.e. stations closest to Edinburgh] and stations towards the end of the rail line in Galashiels and Tweedbank have the highest patronage levels. One of the many contributing factors to high patronage levels in Galashiels and Tweedbank could be rail users travelling from further afield within the Scottish Borders to use the Borders Railway.

Ticket sales for each station along the Borders Rail Line (obtained from LENNON data) is summarised in Appendix C to this report. The ticket sales by station aligns with the trend in station patronage levels as expected.

An on-board passenger survey was undertaken on the Borders Rail on 28th March 2017. A summary is provided in Appendix C to this report.



3.5.10 Public Transport Accessibility

An assessment of public transport journey time accessibility across the Scottish Borders has been undertaken using TRACC[3] accessibility software. TRACC calculates journey times from selected origin and destination points for public transport using timetable information. The journey time calculation also includes walk times to access the nearest public transport services.

The level of public transport journey time accessibility has been calculated from each residential postcode in the Scottish Borders to the Galashiels Transport Interchange (and vice versa) and has been assessed across four time periods:

- AM peak period (7am to 10am);
- Inter peak period (10am to 4pm);
- PM peak period (4pm to 7pm); and
- Off peak (7pm to Midnight).

The same analysis has also been undertaken for travel between the Scottish Borders and Edinburgh, Newcastle and Carlisle.

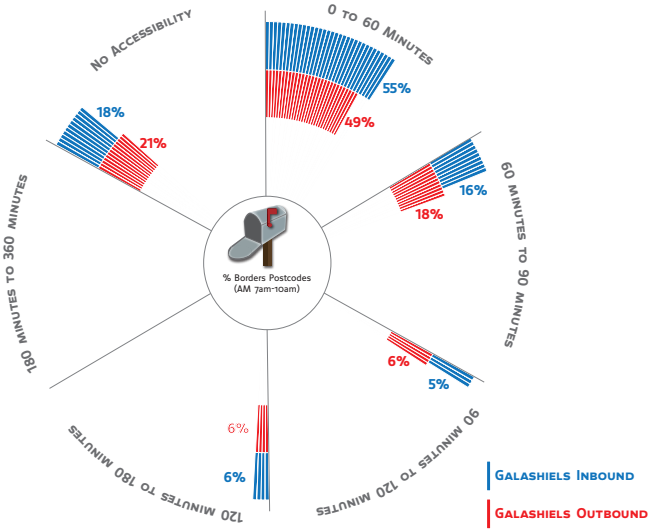
[3] TRACC is a GIS-based multimodal accessibility tool which can calculate journey times from selected origin and destination points for public transport, cycling and walking using public transport timetable and road network data. NPTDR data is used which provides full service / route / trip information, showing arrival and departure times of the trip journey, for all transport modes. The data is updated every three months.

3.5.11 Public Transport Accessibility

Within the Scottish Borders

AM Peak Period

The chart opposite indicates the level of journey time accessibility from all residential postcodes to the Galashiels Transport Interchange (and vice versa) by time band [i.e. 0 to 60 minutes; 60 to 90 minutes; 90 to 120 minutes; 120 to 180 minutes; and 180 to 360 minutes] during the AM peak period. The "No Accessibility" segment covers the percentage of journeys that cannot be completed by public transport to the Galashiels Transport Interchange (and vice versa) within any of the specified time bands during the AM peak time period.



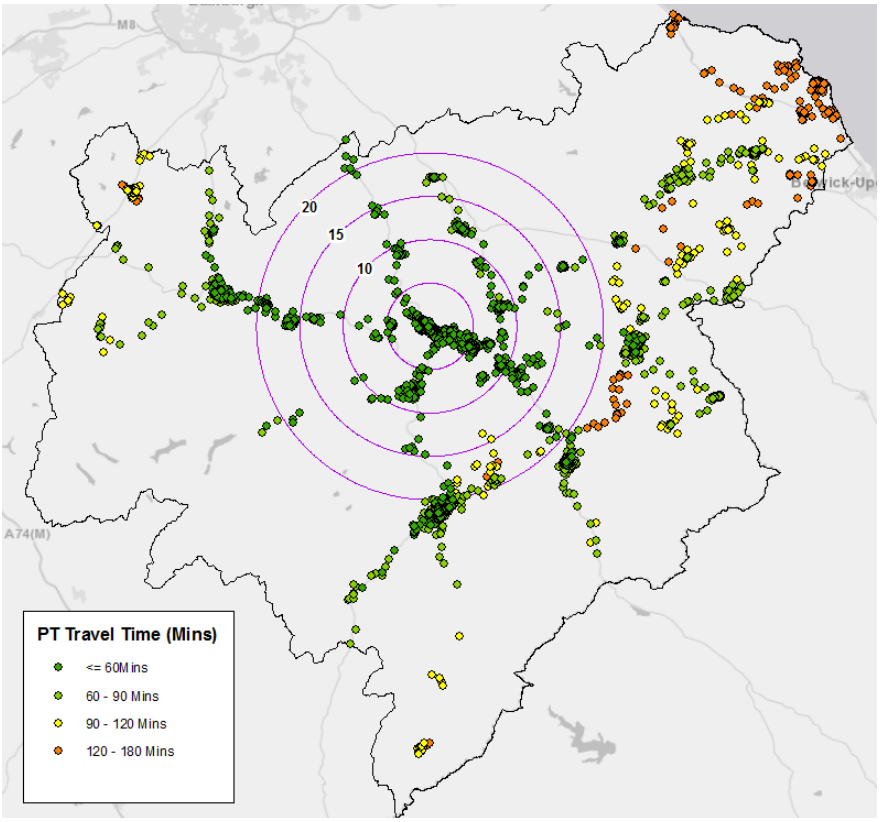
The key points from the analysis are:

- Journeys from 55% of postcodes can reach the Galashiels Transport Interchange by public transport within 60 minutes during the AM peak time period (7am-10am). In the opposite direction, journeys from the Galashiels Transport Interchange can reach 49% of postcodes by public transport;
- Journeys from 82% of postcodes can reach the Galashiels Transport Interchange by public transport during the AM peak period. In the opposite direction, journeys from the Galashiels Transport Interchange can reach 80% of postcodes; and
- Journeys from approximately 20% of postcodes to the Galashiels Transport Interchange (and vice versa) cannot be completed by public transport within any of the specified time bands during the AM peak time period [i.e. No Accessibility].

PT journey time accessibility analysis in both the Inter Peak and PM peak periods show a very similar trend to that of the AM Peak.

The map below highlights PT journey time accessibility to the interchange from Scottish Borders postcodes in the AM peak period (7am to 10am). The purple rings indicate 5km, 10km, 15km and 20km catchment areas from the interchange.

The map clearly highlights an east-west PT accessibility problem, showing postcodes in the east towards the A1 are anywhere between 120 and 180 minutes by public transport from the Galashiels Transport Interchange. The map also clearly highlights much better PT journey time accessibility along the main north-south corridors, including the A7 and A68, suggesting that there could be a problem with public transport service provision / frequency travelling east-west.



Off- Peak Period

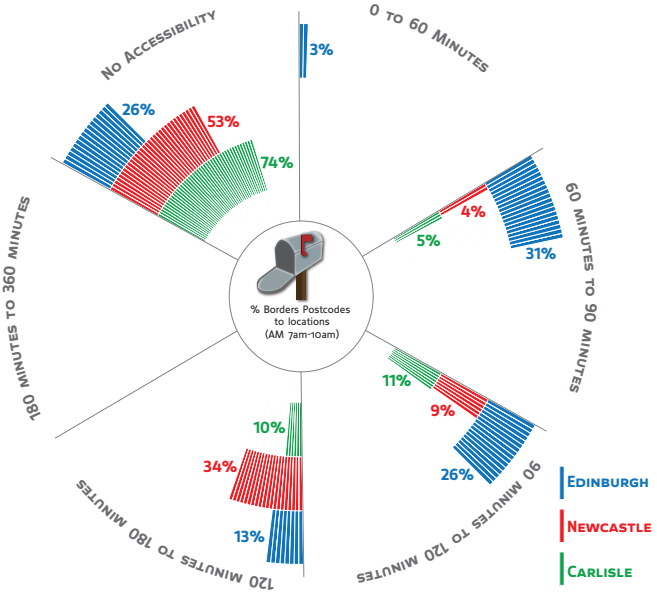
Public Transport journey time accessibility in the off-peak period (between 7pm and midnight) is the worst performing time period. The proportion of journeys which can be made within the specified time segments decreases across the majority of segments. Accessibility for postcodes within 60 minutes remains around the same levels as the other time periods, which again suggests that the majority of bus services are local in nature.

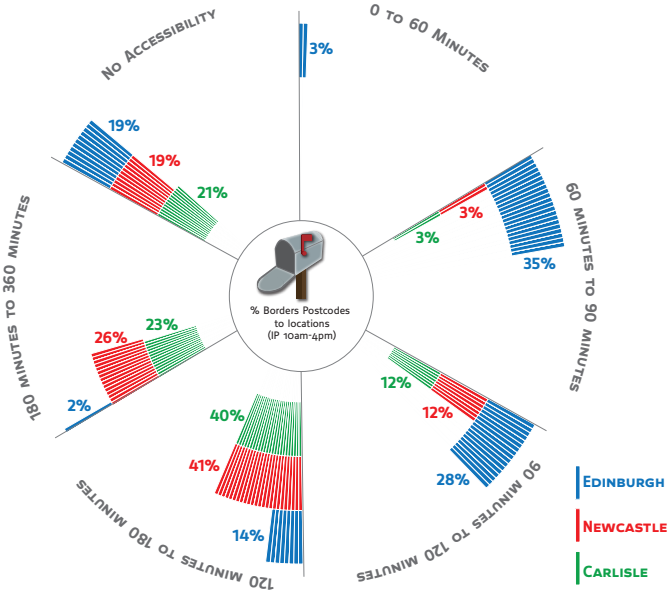
To Edinburgh, Newcastle and Carlisle

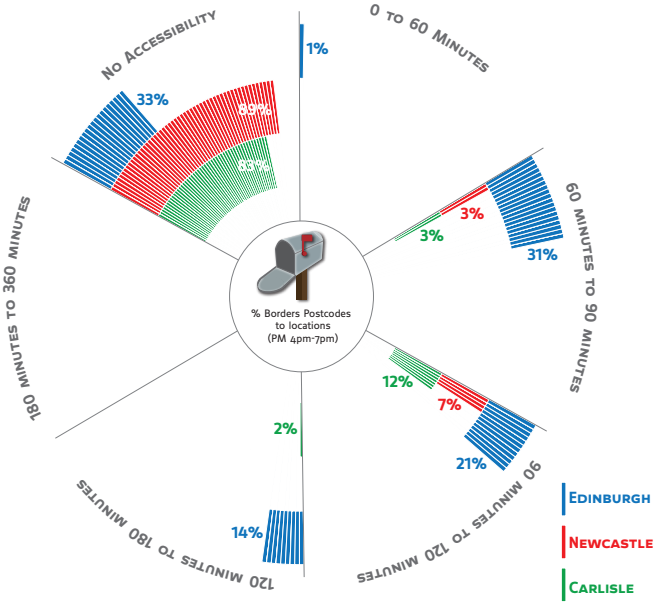
As can be seen in the charts at least one fifth of all Scottish Borders postcodes have “no accessibility” or are unable to complete a journey within the time period to any of the three towns in each time segment.

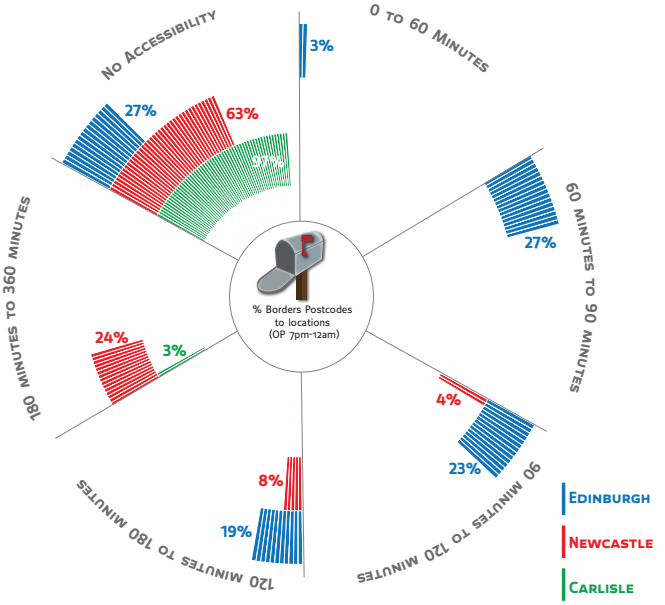
The PM peak period highlights the lowest level of accessibility for Scottish Borders postcodes, with a third having “no accessibility” or are unable to complete a journey to Edinburgh, and 89% and 83% having “no accessibility” or are unable to complete a journey to Newcastle and Carlisle within any specified time segment.

The greatest level of accessibility appears to fall in the Inter Peak period between 10am and 4pm, but this could potentially be skewed as the travel window for this period is six hours compared to the three hours for the commuter periods in the AM and PM.







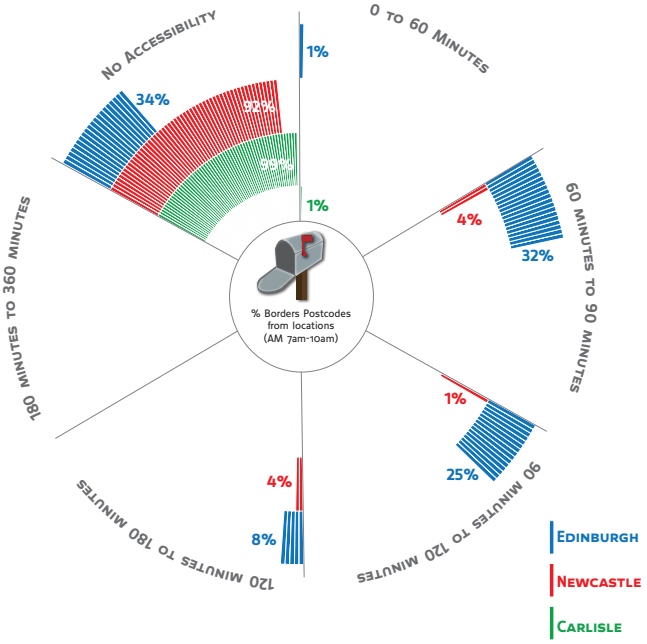


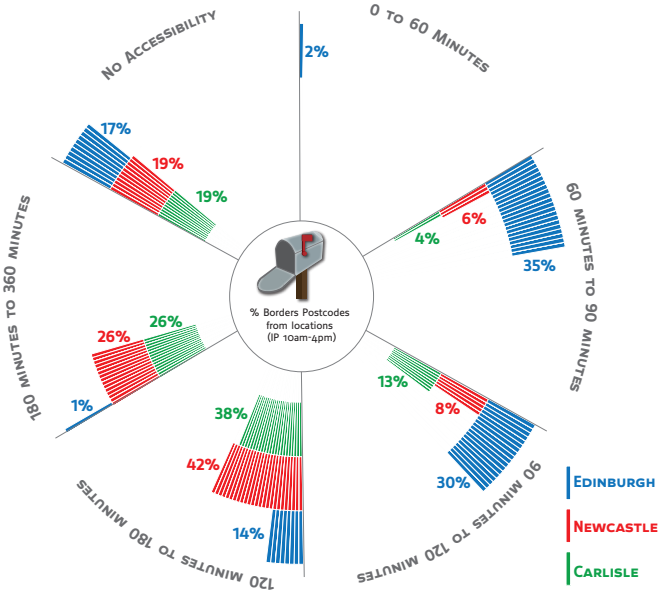
JACOBS

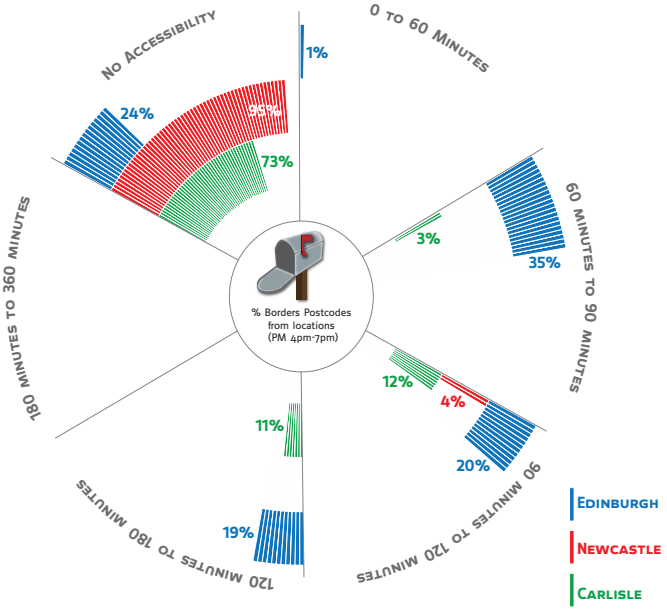
From Edinburgh, Newcastle and Carlisle

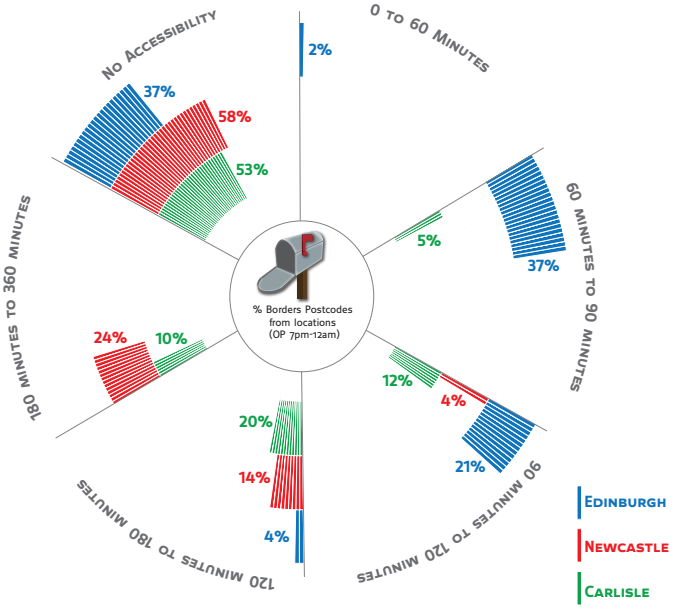
Overall there is a very similar pattern travelling from each of the three cities to the Scottish Borders, especially in terms of those with no accessibility or unable to complete their journey within the time period.

Travelling to the Scottish Borders from these cities does, however, seem to have greater accessibility than travelling from Scottish Borders postcodes. This is especially true in the Off Peak period between 7pm and midnight, where there is a more significant level of accessibility to the Scottish Borders than from the Scottish Borders.







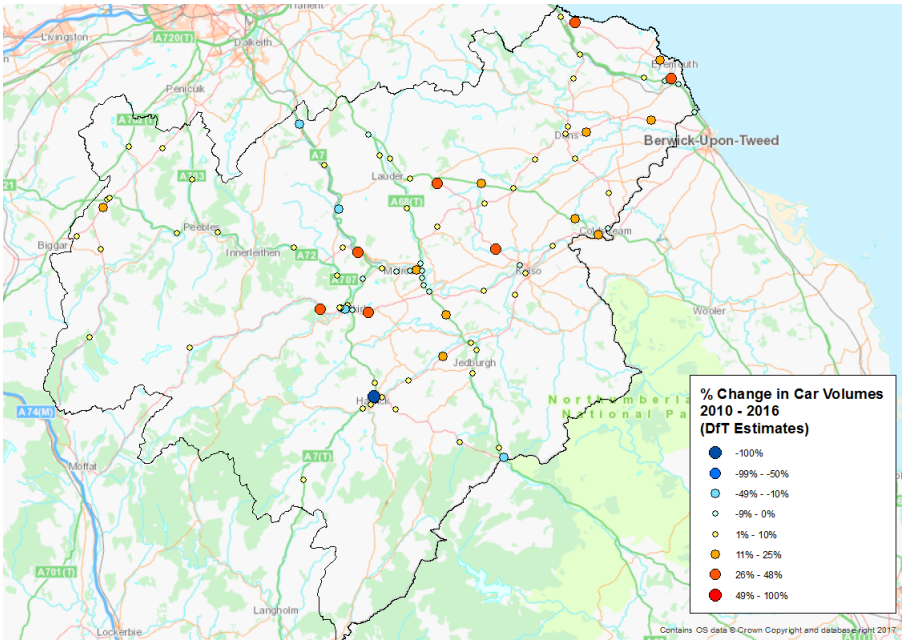


3.5.12 Traffic Volumes (DfT)

There are 96 observed count sites in the Scottish Borders listed on the DfT website. Changes in estimated traffic flows [i.e. cars, LGVs and HGVs] between 2010 and 2016 for each of these sites are shown on the following three maps.

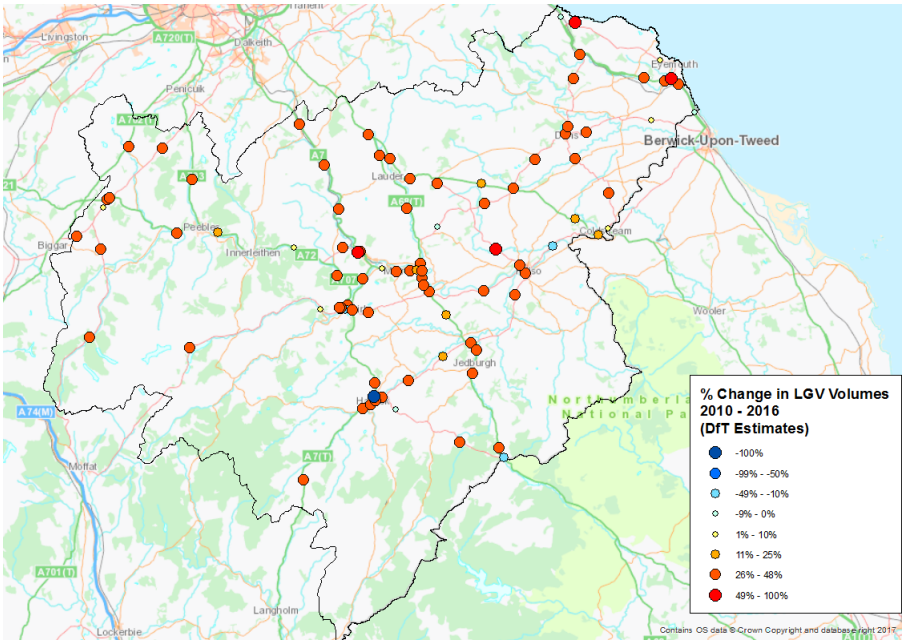
3.5.13 Cars

The change in car flows shows a mixed picture. There were some large increases around Selkirk, Galashiels and on the A6089 from Kelso. Additionally, there were also some increases in the east around Eyemouth and on the A1107. Combining all counts along each of the main road corridors (A1, A7 and A68), indicates a marginal change over the years, with car traffic decreasing by 1% on both the A1 and A7 and increasing by 1% on the A68.



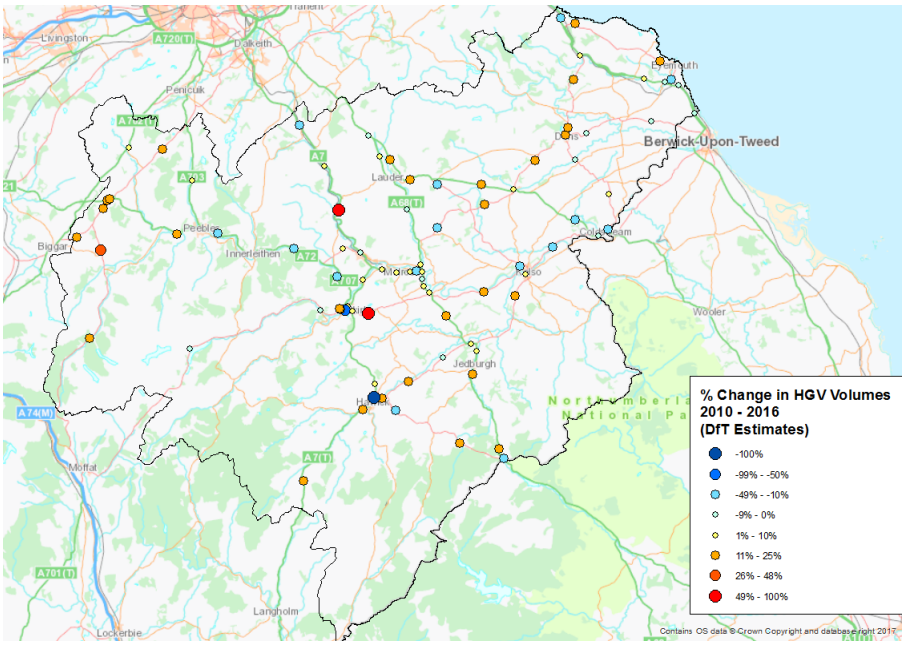
3.5.14 LGVs

The LGV picture is significantly different. DfT estimates showed increases throughout the Scottish Borders and at significant levels [i.e. increases above 25%]. This probably reflects the growth in home-based internet shopping and the rise of the white van. At the corridor level, all three main routes experienced significant average increases; the A1 (approximately 20% increase); and the A68 and A7 (approximately 35% increase).



3.5.15 HGVs

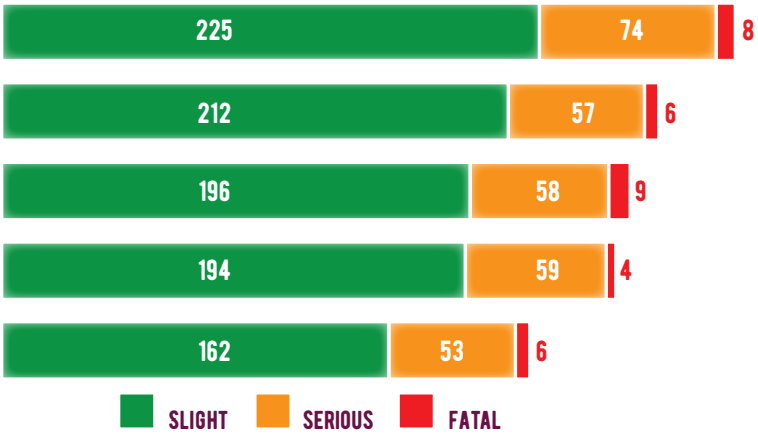
Much of the HGV traffic growth between 2010 and 2016 occurred on the A7 and A702 (+7%). HGV traffic has also increased on the A68 (2%) but decreased on the A1 by 2%.

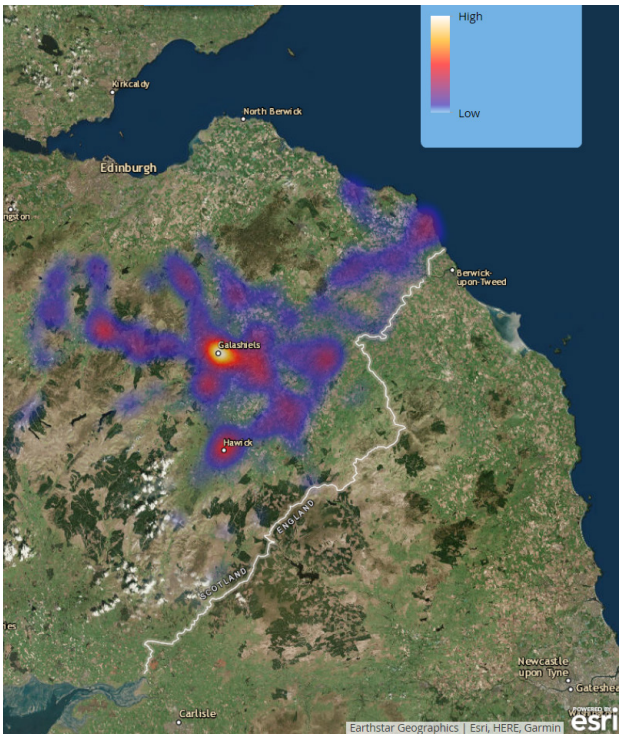


3.5.16 Accident Data (STATS19, 2014)

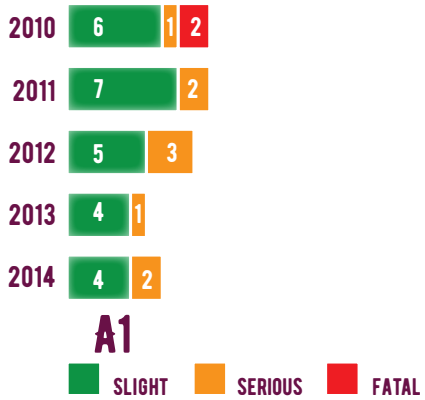
In general, the number of road traffic accidents in the Scottish Borders have reduced over time, from **307** in 2010 to **221** in 2014, an approximate **30%** reduction.

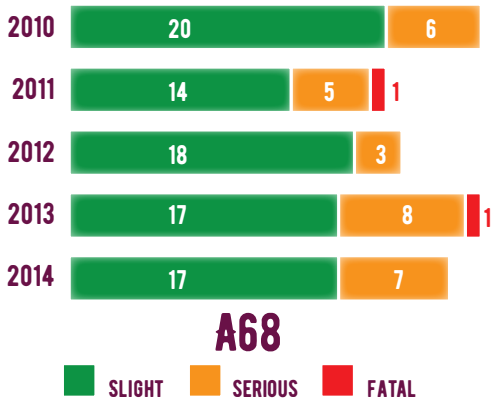
The main clustering of accidents is around the 'horseshoe' between Selkirk, Galashiels and Melrose, and south to St. Boswells. This is shown in the graphic below:

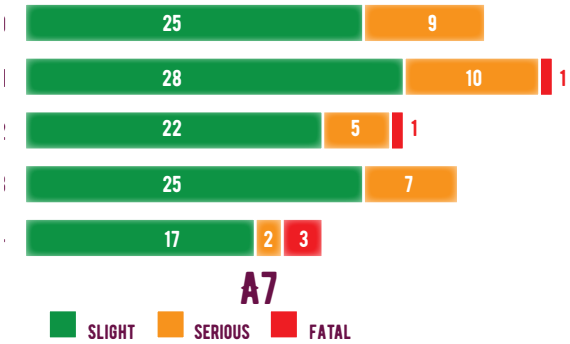




The diagrams below show the number of accidents by severity type [i.e. slight, serious and fatal] on each of the main road corridors over this same time period. The A7 has the highest number of accidents recorded **(155)**, compared to the A68 **(117)** and the A1 **(37)**. In 2014, the number of accidents on the A68 accounted for **11%** of all accidents in the Scottish Borders, followed closely by the A7 with **10%**.



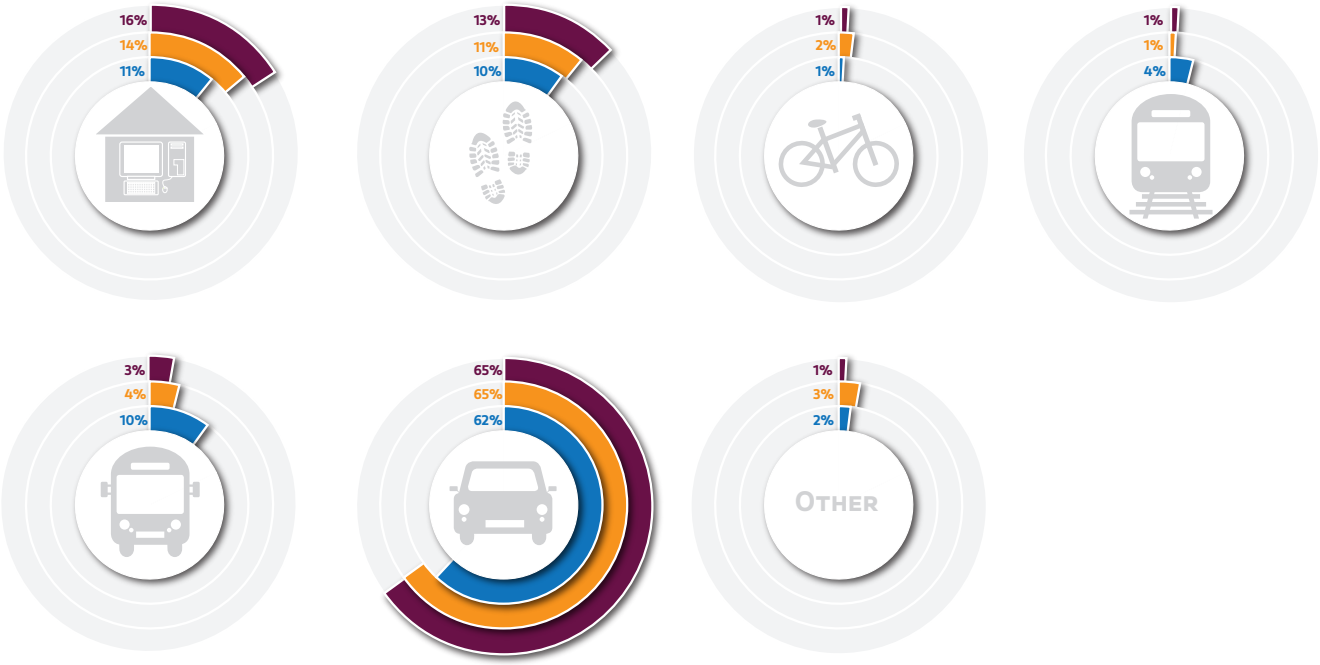




3.5.17 Mode Share (Census 2011)

The chart below shows the travel modes for work trips for Scottish Borders residents compared to the Scottish Rural Average (SRA) comparator area and national trends. As can be seen, the Scottish Borders and SRA comparator area have much lower levels of public transport usage compared to Scotland as a whole, with only **5%** using bus or rail compared to **14%** at the national level. It is worth noting these values are obtained from 2011 census and, as such, will not include any impacts resulting from the Borders Railway.

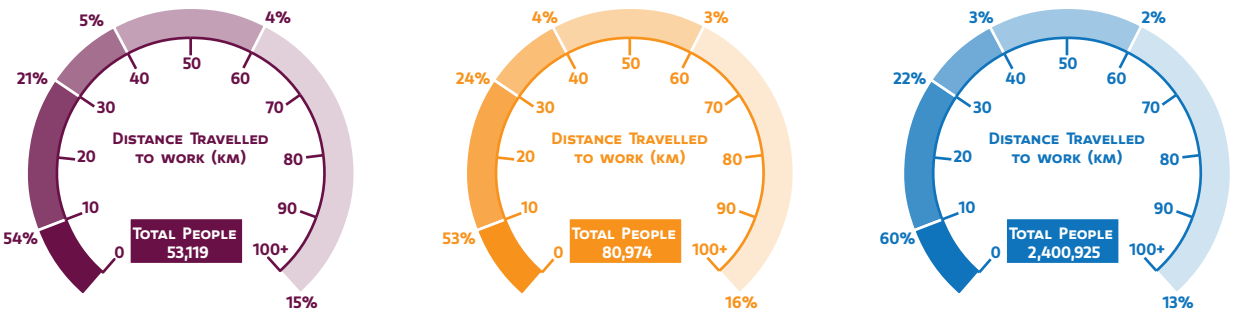
It can also be seen that the number of people who work at home is higher than both the SRA comparator area and national averages. This highlights that there is less traffic proportionally on the local road network and could also indicate the value placed in broadband connectivity as highlighted in the socio-economic analysis.



3.5.18 Distance Travelled to Work (2011 Census)

The distance travelled to work is an important indicator as it illustrates how far people will travel and, as such, often affects the mode choice. If there is adequate transport connectivity and accessibility, then this provides opportunities to travel further to seek work, or to work.

From the diagram it can be seen that residents of the Scottish Borders travel the furthest for work. With **24%** of the population travelling further than **30km** for work compared to **18%** for the national trend. This could either be a reflection on the physical layout of the road network (limited route choice) in the region or people are potentially travelling outwith the region for work, with **19%** travelling further than **60km**.



SCOTTISH BORDERS SCOTTISH RURAL AVERAGE SCOTLAND

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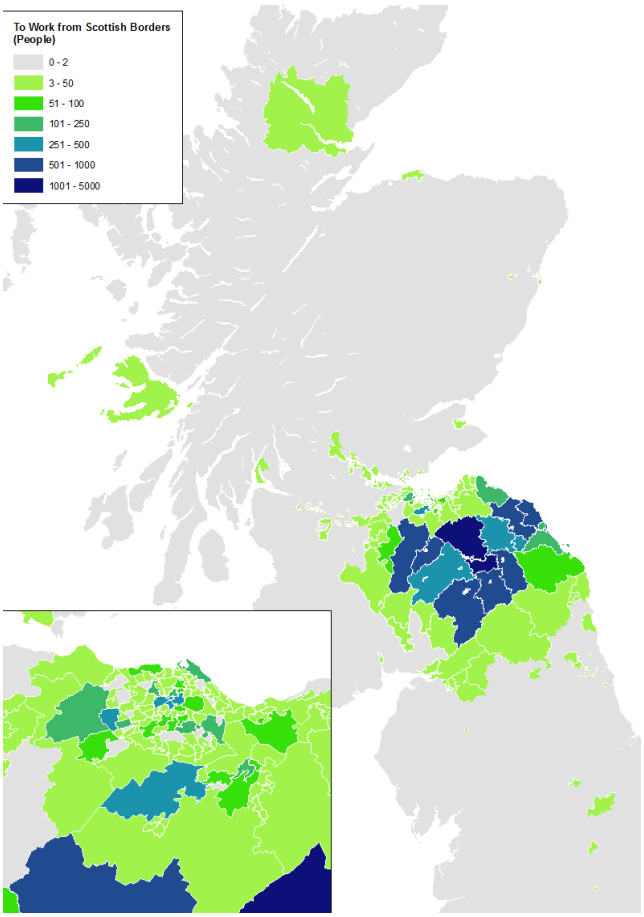
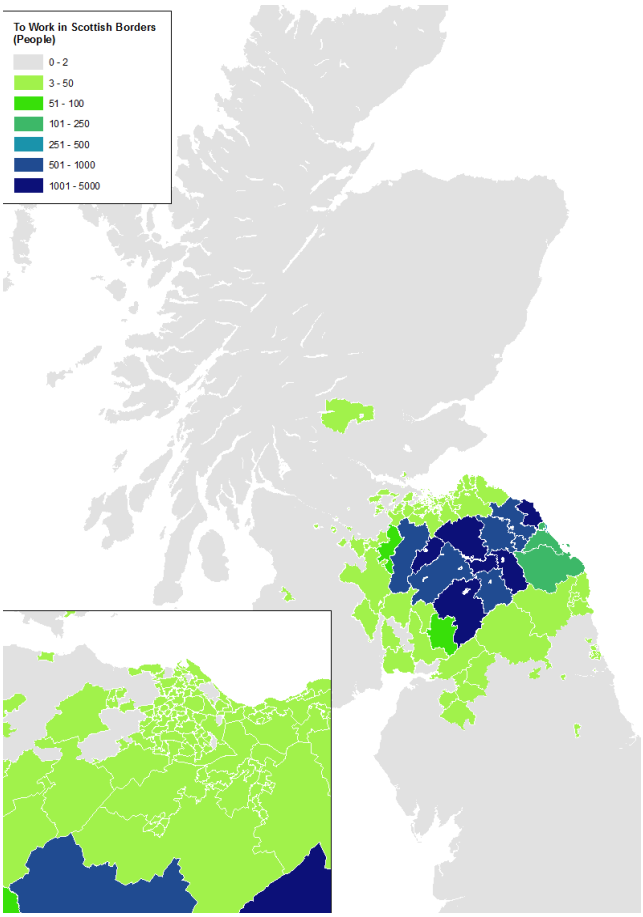
3.5.19 Travel-to-Work Patterns (2011 Census)

Maps showing the travel-to-work patterns for Scottish Borders residents are provided below. Key points from the analysis are:

- Majority of travel to work is within the Scottish Borders **(31,000 or 57%)**.
- Large number of home working **(8,700 or 16%)**, this figure does not include farmers as they don not class themselves as working at home.
- Large number with no fixed employment location [i.e. white van man] **(6,100 or 11%).**
- The highest number of movements are to Northumberland **(1,000 or 2%)**, Midlothian **(1,100 or 2%)** and the City of Edinburgh **(4,100 or 8%)** outwith internal Scottish Borders movements.
- Less than **100** people travel to Carlisle for work.
- Majority of travel movements are local and southeast Scotland centric along the key corridors. This travel pattern could potentially indicate travel barriers (in terms of distance and mode choice) to employment markets other than those served by the key transport corridors in the Scottish Borders.
- **92%** of people working in the Scottish Borders, also live in the Scottish Borders. The remainder of those working in the Scottish Borders originate from around the periphery of the Scottish Borders local authority boundary and along the key transport corridors.





3.4.20 Summary of Key Points – Traffic and Transport

- Lack of bus services travelling east-west linking Scottish Borders towns with the Galashiels Transport Interchange, resulting in increased journey times
- There is reasonable PT journey time accessibility along the main north-south corridors, including the A7 and A68, however, the accessibility analysis highlights a potential problem with public transport service provision / frequency travelling east-west
- The Scottish Borders and SRA comparator area have much lower levels of public transport usage compared to Scotland as a whole, with only 5% using bus or rail compared to 14% at the national level
- Bus service provision along key strategic corridors is frequent providing a reasonable level of service
- Edinburgh is served well by bus from the main population centres within the Scottish Borders, but less so from Kelso and Jedburgh
- Newcastle has a poorer level of bus service provision from the Scottish Borders than Carlisle
- It is possible for the working age population in Galashiels and Hawick to complete a full working day in Carlisle using bus as travel-to-work mode. For the working age population in Carlisle, it would not be possible to commute by bus to either Hawick or Galashiels and work a full 8-hour day.
- Higher levels of homeworking in the Scottish Borders compared to the SRA comparator area and Scotland as a whole
- Borders Rail has experienced significant growth in passenger numbers, and is primarily used by commuters
- Car is the most dominant mode for interchange along the Borders Rail Line, potentially indicating problems with connectivity and integration with other transport modes such as bus or active travel
- Single tracked sections of the Borders Rail Line are affecting punctuality and reliability
- Patronage levels have increased at every station along the ECML between Berwick-upon-Tweed and Edinburgh between 2010 and 2016. Further increases could potentially lead to capacity issues should this growing trend continue
- The majority of trips on the Scottish Borders road network are commuter through-trips
- Significant growth in LGV movements within the region (increases above 25%), probably reflecting growth in home-based internet shopping and the rise of the white van
- The number of road traffic accidents, including severity, have decreased between 2010 and 2014 across the Scottish Borders network. The main clustering of accidents is around the ‘horseshoe’ between Selkirk, Galashiels and Melrose, and south to St. Boswells

Stakeholder Engagement

04

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4.1 Introduction

Stakeholder Engagement is an essential element of the STAG process to ensure that specific knowledge and views of key users of the transport network are captured.

A wide range of stakeholders including local and national authority officers, representatives from transport providers, the emergency services, business organisations and relevant action groups have contributed significantly to the study.

Their views on problems and opportunities across the Scottish Borders transport network and along its key strategic linkages to Edinburgh, Newcastle and Carlisle have been gathered. Potential transport options which could help alleviate the problems and address the potential opportunities have also been gathered.

In total, over 50 stakeholders have contributed to the study through a variety of engagement techniques:

- Stakeholder Workshops (three one-day workshops, 45 attendees representing 29 organisations)
- Structured Telephone Interviews (14 interviews)
- Wider Online Engagement (On-line Community Council Survey and On-line Public Survey)

The study had a demanding timescale – mainly during the engagement phase – due to the announcement of a General Election (8 June 2017), which entailed the pre-election period, just after the study was commissioned, as well as the beginning of the Scottish Borders Council school holidays (29 June 2017).

4.2 Stakeholder Workshops

4.2.1 Overview

Three one-day Workshops took place at the following locations:

- Galashiels Transport Interchange, Galashiels, 20 June 2017
- Heart of Hawick, Hawick, 22 June 2017
- Berwick Community Trust, Berwick-upon-Tweed, 27 June 2017

The workshops were facilitated by Jacobs with assistance from key Transport Scotland representatives.

A specific running order was created in order to maximise engagement:

- Presentation on background and purpose of the Study
- Presentation of key data trends
- First breakout session – Group discussions on Problems and Opportunities
- Plenary session on Problems and Opportunities
- Presentation Summary of Key Themes
- Second breakout session – Group discussions on Potential Options
- Plenary session on Potential Options
- Next Steps and Closing Remarks

Presentations were also provided to these stakeholders in December 2017 to provide feedback on the study. These took place on 5th December at Hawick and Galashiels and 7th December at Berwick upon Tweed.

4.2.2 Invited Stakeholders

A wide range of key stakeholders were invited to the workshops, representing a diverse range of organisations. A total of 45 attendees representing 29 different organisations were divided between the three locations to ensure approximately equal numbers at each. The following stakeholders were invited to attend:

Table 7: Invited Stakeholders

Organisation	Attended
A1 Action Group	✓
A7 Action Group	✓
AccessAble Borders	✓
AMEY	✓
Borders Community Transport Hub	✓
Campaign for Borders Rail	✓
Dumfries & Galloway Council	✓
East Lothian Council	✓
Freight Transport Association	X
Langholm & District Rail Group	✓
National Farmers Union Scotland	X
Network Rail	✓
Newcastleton & District Community Trust	✓
NHS Borders	X
Northumberland County Council	✓
Paths for All	✓
Police Scotland	✓
Rail freight Group	X
Rail North	X
Road Haulage Association	✓

Organisation	Attended
ScotRail	✓
Scottish Ambulance Service	X
Scottish Association for Public Transport	✓
Scottish Borders Chambers of Commerce	✓
Scottish Borders Council (Various depts)	✓
Scottish Enterprise	✓
Scottish Fire and Rescue	✓
SEStran	✓
Stagecoach	X
sustrans	X
SWestrans	✓
The Borders Blueprint Group	X
Timber Transport Forum	✓
Transform Scotland	✓
Transport for the North	✓
Transport Scotland (Various depts)	✓
Visit Scotland	X
West Coast Motors	✓
Young Scot	X

4.2.3 Breakout Sessions - Problems, Opportunities and Key Themes

Following the presentation outlining the key facts, figures and data trends concerning the Scottish Borders transport network, morning breakout sessions were organised. Those sessions were aimed at discussing views on problems relating to current transport provision and identifying potential opportunities for improving transport across the study area.

To facilitate this, the Stakeholders were split into groups which were mixed to ensure a variety of organisations were represented in each. All views were record and collected into Key Themes for further discussion. The themes derived from all three workshops were as follows:

Problem Themes

- **Connectivity & Accessibility**
- **Active Travel**
- **Public Transport**
- **Roads**
- **Socio-Economic**

Opportunity Themes

- **Connectivity & Accessibility**
- **Economy & Development**
- **Leisure & Tourism**
- **Socio-Political**

4.2.4 Breakout Sessions - Options

During the afternoon sessions, stakeholders were asked to discuss in groups their views on potential options for improving the Scottish Borders transport network. Following the identification of options, stakeholders were asked to consider how well each addressed the key themes identified from the Problems and Opportunities session in order to identify those options which may offer maximum benefit overall.

Over 200 options were identified from the workshops which were later collated in to a long list, with similar options being combined or packaged together.

Options covered a wide range of modes and geographic locations, from long distance strategic cycle schemes and major road bypasses, to multi-modal smart information systems and Demand Responsive Transport solutions

4.3 Structured Telephone Interviews

4.3.1 Overview

Key Stakeholders were invited to take part in a Structured Telephone Interview. A set of standard questions was asked to ascertain perspectives on key Problems, Opportunities and potential Options, as well as to provide awareness of any developments or sources of data that could help inform the study.

There was a total of nine questions, as listed below:

1. What are the key functions of your organisation and your specific role within it?

2. What are the key interfaces between your organisation and the transport network in and to / from the Borders?

3. What are the main modes of travel relevant to your organisation in the Borders?

4. What are the main routes within or through the Borders of interest to your organisation?

5. If there are any, what are the specific problems with the transport network in and to / from the Borders which may act as a barrier to the activities and interests of your organisation?

6. Can you highlight any specific opportunities relevant to the transport network in and to / from the Borders which may be relevant to the study?

7. Do you hold any data or studies which could help inform problems and opportunities relevant to this study which you could make available?

8. Do you have any specific suggestions for improvements to the Borders transport network appropriate to this study? If so, could you please identify the top 5 improvements that you think should be considered to address the problems and opportunities highlighted?

9. If your suggested improvements were implemented, what effect would this have on the activities and interests of your organisation?

These questions were developed and agreed in consultation with the Project Working Group in advance of the interviews taking place.

The structured telephone interviews took place during prearranged timeslots during July and August 2017, and were undertaken by two experienced Jacobs' staff – one who asked questions and facilitated the discussion, whilst the other took detailed notes. The interviews lasted between approximately 30 and 45 minutes, depending on the level of detail with which stakeholders wished to discuss.

4.3.2 Interviewees

The following organisations participated in the Structured Telephone Interviews:

Table 8: Organisations that participated in the Structured Telephone Interviews

Organisations	
Campaign for Borders Rail	Northumberland County Council
City of Edinburgh	Rail North
Cumbria County Council	SEStran
Dumfries & Galloway Council	Sustrans
Highways England	Transport for the North
Midlothian Council	VisitScotland
Network Rail	

4.4 Community Council and Public Surveys

4.4.1 Community Council Surveys

Community Councils were invited to participate in an online survey on behalf of their communities. Seven standard questions were asked to ascertain local perspectives on key Problems, Opportunities and potential Options, as well as identifying the top concerns in each topic:

1. Which community council do you represent?
2. Does your community have any issues travelling in / to / from the Borders?
3. Please identify up to 5 key issues
4. Are you aware of any specific opportunities relating to your community which could be relevant to this study?
5. Do you have any suggestions from your communities on transport improvements you would like to see in the Borders that could be relevant to this study?
6. Please identify up to 5 suggestions
7. Would you like to provide any further comments?

These questions were developed and agreed in consultation with the Project Working Group in advance of the online survey going 'live.'

The online survey was issued to all 71 Scottish Borders Community Councils and 18 completed responses were received by the closing date of 11 August 2017.

4.4.2 Public Surveys

The views of the public that use the Scottish Borders transport network alongside information on demographics and travel patterns were also sought.

A wide ranging questionnaire was made available via an online survey. This survey was advertised on the Transport Scotland website, as well as the Scottish Borders Council and SEStran social media channels. The BBC and local press picked up details of the study through Transport Scotland's press release.

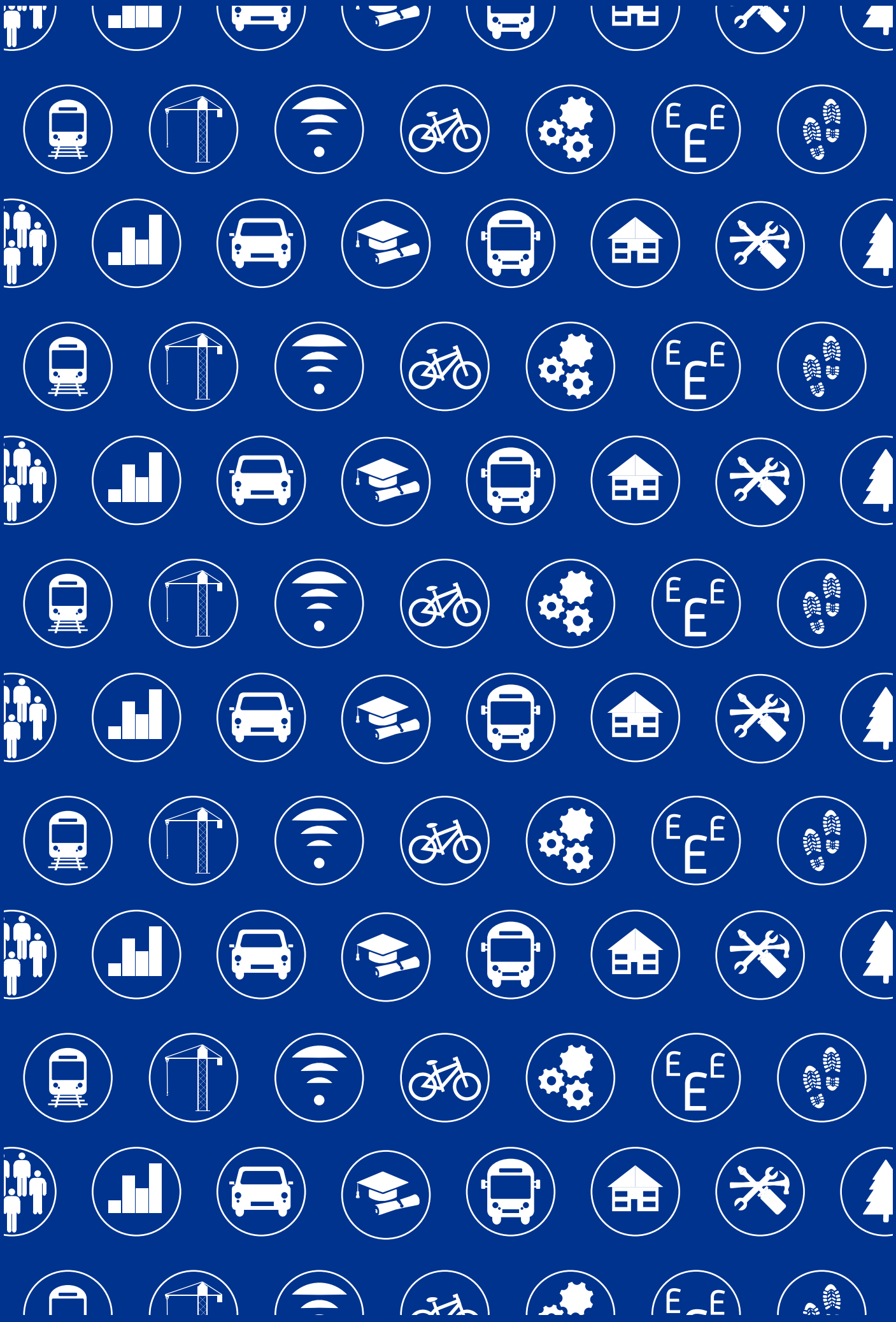
There were a total of 43 questions included in the survey. For ease of completion, respondents were asked specific questions related to their stated main modes of travel. This meant that respondents only answered expanded questions related to previous answers [i.e. if respondents stated they usually travelled by car, then detailed questions were asked relating to journeys by road]. The maximum number of questions a single respondent could answer was 27.

Initial questions focussed on demographic areas including respondents' age range, gender, employment status and home postcode. Postcode was only obtained in order to ascertain travel patterns using the destination of the respondents' most frequent journey. Further questions were then asked in relation to each mode of transport used [i.e. road, rail, bus and active travel].

Information obtained from the public survey has been analysed to gain an understanding of travel behaviour across the study area and to validate the views of key stakeholders. The responses from the public survey also provides an important dataset to compare against elements of the 2011 census data.

A total of 2,492 valid responses were received by the closing date of 11 August 2017.

Analysis of the public survey is provided in Appendix D to this report.



Analysis of Problems, Opportunities, Issues and Constraints

05

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5.1 Introduction

This part of the STAG process is used to identify actual and perceived problems and opportunities, and forms the basis of the development of the study. It is important that the identification of problems and opportunities is considered in the wider context. As such, relevant issues and constraints have also been considered.

STAG guidance broadly defines each of these terms as:

Problems:
existing and future problems within the transport and land use system [e.g. traffic congestion].

Opportunities:
chances to improve the transport and land use system [e.g. improve journey times and reliability].

Issues:
uncertainties that the study may not be in a position to resolve, but must work within the context of [e.g. uncertainty at the time of the study whether a major road or rail link will be built that will affect the study area].

Constraints:
represent the bounds within which a study is being undertaken [e.g. the funding levels that can realistically be obtained, or Scottish, UK or EU legislation].

Four separate exercises have been undertaken to identify existing and future year problems and opportunities across the Scottish Borders transport and land use system:

- Stakeholder engagement;
- Data analysis;
- Analysis of SRM12 outputs and review of Cross Boundary Study Report Final (April 2017); and
- Policy review.

This chapter sets out a summary of the key Problems, Opportunities, Issues and Constraints identified through these four exercises. The full list of **43 individual problems and 34 individual opportunities** is provided in Appendix E to this report.

5.2 Stakeholder Engagement: Summary of Problems and Opportunities

Approximately 230 individual problems and 80 individual opportunities were identified from the Stakeholder Engagement exercise. A review of the individual problems and opportunities was undertaken and this showed that many were very similar and, as such, were grouped in to broad categories and then more specific themes for ease of assessment.

The majority of the identified problems and opportunities were not linked to specific locations or routes / corridors but rather more representative of the Scottish Borders transport network as a whole. However, where recorded, information on specific locations, routes and / or transport services has been reported.

5.2.1 Problem Categories

A total of five key broad categories have been identified. The majority of the problems fall in to the Public Transport and Road categories, representing 63% of those identified. Connectivity and Socio-Economic categories [i.e. the interaction of social and economic factors] collectively represent 32% of the problems whilst Active Travel represents 5% of the identified problems.

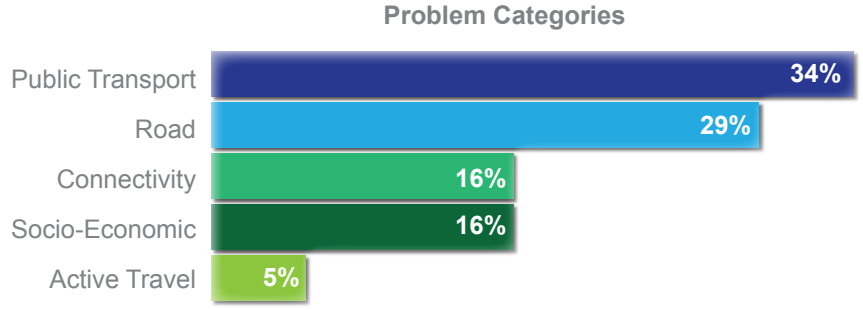
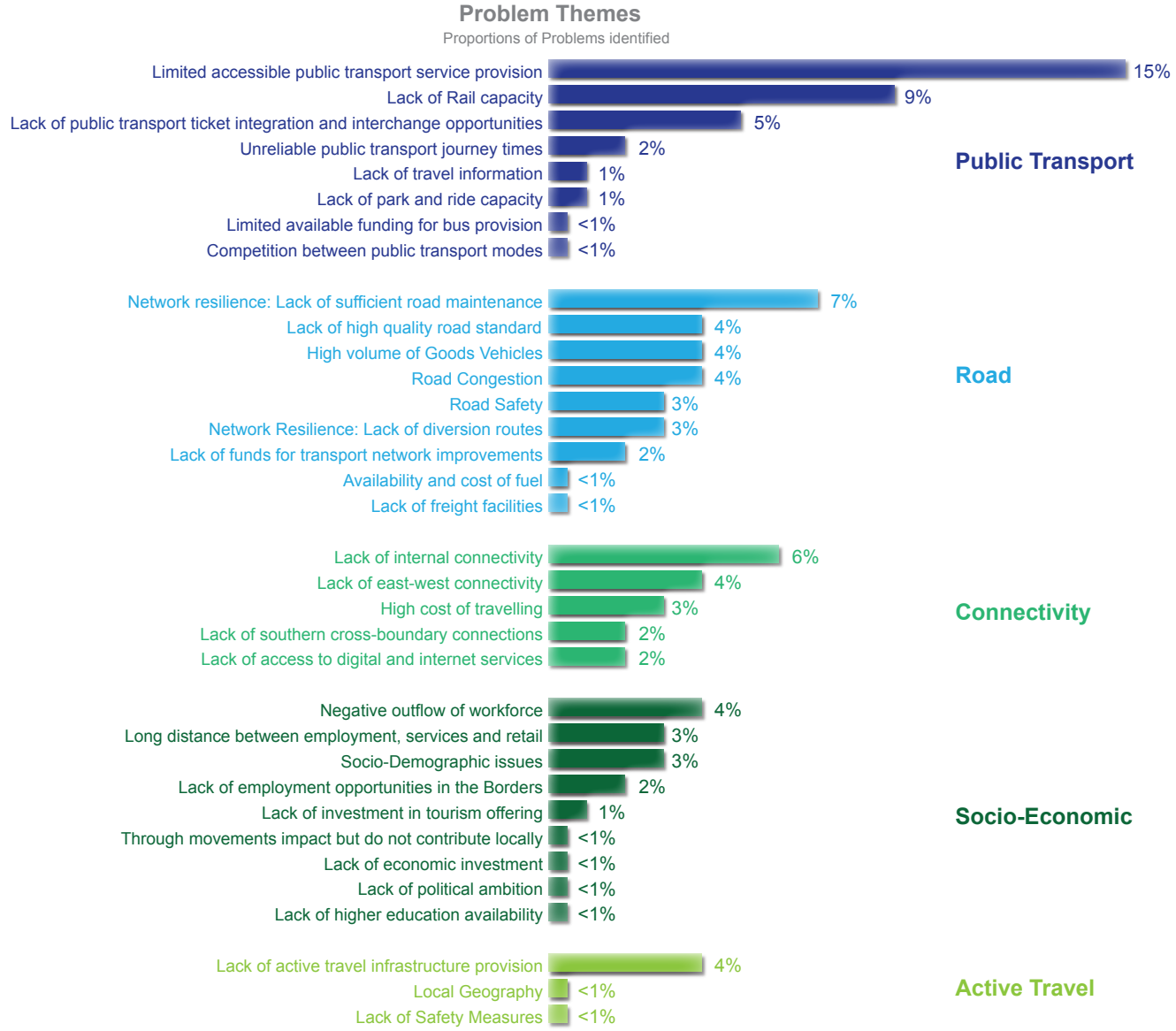


Figure 5: Problem Categories, Identified from Stakeholder Engagement

5.2.2 Problem Themes

A total of 34 problem themes have been identified:

Figure 6: Problem Themes, Identified from Stakeholder Engagement



5.2.3 Analysis of Problem Themes by Category

PUBLIC TRANSPORT

Three key themes were noted amongst responses:

- **Limited accessible public transport service provision** relates to issues of reductions in bus service provision (in particular off-peak services) and the ability to get to and from bus stops and rail stations.
- **Lack of rail capacity** mainly directed at the Borders Railway, including overcrowding on rail services through Midlothian; limited capacity on the rail network and lack of capacity on rail carriages (not only for passengers but for cyclists). The East Coast Main Line (ECML) having to provide both a local and strategic service was also mentioned.
- **Lack of public transport ticket integration and interchange opportunities** was of high concern, in particular the lack of joined up timetables between bus and rail; lack of capacity for cyclists on rail services; and no cross-border bus passes available.

ROAD

Three key themes were noted amongst responses:

- **Network Resilience** relating to the lack of sufficient roads maintenance and diversionary routes.
- **Lack of high quality standard of roads** relates to the part-dualling of the A1 resulting in few overtaking opportunities, as well as narrow main routes through town centres.
- **High Volume of Goods Vehicles** is also of key concern due to the physical impact goods vehicles have on road surfaces, diminish capacity on routes and decrease safety especially when travelling along diversionary routes on minor roads.

CONNECTIVITY

Four key themes were noted amongst responses:

- **Lack of internal connectivity** relates to issues travelling within the Scottish Borders, in particular to health services and retail opportunities.
- **Lack of east-west connectivity** was also of high concern, in particular east-west routes being poor with a lack of direct routes and experiences of long, unreliable journey times.
- **Lack of access to digital and internet services** impacts on the ability to obtain travel information and ability to work from home.
- **High cost of travelling** and unreliable public transport journey times were identified as other issues affecting connectivity.

SOCIO-ECONOMIC

A key theme was noted amongst responses:

- The Socio-Economic problems are largely interlinked, with the main problems relating to the **high number of people travelling out with the Scottish Borders to work and study – mostly to Edinburgh**. This is believed to impact on the amount of employment opportunities available due to a perceived 'brain-drain' and resulting social and economic deprivation as less money and funding is available in the area.

ACTIVE TRAVEL

Three key themes were noted amongst responses:

- **Lack of active travel infrastructure provision** included issues such as cycle routes being too far away from where people actually want to go, poor links between settlements and a lack of pavements making it difficult to walk anywhere.
- **Local geography** is also a problem for active travellers due to the long distances between settlements as well as the challenging topography making active travel unattractive.
- **Lack of safety measures** for both walking and cycling were also identified.

5.2.4 Data Analysis: Validating Problem Themes

A separate exercise has been undertaken to validate the problem themes using the available and relevant datasets and, in turn, helping to quantify the evidence base required for the study.

Each problem theme has been coloured green, orange or red (with green indicating data is available and it validates the problem; orange indicating data is available and it validates the problem in part; and red indicating data is unavailable or the data does not validate the problem).

It can be seen from Figure 7 there are many problem themes that can be either fully validated (in green) or partially validated (in orange) by the available datasets. There are only three themes for which there is currently no available data to support the problem theme.

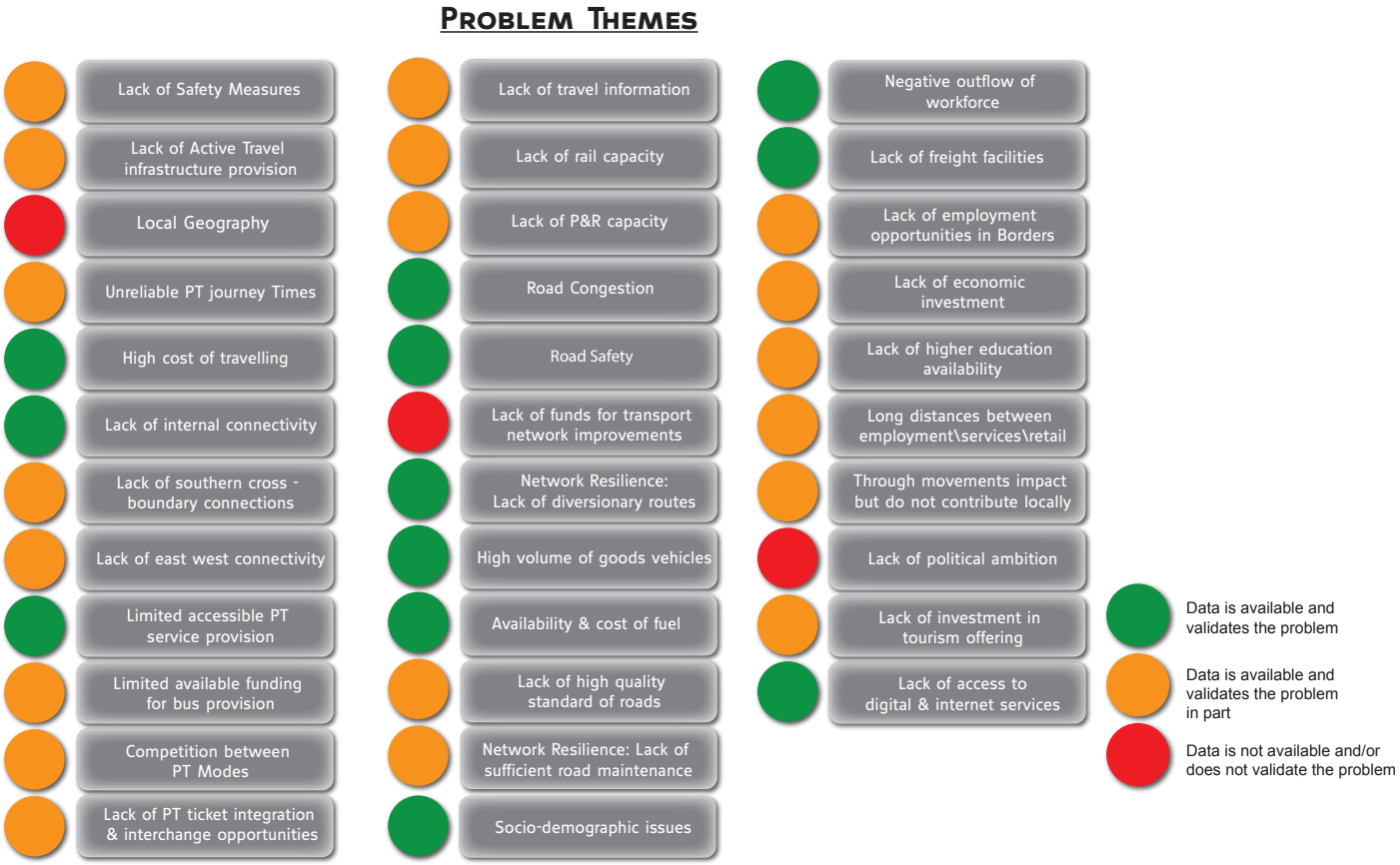


Figure 7: Simple Traffic Light System, Validating Problem Themes

5.2.5 Opportunity Categories

A total of four key broad categories have been identified.

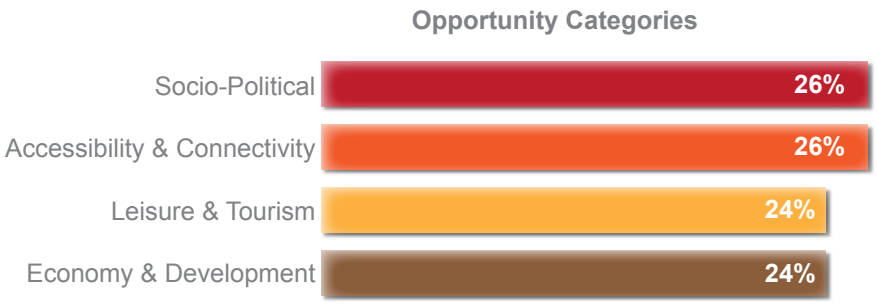
The **Socio-Political** category broadly covers opportunities relating to the social and political characteristics of the Scottish Borders.

The **Accessibility and Connectivity** category broadly covers opportunities relating to transport and how people could move to, from and within the Scottish Borders in the future.

The **Leisure and Tourism** category broadly covers current and future opportunities specifically relating to the leisure and tourism markets in the Scottish Borders.

The **Economy and Development** category broadly covers opportunities relating to the economy, jobs and housing in and around the Scottish Borders.

Figure 8: Opportunity Categories, Identified from Stakeholder Engagement



The opportunities fall evenly into the four broad categories; Socio-Political, and Accessibility and Connectivity representing 52% of those identified. Both Leisure and Tourism, and Economy and Development categories collectively represent 48% of the identified opportunities. The spread of responses is much closer when compared with the problem categories.

5.2.6 Opportunity Themes

A total of 21 individual opportunity themes have been identified:

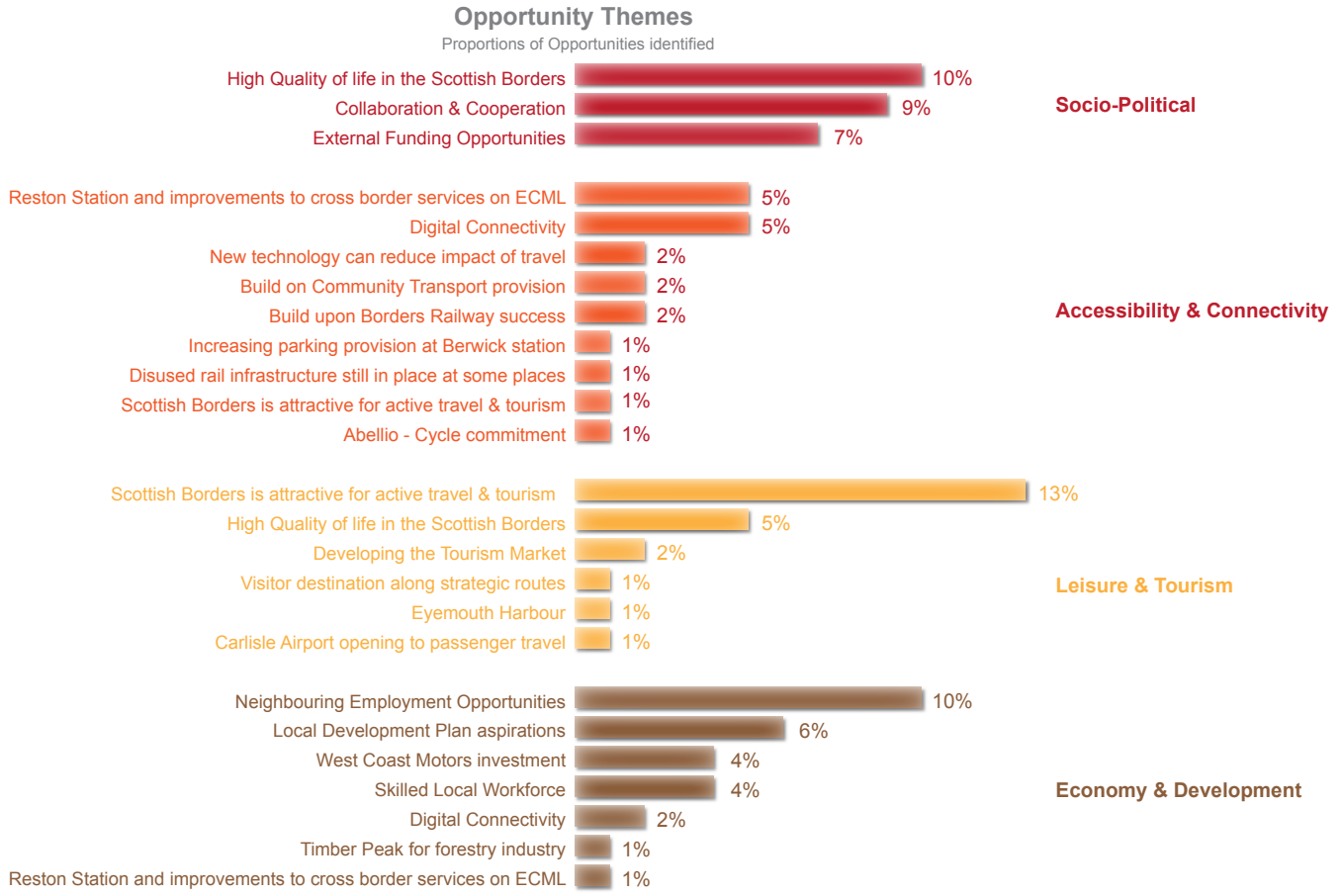


Figure 9: Opportunity Themes, Identified from Stakeholder Engagement

5.2.7 Analysis of Opportunity Themes by Category

SOCIO-POLITICAL

Three key themes were noted amongst responses:

- **High Quality of life in the Scottish Borders** for attracting people to live in the area for the following reasons: low crime rate, natural environment and a place to raise a family.
- **Collaboration and cooperation** between the Scottish Borders, surrounding and cross border Local Authorities in tackling existing and future issues relating to the development pressure in and around Edinburgh, and the effect this might have on greenspace and transport provision.
- **External Funding Opportunities** similar to City Deal-type agreements, petrol station grants and cross border funding.

ACCESSIBILITY AND CONNECTIVITY

Three key themes were noted amongst responses:

- **Increased interest in rail infrastructure / service improvements** as key opportunities that could have a positive influence on future travel in the Scottish Borders.
- **Build upon Borders Railway success**, including wider onwards travel within the Scottish Borders.
- **Digital Connectivity** such as BT's Open-Reach commitment as well as home working, reducing the need to travel.

LEISURE & TOURISM

Three key themes were noted amongst responses:

- **Scottish Borders is attractive for active travel and tourism** including Edinburgh and Newcastle airports being seen as good for international tourists to visit the Borders, potential to better market tourism and events, and developing / marketing the Scottish Borders as a cycling destination.
- **High Quality of Life in the Scottish Borders** making the region an attractive place for travel and tourism due to its unique environment. Leisure and tourism markets should be built upon this setting.
- **Develop the Tourism Market**, including cycling, mountain biking and short-breaks markets. Also mentioned was the potential opportunities relating to a Scottish Borders National Park.

ECONOMY & DEVELOPMENT

Four key themes were noted amongst responses:

- **Neighbouring Employment Opportunities** relating to the Scottish Borders central location and proximity to employment hubs of Edinburgh, Carlisle and Newcastle.
- **Local Development Plan aspirations**, including the Tweedbank Development Zone and distribution centres for goods, as outlined in the Local Development Plan, contributing to economic growth in the Scottish Borders.
- **Skilled Local Workforce** living in the Scottish Borders to attract more businesses such as technology and software to locate in the Scottish Borders, strongly linked to the need for good digital connectivity to enable this.
- **West Coast Motors investment**, through Borders Buses, improving the provision of bus services in the Scottish Borders.

5.2.8 Overlapping Themes

There are four themes that fall in to more than one category:

- **High Quality of Life in the Scottish Borders** falls in to both Socio-Political, and Leisure and Tourism categories. The Socio-Political category covers opportunities relating to policy measures and employer incentives to retain and attract people in to the Borders, whereas the Leisure and Tourism category covers opportunities that build upon its unique setting and natural environment.
- **Digital Connectivity** falls in to both Accessibility and Connectivity, and Economy and Development categories. The Accessibility and Connectivity covers opportunities relating to the alignment of transport with digital connectivity, whereas the Economy and Development category covers the potential effects of digital connectivity on the need for travel [e.g. increases home-working].
- **Scottish Borders is attractive for Active Travel and Tourism** falls in to both Leisure and Tourism, and Accessibility and Connectivity categories. The Leisure and Tourism category covers opportunities related to better marketing of the Borders as a tourist destination, whereas the Accessibility and Connectivity category covers opportunities that relate to active travel and, in particular, on the Tweedbank-Galashiels corridor with the potential to replace many park and ride journeys.
- **Reston Station and improvements to cross border services on ECML** falls in to both Economy and Development, and Accessibility and Connectivity categories. The Economy and Development category covers opportunities for development in Eyemouth and Duns, whereas the Accessibility and Connectivity category covers strategic opportunities relating to the TransPennine and Northern franchises, with potential connecting services to the Scottish Borders, either by rail or by bus.

5.3 Identification of Future Year Problems

The identification of future year problems has focussed on assessing the performance of the Scottish Borders transport network, as it is now and in the future, taking account of committed development and infrastructure measures and resulting forecasts of travel demand.

The principal analytical tool used in this process was the SEStran Regional Model (SRM12). Two model scenarios were used:

- Baseline scenario representing 2014 / 2015 network conditions.
- 2024 Reference Case scenario reflecting the delivery of the Cross Boundary Study committed development proposals and a range of transport infrastructure and policy assumptions.

The modelled scenarios listed above were also used in the Cross Boundary Study. As such, a review of the final Cross Boundary Study report has been undertaken to obtain relevant future year problems identified as part of that work which can also inform this study.

5.3.1 SRM12 Network Performance Indicators

The following indicators have been used to measure the operational performance of the Scottish Borders future year transport network, including performance of the strategic A1, A68 and A7 corridors:

- Unmet road demand – indicator of 'suppressed' demand [i.e. road trips that are prevented from being made due to network constraints].
- Volume / Capacity ratio – useful indicator of road traffic congestion. Three V/C ratios have been defined to determine the significance of congestion levels as follows:
  - V/C ratio less than or equal to 0.8 means traffic would operate with minimal congestion related issues;
  - V/C ratio greater than 0.8 and less than or equal to 1 means traffic levels are approaching or are at capacity and would begin to experience congestion related issues; and
  - V/C ratio greater than 1 means traffic levels are above capacity and would experience significant levels of congestion.

Graphical plots of unmet demand and V/C ratios are provided in Appendix F to this report.

5.3.2 SRM12 Model Analysis Summary

The Scottish Borders future year transport network operates within capacity and no real problems have been identified from the model analysis. However, network problems are evident in Midlothian towards the City of Edinburgh, as well as in and around Edinburgh itself. This is a key conclusion from the model analysis and it aligns well with outcomes from the Cross Boundary Study.

5.3.3 Problem Hotspots from Cross Boundary Study

The pre-appraisal stage of the Cross Boundary Study focussed on identifying problems across the SESplan transport network caused by cross boundary trips from non-committed development [i.e. 2024 Test Case]. Problem hotspots were then identified [i.e. areas in which future problems might occur, or be made worse].

Whilst the problem hotspots are caused by trips from non-committed development, the study report highlights that the general trends of effect from committed development on network performance is very similar. In fact, in most cases, the changes between the Baseline and 2024 Reference Case scenarios are much greater than between the 2024 Reference Case and Test Case. This indicates that the Test Case would only exacerbate existing problems on an already congested network and is confirmed by the following statements made in the study report:

- "Analysis of network performance shows that demand within the Reference Case will exceed the capacity of the strategic transport network in many areas. Test Case demand would exacerbate existing issues and push the network beyond practical limits at critical locations, p5-8."
- "The total time lost to congestion increases disproportionately in the Test Case, which is further indication of the congested nature of the Reference Case network, p5-8."
- "Demand for travel is always greater than actual demand, highlighting increasingly congested nature of the network, p5-8."

On this basis, it is therefore reasonable to include the

most relevant future year problem hotspots identified in the Cross Boundary Study Report in this assessment.

The following problem hotspots have been obtained:

- road;
- bus;
- rail; and
- active travel.

Road hotspots largely affect the City of Edinburgh, in particular the A720 City bypass, and M8 and M9 motorways to the west, and M90 to the north of the city, all of which align well with the SRM12 model analysis. Similarly, bus, rail and active travel hotspots are concentrated in and around Edinburgh.

Edinburgh is one of the key markets for the Scottish Borders and therefore the most relevant future year problems identified in and around Edinburgh have been included in the assessment.

5.4 Summary of Future Year Problems

Based on the model analysis and review of the Cross Boundary Study report, the following future year problems have been identified:

Table 9: Future Year Problems

Category	Future Year Problem
Road	Road congestion: A720 Edinburgh City bypass, M8 and M9 west of Edinburgh, M90 north of Edinburgh
Public Transport	Increased bus journey times on A8 corridor between Edinburgh Airport and city centre
	Borders Railway capacity between Brunstane and Newcraighall, seats full: 85% - 100% seats taken on average
	ECML capacity, Edinburgh - North Berwick Line, west of Musselburgh, Standing: load> 100% of seats
Active Travel	Bonnyrigg is poorly connected to routes leading into Edinburgh
	Sheriffhall junction is potentially hazardous to non-motorised users, no specific infrastructure in place
	Gaps in cycle lane provision along Old Dalkeith Road and Gilmerton Road

5.5 Policy Review: Summary of Problems and Opportunities

A review of the relevant national, regional and local transport and planning policy documents was undertaken to capture further problems and opportunities which relate to targeted and planned economic and social development, and key transport infrastructure plans.

Although not considered policy, a review of the following documents was also undertaken and relevant problems and opportunities have been included in the assessment:

- Transport for North: Strategic Transport Plan (Spring 2016 Update)
- Borders Railway Maximising the Impact: A Blueprint for the Future, 2014
- Edinburgh and South East City Deal Vision, 2016
- Campaign for Borders Rail: Summary Case for a new cross-border rail link, 2017

Additionally the Borderlands Initiative was also explored for input to the problem and opportunity identification process. The Borderlands Deal is being developed to address common economic and demographic challenges faced by the local authorities on both sides of the national border, especially in relation to low GDP, low wages, lack of economic diversification and outward migration by younger people. Two of the key aims in the initial Borderlands Proposition (developed by Dumfries & Galloway Council, Scottish Borders Council, Cumbria County Council, Carlisle City Council and Northumberland Councils) are to improve connectivity and to develop a low carbon economy using the vast renewable energy resources of the area.

Extending the Borders Railway from Tweebank to Carlisle is considered within the Borderlands Proposition, which notes the potential to develop local economies in this corridor and expand labour markets by improving accessibility. The proposition also notes the potential to increase accessibility for active travel and recreation in the area, and that there is potential for freight transport connected to the forestry sector.

5.5.1 Problems and Opportunities

The policy review identified nine problems and 15 opportunities covering several modes of travel, locations and routes. These problems and opportunities have been added to the full list in Appendix E.

Table 10: Problems and Opportunities, Policy Documents

Category	Problem	Opportunity
Road	High car dependency in the Scottish Borders	Route management: Edinburgh and North West England (A68/A7/A702), and Edinburgh and North East England (A1)
	Constrained road capacity [i.e. on A7, A68, A701]	
	Poor road connections to NE England	
	Transport deficit in comparison with links between Inverness, Aberdeen and Perth	
Public Transport	Constrained capacity on Borders Railway corridor	New Rail Stations at Reston and East Linton
	Long rail journey times to major destinations in Scotland and England	
Active Travel		Disused railway lines in green belts offering considerable opportunities for walking and cycling access
Accessibility and Connectivity	Poor connectivity and accessibility in SEStran area to key gateways for both passengers and freight	Edinburgh and South East City Deal for improving connectivity, creativity, inclusivity and business development
		Investment in TransPennine Express services between Edinburgh, Newcastle and Manchester
Economy and Development	Land Use Planning may cause further capacity constraints on links to the Scottish Borders	Conversion of Tweedbank Industrial Estate to Central Borders Business Park
	Considerable out-commuting to Edinburgh and Newcastle	Land Use Planning with approx.10,000 homes allocated for Scottish Borders
		Scottish Borders 'Strategic Development Areas'
		Borders Railway Investment Fund
		Supporting opportunities for higher value employment - particularly in 'Knowledge Intensive Business Services'
		SESplan 'Cross Boundary Transport Contributions Framework'
		Borders Railway key driver of employment and residential opportunities
Socio-Political		Opportunities for high quality education and superior environmental quality
		Borderlands Initiative seeks to deliver opportunities in rural areas of southern Scotland and northern England
		Heriot-Watt University, Scottish Borders Campus in Galashiels

5.6 Issues

The following issues have been identified:

- **Issue 1: Transport and Land Use in neighbouring Local Authorities**

Committed and proposed developments located in Midlothian, particularly around the key transport corridors linking the Scottish Borders to Edinburgh, pose a significant issue for the current and future performance of the transport network. This has been identified from the stakeholder engagement exercise and analysis of SRM12 outputs. The routes of particular concern are:

- A7, A68 and Borders Railway for Gorebridge, Newtongrange and Eskbank (Midlothian)
- A701, A702 and A703 towards the west for Straiton and Easter Bush (Midlothian)
- A1 and East Coast Main Line corridor, particularly at Blindwells and East Linton which is located between Edinburgh and the proposed Reston Station (East Lothian)

The A701 Relief Road scheme in Midlothian aims to relieve road performance issues on the existing A701 route, as well as providing a link to the A703 and A702. Whilst the scheme is likely to provide an improvement for road users between the Scottish Borders and Edinburgh, it is still identified as an issue as the study is unable to influence the outcome of the scheme.

- **Issue 2: Internet / Broadband Connectivity**

Broadband connectivity is not directly within the remit of local, regional and national transport bodies. This study will, however, highlight the significance broadband connectivity can have on reducing the need to travel, along with encouraging people and businesses to locate in the Scottish Borders.

- **Issue 3: Government Funding and Cuts**

The study must work within the context of available budget and resource to Scottish Borders, SEStran and Transport Scotland, especially when public funds and resources are currently being stretched. Key stakeholders highlighted the struggle for funding for community transport, including increased reliance on volunteers to assist in the delivery of community transport.

5.7 Constraints

The following constraints have been identified:

- **Constraint 1: Physical Constraints**

Landscape

The Scottish Borders is an extremely rural area in places and, as such, has many geographical constraints. In particular, settlements are sparsely located throughout the region as a result of the hilly topography. This topography constrains the ability to travel and to deliver public transport effectively. Difficult topography can also constrain potential infrastructure solutions due to higher delivery costs and environmental concerns.

Rail Network

There are constraints with the existing rail network as highlighted through stakeholder engagement, data analysis and policy review. These include the lack of capacity most notably on approaches and junctions towards Edinburgh Waverley (including the station capacity itself) and timetabling. Given the physical limitations of increasing capacity on the network, as well as developing new timetables, the study will have to work within these constraints in relation to the sifting of potential rail options.

- **Constraint 2: Institutional Boundary Constraints – Policies, Revenue and Funding**

Scottish Border with England

Given the Scottish Borders sits on the border between Scotland and England, this will naturally pose challenges in delivering cross-border transport schemes. This is attributable to differences in the appraisal and delivery mechanism of transport schemes such as STAG and WebTAG; planning policies; sources of funding and the many stakeholders involved. In general, this is seen as a constraint, however The Borderlands Initiative presents the opportunity to enable and further formalise cross-boundary cooperation, as well as provide a joined-up approach to deliver cross-border transport schemes.

Regional Boundaries

Any problems or options that relate to areas out with the Scottish Borders will involve the need for collaborative working between the Scottish Borders, South Lanarkshire, East Lothian, Midlothian, West Lothian and City of Edinburgh Councils. Although this may be a constraint to the study and options that could cross these boundaries, the role of SEStran can help facilitate these collaborations.

Revenue and Capital Funding

The STAG process will ensure that the financial implications of options are fully assessed to ensure value for public money. As well as capital expenditure, where applicable, this includes taking cognisance of potential on-going revenue commitments to support

maintenance and operation, which may including instances where funding would be required from other agencies.

As the key markets of Edinburgh, Newcastle and Carlisle identified for the purposes of this pre-appraisal are all within different local authority areas, the requirement for extensive collaborative working to ensure political and financial support for potential schemes brought forward presents a potential deliverability constraint.

- **Constraint 3: Bus Deregulation and Funding**

The study must take into account the regulation of bus services and associated constraints with this. The Scottish Borders has a history of bus services being supported by the local council because of unprofitable routes. These are often vital transport links to the communities they serve, however services are constrained by the funds available. The study has taken cognisance of this, along with the expected changes from West Coast Motors taking over First Borders services will have on the delivery of bus services in the study area.

Objective Setting

06

JACOBS®

6.1 Introduction

This chapter sets out the Transport Planning Objectives for the study which reflect the identified problems and opportunities, and express the outcomes sought for the study.

The development of the TPOs has been informed by:

- problems and opportunities identified through stakeholder engagement, outcomes from a comprehensive review of policy, and analysis of data and SRM12 model outputs (as discussed in Chapter 5);
- the wider established transport, land use planning and economic policy context; and
- discussions with the Project Working Group.

The objectives have been developed and expressed with SMART principles in mind, such that they will be:

Specific: it will say in precise terms what is sought.

Measurable: there will exist means to establish to stakeholders' satisfaction whether or not the objective has been achieved.

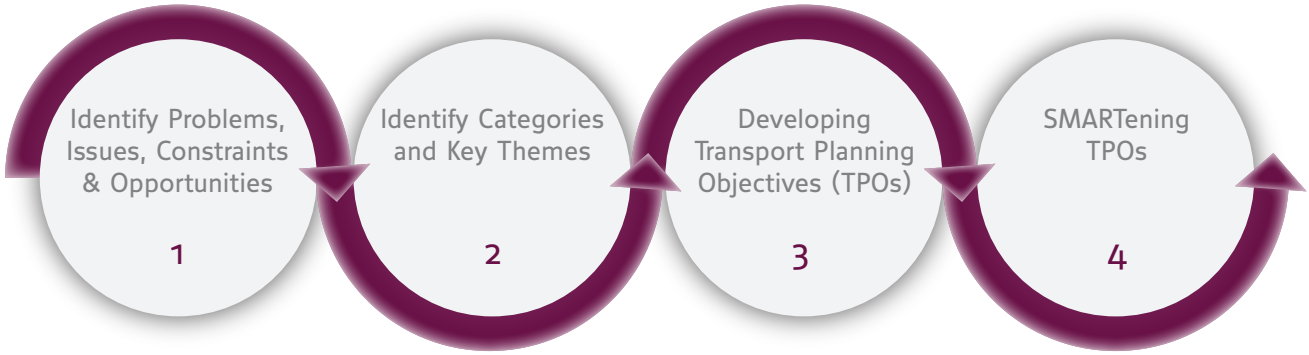
Attainable: there is general agreement that the objective set can be reached.

Relevant: the objective is a sensible indicator or proxy for the change which is sought.

Timed: the objective will be associated with an agreed future point by which it will have been met.

The is no STAG requirement for SMART objectives at Pre-Appraisal. However, it is considered helpful to have the objectives framed such that they can be "SMARTened" as the options are refined and developed.

6.2 TPO Development Process



The development of the Transport Planning Objectives (TPOs) is underpinned by a fully auditable, four-step approach.

A mapping exercise has been undertaken to clearly show the linkage between the identified problems / opportunities and objective themes, and subsequently the TPOs. For clarity, output from the mapping exercise for a selected objective theme is shown in Figure 10 below and the full mapping process is shown in Figure 52 in Appendix G to this report.

STEP 1: Identifying Problems, Opportunities, Issues and Constraints

A fundamental part of the Scottish Transport Appraisal Guidance (STAG) process is the identification of problems (both actual and perceived) and opportunities within the current and future transport system.

Problems and opportunities have been identified through four key tasks:

- Stakeholder engagement;
- Data analysis;
- Analysis of SEStran Regional Model (SRM12) outputs and review of Cross Boundary Study Report Final (April 2017); and
- Review of national, regional and local policy documents.

Identifying issues and constraints is also an important part of the STAG process and have been considered in parallel to the identification of problems and opportunities, as described in Chapter 5.

A total of **246 individual problems** and **95 individual opportunities** have been identified.

Mapping from left to right, the problems, issues, constraints and opportunities have been linked into the appropriate theme(s) and subsequently into the appropriate objective(s). This has enabled the objective setting process to remain focussed on setting objectives that alleviate the identified problems and address the identified opportunities. Furthermore, this process then provides an efficient means to assist in the sifting of potential options.

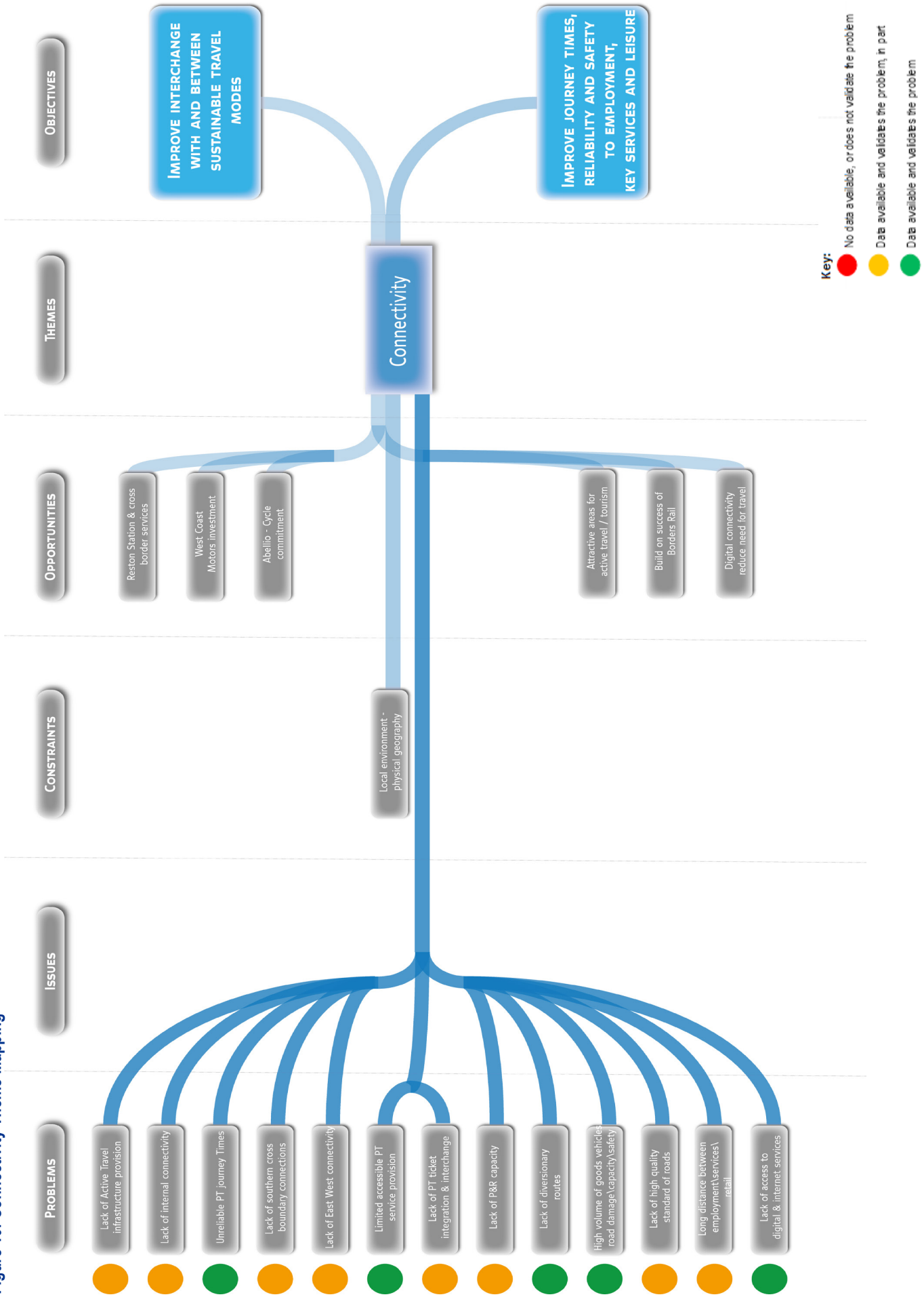


Figure 10: Connectivity Theme Mapping

STEP 2: Identifying Categories and Key themes

A fundamental part of the Scottish Transport Appraisal A review of the individual problems and opportunities identified through the four tasks listed above was undertaken and this highlighted that many were very similar and, as such, were grouped into broad categories and then more specific themes for ease of assessment.

The following broad categories were identified:

Problem Themes

- **Connectivity & Accessibility**
- **Active Travel**
- **Public Transport**
- **Roads**
- **Socio-Economic**

Opportunity Themes

- **Connectivity & Accessibility**
- **Economy & Development**
- **Leisure & Tourism**
- **Socio-Political**

A total of 34 problem themes and 21 opportunity themes were identified through the stakeholder engagement. The themes are described in more detail in Chapter 5.

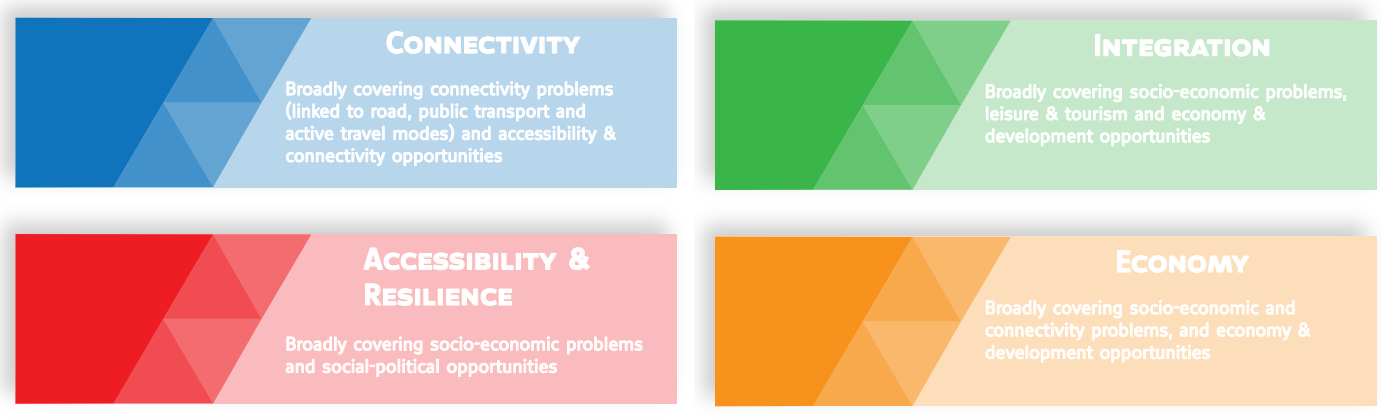
Similarly, individual problems and opportunities highlighted through the other key tasks were also grouped in to the broad categories and then more specific themes.

As a result, a total of **36 problem themes** and **25 opportunity themes** have been identified.

STEP 3: Developing Transport Planning Objectives (TPOs)

The Transport Planning Objectives (TPOs) need to express the outcomes sought for the study and describe how the identified problems (and root causes) will be alleviated, whilst avoiding indications of potential solutions. The TPOs should also reflect the opportunities to be grasped.

Based on the outputs from Step 1 and Step 2, four objective themes have been identified from which the TPOs have been derived:



Transport Planning Objectives

The Transport Planning Objectives for the Borders Transport Corridors Study at Pre-Appraisal are:

TPO 1 Improve interchange with and between sustainable transport modes.

TPO 3 Integrate transportation and land-use opportunities to capitalise on the built and natural environment.

TPO 2 Improve journey times, reliability and safety to employment, key services and leisure.

TPO 4 Reduce business transport costs for economically competitive sectors

TPO 1 is focussed on alleviating the problems and addressing the opportunities, including those affecting the overall public transport network, connecting bus & rail and further integrating active travel in the Scottish Borders.

TPO 2 is focussed on alleviating problems related to connecting travel modes, road network performance, as well as providing more reliable and efficient travel for residents to access key services and employment opportunities.

TPO 3 is focussed on alleviating problems that act as barriers to linking key development areas with a good transport network while maintaining the high quality natural environment of the Scottish Borders, which is a key attractor of visitors to the area.

TPO 4 is focussed on improving the competitiveness of local businesses in the Scottish Borders, by helping to alleviate key problems such as transport related costs and transport network integration. The outcome could be one that promotes the local economy by providing improved accessibility to the transport network for businesses to efficiently and effectively access key markets and high skilled workforce.

STEP 4: Smartening the TPOs

SMART TPOs can be challenging to set but are a necessary aid in determining the success of post-implemented options. At Pre-Appraisal, however, there is no requirement for the TPOs to be set with any specific targets or indicators. They have been developed so that they can be SMARTened as the options are refined and developed.

As part of this process, a simple traffic light system has been used to highlight the potential difficulty in SMARTening the TPOs, as shown in table 11 below. Each SMART principle has been coloured green, orange or red (with green indicating SMARTening could be achieved without difficulty; orange indicating SMARTening could be achieved but with some difficulty; and red indicating SMARTening could be very difficult or unable to achieve).

Table 11: SMARTening the TPOs

SMARTening the Transport Planning Objectives (TPOs)								
Problem Category	Opportunity Category	Objective Theme	TPO	Specific	Measurable	Attainable	Relevant	Timed
Public Transport (limited overall accessible PT provision)	Connectivity (physical and digital connections, technology reducing need to travel)	Connectivity	TPO 1: Improve interchange with and between sustainable travel modes	Yes - specifically linked to sustainable modes of travel	Whilst no targets specified yet, i.e. mode shift, these could be added later	All sustainable modes are currently catered for and so actions on these could be made attainable	Is specifically linked to both problems (and root causes) and opportunities	No timings identified at this time but could be added later
Connectivity (lack of East / West connectivity)								
Active Travel (lack of active travel infrastructure)								
Public Transport (lack of rail capacity)	Socio-political (encouraging / allowing younger people to stay in Borders)	Accessibility & Resilience	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	Yes - specifically linked to journey times & reliability and services & employment	Whilst no targets specified, i.e. specific time savings, these could be added later	Transport schemes regularly linked to journey time savings and reliability so can be made attainable	Is specifically linked to both problems (and root causes) and opportunities	No timings identified at this time but could be added later
Road (lack of diversionary / alternative routes)								
Socio-economic (high cost of living, long distances to employment / services, high levels of social deprivation in areas where access to employment is limited)								
Socio-economic (long distances to employment / services, struggling local economy contributing to retail closures)	Leisure & Tourism (build on area as tourism destination, outstanding built & natural environment, unique identity)	Integration	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	Yes - specifically linked to the areas of land-use and the quality of built and natural environment	No targets specified at this time and may be challenging to identify these	A wide range of examples where land use planning is linked to transport and shown to be possible and beneficial / attainable	Is specifically linked to both problems (and root causes) and opportunities	No timings identified at this time but could be added later
	Economy & Development (forestry, land-use planning - aspirational local development plan)							
Socio-economic (budgetary constraints, low local wages, high levels out-commuting / "brain drain"	Economy & Development (skilled local workforce, centre for timber and food / drink production and farming)	Economy	TPO 4: Reduce business transport costs for economically competitive sectors	Partly - links to the costs of transport and the economically competitive sectors, however doesn't specify what these are	Whilst no targets specified, i.e. specific cost savings, these could be added later	There are a number of economically competitive sectors in the Borders that could and would benefit from reductions in the costs of transport	Is specifically linked to both problems (and root causes) and opportunities	No timings identified at this time but could be added later
Connectivity (lack of east-west connectivity, poor digital coverage)								

6.3 TPOs and Wider Policy Context

A review of relevant policy documents that have been published since the first National Transport Strategy (NTS) in 2016 and Strategic Transport Projects Review (STPR) in 2008 has been undertaken to ensure that the Transport Planning Objectives (TPOs) set for the study align with the established national, regional and local policy directives, plans and strategies. The relevant policy documents are shown below.

The following figures demonstrate the fit of each TPO with the relevant objectives set out in these established policy documents. Each objective has been scored using the following convention:

✓ = fit

O = neutral

X = conflict

Figure 11: Hierarchical Policy Framework

National Transport Strategy 2016		TPO1	TPO2	TPO3	TPO4
High Level Objectives	Promote economic growth by building, enhancing, managing & maintaining transport services, infrastructure and networks to maximise their efficiency	✓	✓	✓	✓
	Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network	✓	✓	O	O
	Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy	✓	O	✓	O
	Improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff	O	✓	O	O
	Improve integration by making journey planning and ticketing easier and working to ensure smooth connection between different forms of transport	✓	✓	O	O
Key Strategic Objectives	Improved journey times and connections, to tackle congestion and lack of integration and connections in transport	✓	✓	O	✓
	Reduced emissions, to tackle climate change, air quality, health improvement	✓	O	✓	O
	Improved quality, accessibility and affordability, to give choice of public transport, better quality services and value for money, or alternative to car	✓	✓	O	O

Figure 12: TPOs vs NTS 2016

National Planning Framework 3	TPO1	TPO2	TPO3	TPO4
A sustainable, successful Place: Enterprise zones, City Investment Plans, aligning planning and infrastructure investment, support housing developments, investment in coastal and rural areas	O	O	✓	✓
A Low Carbon Place: Renewable sources, energy efficiency, community and locally-owned renewable energy, National Renewables Infrastructure Plan	✓	O	O	O
A Natural, resilient Place: Cycling Action Plan, National Walking Strategy, Scottish Biodiversity Strategy, Tourism Development Framework, Climate Change Adaptation	✓	✓	O	O
A Connected Place: Smart Cities, Infrastructure Investment Plan, Next generation Broadband, charging points, Scotland's Scenic Routes	✓	✓	✓	✓

Figure 13: TPOs vs NPF3

Strategic Transport Projects Review	TPO1	TPO2	TPO3	TPO4
Wealthier and Fairer Scotland: improvements in transport provision will generate savings for businesses and individual travellers, leading to improvements in economic welfare	✓	✓	○	✓
Smarter Scotland: promoting innovation and encouraging implementation of new transport technologies	✓	✓	○	✓
Healthier Scotland: encouraging a shift from car to public transport and to healthier and physically active forms of transport, and by improving transport access to health and community services	✓	✓	✓	○
Safer and Stronger Scotland: improving the quality, accessibility and affordability of public transport to provide access to essential services and ecoomic opportunities, reduction of accidents through improvement of the condition of roads infrastructure	✓	✓	○	○
Greener Scotland: promoting public transport as well as encouraging the adoptation of new low carbon technologies and promoting cleaner vehicles, provide attractive alternatives to the car.	✓	○	✓	○

Figure 14: TPOs vs STPR

Programme for Government 2016-17	TPO1	TPO2	TPO3	TPO4
Growing a productive, sustainable economy with more jobs and fair work	○	○	○	✓
Improved journey times	✓	✓	○	○
Reduced emissions to tackle climate change and improve air quality and health	✓	○	○	○
Improved accessibility and affordability	✓	✓	○	○
Reduce the demand for transport	○	○	✓	○
Facilitate modal shift to more sustainable forms of decarbonised vehicles	✓	○	○	○
Make the transport network as efficient as possible	✓	✓	✓	✓
Encourage transfer of freight to more sustainable modes	○	○	✓	✓

Figure 15: TPOs vs Programme for Government 2016-17

Scottish Borders Economic Strategy 2023	TPO1	TPO2	TPO3	TPO4
Creating the Conditions for Businesses to Compete: enourage new business start-ups and growth of existing, ensure new land premises are developed to enable relocation and growth, cost effective access to Next Generation Broadband - a good road network & key infrastructure, grow activity in key local sectors, maximise recreational, retail and cultural opportunities, attract new businesses to the Scottish Borders	○	○	✓	✓
Building on our Assets: maximise the economic development potential of Borders Railway, develop business -FE/HE around Scottish Borders Campus, increase tourism and leisure visitors, encourage integrted and multipurpose land-use, a framework allowing communities to contribute to economic growth	○	○	✓	○
Developing the Workforce of the Future: bring more young people and other job seekers into employment, support employers to address skills deficiencies, attract talented & entrepreneurial people who place a high value on access & quality of life, encourage people to develop new entrepreneurial and business skills	○	○	○	○
Providing Leadership: encourage and support transition to a low carbon economy, provide political leadership and promote the case for Scottish Borders at Scottish, UK and EU levels, coordinate and collaborate across activities and budgets, ensure that spending by Community Planning Partners has a positive impact on the economy	○	○	○	○

Figure 16: TPOs vs Scottish Borders Economic Strategy 2023

SEStran Regional Transport Strategy 2015-2025	TPO1	TPO2	TPO3	TPO4
Economy - to ensure transport facilitates economic growth, regional prosperity and vitality in a sustainable manner	○	✓	✓	✓
Accessibility - to improve accessibility for those with limited transport choice (including disabled people) or no access to a car, particularly those who live in rural areas	✓	✓	○	✓
Environment - to ensure that development is achieved in an environmentally sustainable manner	✓	○	✓	○
Safety and Health - to promote a healthier and more active SEStran area population	✓	✓	○	○

Figure 17: TPOs vs SEStran RTS 2015-2025

SESplan Approved Development Plan 2013-2032	TPO1	TPO2	TPO3	TPO4
Enable growth in the economy by developing key economic sectors, acting as the national hub for development and supporting local and rural development	○	○	○	✓
Set out a strategy to enable delivery of housing requirments to support growth and meet housing need and demand in the most sustainable locations	○	○	✓	○
Integrate land use and sustainable modes of transport, reduce the need to travel and cut carbon emissions by steering new development to the most sustainable locations	✓	✓	✓	○
Conserve and enhance the natural and built environment	○	○	✓	○
Promote green networks including through increasing woodland planting to increase competitiveness, enhance biodiversity and create more attractive, healthy places to live	○	○	○	○
Promote the development of urban brownfield land for appropriate uses	○	○	✓	○
Promote the provision of improved infrastructure to enhance connectivity within the area, between the area and other parts of the UK and elsewhere to support economic growth and meet the needs of communities	✓	✓	○	✓
Contribute to the response to climate change through mitigation and adaptation and promote high quality design / development	○	○	✓	○

Figure 18: TPOs vs SESplan RTS 2015-2025

SESplan Proposed Development Plan 2018-2038	TPO1	TPO2	TPO3	TPO4
				
A Place to do Business - Locations for investment, a low carbon economy	○	○	○	✓
A Place for Communities - Increasing housing delivery, thriving town centres, Enhanced Green Networks	○	○	✓	○
A Better Connected Place - Supporting Non-car travel, Regional Walking and Cycling, Strategic Transport Improvements	✓	✓	○	✓

Figure 19: TPOs vs SESplan Proposed Development Plan 2018-2038

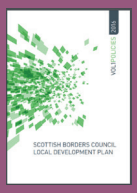
Scottish Borders Local Development Plan 2016-2025	TPO1	TPO2	TPO3	TPO4
				
To provide an adequate range and quality of land and premises for business and industry	○	○	✓	✓
To protect strategically important business opportunities	○	○	○	✓
To promote the development and regeneration of town centres	○	○	✓	○
To provide a generous supply of land for mainstream and affordable housing	○	○	○	○
To encourage better connectivity by transport and digital networks	✓	✓	○	✓
To protect and enhance the natural and built environment	○	○	✓	○
To protect important open space	○	○	○	○
To promote green network linkages around towns	✓	○	✓	○
To integrate climate change adaptation requirements such as flood preventation and sustainable renewable energy production	✓	○	○	○
To make adequate provision for waste management	○	○	○	○

Figure 20: TPOs vs Scottish Borders LDP 2016-2025

Scottish Borders Local Transport Strategy 2007-2008	TPO1	TPO2	TPO3	TPO4
				
To ensure a safer and more sustainable environment	✓	○	✓	○
To help address the issues highlighted in the Council's Structure and Community Plans	○	○	○	○
To maximise personal mobility and accessibility for all	✓	✓	○	○
To promote and improve healthy modes of transport	✓	○	○	○
To reduce social exclusion throughout the Council area	✓	○	✓	○
To enhance the local economy and provide improved transport to, from and within the Scottish Borders	✓	✓	○	✓

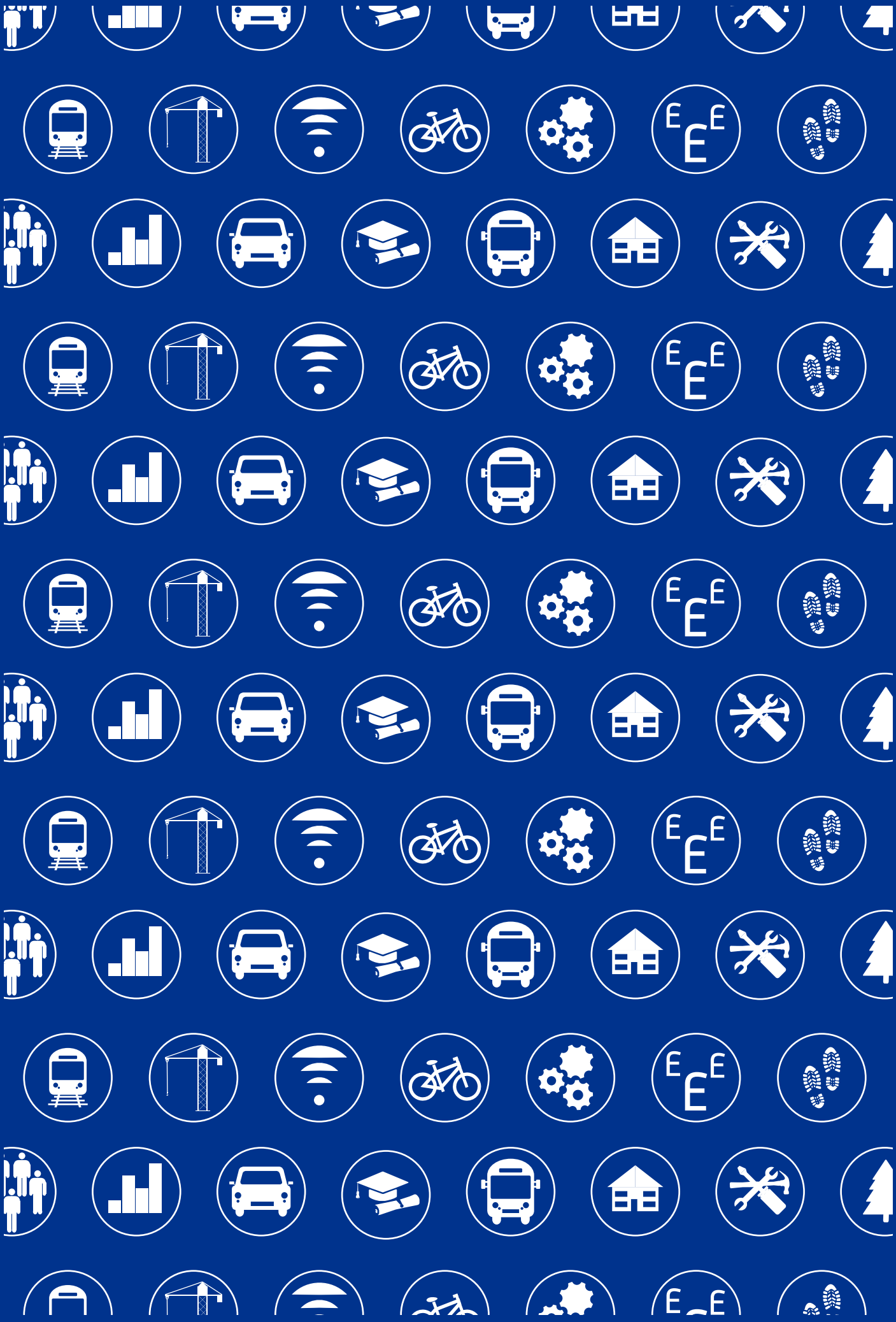
Figure 21: TPOs vs Scottish Borders LTS 2007-2008

Scottish Borders Local Access & Transport Strategy 2015	TPO1	TPO2	TPO3	TPO4
				
The improvement of strategic routes to market	○	✓	○	✓
To help promote and develop the newly constructed Borders Rail Service	✓	✓	○	○
The development of a strategic cycling and walking network throughout the Scottish Borders	✓	○	○	○
The promotion of improvements to the public transport network	✓	✓	○	○
To help provide a more integrated and connected transport network in the Scottish Borders	✓	✓	✓	✓
To help promote and deliver more vibrant town centres	○	○	✓	✓
To deliver a safer and better maintained road network	○	✓	○	✓
To help promote low carbon transport and measures to help reduce the need to travel such as digital connectivity	○	○	✓	✓
The provision of a network of charging points for electric vehicles	✓	○	○	○

Figure 22: TPOs vs Scottish Borders Local Access & Transport Strategy 2015

Midlothian Local Development Plan 2014	TPO1	TPO2	TPO3	TPO4
				
To implement the requirements of the Strategic Development Plan for South East Scotland (SESplan)	○	○	○	○
To contribute to the delivery of successive Midlothian Single Outcome Agreements	○	○	○	○
To support the development of a vibrant, competitive and sustainable local economy	○	○	○	○
To safeguard and enhance Midlothian's natural and built heritage, which sustains the quality of life of its communities	○	○	○	○
To respond robustly to the challenges of mitigating climate change and adapting to its impacts	○	○	○	○
To provide positively for development which secures long-term social, economic and environmental benefits for existing and new residents, and not just short-term gain	○	○	○	○
To identify and implement a Green Network for Midlothian consistent with national and regional green network projects	○	○	○	○
To help ensure that Midlothian is a welcoming and enriching place to live, work and visit	○	○	○	○

Figure 23: TPOs vs Midlothian LDP 2014



Option Generation, Sifting and Development

07

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7.1 Introduction

The next step in the STAG Pre-Appraisal process is to generate a wide range of options which could meet the Transport Planning Objectives, and alleviate the identified problems and address the potential opportunities across the Scottish Borders transport and land use system.

As stipulated in STAG, the Option Generation process should not be unreasonably constrained at the start of the process. As such, option generation has been informed by four key tasks helping to encourage new potential options in addition to those which have been proposed for some time:

- outcomes from a comprehensive review of relevant policy documents;
- options challenge workshops;
- discussions with the Project Working Group; and
- suggestions from stakeholders.

Approximately 270 individual options were generated from the tasks listed above, some of which were not linked to specific locations or routes / corridors but rather more representative of the Scottish Borders transport network as a whole. Given the geographic extent of the Scottish Borders, no one measure will provide a solution to the transport problems and address all the opportunities within the study area. It is likely that the most effective solutions will consist of packages of different measures.

A review of the individual options was undertaken and this showed that many were very similar and, as such, were grouped into single options. Further refinement was undertaken removing generic options which were not considered transport options. Approximately **100 individual options** have been generated.

7.2 Do-Minimum and Reference Case

STAG requires the establishment of Do-Minimum and Reference Case Scenarios.

- **Do-Minimum Scenario:** represents the current road network infrastructure along with committed, future year transport improvement measures and land-use developments. The Do-Minimum represents the baseline in which all potential options are measured.
- **Reference Case:** includes other non-controversial but as yet uncommitted schemes and which can be used as a baseline for option comparison.

The Do-Minimum forms a natural part of the Option Development process and would be created using an existing LATIS transport model, or through the creation of a new transport model. However, no new transport modelling has been undertaken as part of this study.

It is recommended that a comprehensive review of the existing SEStran Regional Model 2012 (SRM12), used in the Cross Boundary Study (April 2017), and the Analysis of Problems and Opportunities task in this study, is undertaken in any subsequent appraisal work to determine its appropriateness in providing the quantitative basis in which to test the generated options, but also to maintain consistency in modelling approach throughout later stages of the appraisal.

7.3 Option Sifting

The STAG process allows option sifting to be undertaken. This is particularly relevant when an unmanageably large number of options have been generated or where there is general consensus that a particular option, or options generated, are not expected to achieve the intended Transport Planning Objectives or meet the identified transport problems and / or opportunities.

Due to the strategic nature of the Scottish Borders Transport Corridors Study Pre-Appraisal, we have worked with Scottish Borders Council to identify those options which are local in nature and would not therefore address the problems and/or opportunities at the strategic level of the study. Although they have been 'sifted' from the option long list, they remain available to be taken forward for further consideration by Scottish Borders Council. Similarly, options were also identified as out of scope for this Pre-Appraisal study and these have been highlighted to both Scottish Borders Council and SEStran for further consideration.

The remaining options have thus been sifted based on STAG guidance whereby, it is recommended that options which are not expected to meet the objectives should be removed from further consideration. Conversely, and whilst recognising that in most cases there is limited quantifiable information available, it is equally important to avoid sifting out any options too early until unequivocal evidence demonstrates the option will not deliver against the objectives or alleviate the identified problems and address the potential opportunities.

7.3.1 Method of Approach

The Option Generation and Sifting process was undertaken using a three-staged approach as shown in Figure 24 and is described in more detail below.

Figure 24: Option Generation and Sifting Methodology

Stage 1 - Generate Long List of Options and Initial Sifting out

This initial stage involved generating a long list of options from various sources and stakeholder input. The long list of options was grouped in to one of the following categories:

- Strategic / Regional
- Local
- Out of Scope

An initial sifting out of options was undertaken for options that fell in to Local or Out of Scope categories, leaving 65 individual strategic / regional options reflecting the strategic nature of the study. Whilst the Local and Out of Scope options sifted out at this stage do not fall within the scope of this Pre-Appraisal study, they could be considered further by Scottish Borders Council and SEStran Regional Transport Partnership.

Stage 2 - Strategic / Regional Options assessed against Transport Planning Objectives (TPOs)

A graded approach was adopted where the Strategic / Regional options were grouped into the following categories:

- Expected to meet the objectives and are therefore selected (✓)
- Uncertainty in meeting the objectives, but select for next stage (O)
- Not expected to meet the objectives and are therefore sifted out (X)

From Stage 2, no options were removed because each option has the potential to deliver against the Transport Planning Objectives (TPOs). Therefore, 65 individual options remained at this stage. The high level qualitative appraisal of the 65 options against the TPOs is provided in Appendix H to this report.

Stage 3 - Implementability Appraisal

In this third and final stage, two main tasks were undertaken:

- **Options Challenge Workshops**. The main purpose of the workshops was to further refine the options and validate the implementability appraisal. This process involved a degree of rationalisation where similar individual options were consolidated into a single option, for example:
  - Three individual options each identifying an express bus to each of the three key market towns of Edinburgh, Newcastle and Carlisle, were consolidated into one option: Express Bus Service – Provision of express bus services to key external markets (Edinburgh, Newcastle and Carlisle, including airports).
- **High level qualitative implementability appraisal** to highlight potential issues / risks associated with delivery of the emerging multi-modal options. The appraisal covered the following criteria:
  - feasibility [i.e. technical/operational issues]
  - affordability [i.e. capital/revenue costs/value for money]
  - acceptability [i.e. public/political].

Further details on the implementability criteria are provided in Appendix I to this report.

From this third and final stage, **21 multi-modal options** have been recommended for either the upcoming Strategic Transport Projects Review (STPR) or further development by partner organisations and third parties. The options and rationale for selection at this stage of the STAG process are described below and cover the following option types:

- Accessibility
- Active Travel
- Connectivity
- Freight
- Park and Ride
- Public Transport
- Road

The sifted out options and rationale for removing at this stage of the STAG process are provided in Appendix J to this report.

Recommended Multi-Modal Options for Further Consideration

Option 1
Type of Option: Accessibility
Title: Increase Bus Services to Strategic Health Service Facilities
Description: Increase bus service provision between Scottish Borders and Borders General Hospital and other strategic health facilities [e.g. Edinburgh Royal Infirmary]

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	✓	O

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "integrate transportation and land-use opportunities to capitalise on the built and natural environment" by increasing bus service provision to the Borders General Hospital and Edinburgh Royal Infirmary as well as other strategic health facilities serving the Scottish Borders region. It is expected that this option would score positively against STAG criteria, in particular Accessibility and Social Inclusion criteria. This option would also contribute to several national objectives such as Scottish Government's strategic objective "Healthier Scotland."

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected. Delivery of this option should be relatively straightforward and it would augment existing bus services, however there would need to be strong collaborative working between the public sector, other relevant organisations and bus service operators.
Affordability	This would be a low to moderate revenue option. This option could make use of existing public sector or community vehicles but would be dependent on securing public or private sector revenue funding. It is expected that this option could meet the objectives in a cost effective manner.
Acceptability	It is expected that this option would have public support as it would augment existing bus services and improve service provision to key health services. The option also aligns well with established wider policy directives, plans and strategies.

Option 2
Type of Option: Accessibility
Title: Improve Physical Access to Strategic Public Transport Services
Description: Improve physical accessibility to public transport through infrastructure and on public transport vehicles for people with mobility or sensory impairment on strategic routes

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	O	O

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes" and to "improve journey times, reliability and safety to employment, key services and leisure" by improving physical accessibility to public transport through infrastructure and on public transport vehicles for people with mobility or sensory impairment on strategic routes. This option could include provision of low-floor, easy access vehicles and features to assist people with sensory impairments where these are not currently provided as well as infrastructure at bus stops such as shelters, benches and raised boarding kerbs. It is expected that this option would score positively against STAG criteria, in particular Accessibility and Social Inclusion criteria. This option would also contribute to several objectives set out in national, regional and local policy directives, plans and strategies, including those within the National Transport Strategy, SEStran Regional Transport Strategy and the Scottish Borders Local Access and Transport Strategy. Population data trends indicate that people over the age of 65 living in the Scottish Borders has increased year-on-year since the 2011 census, with average growth slightly higher than the national trend.

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected. Delivery of this option should be relatively straightforward but does require interfaces between the public sector and private sector bus operators in respect of improved vehicles.
Affordability	This would be a relatively low cost option. The cost of this option is driven by the need to provide infrastructure at bus stops as well as ongoing maintenance costs. This option would require capital and revenue funding, with some costs potentially being offset by advertising revenue streams in shelters where appropriate. It is expected that this option could meet the objectives in a cost effective manner.
Acceptability	This option is expected to have public and political support. The option also aligns well with established wider policy directives, plans and strategies.

Option 3
Type of Option: Active Travel
Title: Strategic Active Travel Network
Description: Implement a strategic active travel network and cross-boundary active travel measures [e.g. Peebles - Edinburgh], including provision around key services and public transport interchanges

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	✓	O

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "integrate transportation and land-use opportunities to capitalise on the built and natural environment" by implementing a strategic active travel network within the Scottish Borders region and cross boundary active travel measures, including provision around key services and public transport interchanges. It is expected that this option would score positively against STAG criteria, in particular Accessibility and Social Inclusion, and Integration criteria, and could also encourage a shift from car to active travel modes. This option would contribute to Scottish Government's strategic objective "Healthier Scotland" as well as contribute to "the development of a strategic cycling and walking network throughout the Scottish Borders" objective as set out in the Scottish Borders Local Access and Transport Strategy.

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected and the option should be relatively straightforward to deliver.
Affordability	This would be a low to moderate cost option. It would require capital funding and associated ongoing maintenance costs. It could be difficult to quantify the monetised benefits associated with the option, however it is expected that this option could meet the objectives in a cost effective manner.
Acceptability	This option is expected to have a strong element of local support.

Option 4
Type of Option: Freight
Title: Freight Route
Description: Implement a freight route signage strategy, including the provision of specific real time Satnav route information

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by implementing a freight route signage strategy across the Scottish Borders region. It is expected that this option would score positively against STAG criteria, in particular Economy and Safety, and could help to remove strategic HGVs movements from the local road network and improve journey times. This option would also contribute to national objectives, including "Make the transport network as efficient as possible" as set out in the Scottish Government's Programme for Scotland.

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected, but the SatNav element could be dependent on reliable signal coverage across the Scottish Borders. Delivering this option should be relatively straightforward, but could require the development of a driver awareness strategy.
Affordability	This would be a relatively low cost option and it is expected that this option could meet the objectives in a cost effective manner.
Acceptability	This option is expected to have public and political support, as well as strong support from freight organisations such as the Timber Transport Forum, Road Haulage Association and Freight Transport Association.

Option 5
Type of Option: Freight
Title: Develop Forestry Route Network
Description: Improve network of internal forestry tracks as well as its connections to roads and railway, including 'low-tech' timber pickup facilities

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	✓	✓

Rationale for Selection at this stage

This option should result in a reduction of the number of timber freight vehicles needing to use stretches of the strategic road network by improving the network of internal forestry tracks as well as its connections to roads and railway, including 'low-tech' timber pickup facilities. As a result, it would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure," to "integrate transportation and land-use opportunities to capitalise on the built and natural environment," and to "reduce business transport costs for economically competitive sectors". Access to 'low-tech' timber facilities is within the scope of the study, but the facilities themselves are not. This option would be implemented in line with current best practice.

Implementability Appraisal

Feasibility	There could be some technical issues, in particular connections with current rail infrastructure as well as land-ownership. The delivery of this option is not within Transport Scotland's remit, however Transport Scotland would work with and support organisations responsible where possible.
Affordability	This would be a low to moderate cost option, and would require on-going maintenance costs. It is expected that this option could meet the objectives in a cost effective manner.
Acceptability	This option is expected to have public and political support, as well as strong support from freight organisations such as the Timber Transport Forum, Road Haulage Association and Freight Transport Association.

Option 6
Type of Option: Park-and-Ride
Title: Increase Park and Ride Provision
Description: Increase capacity of existing Park-and-Ride sites and implement new Park-and-Ride schemes for all modes at strategic locations [e.g. Interchanges and Key Employment Areas]

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	✓	O

Rationale for Selection at this stage

This option would increase the capacity of existing Park-and-Ride sites and implement new Park-and-Ride schemes for all modes at strategic locations such as interchanges and key employment areas. In doing so it would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "integrate transportation and land-use opportunities to capitalise on the built and natural environment". It is expected that this option would score positively against STAG criteria, in particular Integration and Accessibility and Social Inclusion criteria, and would contribute to several objectives set out in national, regional and local policy directives, plans and strategies. This option would offer a more competitive alternative to the car and encourage a shift in mode from private car to public transport. This option would focus on creating a strategic public transport hub at Tweedbank and potentially at Stow.

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected. This option would be dependent on the provision of adequate bus services from the Park-and-Ride facilities. Delivery of this option should be relatively straightforward as Park-and-Ride facilities are currently operating successfully in several areas.
Affordability	This would be a low to moderate cost option. It is expected that this option could meet the objectives in a cost effective manner.
Acceptability	This option is expected to have public support as the option would encourage mode shift and potentially reduce congestion on busy routes.

Option 7
Type of Option: Public Transport
Title: Express Bus Services
Description: Provision of express bus services to key external markets (Edinburgh, Newcastle and Carlisle, including airports)

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	O	O

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes" and to "improve journey times, reliability and safety to employment, key services and leisure" by introducing express bus services to the key external markets of Edinburgh, Newcastle and Carlisle, including airports. This would significantly reduce travel times by bus, offer a more competitive alternative to the car and improve connectivity to these key markets. This option would contribute to several national, regional and local transport objectives, including 'The promotion of improvements to the public transport network" and "to help provide a more integrated and connected transport network in the Scottish Borders" as set out in the Scottish Borders Local Access and Transport Strategy.

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected. Delivery of this option should be relatively straightforward and it would augment existing bus services, however there would need to be strong collaborative working between the public sector, other relevant organisations and bus service operators.
Affordability	This would be a low to moderate revenue option but would be dependent on securing public or private sector revenue funding. It is expected that this option could meet the objectives in a cost effective manner.
Acceptability	It is expected that this option would have public support as it would augment existing bus services. The option also aligns well with established wider policy directives, plans and strategies.

Option 8
Type of Option: Public Transport
Title: East-West Bus Services
Description: Increase number and frequency of east-west bus services, including extending timetable into evening

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	O	O

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes" and to "improve journey times, reliability and safety to employment, key services and leisure" by increasing the number and frequency of east-west bus services, including extending timetables into the evening. This option would increase opportunities to travel by bus and would have a significant impact on the amount of time that could be spent in towns along east-west routes.

Implementability Appraisal

Feasibility	No significant technical or operational issues are expected. Delivery of this option should be relatively straightforward and it would augment existing bus services, however it would require reconfiguration of existing bus timetables and potentially additional bus fleets. There would also need to be strong collaborative working between the public sector, other relevant organisations and bus service operators.
Affordability	This would be a low to moderate revenue option but would be dependent on securing public or private sector revenue funding. It is expected that this option could meet the objectives in a cost effective manner.
Acceptability	It is expected that this option would have public support as it would augment existing bus services. The option also aligns well with established wider policy directives, plans and strategies.

Option 9
Type of Option: Public Transport
Title: Borders Railway Extension - South/West
Description: Extend the Borders Railway to Hawick and / or Carlisle

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by extending the Borders Railway to Hawick and / or Carlisle. This option would also contribute to several objectives set out in national, regional and local policy directives, plans and strategies, including contribution to the strategic aim of "building on our assets" as outlined in the Scottish Borders Economic Strategy and "to help promote and develop the newly constructed Borders Rail Service" as set out in the Scottish Borders Local Access and Transport Strategy. It is expected that this option would also score positively against most STAG criteria. The Borders Railway onboard passenger travel survey (March 2017) highlighted that 55% of respondents that use Tweedbank station travel from locations further south in the Scottish Borders, in particular, Selkirk, Hawick, Jedburgh and Kelso.

Implementability Appraisal

Feasibility	This option would be implemented in line with current best practice, with operation through the ScotRail franchise and Network Rail Scotland. There could be significant technical constraints and adverse environmental impacts which could affect the delivery of this option but, equally, could be mitigated at project design level.
Affordability	This would be a high cost option and therefore it may not meet the objectives in a cost effective manner.
Acceptability	This option has had significant public exposure and has received strong support from rail campaign groups, but could face some opposition due to potential impacts on the natural environment.

Option 10
Type of Option: Public Transport
Title: Borders Railway Extension - South/East
Description: Extend the Borders Railway towards East Coast Main Line (ECML) via Berwick-upon-Tweed

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by extending the Borders Railway towards the East Coast Main Line (ECML) at Berwick-upon-Tweed. This option would also contribute to several objectives set out in national, regional and local policy directives, plans and strategies, including contribution to the strategic aim of "building on our assets" as outlined in the Scottish Borders Economic Strategy and "to help promote and develop the newly constructed Borders Rail Service" as set out in the Scottish Borders Local Access and Transport Strategy. It is expected that this option would also score positively against most STAG criteria. The Borders Railway onboard passenger travel survey (March 2017) highlighted that 28% of respondents that use Tweedbank station travel from locations further to the east towards Berwick.

Implementability Appraisal

Feasibility	This option would be implemented in line with current best practice, with operation through the ScotRail franchise and Network Rail Scotland. There could be significant technical constraints and adverse environmental impacts which could affect the delivery of this option but, equally, could be mitigated at project design level.
Affordability	This would be a high cost option and therefore it may not meet the objectives in a cost effective manner.
Acceptability	Difficult to gauge level of support but could face some opposition due to potential impacts on the natural environment.

Option 11
Type of Option: Public Transport
Title: Enhanced Rail Services
Description: Increase the frequency, capacity and service quality of the existing Borders Railway [e.g. service capacity, bike storage, Wi-Fi, reliability and punctuality]

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	O	✓

Rationale for Selection at this stage

This option would increase the frequency, capacity and service quality of the existing Borders Railway by double tracking part, or all of, the existing Borders Railway and increasing frequency of existing Borders Rail services. It would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors." by. This option would also contribute to several objectives set out in national, regional and local policy directives, plans and strategies, including contribution to the strategic aim of "building on our assets" as outlined in the Scottish Borders Economic Strategy and "to help promote and develop the newly constructed Borders Rail Service" as set out in the Scottish Borders Local Access and Transport Strategy. It is expected that this option would also score positively against STAG criteria, in particular Accessibility and Social Inclusion, Economy and Integration.

Implementability Appraisal

Feasibility	This option would be implemented in line with current best practice, through the ScotRail franchise and Network Rail Scotland, and would provide a step change in capacity on the rail line. There could be significant technical constraints such as creating additional capacity at Waverley Station to accommodate additional services and adverse environmental impacts associated with double tracking part, or all, of the existing line which could affect the delivery of this option but, equally, could be mitigated at project design level.
Affordability	This would be a moderate to high cost option, with the main element of capital expenditure linked to providing additional sections of double tracking along the line. Additional revenue is likely to accrue and it may meet the objectives in a cost effective manner.
Acceptability	This option is likely to have strong public support.

Option 12
Type of Option: Public Transport
Title: New Rail Stations
Description: New rail stations on the existing Borders Railway

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	✓	O

Rationale for Selection at this stage

This option would contribute to the objectives to "improve interchange with and between sustainable travel modes," to "improve journey times, reliability and safety to employment, key services and leisure" and to "integrate transportation and land-use opportunities to capitalise on the built and natural environment" by building new railway stations on the existing Borders Railway. It is expected that this option would also score positively against STAG criteria, in particular Accessibility and Social Inclusion, Economy and Integration, and would further contribute to the strategic aim of "building on our assets" as outlined in the Scottish Borders Economic Strategy.

Implementability Appraisal

Feasibility	This option would be implemented in line with current best practice. There could be some potential environmental issues associated with new infrastructure which would need to be mitigated during construction phase of this option. There could be disruption to existing services during construction works. This option would also be dependent on planned residential and economic development and uptake along the rail corridor.
Affordability	This would be a low to moderate cost option but may not meet the objectives in a cost effective manner.
Acceptability	This option could have some negative opinions from those who have a desire to firstly see improvements to the existing services.

Option 13
Type of Option: Public Transport
Title: Extension of Borders Railway Services
Description: Link Borders Railway and Fife Circle, providing interchange at Edinburgh Gateway; West Edinburgh; and potential future link to Glasgow

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
✓	✓	✓	✓

Rationale for Selection at this stage

This option would contribute to all four objectives by linking the Borders Railway and Fife Circle, as well as providing an interchange at Edinburgh Gateway for access to the airport; West Edinburgh; tram services; and a potential future link to Glasgow. It is expected that this option would also score positively against STAG criteria, in particular Accessibility and Social Inclusion, Integration and Economy, and contribute to several objectives set out in the National Transport Strategy, SEStran Regional Transport Strategy and the Scottish Borders Transport and Economic Strategies. This option would reduce connection times, make interchange between modes more attractive and improve access to the north and west of Edinburgh.

Implementability Appraisal

Feasibility	Delivery of this option would be implemented in line with current best practice. No significant operational issues are expected, but could require enhanced signalling, reconfiguration of timetables and additional rolling stock. There would be capacity constraints at Edinburgh Waverley and on Fife Circle route.
Affordability	This would be a low to moderate cost option, as additional rolling stock could be required, as well as potential capacity enhancements in the Edinburgh area. This option could meet the objectives in a cost effective manner.
Acceptability	This option is likely to receive support from the public and rail campaign groups.

Option 14
Type of Option: Road
Title: A1 Dualling
Description: Complete the dualling of the A1 south of Edinburgh to the Scottish Border

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
0	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to “improve journey times, reliability and safety to employment, key services and leisure” and to “reduce business transport costs for economically competitive sectors” by dualling the A1 between Edinburgh and the Scottish Border. It is expected that this option would score positively against STAG criteria, in particular Safety and Economy, and further contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option would improve safety and journey times along the A1 corridor by providing a higher standard of road to the existing single dual carriageway sections. The estimated annual average daily traffic flow on the A1 within the Scottish Borders was 8,600 vehicles during 2016 (obtained from the Department for Transport).

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges associated with major road works, ground investigation works and potential re-alignment of carriageway during construction works. There could be major disruption to road users during construction. There may also be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a high cost option and may not meet the objectives in a cost effective manner.
Acceptability	The A1 Action Group, made up of Elected Members and Community Councils, has campaigned for the route to be dualled for many years and are also supportive of any potential improvement works. The Scottish Government is working closely with organisations south of the border, including Transport for the North (TfN) and Highways England and is committed to looking at various options to improve and upgrade the A1.

Option 15
Type of Option: Road
Title: A1 Safety Measures
Description: A1 package of safety measures and improvements [e.g. average speed cameras, climbing lanes and junction improvements]

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to “improve journey times, reliability and safety to employment, key services and leisure” and to “reduce business transport costs for economically competitive sectors” by implementing a package of safety measures and associated improvements along the A1. It is expected that this option would score positively against STAG criteria, in particular Safety, and contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option would have a significant impact on reducing the number and severity of accidents by providing improved road standards, in particular at known accident cluster locations, including between A1 / A1107 junction at Ayton and A1 junction near Hilton Bay, and between A1 / A1107 junction just south of Cocksburnpath and A1 roundabout at Cove.

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges and disruption to road users during junction improvement works and construction of climbing lanes. There may be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a moderate cost option and is likely to meet the objectives in a cost effective manner.
Acceptability	The A1 Action Group, made up of Elected Members and Community Councils, has campaigned for the route to be dualled for many years and are also supportive of any potential improvement works. The Scottish Government is working closely with organisations south of the border, including Transport for the North (TfN) and Highways England and is committed to looking at various options to improve and upgrade the A1.

Option 16
Type of Option: Road
Title: A68 Capacity Enhancement
Description: A68 capacity enhancement measures, such as partial dualling, bypass and overtaking lanes

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	X	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by introducing capacity enhancement measures along the A68 such as overtaking lanes, partial dualling and construction of a bypass at Lauder. It is expected that this option would score positively against STAG criteria, in particular Safety and Economy, and further contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option would improve safety and journey times along the A68 corridor by providing a higher standard of road to the existing single carriageway sections. This option would be delivered in line with current best practice. The estimated annual average daily traffic flow on the A68 within the Scottish Borders was 7,900 vehicles during 2016 (obtained from the Department for Transport).

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges associated with major road works, ground investigation works and potential re-alignment of carriageway during construction works. There may be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a moderate to high cost option and may not meet the objectives in a cost effective manner.
Acceptability	This option is likely to have public support but could face some opposition due to potential impacts on the natural environment. Residents may support any proposed bypass at Lauder as it would reduce traffic congestion in the town centre, however businesses may be unhappy at the prospect of losing passing trade.

Option 17
Type of Option: Road
Title: A68 Safety Measures
Description: A68 package of safety measures and improvements [e.g. complete Soutra South-Oxton improvement, average speed cameras, climbing lanes and junction improvements]

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by implementing a package of safety measures and associated improvements along the A68. It is expected that this option would score positively against STAG criteria, in particular Safety, and contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option would have a significant impact on reducing the number and severity of accidents by providing improved road standards, in particular at known accident cluster locations, including a three-mile stretch between A68 / A6091 junction and just south of Newton St Boswells, as well as through Lauder town centre.

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges and disruption to road users during junction improvement works and construction of climbing lanes. There may be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a moderate cost option and it is likely to meet the objectives in a cost effective manner.
Acceptability	This option is likely to receive support from the public.

Option 18
Type of Option: Road
Title: A7 Capacity Enhancement
Description: A7 capacity enhancement measures, such as partial dualling, bypass and overtaking lanes

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	X	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by introducing capacity enhancement measures along the A7 such as overtaking lanes, dualling and potential construction of bypasses at Galashiels, Selkirk, Hawick and Langholm aimed at removing long distance road trips from these town centres. It is expected that this option would score positively against STAG criteria, in particular Safety and Economy, and further contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option would improve safety and journey times along the A7 corridor by providing a higher standard of road to the existing single carriageway and would reduce conflict between strategic and local trips, and have more localised benefits such as reduced delays for both road and bus users. The Scottish Government is committed to looking at various options to improve and upgrade the A7 and has since made an initial investment to deliver immediate improvements. The estimated annual average daily traffic flow on the A7 within the Scottish Borders was 5,200 vehicles during 2016 (obtained from the Department for Transport).

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges associated with major road works, ground investigation works and potential re-alignment of carriageway during construction works. There may be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a moderate to high cost option and may not meet the objectives in a cost effective manner.
Acceptability	The A7 Action Group, which lobbies for improvements on the route, produced a new action plan in 2015 titled "2015 Onwards – A Continuing Vision" detailing aspirations for road improvement works. Selkirk and Langholm bypasses are detailed in the A7 action plan and both have strong support from the action group but could face some opposition due to potential impacts on the natural environment. Residents may support the bypasses as they would reduce traffic congestion in the town centres, however businesses may be unhappy at the prospect of losing passing trade.

Option 19
Type of Option: Road
Title: A7 Safety Measures
Description: A7 package of safety measures and improvements [e.g. average speed cameras, climbing lanes, junction improvements and appropriate diversionary routes]

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by implementing a package of safety measures and associated improvements along the A7, including appropriate diversionary routes. It is expected that this option would score positively against STAG criteria, in particular Safety, and contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option would have a significant impact on reducing the number and severity of accidents by providing improved road standards, in particular at known accident cluster locations, including A7 stretch from South Boleside, through Galashiels to the B710 junction at Bowland.

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges and disruption to road users during junction improvement works and construction of climbing lanes. There may be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a moderate cost option and it is likely to meet the objectives in a cost effective manner.
Acceptability	The A7 Action Group, which lobbies for improvements on the route, produced a new action plan in 2015 titled "2015 Onwards – A Continuing Vision" detailing aspirations for road improvement works and would therefore support this option. This option is also likely to receive support from the public.

Option 20
Type of Option: Road
Title: Secondary Network Safety Measures
Description: Package of safety measures and improvements to secondary road network performing strategic function

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by implementing a package of safety measures and associated improvements to the secondary road network where this performs a strategic function. These roads could be: A697 linking Scottish Borders to Northumberland; A698 (Hawick-Jedburgh-Kelso); A699; A703; and A72 at Peebles leading to A702. It is expected that this option would score positively against STAG criteria, in particular Safety, and contribute to objectives set out in national, regional and local policy directives, plans and strategies. This option could have a significant impact on reducing the number and severity of accidents by providing improved road standards.

Implementability Appraisal

Feasibility	This option would be delivered in line with current best practice. There could be some technical challenges and disruption to road users during junction improvement works and construction of climbing lanes. There may be some environmental issues which would need to be mitigated during planning and construction phases of this option.
Affordability	This would be a moderate cost option and it is likely to meet the objectives in a cost effective manner.
Acceptability	This option is likely to have public and political support.

Option 21
Type of Option: Road
Title: Enhanced Service and Rest Areas
Description: Service areas to include facilities for HGV rest stops, electric vehicle charging points, tourist facilities and coach layover

High Level Appraisal against Transport Planning Objectives

TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
O	✓	O	✓

Rationale for Selection at this stage

This option would contribute to the objectives to "improve journey times, reliability and safety to employment, key services and leisure" and to "reduce business transport costs for economically competitive sectors" by supporting service areas to include for example facilities for HGV rest stops, electric vehicle charging points, tourist facilities and coach layover.

Implementability Appraisal	
Feasibility	Delivery of this option should be relatively straightforward as it is anticipated that there would be no significant technical or operational issues with implementing this option.
Affordability	This would be a relatively low cost option. A potential funding source could come from grant funding by The Scottish Borders Council through the "ChargePlace Scotland" network for electrical vehicle charging points. This option could meet the objectives in a cost effective manner.
Acceptability	This option is likely to receive support from the public and the freight industry.

The recommended multi-modal options for either the upcoming Strategic Transport Projects Review (STPR) or further development by partner organisations and third parties are shown indicatively (where possible) for illustrative purposes only in Figure 24 below.

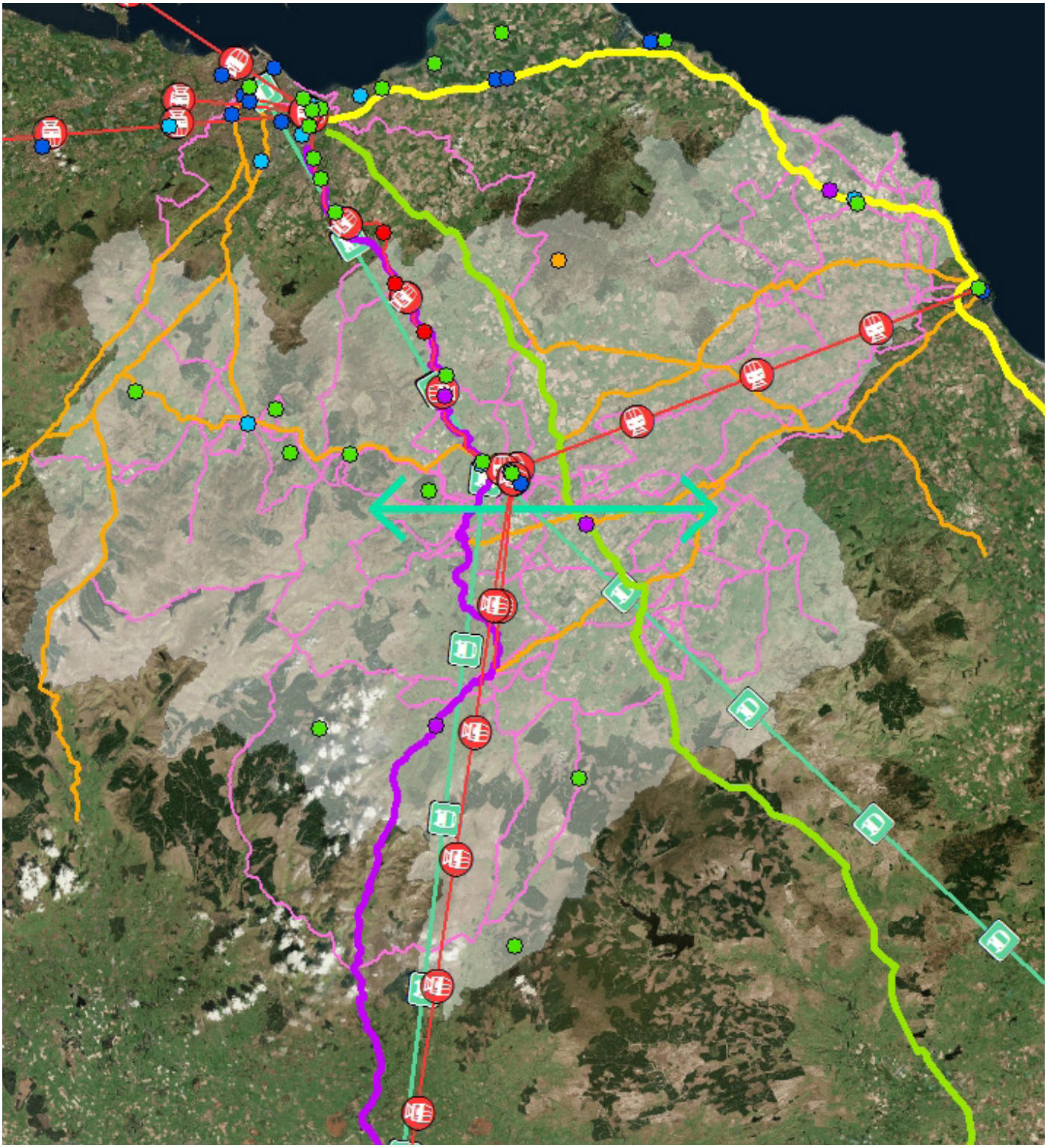

Figure 25: Recommended options for STAG Part I (indicative locations for illustrative purposes only)

Recommendations and Next Steps

08

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8.1 Recommendations and Next Steps

This Pre-Appraisal report has set the context for the appraisal of transport options for the Scottish Borders and for its key strategic connections to Edinburgh, Newcastle and Carlisle.

In line with STAG guidance, it has identified the key transport problems, opportunities, issues and constraints within the study area, which have formed the basis for objective setting and the generation of a wide range of options to be appraised.

The multi-modal options recommended for either the upcoming Strategic Transport Projects Review (STPR) or further development by partner organisations and third parties are listed in Table 12 opposite.

It is also recommended that a comprehensive review of the existing SRM12 model, used in the SESplan Cross Boundary Study (April 2017), and the Analysis of Problems and Opportunities task in this study, is undertaken in any subsequent appraisal work to determine its appropriateness in providing the quantitative basis in which to test the generated options, but also to maintain consistency in modelling approach throughout later stages of the appraisal.

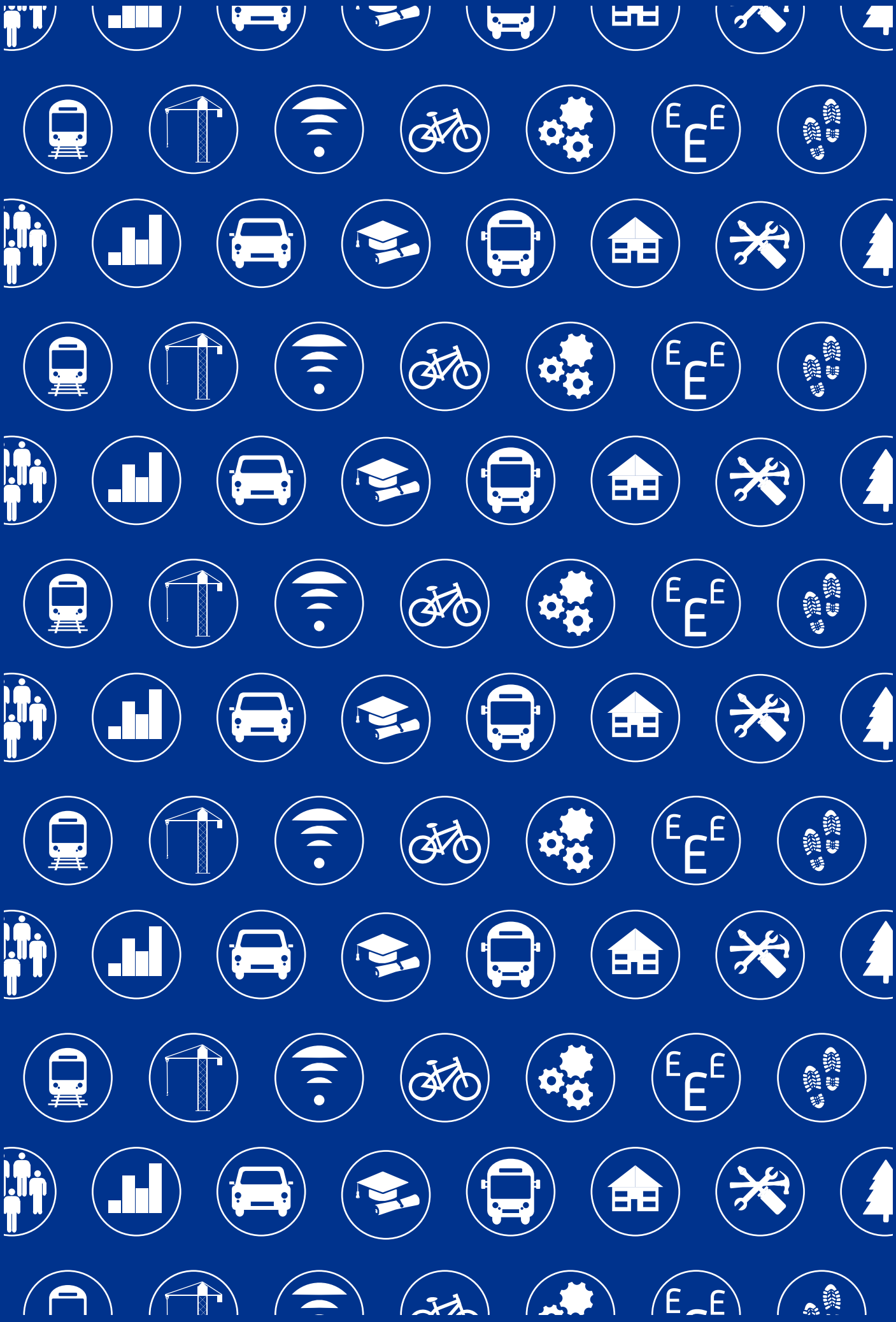
8.1 STAG Initial Appraisal (Part I)

The purpose of the initial appraisal would be to undertake an initial qualitative appraisal of the recommended options from Pre-Appraisal. This would include an assessment of:

- the likely impacts of the options against the Transport Planning Objectives;
- the likely impacts of the options against STAG criteria [i.e. Environment, Safety, Economy, Integration, and Accessibility and Social Inclusion];
- options against established policy directives; and
- feasibility, affordability and public acceptability of the options.

Option	Type	Title	Description
1	Accessibility	Increase Bus Services to Strategic Health Service Facilities	Increase bus service provision between Scottish Borders and Borders General Hospital and other strategic health facilities [e.g. Edinburgh Royal Infirmary]
2	Accessibility	Improve Physical Access to Strategic Public Transport Services	Improve physical accessibility to public transport through infrastructure and on public transport vehicles for people with mobility or sensory impairment on strategic routes
3	Active Travel	Strategic Active Travel Network	Implement a strategic active travel network and cross-boundary active travel measures [e.g. Peebles - Edinburgh], including provision around key services and public transport interchanges
4	Freight	Freight Route	Implement a freight route signage strategy, including the provision of specific real time Satnav route information
5	Freight	Develop Forestry Route Network	Improve network of internal forestry tracks as well as its connections to roads and railway, including 'low-tech' timber pickup facilities
6	Park and Ride	Increase Park and Ride Provision	Increase capacity of existing Park-and-Ride sites and implement new Park-and-Ride schemes for all modes at strategic locations [e.g. Interchanges and Key Employment Areas]
7	Public Transport	Express Bus Services	Provision of express bus services to key external markets (Edinburgh, Newcastle and Carlisle, including airports)
8	Public Transport	East-West Bus Services	Increase number and frequency of east-west bus services, including extending timetable into evening
9	Public Transport	Borders Railway Extension – South/West	Extend the Borders Railway to Hawick and / or Carlisle
10	Public Transport	Railway Extension – South/ East	Extend the Borders Railway towards East Coast Main Line (ECML) via Berwick-upon-Tweed
11	Public Transport	Enhanced Rail Services	Increase the frequency, capacity and service quality of the existing Borders Railway [e.g. service capacity, bike storage, Wi-Fi, reliability and punctuality]
12	Public Transport	New Rail Stations	New rail stations on the existing Borders Railway
13	Public Transport	Extension of Borders Railway Services	Link Borders Railway and Fife Circle, providing interchange at Edinburgh Gateway; West Edinburgh; and potential future link to Glasgow
14	Road	A1 Dualling	Complete the dualling of the A1 south of Edinburgh to the Scottish Border
15	Road	A1 Safety Measures	A1 package of safety measures and improvements [e.g. average speed cameras, climbing lanes and junction improvements]
16	Road	A68 Capacity Enhancement	A68 capacity enhancement measures, such as partial dualling, bypass and overtaking lanes
17	Road	A68 Safety Measures	A68 package of safety measures and improvements [e.g. average speed cameras, climbing lanes and junction improvements]
18	Road	A7 Capacity Enhancement	A7 capacity enhancement measures, such as partial dualling, bypass and overtaking lanes
19	Road	A7 Safety Measures	A7 package of safety measures and improvements [e.g. average speed cameras, climbing lanes, junction improvements and appropriate diversionary routes]
20	Road	Secondary Network Safety Measures	Package of safety measures and improvements to second-ary road network performing strategic function
21	Road	Enhanced Service and Rest Areas	Service areas to include facilities for HGV rest stops, electric vehicle charging points, tourist facilities and coach layover

Table 12: Recommended Multi-Modal Options for Further Consideration



Appendix - A
Data Sources

A

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Policy Documents

National Policy

- Transport Scotland – National Transport Strategy, 2016 Refresh
- Transport Scotland – Strategic Transport Projects Review, 2008
- The Scottish Government – National Planning Framework 3, 2014
- The Scottish Government – Programme for Government, 2016-2017

Regional Policy

- Scottish Borders Economic Strategy, 2023
- SESplan Approved Development Plan, 2013 – 2032
- SESplan Proposed Development Plan, 2018-2038
- SEStran Regional Transport Strategy, 2015 – 2025 Refresh

Local Policy

- Scottish Borders Local Development Plan, 2016 – 2025
- Scottish Borders Local Transport Strategy, 2007 / 2008
- Scottish Borders Local Access and Transport Strategy: Main Issues Report, 2015
- Midlothian Proposed Local Development Plan, 2016

Other Documents

- Campaign for Borders Rail: Summary Case for a new cross-border rail link, 2017
- Borders Railway Maximising the Impact: A Blueprint for the Future, 2014
- Transport for North: Strategic Transport Plan (Spring 2016 Update)
- Edinburgh and South East City Deal Vision, 2016

Socio-Economic Data

Table 13: Socio-Economic Datasets

Socio-Economic	Source	Description	Analysis Level
Small Area Income Estimates	Nomis	Data providing gross household income distribution estimates at Datazone level for 2014	Datazone
Benefit Claimants - Residents	Nomis	No. of people claiming benefits based on residential location and benefit type	Local Authority
Jobseekers Allowance 2011-17 Residents	Nomis	No. of people on Jobseekers Allowance based on place of residence	Local Authority
Jobseekers Allowance 2011-17 Workplace	Nomis	No. of people on Jobseekers Allowance based on workplace	Local Authority
BRES Data	Nomis	The UK Business Register and Employment Survey data is the source of employee and employment estimates by detailed geography and industry	Datazone. Protected dataset with procedure in place to mask values
UKMIG008 - Migration	Nomis	No. of people who have moved in and out of a specified geographical location	Local Authority
Annual Survey of Hours & Earnings – Workplace & Residents (2012-16)	Nomis	Data on levels, distribution and make-up of earnings and hours worked for UK employees by sex and full-time or part-time status in all industries and occupations	Local Authority
Business - Birth, Deaths & Survival Rate	Scottish Statistics	No. of business start-ups, closures and survival rats over a three-year period. Data is based on registrations and de-registrations for VAT and PAYE. Three-year survival rates are currently available for business start-ups from 2002	Intermediate Zone level

Socio-Economic	Source	Description	Analysis Level
Scottish Index of Multiple Deprivation	Scottish Statistics	SIMD provides a relative ranking of the data zones in Scotland from 1 (most deprived) to 6,976 (least deprived) based on a weighted combination of data in the domains of Income; Employment; Health; Education, Skills and Training; Geographic Access to Services; Crime; and Housing	Datazone
House Sales 2010 – 2015	Scottish Statistics	No. of houses sold in the area which will be used to understand property demand and turnover in the study area	Local Authority
House Prices 2010 - 2015	Scottish Statistics	Average house price in the area which will be used to understand property demand, turnover and the attractiveness	Local Authority
Population Mid-Year Estimate 2011-16	Scottish Statistics	Population estimates based on applying information on births, deaths and migration. This will provide an estimate of current population levels, and assist in identifying recent population trends	Datazone
QS501SC - Highest Level of Qualification	Scottish Census	No. of people with and without qualifications, up to Level 4 and above. This is to understand the level of education obtained for people who live in the Borders	Census Output Area – aggregated to Datazone for consistency
QS601SC - Economic Activity	Scottish Census	No. of people who are economically active, inactive, in full or part-time work. This will be used to understand how many people have full or part-time jobs in the Borders	Census Output Area – aggregated to Datazone for consistency
LC6604SC - Occupation by Industry	Scottish Census	No. of people by their occupation working in each industry. This will be used to identify the type of jobs people have in the Borders	Census Output Area – aggregated to Datazone for consistency
KS404SC - Car or Van Availability	Scottish Census	No. of cars or vans in each household. This will be used to understand car and van ownership across the Borders	Census Output Area – aggregated to Datazone for consistency
KS102SC - Age Structure	Scotland Census	No. of people within specified age brackets. This will be used to understand the spread of young and old people across the Borders	Census Output Area – aggregated to Datazone for consistency
QS604SCb - Hours Worked	Scotland Census	No. of hours worked by people in a week for both part and full-time jobs. This will be used to understand how many hours' people work per week in the Borders	Census Output Area – aggregated to Datazone for consistency
QS701SC - Method of Travel to Work	Scotland Census	No. of people travelling to work by their main mode of travel. This is to understand mode share and how people are travelling to work	Census Output Area – aggregated to Datazone for consistency
QS703SC - Distance Travelled to Work	Scotland Census	No. of people travelling to work by the distance they travel from home. This to understand the typical distances people are travelling to work	Census Output Area – aggregated to Datazone for consistency
Location of usual residence and place of work by method of travel	Office for National Statistics	Information on the home and work locations, and the main mode of travel. This is critical for understanding where people are travelling to and from in the Borders, as well as the mode of transport they are using	Settlement Level. Secured Dataset and will be aggregated to settlement level

Public Transport Data

Rail

There are three passenger railway stations in the Scottish Borders (Tweedbank, Galashiels and Stow) which are located on the Borders Railway. The following information has been gathered:

- Timetables
  - Edinburgh – Newcraighall – Tweedbank (ScotRail) (21st May – 9th December 2017)
  - Service frequency, journey times and ticket price tables have been created for Tweedbank, Galashiels and Stow stations.
- Station Facilities
  - A desktop-review of station facilities on the Borders Railway and East Coast Main Line between Edinburgh Waverley and Berwick-upon-Tweed (including North Berwick) has been conducted.
- ORR (The Office of Rail and Road) Data
  - Total passenger numbers at each rail station on the Borders Railway and East Coast Mainline (between Edinburgh Waverley and Berwick-upon-Tweed) from 1997/98 to 2015/16 (where data is available).
  - Total passenger numbers by ticket types at each rail station on the Borders Railway and East Coast Mainline (between Edinburgh Waverley and Berwick-upon-Tweed) between 2010/11 and 2015/16 (where data is available).
- LENNON Data
  - Review of origin–destination movements from rail stations using ticket sales.
- Proposed Reston and East Linton Stations
  - Review of news reports and previous studies of reinstating Reston and East Linton Railway Stations for potential new commuter service along the East Coast Main Line.
- Borders Railway Passenger Survey
  - Results from Transport Scotland commissioned passenger travel survey on the Borders Railway, undertaken on Tuesday 28th March 2017.
  - Borders Railway Baseline and Year 1 surveys and study report:

https://www.transport.gov.scot/publication/borders-railway-baseline-study-final-report/

https://www.transport.gov.scot/media/39388/borders-railway-1-year-evaluation.pdf

Bus

- Timetables

A desktop study was conducted to gather timetable information, service provision and frequency in the study area. There are several bus service providers in the area including Borders Buses, Perryman's Buses, Telford Coaches, Peter Hogg, Travel Sure, as well as services supported by Scottish Borders Council.

- Bus Passenger Survey
  - Transport Scotland commissioned a bus service passenger survey in May 2017 which will be used to understand the trends and movements amongst bus passengers in the study area.
- Journey Time Data

Journey time data has been identified as a data gap. Transport Scotland is seeking to purchase a Scotland-wide road traffic speed dataset, but, at the time of writing, the supplier has yet to be confirmed.

- Accessibility Analysis

TRACC Visography will be used to undertake an existing accessibility analysis in the Scottish Borders. TRACC is a GIS-based multimodal accessibility tool that can calculate journey times from selected origin and destination points for public transport, cycling and walking using public transport timetable and road network data. The following data will be used to conduct public transport accessibility analysis in the study area:

- Meridian 2 is a free road network dataset provided by Ordnance Survey. It contains all major and most minor roads in the UK. NB Ordnance Survey withdrew this product on 31st March 2017. The January 2016 version of this product has been obtained for use in the study.
- NPTDR Data provides full service / route / trip information, showing arrival and departure times of the trip journey, for all transport modes. NPTDR data is updated every three months.

Transport and Traffic Data

Transport and traffic data has been obtained from Transport Scotland and the Department for Transport.

- Department for Transport (DfT)

DfT has an existing network of permanent Automatic Traffic Count (ATC) counters across the UK, of which 92 are located in the Scottish Borders and listed in Table 12. This data consists of estimated Annual Average Daily Flows (AADF) and categorised into vehicle classes. These counts will be used to inform traffic levels in the study area over the past six years (where data is available).

- Transport Scotland

Transport Scotland has an existing network of permanent ATC counters which will be used to inform traffic growth in the area over a period of several years.

These ATC counters provide Annual Average Daily Traffic (AADT) information and also provide information on vehicle class.

Transport Scotland commissioned further 24hr ATC surveys over a 3-week period from 13th March to 2nd April 2017. These traffic surveys include directional data on vehicle class and speed at 15 minute intervals, and were conducted at the locations listed in Table 15 and shown in Figure 26 below. Road Side Interviews (RSIs) were conducted at locations listed in Table 16 and shown in Figure 26.

Table 14: DfT AADF counter Locations in the Scottish Borders

Count ID	Road	Road Start	Road End
708	A1	A6112	A1107
728	A68	A699	B6398
729	A68	B6357	B6358 Canongate
1024	A72	A701	A703
1062	A698	B6405	A68
1064	A701	LA Boundary	B712
1066	A703	A72	LA boundary
1069	A707	A708	A72
1197	A1107	B6438	B6355 Victoria Rd
1198	A6089	A697	A6105
1201	A6105	A697	A6112
1203	A6112	B6355	A1
10709	A1	C-road Burnmouth	A1107
10715	A7	B6362 Townfoot	B6368
10716	A7	A707	B7014 Dunsdale Haugh
10717	A7	B711	B6399 Albert Rd
10730	A68	A698	A698
10731	A68	LA Boundary	A6088
10791	A702	LA Boundary	LA Boundary
10835	A72	B709	A707
10871	A697	A6105	A6105
10872	A698	A697	A6112
10873	A698	Weensland Park	A6088
10880	A708	LA Boundary	B709
11010	A6088	A68	B6357
11014	A6105	A6112	B6355
20709	A1	C-road to Ayton	A6112
20716	A7	B6359	A699
20735	A68	B6360	A6105
20830	A72	A701	A721
20872	A697	A697 split	A6089
20873	A698	A699	A6089
20874	A699	A7(T)	A68
20875	A701	A72	LA Boundary
20880	A707	A7	A708
20881	A708	A708 Linglie Rd	A707 Linglie Rd
20893	A721	LA Boundary	A72
21007	A6089	B6397	A698
21010	A6105	A68	A6089
21011	A6112	B6461	A6105
30709	A1	LA Boundary	C-road Burnmouth
30716	A7	B7014 Dunsdale Haugh	A6091
30735	A68	A697	A697
30737	A68	A6088	B6357
30836	A72	A703	B709
30873	A697	A698	A6105
30874	A698	A6112	LA Boundary
30875	A698	A6088	B6405

Count ID	Road	Road Start	Road End
31016	A6105	A6112	A6112
40714	A7	A699	A707
40715	A7	LA Boundary	B711
40732	A68	A6105	A697
40733	A68	B6358 Canongate	A698
40832	A72	LA Boundary	A701
40833	A72	A707	Kilnknowe Place, Galashiels
40873	A697	A6105	A6089
40875	A699	A68	B6352
40882	A708	B709	A708 split, west of Selkirk
41012	A6088	B6357	A698
41016	A6105	B6355 Main St West End, Chirnside	LA Boundary
41017	A6112	A698	B6461 Kelso Rd, Swinton
50713	A7	B6368	LA Boundary
50716	A7	Glendinning Terrace, Galashiels	B6362 Townfoot
50727	A68	A697	B6368
50737	A68	A698	A699
50785	A72	A721	A701
50830	A6112	A6105	B6355 (east Preston)
50833	A6105	A6089	A697
50836	A6089	A6105	B6397
50943	A697	A697 split, High Cross	A68

Count ID	Road	Road Start	Road End
50947	A698	A68	A699/A6089
50955	A701	B712	A72
50975	A707	A708	A708
50980	A708	A708 main route	A707
78588	A7	A7 Bridge Place	Glendinning Terrace
78589	A72	Kilnknowe Place	A7
78595	A7	B6399 Albert Rd	A698
78596	A698	A7(T)	Weensland Park
78597	A7	A698	B6359
80192	A1	A1107	C-road NW of Ayton
80193	A6091	B6360	B6374
80376	A1107	A1	B6438
80385	A698	A699/A6089	A697
80391	A6091	A7(T)	B6360
80395	A1107	A1	B6355
80523	A1	A1107	LA Boundary
80567	A6091	B6374	B6361 Main Street
80568	A6091	B6361 Main Street	A68(T)
80569	A68	B6340 Earlston Road	A6091
80570	A68	A6091	B6360
80571	A68	B6398	B6340 Earlston Road
83024	A7	A6091	A7 A72 split

Table 15: Transport Scotland commissioned ATC Locations

Site	Location
ATC01	A721 between A702 and Carnwath
ATC02	A702 between Dolphinton and West Linton
ATC03	A703 between Peebles and Leadburn
ATC04	A7 between Stow and Gorebridge
ATC05	A68 between Carfraehill and Pathead
ATC06	A1 between England and Cocksburnpath
ATC07	A7 between Hawick and Langholm
ATC08	A68 between Jedburgh and England
ATC09	A697 between Greenlaw and Coldstream
Site A	A72 West of Peebles
Site B	A701 at Tweedsmuir
Site C	A6089 North of Kelso
Site D	A699 West of Kelso
Site E	A698 East of Kelso
Site F	A6105 East of Duns
Site G	A6105 West of Duns
Site H	A6112 North of Duns

Table 16: Transport Scotland commissioned RSI Locations

Site	Location
RSI-01	A721 westbound between A702 and Carnwath
RSI-02	A702 northbound between Dolphinton and West Linton
RSI-03	A703 northbound between Peebles and Leadburn
RSI-04	A7 northbound between Stow and Gorebridge
RSI-05	A68 northbound between Carfraehill and Pathead
RSI-06	A1 southbound between England and Cocksburnpath
RSI-07	A7 southbound between Hawick and Langholm
RSI-08	A68 southbound between Jedburgh and England
RSI-09	A697 southbound between Greenlaw and Coldstream

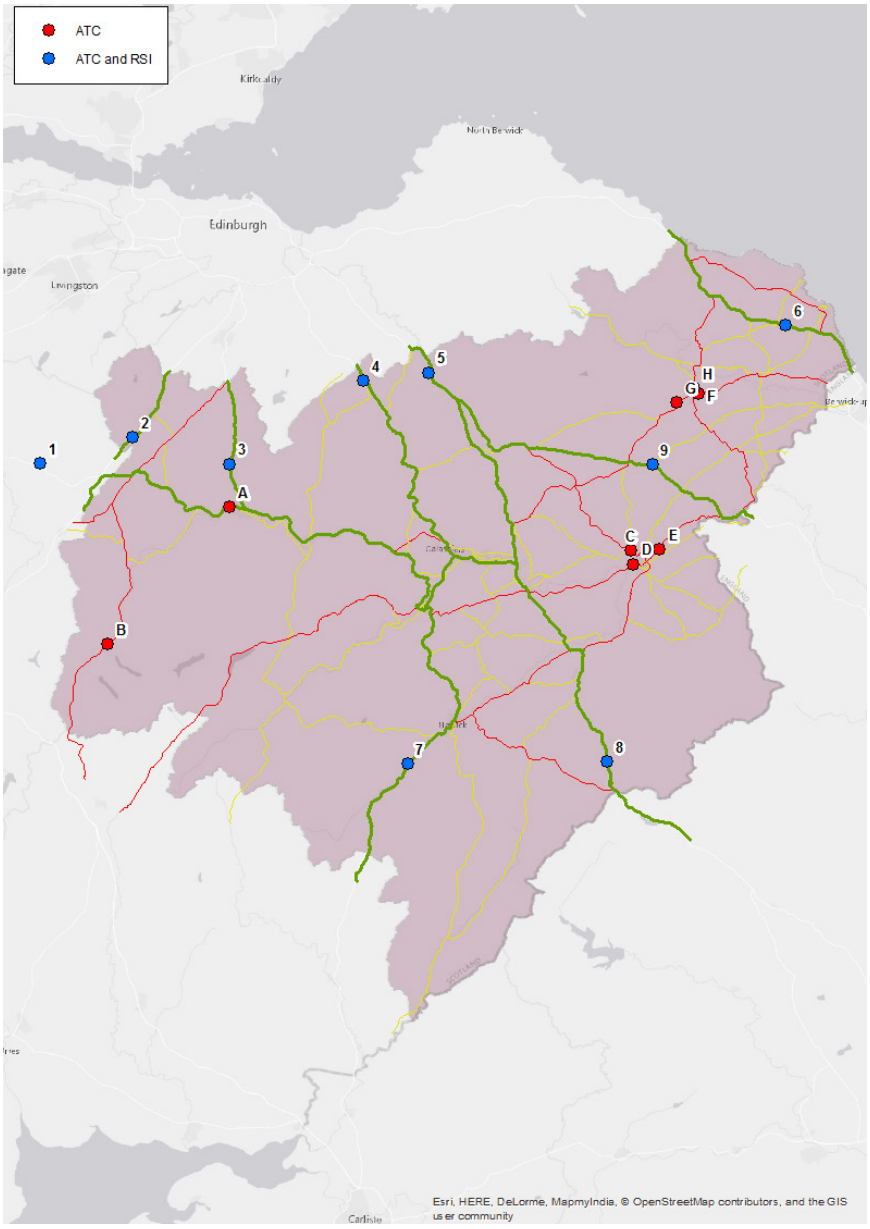

Figure 26: Location of ATC & RSI counts

Appendix - B SRM12: Forecast Assumptions

B

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2024 Demographic Forecasts

Sources: Cross Boundary Study Report Final, April 2017 and TELMoS Outputs

Table 17: TELMoS Outputs, Changes in Population, 2015-2024

Area	2014 / 2015 Baseline	2024 Reference Case	Change 2015-2024	% Change 2015-2024
City of Edinburgh	464,600	470,200	5,500	1%
East Lothian	98,200	98,200	0	0%
Fife (SESplan area)	273,100	279,900	6,700	2%
Midlothian	82,100	91,300	9,200	11%
Scottish Borders	113,700	118,300	4,600	4%
West Lothian	173,400	186,300	12,800	7%
SESplan	1,205,100	1,244,000	38,900	3%
Scotland	5,148,900	5,456,800	307,900	6%

Table 18: TELMoS Outputs, Changes in Households, 2015-2024

Area	2014 / 2015 Baseline	2024 Reference Case	Change 2015-2024	% Change 2015-2024
City of Edinburgh	223,700	241,900	18,200	8%
East Lothian	43,000	50,100	7,100	17%
Fife (SESplan area)	124,000	137,400	13,400	11%
Midlothian	35,000	45,000	10,100	29%
Scottish Borders	53,000	55,700	2,700	5%
West Lothian	74,600	82,500	7,900	11%
SESplan	553,300	612,700	59,400	11%
Scotland	2,399,800	2,671,100	271,300	11%

Table 19: TELMoS Outputs, Changes in Employment, 2015-2024

Area	2014 / 2015 Baseline	2024 Reference Case	Change 2015-2024	% Change 2015-2024
City of Edinburgh	270,200	303,100	32,900	12%
East Lothian	23,300	23,700	300	1%
Fife (SESplan area)	96,500	96,100	-300	0%
Midlothian	23,900	27,500	3,600	15%
Scottish Borders	37,900	38,100	200	0%
West Lothian	69,300	70,900	1,600	2%
SESplan	521,000	559,400	38,400	7%
Scotland	2,265,100	2,380,500	115,400	5%

Table 20: TELMoS Outputs, Changes in Non-working Population, 2015-2024

Area	2014 / 2015 Baseline	2024 Reference Case	Change 2015-2024	% Change 2015-2024
City of Edinburgh	110,500	96,400	-14,100	-13%
East Lothian	19,100	17,800	-1,300	-7%
Fife (SESplan area)	69,100	64,700	-4,400	-6%
Midlothian	15,500	16,300	800	5%
Scottish Borders	22,100	21,700	-400	-2%
West Lothian	34,100	32,800	-1,300	-4%
SESplan	328,200	315,900	-12,300	-4%
Scotland	1,062,600	1,107,500	44,900	4%

Table 21: TELMoS Outputs, Changes in Retired Population, 2015-2024

Area	2014 / 2015 Baseline	2024 Reference Case	Change 2015-2024	% Change 2015-2024
City of Edinburgh	75,700	80,400	4,700	6%
East Lothian	19,700	18,500	-1,200	-6%
Fife (SESplan area)	71,500	79,200	7,700	11%
Midlothian	15,600	14,500	-1,100	-7%
Scottish Borders	26,900	29,800	2,900	11%
West Lothian	27,000	32,600	5,600	21%
SESplan	293,600	325,200	31,600	11%
Scotland	994,800	1,094,400	99,600	10%

2024 Planning Inputs

Sources: Cross Boundary Study Report Final, April 2017

Table 22: Housing Units, 2013-2024

Area	Housing Units		
	Committed	Non-committed	Total
City of Edinburgh	13,500	7,610	21,110
East Lothian	5,480	4,160	9,630
Fife (SESplan area)	5,590	9,440	15,030
Midlothian	7,380	4,300	11,680
Scottish Borders	720	7,020	7,740
West Lothian	4,570	12,820	17,390
SESplan	37,240	45,340	82,590

Table 23: Employment Land, 2013-2024

Area	Employment Land (sqm)			
	Committed		Non-committed	
	Office	Industry	Office	Industry
City of Edinburgh	1,110,000	0	493,000	0
East Lothian	20,000	37,700	118,700	32,000
Fife (SESplan area)	52,400	516,400	460,400	653,800
Midlothian	262,000	77,500	349,000	104,400
Scottish Borders	4,100	7,200	37,000	65,600
West Lothian	1,056,800	202,100	7,300	0
SESplan	2,505,200	840,900	1,465,500	855,800

2024 Reference Case Transport Interventions

Sources: Draft SRM12 Transport Intervention Summary Note, June 2016

Table 24: Road Interventions, 2024 Reference Case

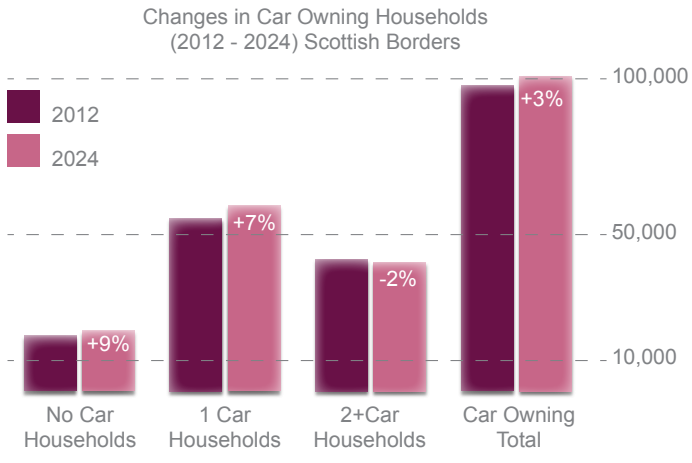
ID	Intervention	Local Authority	Comments
R1	Urbanisation of the A7 Hardengreen to Gilmerton Road Roundabout	Midlothian	Speed limit reduced on A7 from 60mph to 40mph between A6094 & B6392
R2	Improvements to A701 Corridor (Midlothian)	Midlothian	Speed limit reduced on Seafield Road from 30mph to 20mph between A701 & A703, New right turning lane added at A702/Bush Loan junction, Signalisation of A701/Mauricewood Road junction, New roundabout at A702/Mauricewood Road junction
R3	Houston Road-Drumshoreland Link Road at Pumpherston	West Lothian	New link added from Houston, Road/ Pumpherston Road junction to new junction on Drumshoreland Road
R4	A89 Distributor Road between Clarkson Road and Greendykes Road	West Lothian	New link added from B8020 to Clarkson Road
R5	Bus priority and new roundabout at the A71/B7031 junction	West Lothian	New roundabout and bus lanes added at A71/B7031 junction
R6	Bus priority at the B7015/A71 junction	West Lothian	Bus lanes added at A71/B7015 junction
R7	Junction improvements on B8020 at Broxburn and Newton	West Lothian	Increased capacity at B8020 junctions at Winchburgh and Broxburn
R8	Winchburgh Distributor Road connection to East Broxburn	West Lothian	New link from B9080 to B8020 west of Winchburgh, Speed limit on B9080 reduced from 60mph to 30mph (partially)
R9	Distributor Road linking the A706 at Blaeberryhill to the B7066 at Cultsykefoot	West Lothian	New link from A706 to B7066
R10	A801 Avon Gorge	West Lothian	New link from A801/B8047 junction to A801/ B825/B805 junction and increased capacity
R11	A68 Soutra - Oxton Road Improvement	Scottish Borders	Increased speeds and capacity on A68 at Oxton Road
R12	Access to Brodie Road & Slips to A1 at Dunbar	East Lothian	New slips on A1 accessing Brodie Road
R13	Access to B1347	East Lothian	New link to B1347
R14	Access to A6094 North of A1 & to A199 East of A6094	East Lothian	New links to A199 to A6094
R15	Access to B6471 & A6093 & new link road	East Lothian	New links to A6093 and B6471
R16	New slip road access to/from A1 Northbound with underpass connection	East Lothian	Half junction at A1/Queen Margaret University upgraded to full junction
R17	Access to Edinburgh Road at Prestongrange Road & further East along B1361	East Lothian	New links to B1348 and B1361
R18	A1 Intersection at A199 signal improvements	East Lothian	Signal optimisation at A1/A199 junction
R19	Edinburgh 20mph zones	Edinburgh	Speed limit reduced to 20mph in parts of Edinburgh as per CEC scheme proposals
R20	Queensferry Crossing	Edinburgh/Fife	New bridge with associated connections and modifications
R21	Signalisation of Bankhead Roundabout	Fife	Signalisation of A92/B921 junction
R22	Signalisation of Preston Roundabout	Fife	Signalisation of A92/A911 junction
R23	Signalisation & Upgrading Leslie Road Corridor	Fife	Signalisation of Queensway Roundabout (A911/Church Street) and Leslie Roundabout (A911/B969)

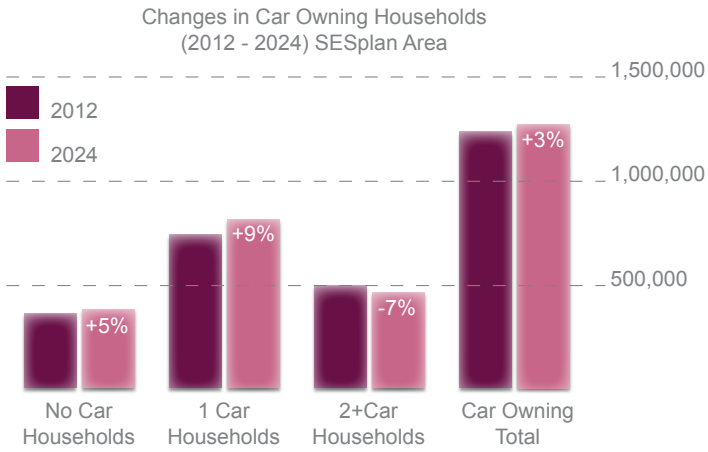
ID	Intervention	Local Authority	Comments
R24	A71 bypass north of Wilkieston (Calderwood development)	West Lothian	Link from A71 to Bonnington Road
R25	New junction on the M9 (Winchburgh)	West Lothian	New Grade separated intersection on M9 with slips accessing B8020
R26	Signalisation of Bothwell Gardens Roundabout with a Reconfigured Layout	Fife	Modification and signalisation of A823/ Netherton Broad Street junction
R27	Signalisation of Redhouse Roundabout	Fife	Signalisation of A92/A921 junction with capacity improvements
R28	Signalisation of Gallatown Roundabout	Fife	Signalisation of A915/A921 junction with capacity improvements
R29	Levenmouth Link Road	Fife	New link from A915 to A955
R30	Signalisation of Pitreavie Roundabout	Fife	Signalisation of (A823(M)/ A823/B980 junction
R31	Signalisation of Standingstane Road/ Windygates Road Junction	Fife	Signalisation of Standingstane Road/ Windygates Road junction
R32	Widen southbound approach to Pitreavie roundabout	Fife	Additional lane added on A823 southbound approach
R33	Development access points	All	Various new links / network loading points to new development sites

Table 25: Public Transport Interventions, 2024 Reference Case

ID	Intervention	Local Authority	Comments
R34	Winchburgh Rail Station	West Lothian	New station at Winchburgh with two passenger services per hour on the Dunblane to Edinburgh line
R35	Winchburgh park and ride/interchange facilities	West Lothian	189 space car park with interchange to rail services at Winchburgh station
R36	Edinburgh Gateway Station	Edinburgh	New station at Edinburgh Gateway – served by Fife services and EGIP
R37	Edinburgh Glasgow Rail Improvement Programme	Edinburgh	Includes faster and more frequent Edinburgh to Glasgow services, including 2 E-G direct, 2 stopping at Edinburgh Park and 2 stopping at Edinburgh Gateway, Journey time reductions along Edinburgh to Dunblane and Alloa Lines
R38	Forth Crossing Public Transport Strategy	Edinburgh	Cross Forth bus services using the existing Forth Road Bridge

Figure 27: Changes in Car Owning Households, 2012-2024, Scottish Borders & Figure 26: Changes in Car Owning Households, 2012-2024, SESplan Area





Parking Charges

[Source: Draft SRM12 Transport Intervention Summary Note, June 2016]

The SRM12 model contains parking charges to reflect the cost of parking within controlled parking areas. The assumed increase in Edinburgh City Centre parking charges between the 2012 base and 2024 forecast year scenarios is 32% in real terms. This growth reflects an extrapolation of the change in on-street and off-street parking charges within central Edinburgh between 2012 and 2015.

Public Transport Fares

[Source: Draft SRM12 Transport Intervention Summary Note, June 2016]

There are no changes to public transport fares within the future year modelling. PT fares are assumed to change in-line with inflation over time.

Public Transport Values of Time

[Source: SRM12 model]

Year	Values of Time, £/hr (2010 prices)	
	In-Work (Business)	Non-Work (Commute & Other)
2012	24.67	5.94
2024	30.74	7.09

Table 26: Public Transport Values of Time, by Journey Purpose 2010 prices

Appendix - C Traffic and Transport - Analysis

C

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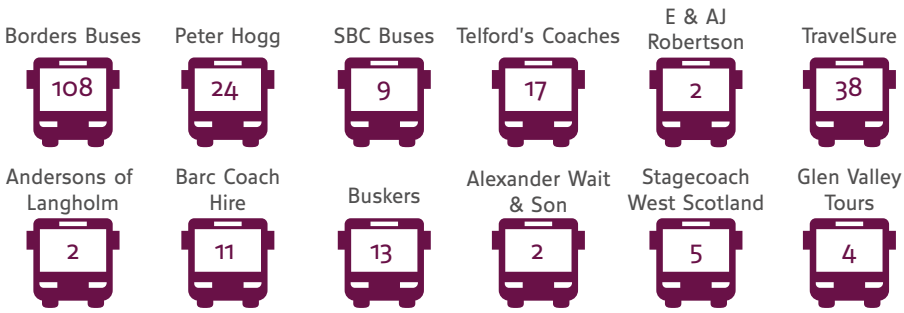
Existing Bus Service Operators

The graphic right provides an overview of the current bus service operators within the Scottish Borders.

Figure 28: Bus Operators in the Scottish Borders



Bus Services to Edinburgh

Service patterns from several towns within the Scottish Borders to Edinburgh are shown in the tables below. The tables only highlight services that are direct between the towns and involve no interchange, or interchange times greater than five minutes.

Monday to Friday										
Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
253 - Eyemouth - Edinburgh	10	0626	0831	1616	1811	9	0736	0929	1845	2042
51 - Jedburgh - Edinburgh	6	0550	0750	1550	1753	6	1000	1205	1920	2110
52 - Kelso - Edinburgh	6	0635	0843	1715	1920	6	0900	1105	2010	2200
x95 - Galashiels - Edinburgh	15	0540	0703	2132	2246	15	0710	0834	2300	0019
x95 Hawick - Edinburgh	12	0607	0832	1835	2038	11	0710	0921	1700	1926
x62 - Peebles - Edinburgh	30	0609	0713	2215	2317	30	0720	0841	2330	0037
x62 - Melrose - Edinburgh	22	0650	0918	2100	2317	20	0720	0956	2030	2245
x62 - Galashiels - Edinburgh	31	0520	0713	2130	2317	20	0720	0930	2230	0022
x70 - Peebles - Edinburgh	1	0707	0841	-	-	1	1710	1835	-	-

Saturday										
Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
253 - Eyemouth - Edinburgh	6	0645	0845	1645	1845	7	0810	0958	1910	2058
51 - Jedburgh - Edinburgh	6	0555	0754	1605	1808	6	1000	1205	1920	2110
52 - Kelso - Edinburgh	6	0635	0843	1715	1920	7	0900	1105	2250	0040
x95 - Galashiels - Edinburgh	14	0629	0743	2132	2246	14	0805	0927	2300	0019
x95 Hawick - Edinburgh	12	0540	0743	1635	1848	10	-	-	-	-
x62 - Peebles - Edinburgh	28	0641	0745	2215	2317	28	0750	0900	2230	2337
x62 - Melrose - Edinburgh	20	0625	0845	2100	2317	18	0750	1016	2030	2245
x62 - Galashiels - Edinburgh	28	0555	0745	2130	2317	27	0750	0950	2230	0022
x70 - Peebles - Edinburgh	-	-	-	-	-	-	-	-	-	-

Sunday										
Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
253 - Eyemouth - Edinburgh	4	0731	0930	1631	1830	4	1010	1202	1910	2102
51 - Jedburgh - Edinburgh	4	0905	1057	1705	1847	3	1310	1505	2010	2200
52 - Kelso - Edinburgh	1	1105	1257	-	-	2	1110	1305	1710	1905
x95 - Galashiels - Edinburgh	11	0819	0933	2035	2149	11	0945	1110	2155	2314
x95 Hawick - Edinburgh	-	-	-	-	-	-	-	-	-	-
x62 - Peebles - Edinburgh	14	0807	0913	2112	2218	14	0930	1041	2230	2336
x62 - Melrose - Edinburgh	-	-	-	-	-	-	-	-	-	-
x62 - Galashiels - Edinburgh	13	0820	1013	2025	2218	14	0930	1130	2230	0021
x70 - Peebles - Edinburgh	-	-	-	-	-	-	-	-	-	-

Bus Services to Carlisle

Service patterns from several towns within the Scottish Borders to Carlisle are shown in the tables below. The tables only highlight services that are direct between the towns and involve no interchange, or interchange times greater than five minutes.

Monday to Thursday

Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
Galashiels - Carlisle	12	0840	1048	2105	2305	12	0615	0818	1744	1950
Hawick - Carlisle	12	0840	1004	2105	2225	12	0655	0818	1826	1950

Friday

Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
Galashiels - Carlisle	13	0840	1048	2300	0100	13	0615	0818	1955	2211
Hawick - Carlisle	13	0840	1004	2300	0100	13	0655	0818	2048	2211

Saturday

Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
Galashiels - Carlisle	13	0840	1048	2300	0058	13	0620	0822	1955	2211
Hawick - Carlisle	13	0840	1004	2300	0018	13	0700	0822	2048	2211

Sunday

Direction	No. NB Services	First Service NB	Arrival	Last Service NB	Arrival	No. SB Services	First Service SB	Arrival	Last Service SB	Arrival
Galashiels - Carlisle	4	1100	1303	1930	2130	4	0845	1048	1645	1845
Hawick - Carlisle	4	1100	1220	1930	2048	4	0926	1048	1726	1845

Borders Railway Ticket Sales

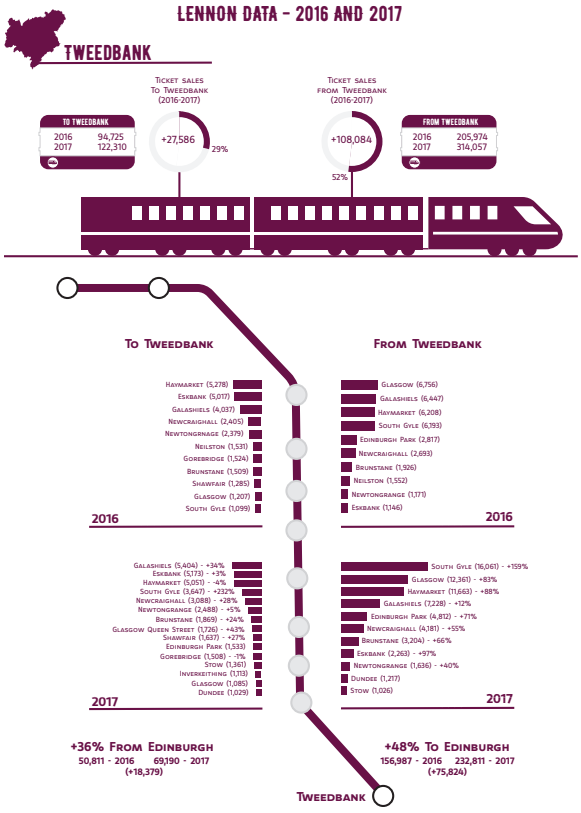
LENNON data which summarises ticket sales by station was supplied by Transport Scotland for all stations on the Borders railway for the period covering 2016 up-until August 2017. The total change in ticket sales were compared as well as highlighting all stations which recorded over a 1,000 ticket sales across the year.

Over the two-year period from 2016 to 2017, there has been a significant increase in the number of ticket sales **from** Borders Rail stations, increasing from **706,000 to 1,067,000 (+361,000 or 51%)**. The largest contributors were sales from Tweedbank **(+108,000),** Galashiels **(+87,100)** and Eskbank **(+73,900)**. The increase in numbers from Tweedbank and Galashiels in particular, seem to indicate that these two stations are attracting passengers from much further afield in the Scottish Borders region due to their geographical location at the head of the rail network in the Scottish Borders.

Tickets to stations on the Borders Rail network have also increased, although not to the same level as those from stations on the network, which could potentially indicate that the majority of trips are commuter trips from the stations on the Borders Rail. Ticket sales have increased from **360,000 to 556,000 (+196,000)** over the two-year period, with the largest increases in ticket sales with destinations at Eskbank **(+73,000)**, Galashiels **(+45,000)** and Tweedbank **(+28,000)**.

The largest single increase in ticket sales is **75,800** from Tweedbank to Edinburgh over this time period, with the largest decrease in ticket sales being **-8,800** from Newcraighall to Edinburgh. Across all stations, Edinburgh saw the largest increase in number of ticket sales with **216,000 (+44%)**.

Figure 29: Example of LENNON data analysis



Looking at journeys to stations on the Borders Railway, the largest increase was ticket sales from Glasgow Queen Street to Eskbank, which increased by **22,000 (+136%)**. Conversely the largest decrease in ticket sales was **3,800** from Haymarket to Newcraighall **(-33%)**.

Borders Railway Ticket Sales

An on-board passenger survey was undertaken on the Borders Rail on 28th March 2017. Questionnaires were handed out to passengers at the following seven stations; Tweedbank, Galashiels, Stow, Gorebridge, Newtongrange, Eskbank, and Shawfair.

Overall the survey received 726 responses with 309 (43%) of these coming from Tweedbank. 74% of the responses identified Edinburgh Waverley as their destination, with an even spread of destinations beyond this. 43% of respondents identified commuting as the purpose of their journey and 39% of people made this journey more than three times a week.

Looking at the mode share for travelling to the origin station and methods for onwards travel, travelling by car either parked at the station (42%) or dropped off (12%) were the most common responses for getting to the station with 73% of respondents identifying walking as the main mode of onward travel.

The map below shows the origin catchment postcodes for respondents of the Tweedbank survey.

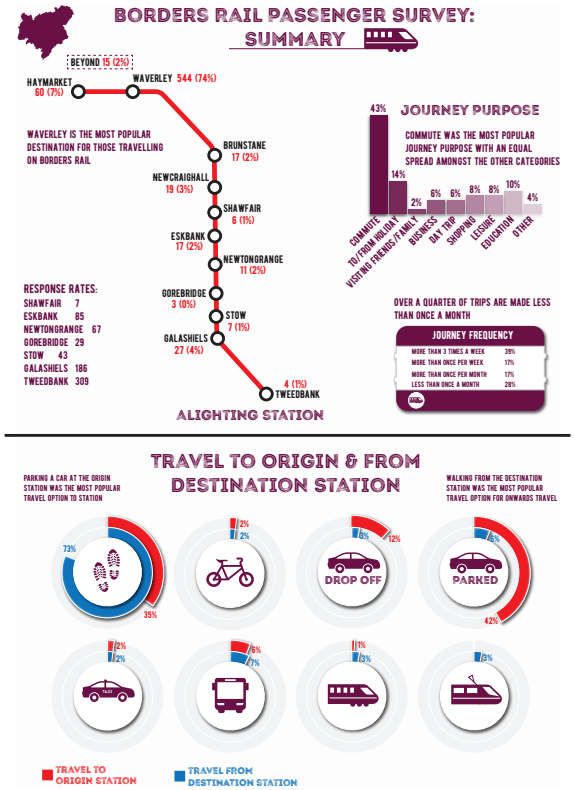


Figure 30: Example of On Board Survey data analysis

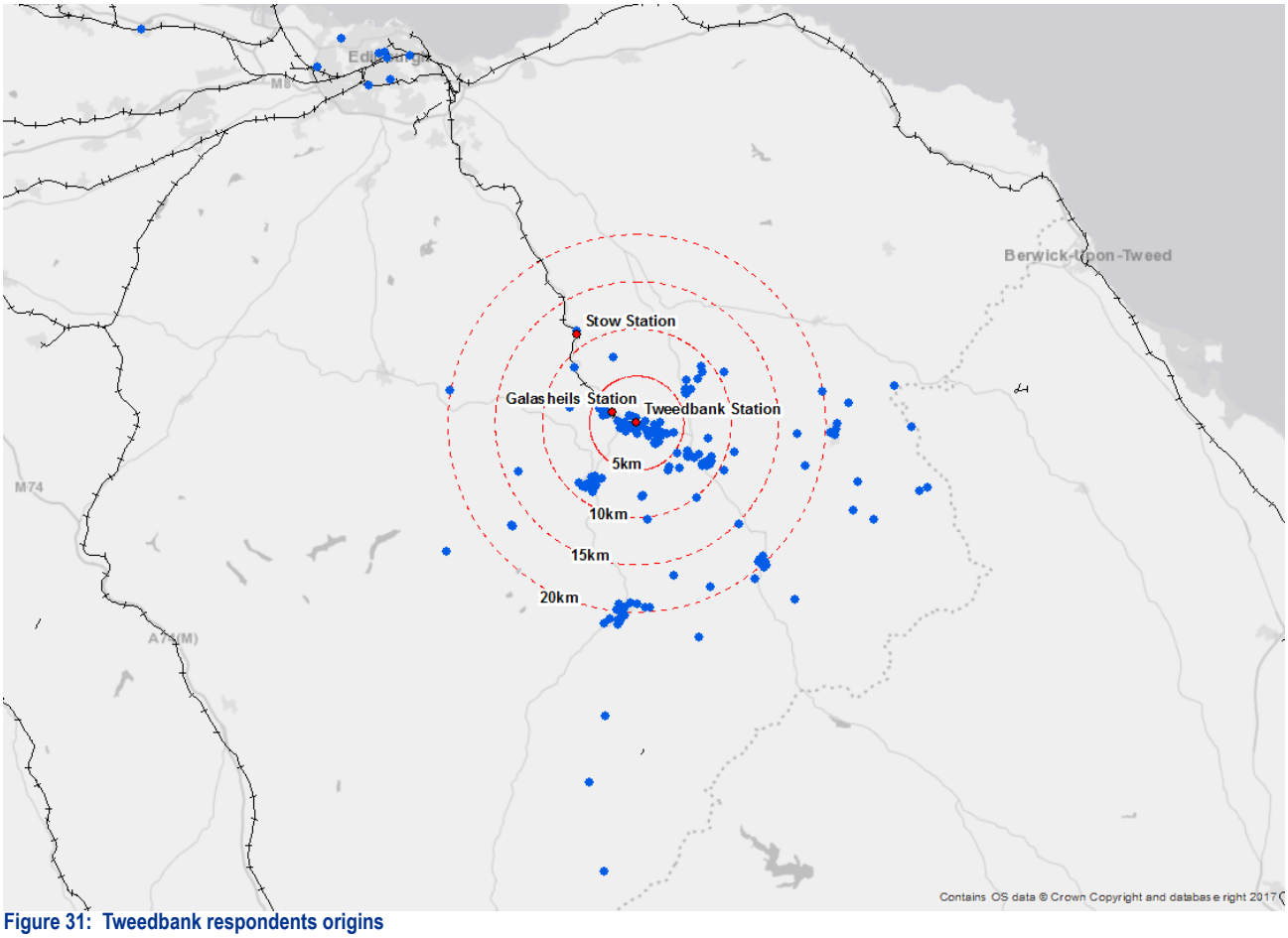


Figure 31: Tweedbank respondents origins

Traffic Flows

In April 2017 nine combined Automatic Traffic Counts (ATCs) and Road Side Interview surveys (RSI) were carried out in addition to eight further ATCs in the Scottish Borders. The ATCs provide daily flows on the road network for each vehicle class over a two-week period and the RSIs provide traffic movement information derived through the surveys such as origin and destination and journey purpose information.

RSI

Data from the nine RSI locations was analysed to understand the origin destination movements and the reason for the journey.

There were multiple response rates for each of the sites which are indicated in the table opposite.

In order to provide an overview of the results, origins and destinations were summed by local authority as opposed to specific individual locations. The Scottish Borders was also split into five sectors for the analysis, with those indicated in the map opposite.

An overall summary of the data is illustrated in each of the charts on the following page. The pie chart indicates the response to the survey by time period (AM 0700-0959, IP 1000-1559, PM 1600-1900). The bar charts indicate the journey purpose by time period split across five categories. Finally, the main origin for movements, the main destination and the actual main origin to destination movements are highlighted. In not all cases do all three synchronise. For example, for site 1 in the Inter Peak, the main origin is West Borders, the main destination is South Lanarkshire, but the largest origin to destination movement is South Lanarkshire to South Lanarkshire.

In general, the main movements highlighted through the analysis, show that both the City of Edinburgh and England are the main destination points and that the overall majority of movements are commuting trips.

Site ID	Site	Number of Responses
1	A721 westbound between A702 & Carnwath	462
2	A702 northbound between Dolpinton & West Linton	360
3	A703 northbound between Peebles & Leadburn	364
4	A7 northbound between Stow & Gorebridge	527
5	A68 northbound between Carfraehill & Pathhead	696
6	A1 southbound between England & Cockburnspath	450
7	A7 southbound between Hawick & Langholm	314
8	A68 southbound between Jedburgh & England	337
9	A697 southbound between Greenlaw & Coldstream	258

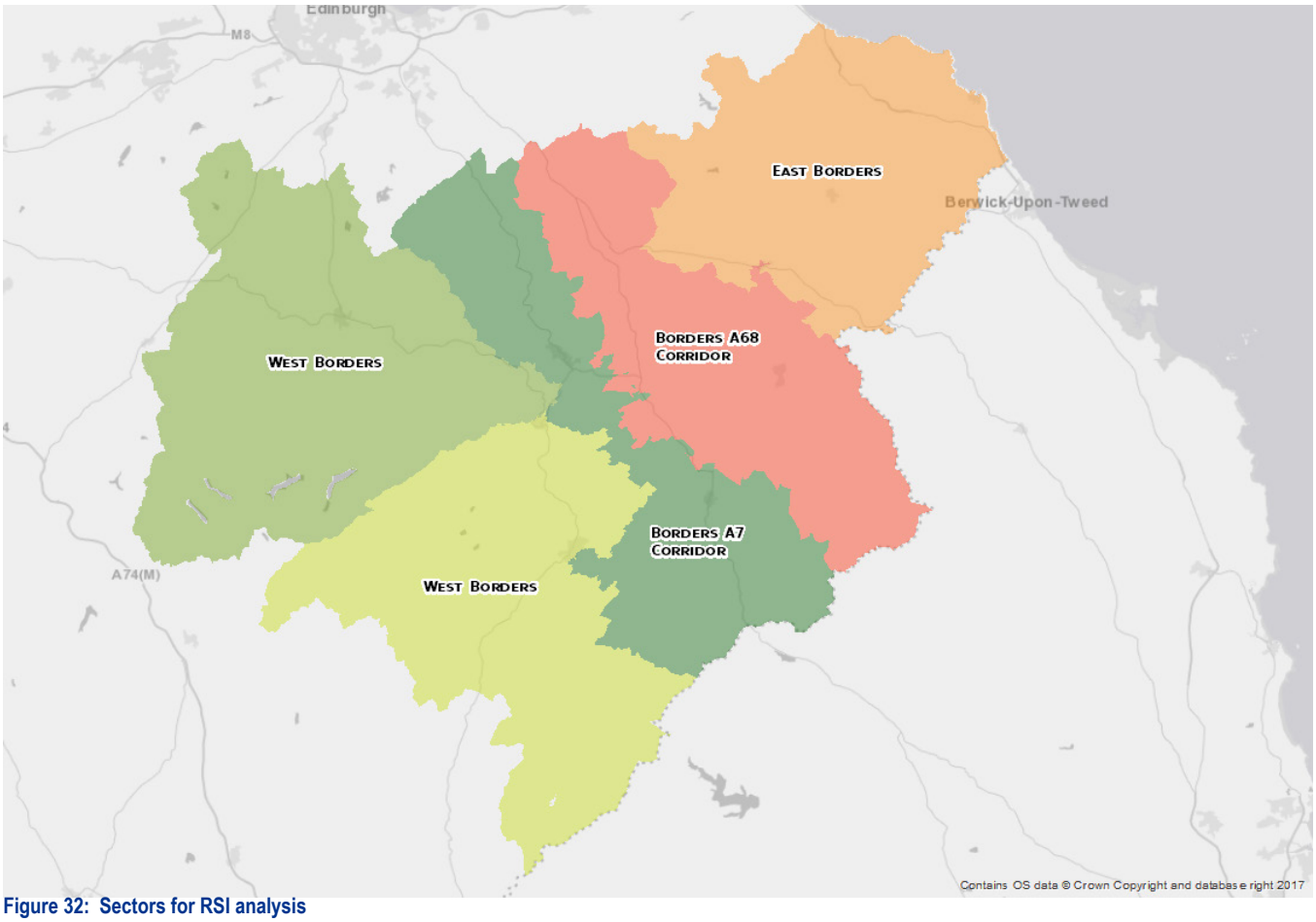


Figure 32: Sectors for RSI analysis

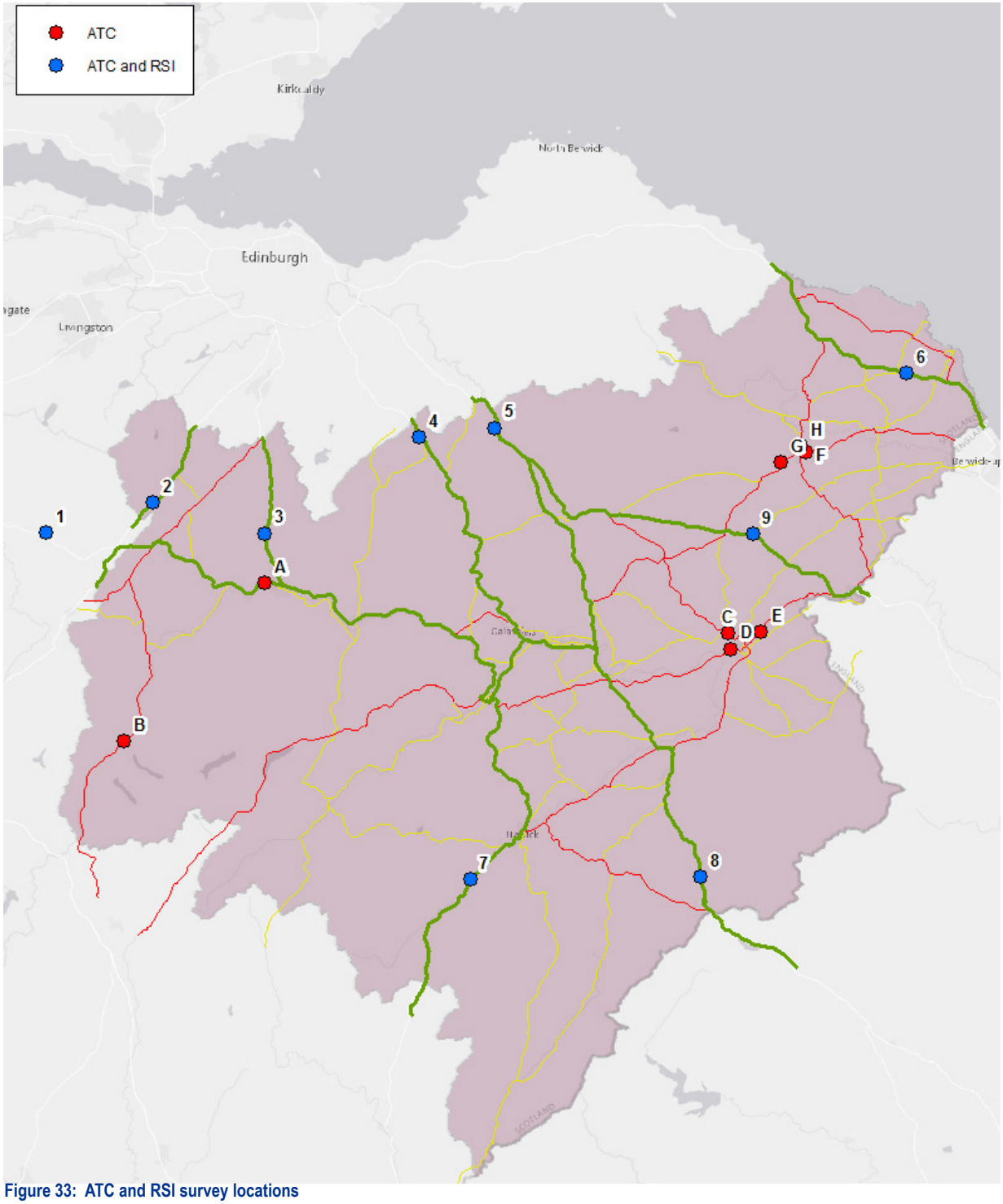


Figure 33: ATC and RSI survey locations

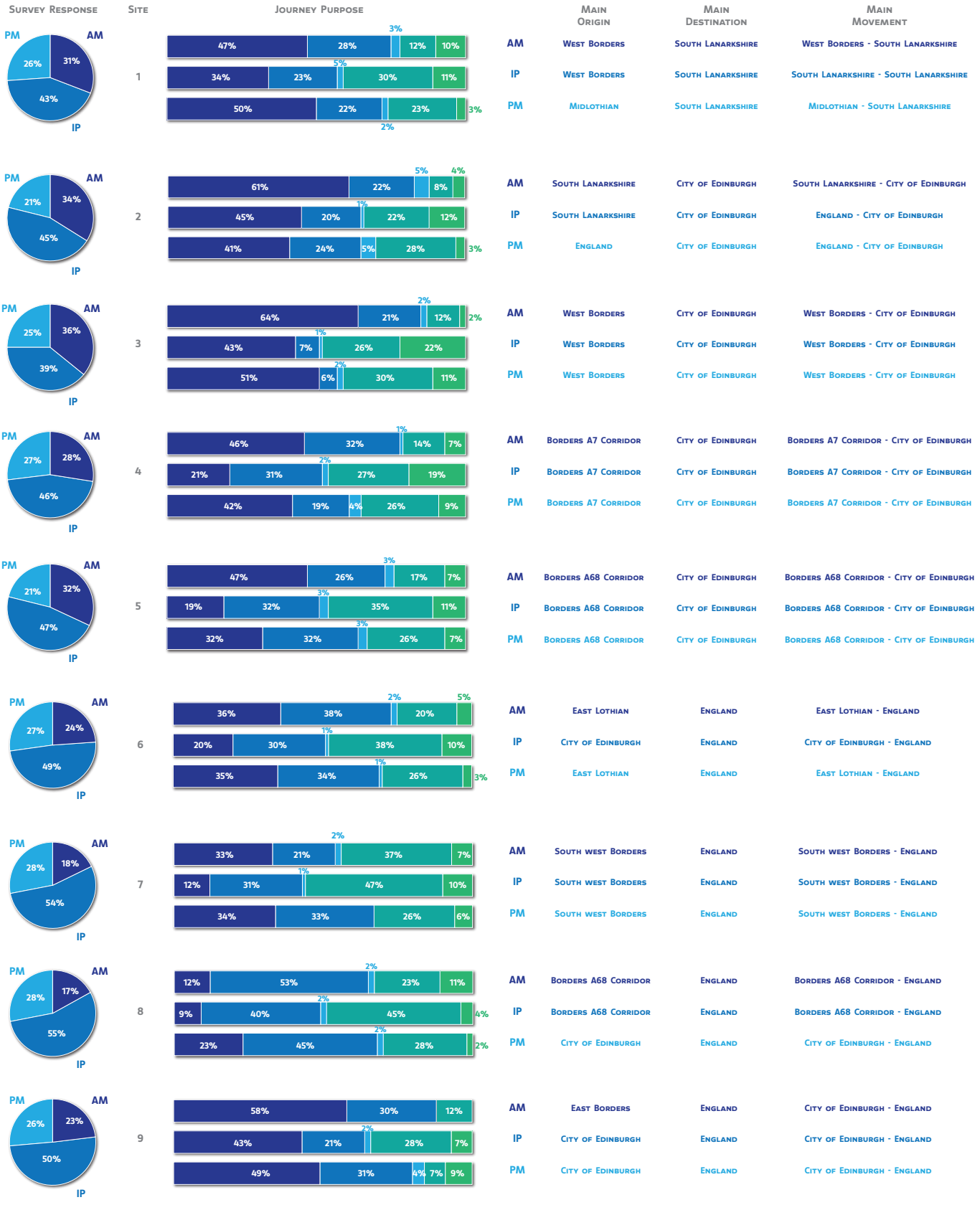


Figure 34: RSI survey analysis

Accident Locations

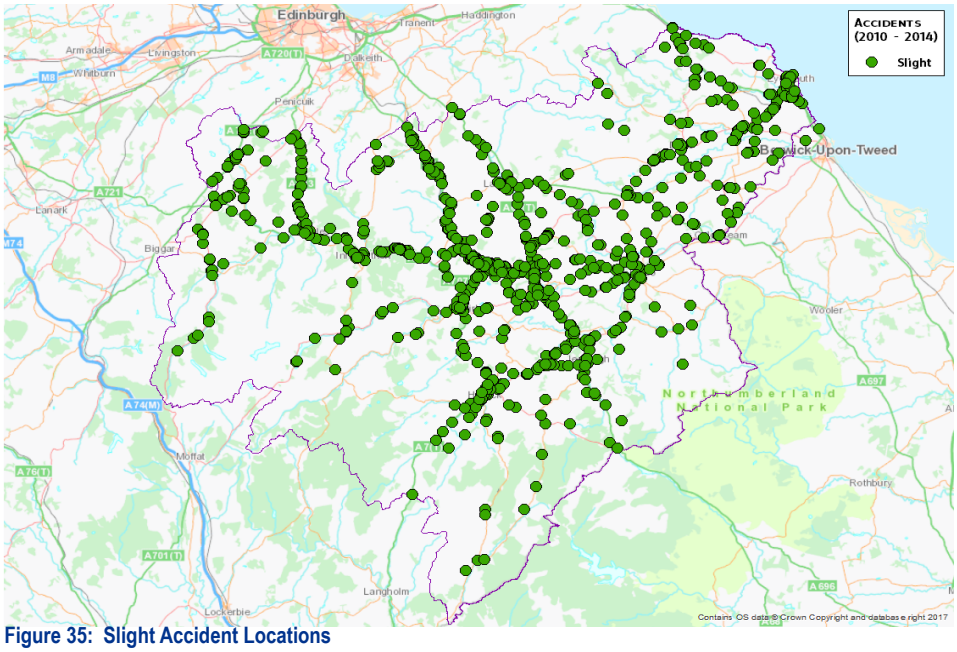


Figure 35: Slight Accident Locations

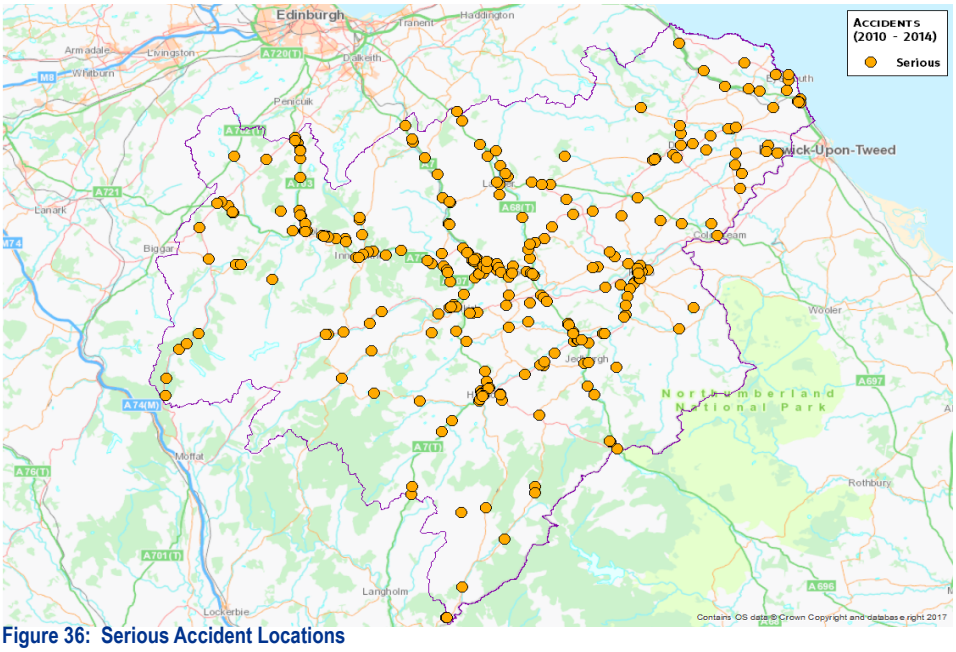
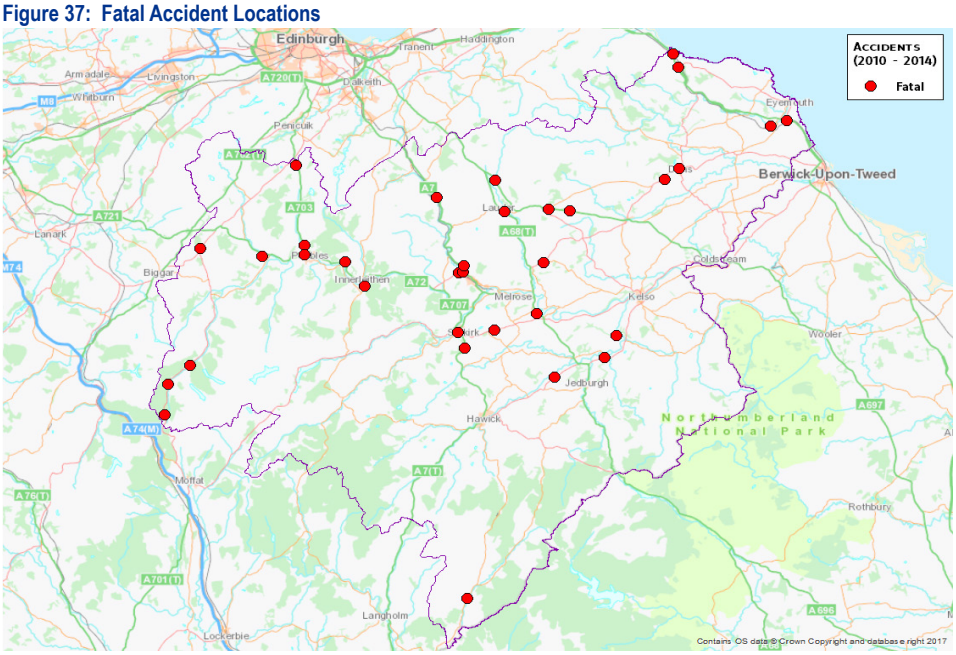


Figure 36: Serious Accident Locations

Figure 37: Fatal Accident Locations



Change in Mode Choice (Public Survey)

Outputs from the survey, however, have been analysed to feed into this section of the report to reflect current mode choice decisions to comprehend the impacts, if any of the Borders railway on mode choice since the 2011Census.

From a cleaned version of the outputs, 2,190 responses were analysed to understand, how many people have changed their main mode of transport in the Scottish Borders. From the results, 647 respondents (30%) indicated that they have changed their main mode of transport within the Scottish Borders. 60% indicated a switch to car, 24% to rail, 11% to bus and 5% to active travel. The charts on the left provide a breakdown of the changes in mode choice. For example, in the top chart, 26% of those who switch to car, did so from rail.

The outputs from the survey show that there has been a significant change in main travel modes in the Scottish Borders, especially towards car. The main reasons behind this switch were; long public transport travel times, lack of direct routes and frequency of public transport services, which further evidences the traffic and transport trends identified in this report.

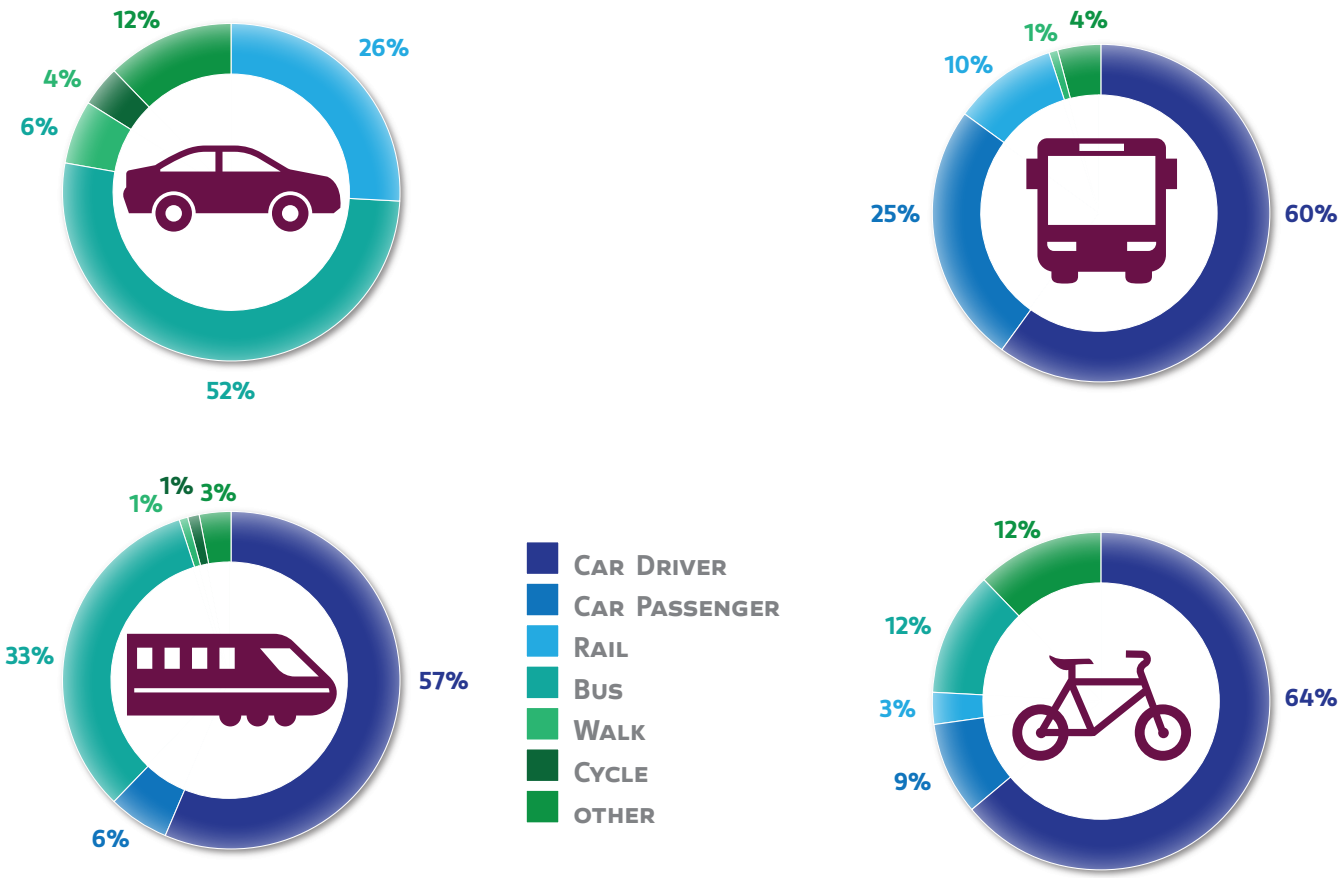


Figure 38: Change in Mode Share

Appendix - D
Public Survey Analysis

D

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Self-Reported Journey Destination and Mode share

Respondents were asked to identify the destinations they travel to most regularly. Response summary is shown in Figure 39 and Figure 40. The mode of travel most frequently used is shown in Figure 41 below.

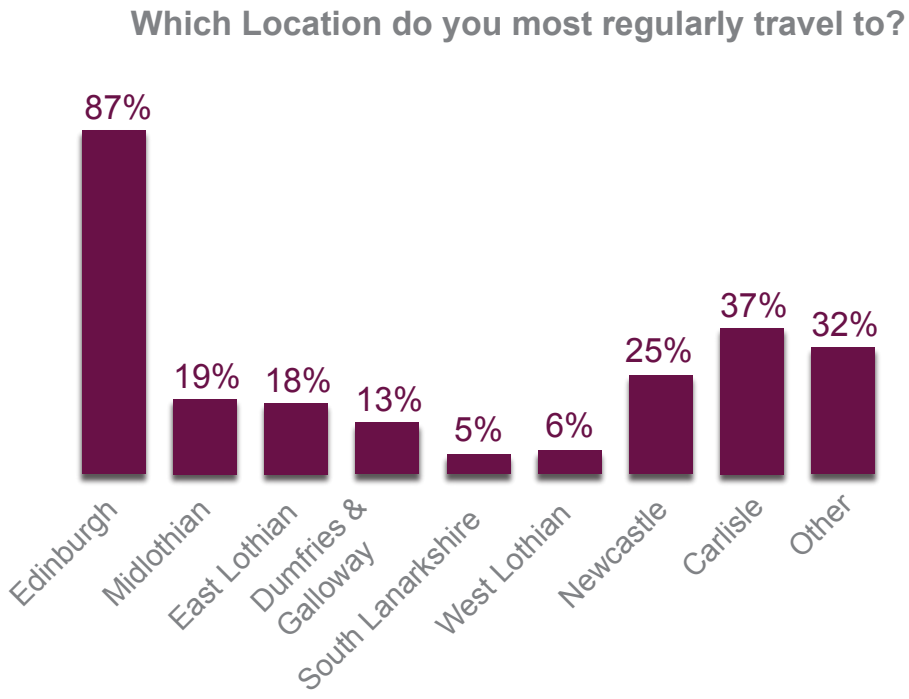


Figure 39: Main Destinations, Public Survey

Figure 40: Summary of "Other" destinations

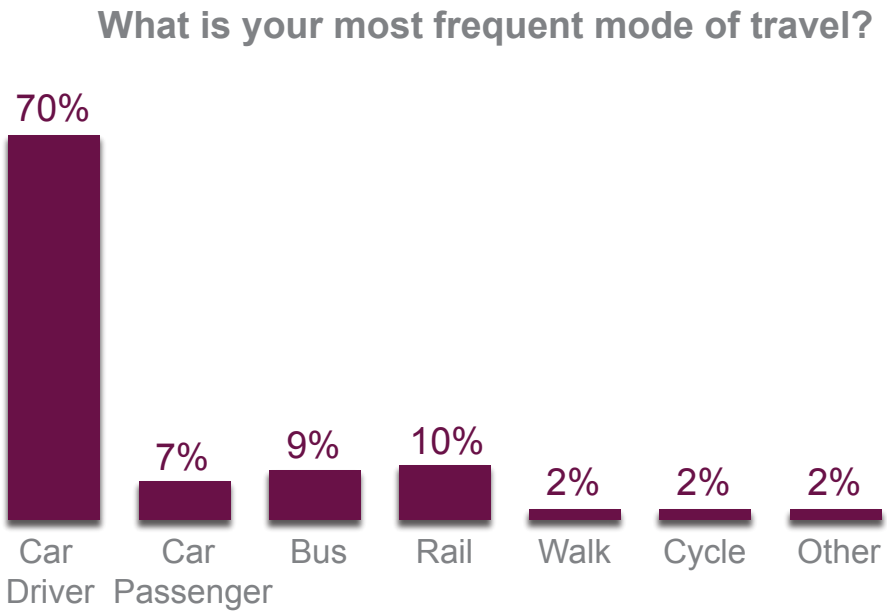


Figure 41: Mode share of the respondents' most frequent journeys

Overall Summary of Self-Reported Problems

Respondents were asked to identify the single biggest issue for transport in the area. A summary of responses is shown below in Figure 42.

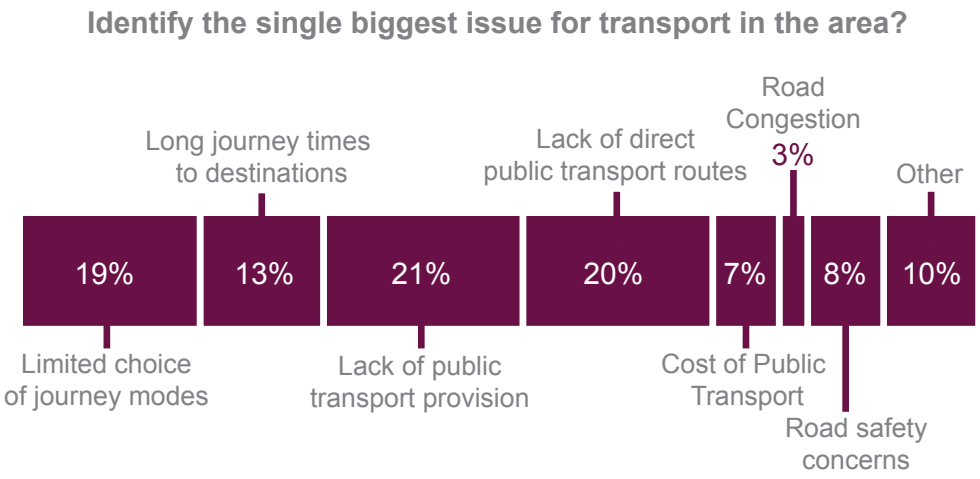


Figure 42: Opinion of Single Biggest Transport Issue

Self-Reported Problems with the Road Network

Respondents who identified car as a main mode of travel were asked to elaborate on which elements of the road network have a negative impact on their ability to travel by road within the Scottish Borders. A summary of responses is shown in Figure 43.

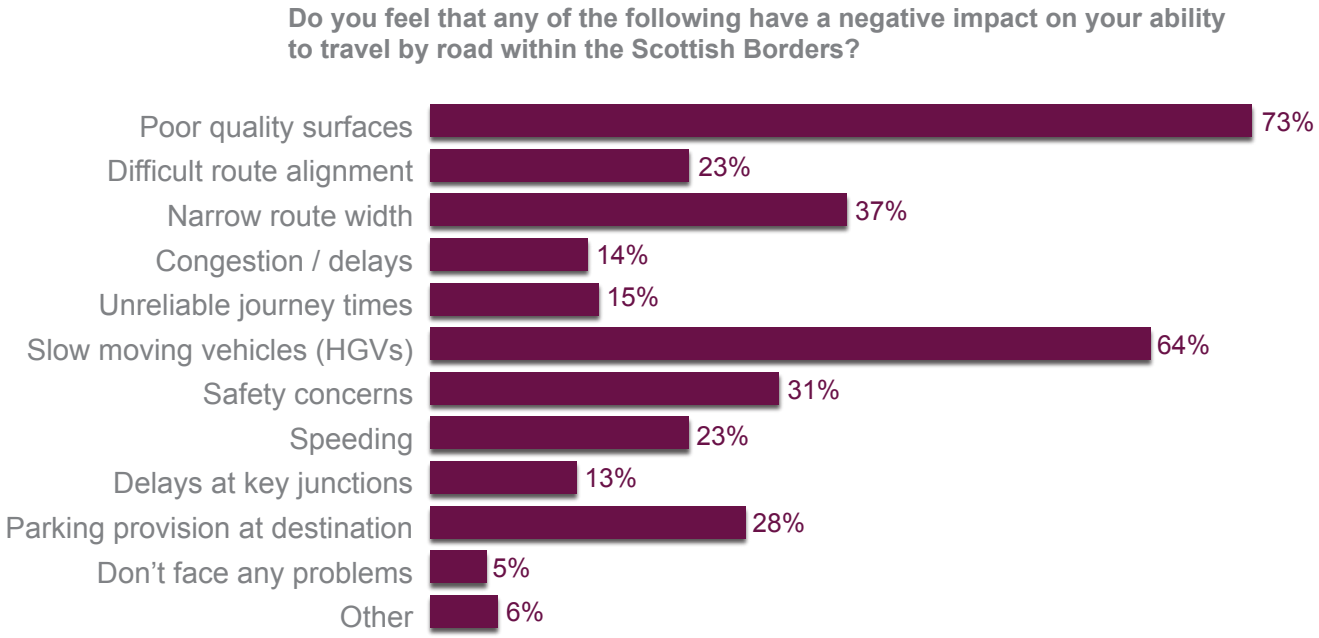
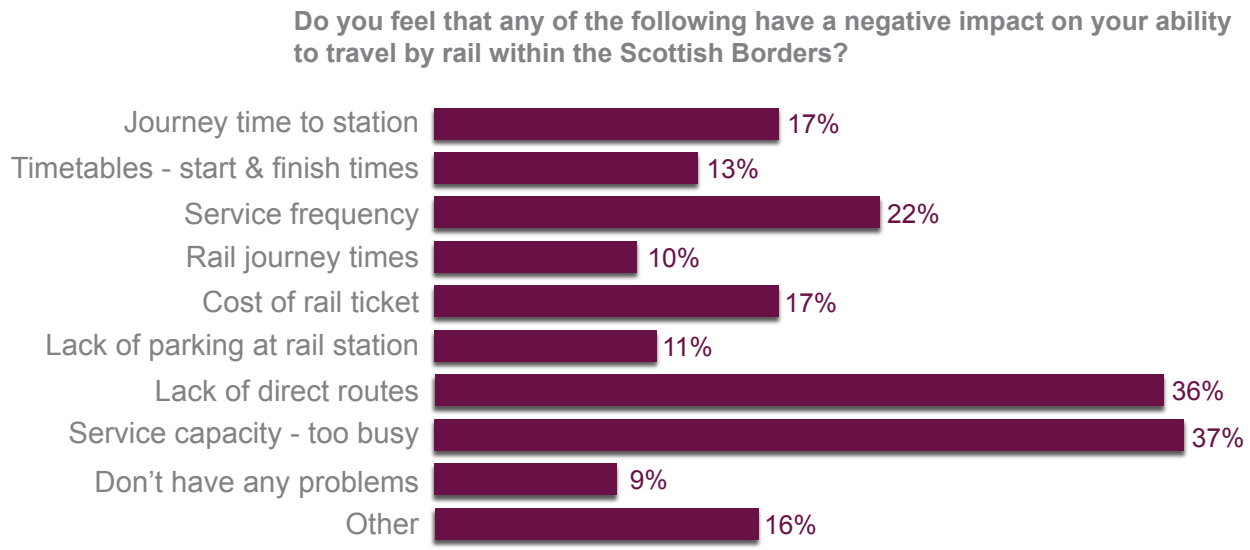


Figure 43: Problems identified by Road users

Self-Reported Problems with the Rail Service Provision

Respondents who identified rail as a main mode of travel were asked to elaborate on which elements of the rail provision that have a negative impact on their ability to travel by rail from / to and within the Scottish Borders. A summary of responses is shown in Figure 44 below.

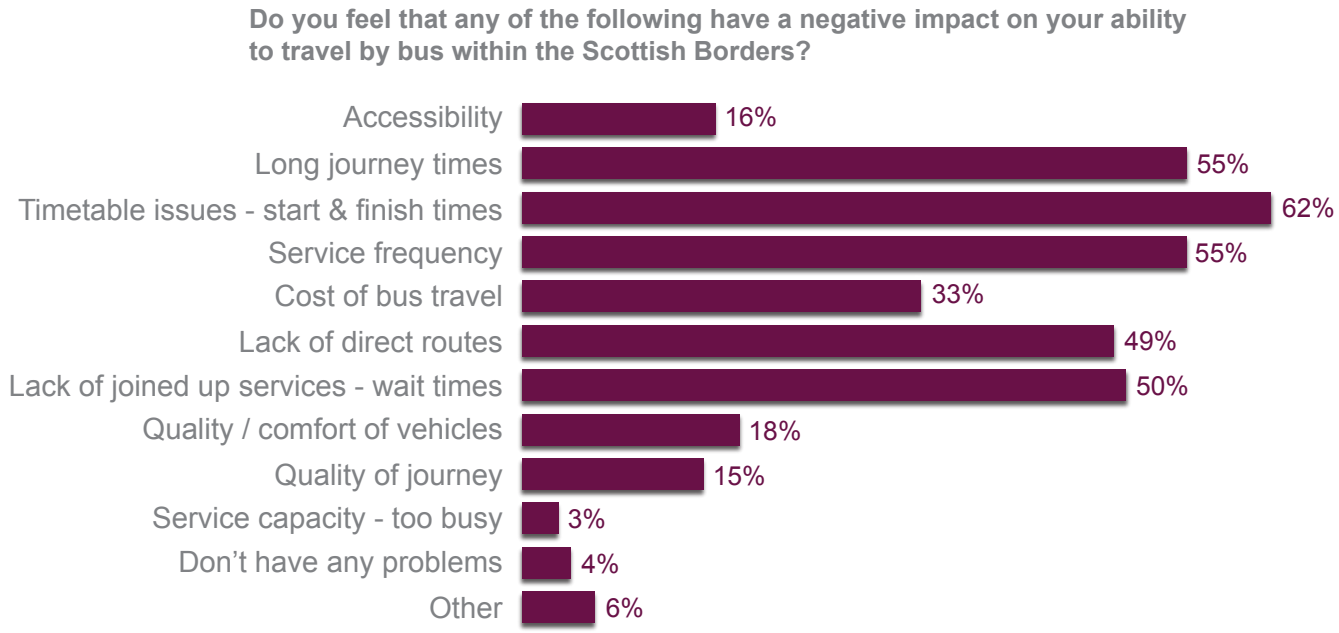
Figure 44: Problems identified by Rail users



Self-Reported Problems with the Bus Service Provision

Respondents who identified bus as a main mode of travel were asked to elaborate on which elements of the bus service provision that have a negative impact on their ability to travel by rail from / to and within the Scottish Borders. A summary of responses is shown in Figure 45.

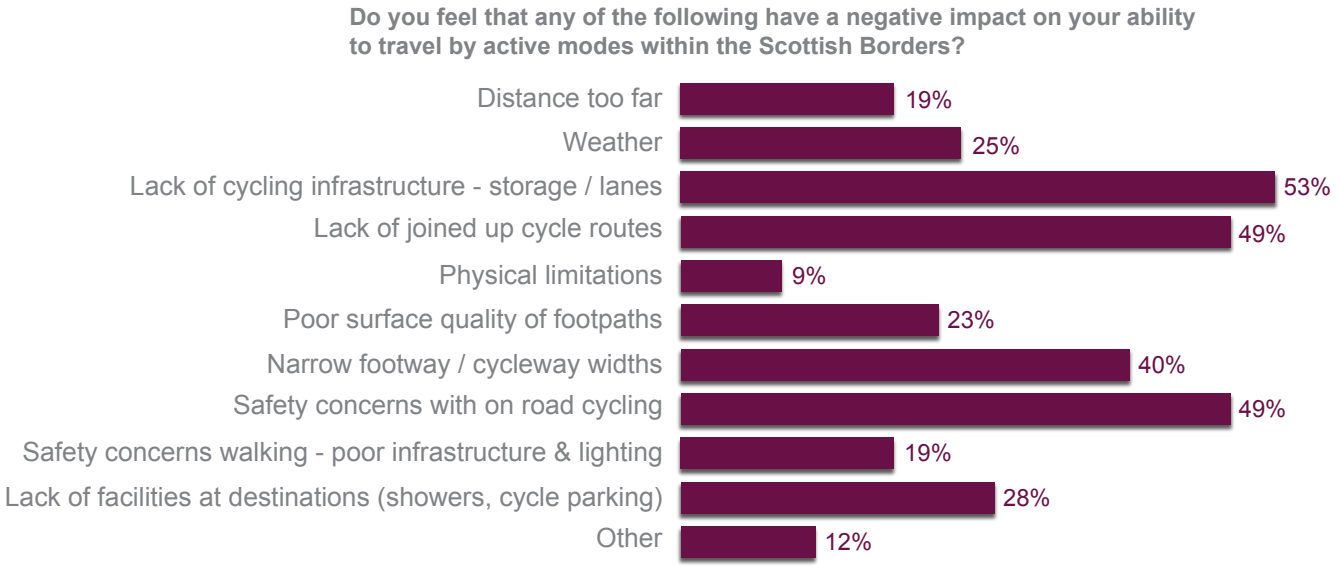
Figure 45: Problems identified by Bus users



Self-Reported Problems with the Active Travel Provision

Respondents who identified active as a main mode of travel were asked to elaborate on which elements of the active travel provision that have a negative impact on their ability to travel by on foot or by bike from / to and within the Scottish Borders. A summary of responses is shown in Figure 46.

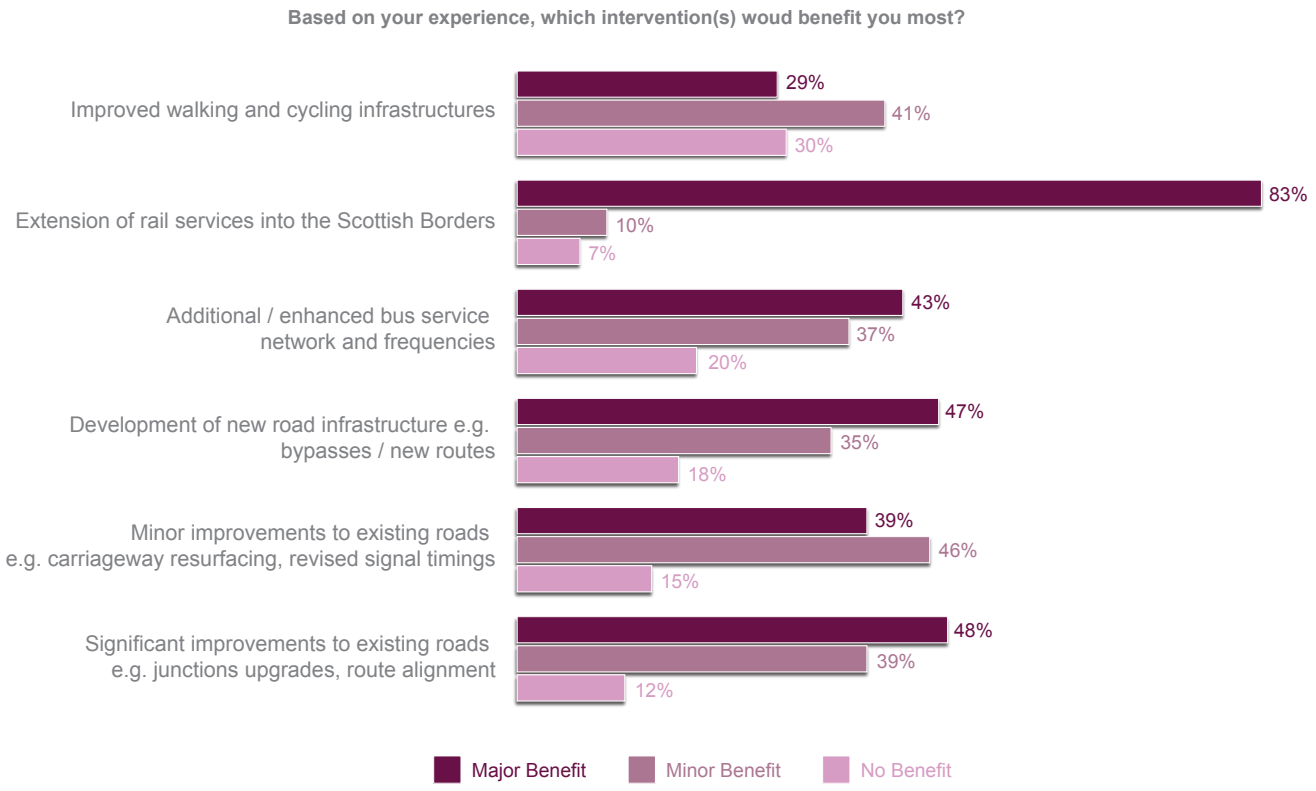
Figure 46: Problems identified by Active Travel users



Self-Reported Suggested Interventions

Survey respondents were asked what type of interventions they felt they would benefit most. A summary of responses is shown in Figure 47 below.

Figure 47: Benefit of Interventions



Respondents were asked should their suggested intervention be implemented, how it would benefit them.

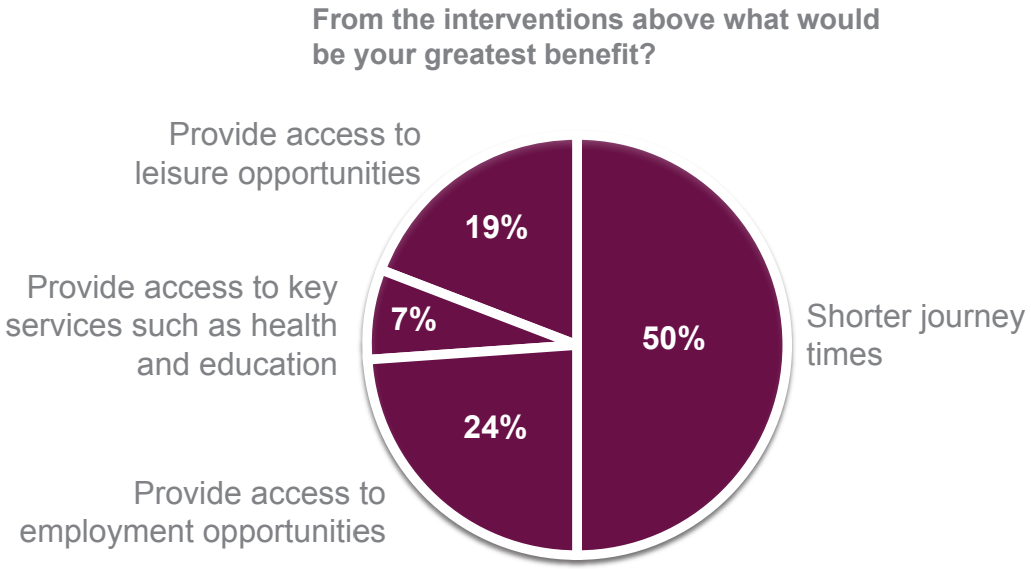
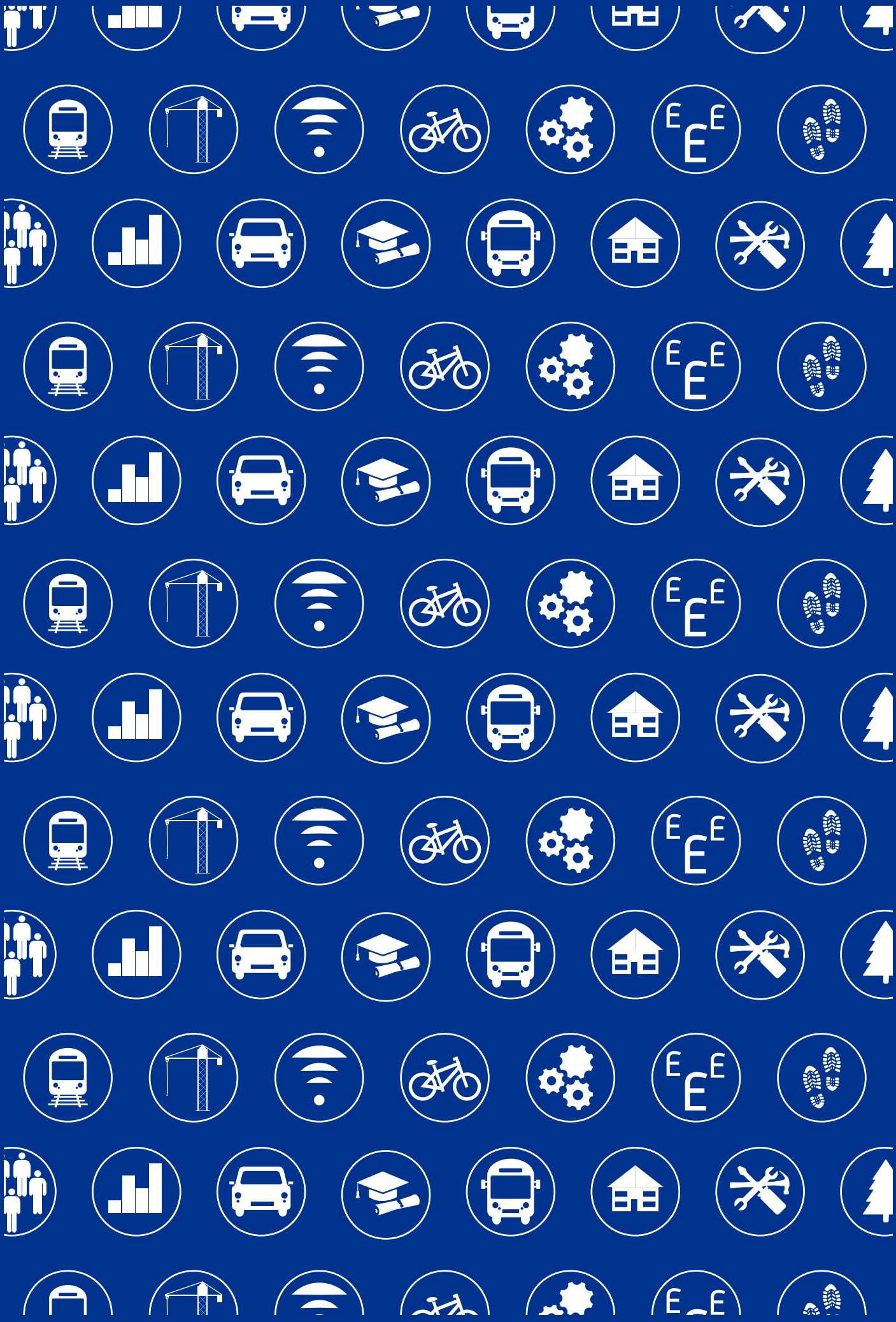


Figure 48: Greatest Benefit from Potential Interventions

Self-Reported Problems with the Bus Service Provision

Survey respondents were additionally given an opportunity to identify specific interventions they would like to see implemented on the Scottish Borders transport network. Given the wide range of responses, these have been summarised into a 'Word Cloud' highlighting key themes as shown in Figure 49 below.

Figure 49: Most Frequently used Words on Further Specific Interventions



Appendix - E Full List of Problems and Opportunities

E

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Full List of Problems and Opportunities

Based on the analysis, policy review and stakeholder engagement, the following problems have been identified:

- **PUBLIC TRANSPORT**
  - Unreliable public transport journey times
  - Competition between public transport modes
  - Lack of public transport ticket integration and interchange opportunities
  - Lack of rail capacity
  - Limited accessible public transport service provision
  - Limited available funding for bus provision
  - Constrained capacity on Borders Railway corridor
  - Long rail journey times to major destinations in Scotland and England
  - Lack of park and ride capacity
  - Lack of travel information
  - Increased bus journey times on A8 corridor between Edinburgh Airport and city centre
- **ROAD**
  - Road safety
  - Availability and cost of fuel
  - Road congestion, including A720 Edinburgh City bypass, M8 and M9 west of Edinburgh, M90 north of Edinburgh
  - High volume of Goods Vehicles
  - Lack of diversion routes
  - Lack of sufficient roads maintenance
  - Lack of freight facilities
  - Lack of funds for transport network improvements
  - Lack of high quality standard of roads
  - High car dependency in the Scottish Borders
  - Constrained road capacity [i.e. on A7, A68, A701]
  - Poor road connections to NE England
  - Transport deficit in comparison with links between Inverness, Aberdeen and Perth
- **CONNECTIVITY**
  - Lack of access to digital and internet services
  - Lack of east-west connectivity
  - Lack of internal connectivity
  - Lack of southern cross-boundary connections
  - Poor connectivity and accessibility in SEStran area to key gateways for both passengers and freight
  - High cost of travelling
- **SOCIO-ECONOMIC**
  - Lack of economic investment
  - Lack of employment opportunities in the Borders
  - Lack of higher education availability
  - Lack of investment in tourism offering
  - Lack of political ambition
  - Negative outflow of workforce
  - Socio-demographic issues
  - Through movements impact but do not contribute locally
  - Land Use Planning may cause further capacity constraints on links to the Scottish Borders
  - Long distances between employment, services and retail
- **ACTIVE TRAVEL**
  - Lack of active travel infrastructure provision
  - Local geography makes active travel unattractive
  - Lack of safety measures

The following opportunities have been identified:

- **SOCIO-POLITICAL**
  - Collaboration and Cooperation
  - External Funding Opportunities
  - Borderlands Initiative seeks to deliver opportunities in rural areas of southern Scotland and northern England
  - Opportunities for high quality education and superior environmental quality
  - Heriot-Watt University Scottish Borders Campus in Galashiels
  - High quality of life in the Scottish Borders
- **ACCESSIBILITY AND CONNECTIVITY**
  - Digital connectivity
  - New technology can reduce impact of travel
  - New Rail Stations at Reston and East Linton
  - Reston Station and improvements to cross border services on ECML
  - Build on Community Transport provision
  - Investment in TransPennine Express services between Edinburgh, Newcastle and Manchester
  - Edinburgh and South East City Deal for improving connectivity, creativity, inclusivity and business development
  - Scottish Borders is attractive for active travel and tourism
- **LEISURE AND TOURISM**
  - Developing tourism market
  - Carlisle Airport opening to passenger travel
  - Eyemouth Harbour
  - Visitor destinations along strategic routes
- **ECONOMY AND DEVELOPMENT**
  - Local Development Plan aspirations
  - Neighbouring employment opportunities
  - Skilled local workforce
  - Timber Peak for forestry industry
  - Conversion of Tweedbank Industrial Estate to Central Borders Business Park
  - Land Use Planning with approximately 10,000 homes allocated for Scottish Borders
  - Scottish Borders ‘Strategic Development Areas’
  - Supporting opportunities for higher value employment, particularly in ‘Knowledge Intensive Business Services’
  - Borders Railway Investment Fund
  - SESplan ‘Cross Boundary Transport Contributions Framework’
  - Borders Railway key driver of employment and residential opportunities
  - West Coast Motors investment
- **ROAD**
  - Route management between Edinburgh and North West England (A68/A7/A702) and North East England (A1)
- **PUBLIC TRANSPORT**
  - Disused rail infrastructure still in place at some sections
  - Increasing parking provision at Berwick station
- **ACTIVE TRAVEL**
  - Disused railway lines in green belts offering considerable opportunities for walking and cycling access

Appendix - F SRM12 Plots of Unmet Demand and V/C Ratios

F

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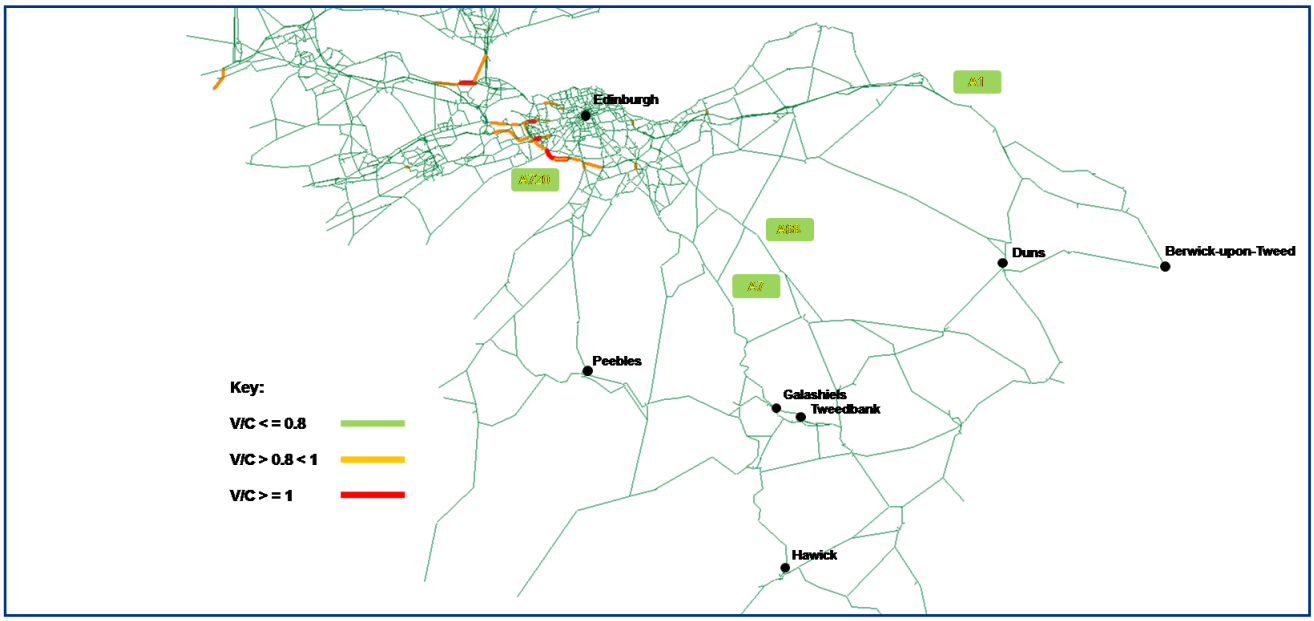


Figure 50: Volume over Capacity Ratio (V/C), 2024 Reference Case, PM Peak Hour

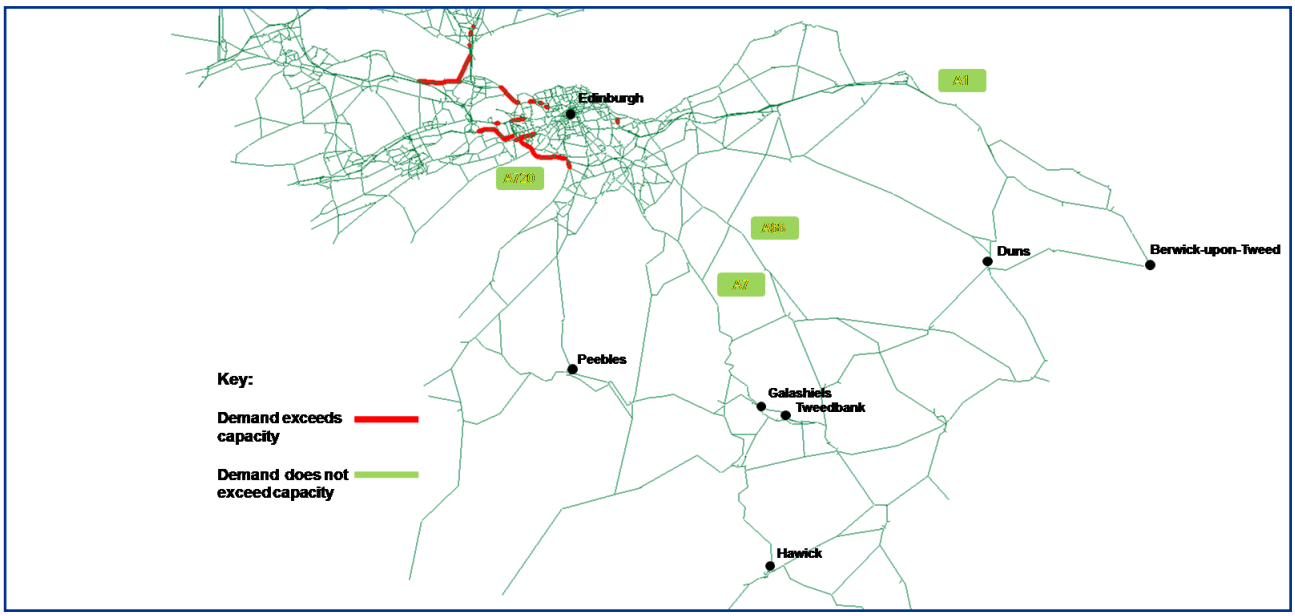
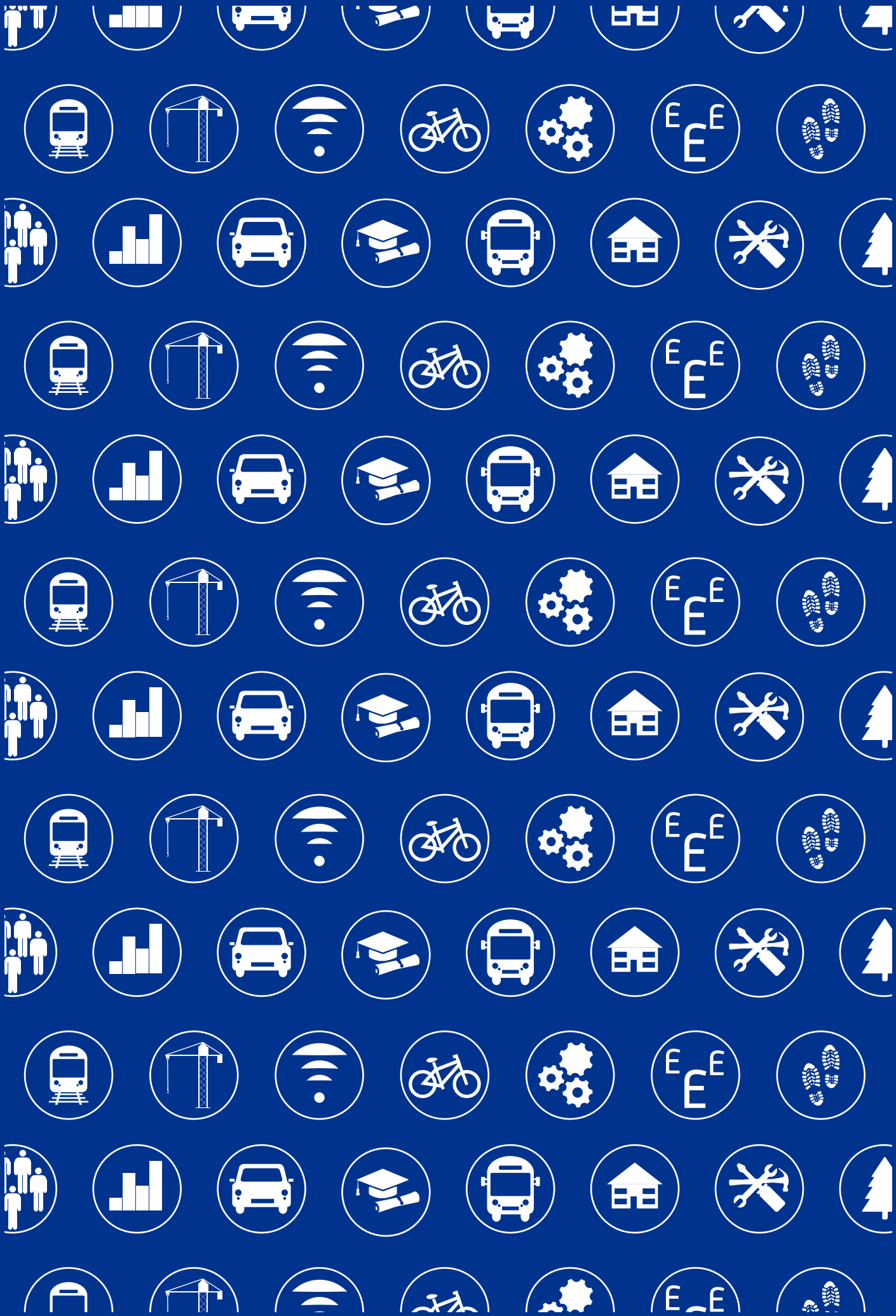


Figure 51: Unmet Demand, 2024 Reference Case, PM Peak Hour



Appendix - G TPO Mapping Process

G

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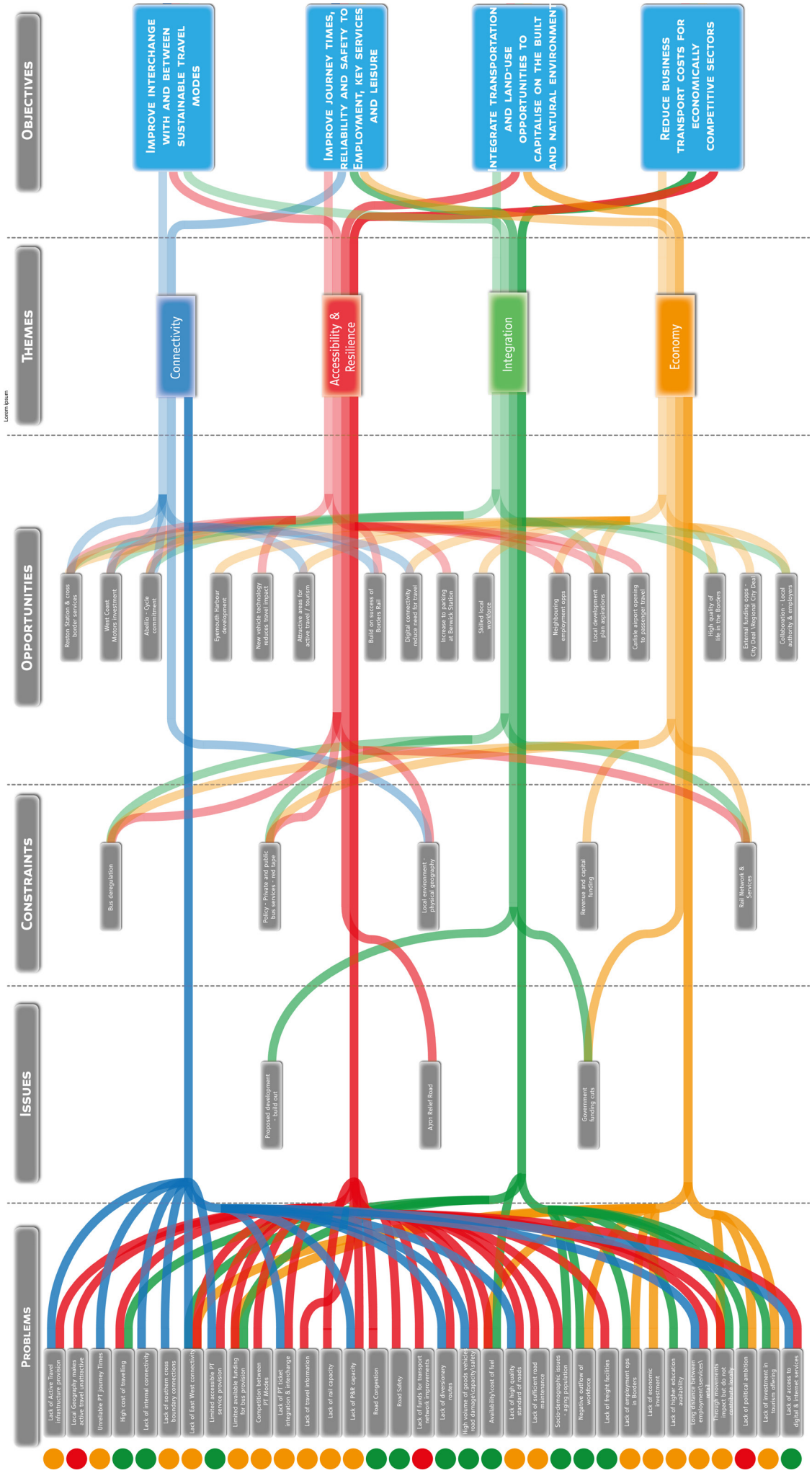
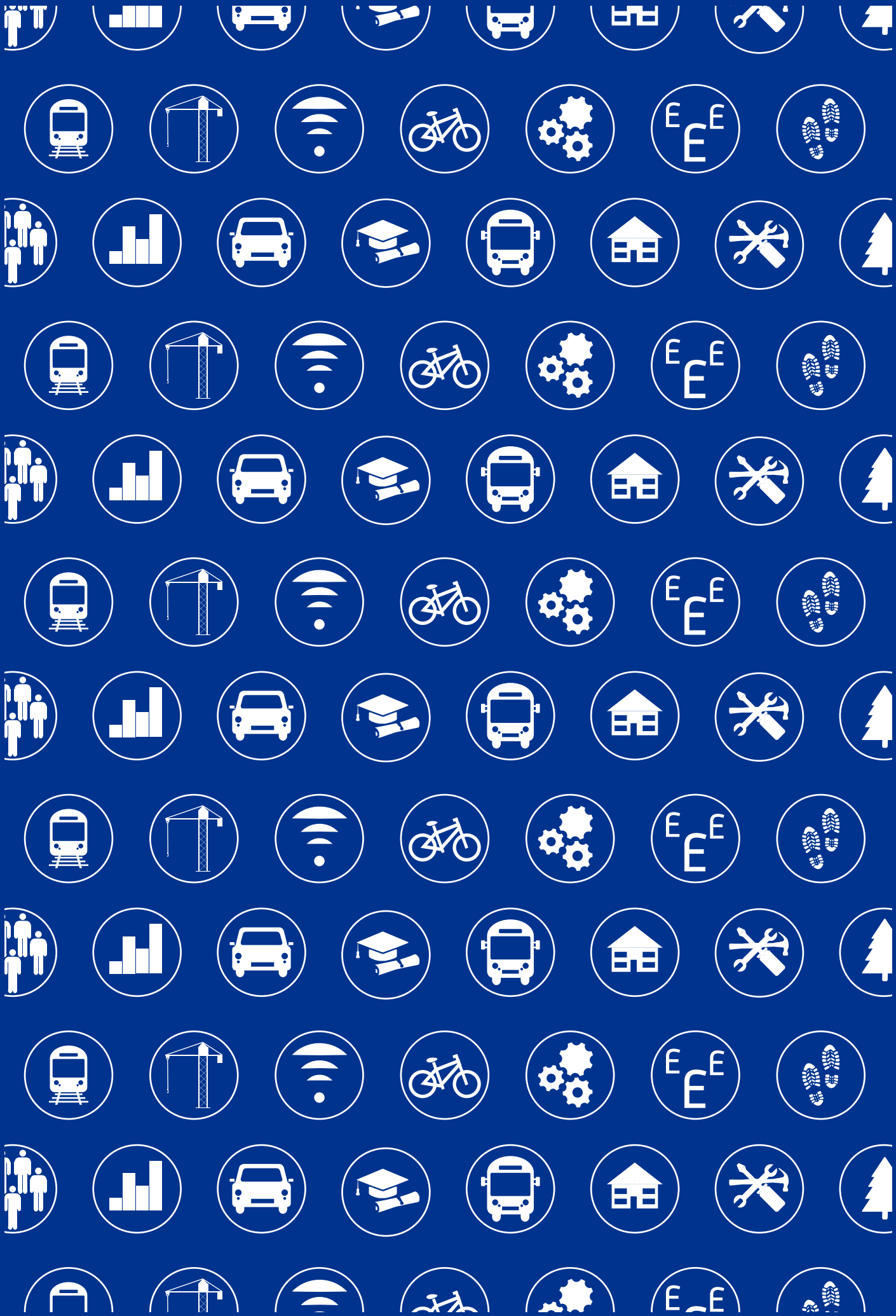


Figure 52: TPO Mapping



Appendix - H Options Assessment against TPOs

H

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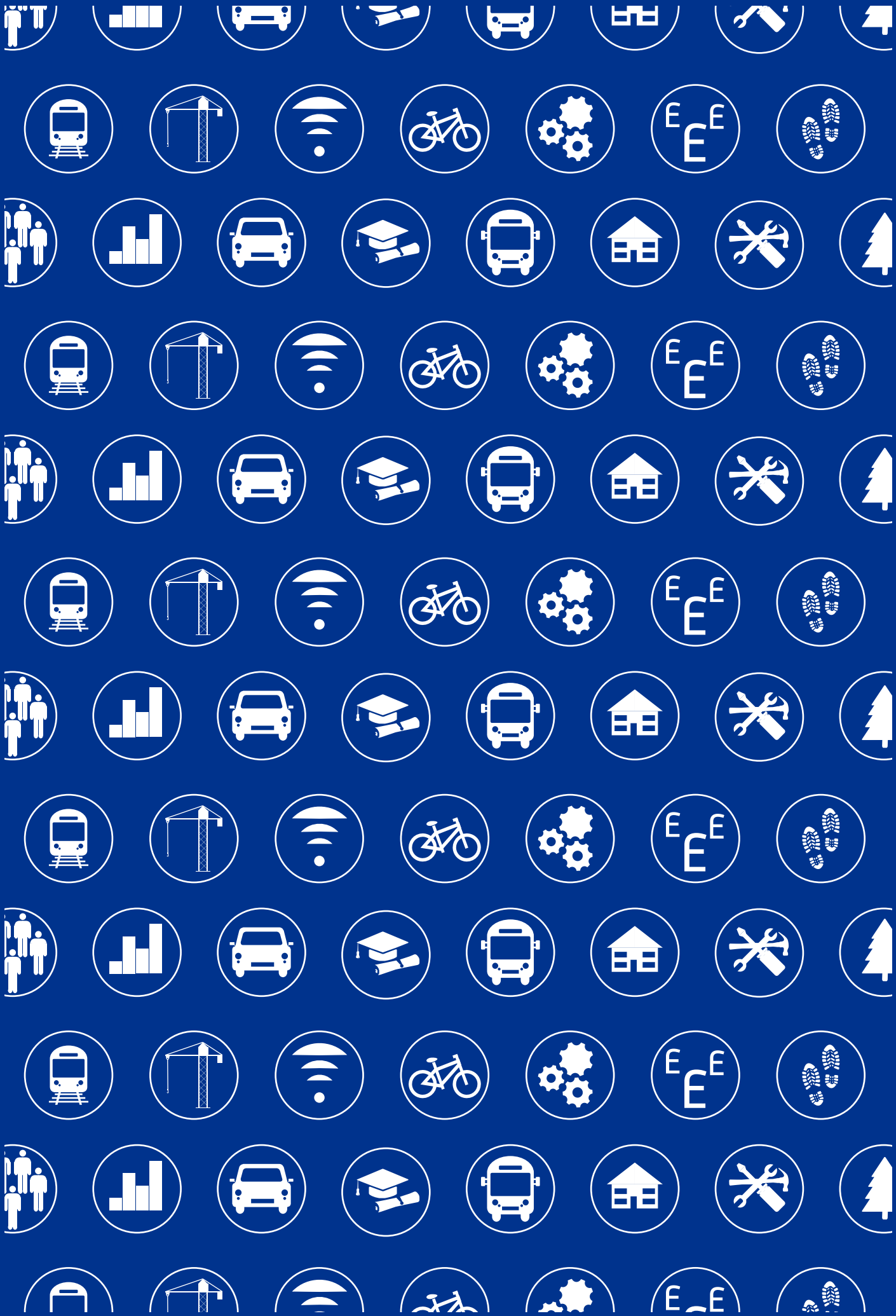
Table 27: Recommended Options, High Level Appraisal against TPOs

Type of Option	Option Description	TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
Accessibility	Increase bus service provision to Borders General Hospital and other health service centres [e.g. shuttle buses]	✓	✓	✓	✓
	Increase provision of public transport from villages to tertiary education facilities	0	✓	✓	0
	Improve physical accessibility on Public Transport vehicles for people with mobility or sensory impairment on strategic routes	✓	✓	0	0
	Improve physical accessibility to Public Transport through infrastructure for people with mobility or sensory impairment on strategic routes	✓	✓	0	0
Active Travel	Implement a dedicated Borders Active Travel Network, including provision around key services and public transport interchanges	✓	✓	✓	0
	Cross Boundary active travel measures [e.g. Peebles - Edinburgh]	✓	✓	✓	0
Connectivity	Improve the provision of real time traffic and passenger information in the Scottish Borders for all modes	✓	✓	0	0
	Increase the proportion of homes and businesses with access to quality broadband service	0	0	0	✓
Freight	A central distribution hub / hubs for freight and delivery services for key markets and transport hubs	0	✓	0	✓
	Review of HGV speed limits on key HGV routes and update accordingly [NB – arguments for both raising and lowering speeds]	0	✓	0	0
	Implement and enforce freight route signage strategy, including Satnav information	0	✓	0	✓
	Improve connections and missing links between forests, roads and railway, including 'low-tech' timber pickup facilities	✓	✓	✓	✓
	Improve network of internal forestry roads to remove HGV traffic from public roads	0	✓	✓	✓

Type of Option	Option Description	TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
Park & Ride	Increase capacity of existing P&Rs and implement new P&R schemes for all modes at strategic locations [e.g. Interchanges and Key Employment Areas]	✓	✓	0	0
Public Transport	Bus priority in north towards Edinburgh	✓	✓	0	0
	Introduce subsidised public transport fare schemes	0	0	0	0
	Express bus service to Edinburgh, including Edinburgh Airport	0	✓	0	0
	Express bus service to Newcastle, including Newcastle Airport	0	✓	0	0
	Express bus service to Carlisle	0	✓	0	0
	Increase number of east-west bus services	✓	✓	0	0
	Increase frequency of bus services, including extending timetable into evening	✓	✓	0	0
	Integrate bus and rail timetables, and other modes where appropriate	✓	✓	✓	0
	Integrated ticketing between modes	✓	✓	0	0
	Implement a strategic bus network connecting principle Borders settlements, and the destinations of Edinburgh, Carlisle and Newcastle	✓	✓	0	0
	Extend the Borders Railway to Hawick	✓	✓	✓	✓
	Extend the Borders Railway to Carlisle	✓	✓	✓	✓
	Extend the Borders Railway towards ECML via Berwick	✓	✓	✓	✓
	Construct an east-west rail link (heavy or light) linking key settlements in the Borders	✓	✓	✓	✓
	Extend Borders Railway to key settlements in the Borders	✓	✓	✓	✓
	Increase rail junction capacity in Edinburgh	✓	✓	✓	✓
	Double track the existing Borders Railway and increase frequency of Borders Rail Services	✓	✓	✓	✓

Type of Option	Option Description	TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
Public Transport	Improve service quality of Borders Railway [e.g. service capacity, bike storage, Wi-Fi, reliability and punctuality]	✓	✓	✓	✓
	New rail stations on existing Borders Railway [e.g. Heriot]	✓	✓	✓	
	Extend ScotRail services from Dunbar to beyond (south)	✓	✓	✓	✓
	Link Borders Railway and Fife Circle through Crossrail, providing interchange at Edinburgh Gateway for airport; West Edinburgh, freight depot, trams and potential link to Glasgow	✓	✓	✓	✓
Road	Fully dual the A1	0	✓	0	✓
	Dual the A1 between Edinburgh and the Scottish Border	0	✓	0	✓
	A1 climbing lanes and junction improvements	0	✓	0	✓
	Programme of safety measures on the A1	0	✓	0	✓
	Construction of Selkirk Bypass	0	✓	0	✓
	Construction of Hawick Bypass	0	✓	0	✓
	Construction of Galashiels Bypass	0	✓	0	✓
	Construction of A68 Lauder Bypass	0	✓	0	✓
	Construction of Langholm Bypass	0	✓	0	✓
	Road Safety Measures [e.g. speed cameras; education and enforcement; and road safety engineering]	0	✓	0	0
	Support service stations to include facilities for HGV rest stops, electric vehicle charging, tourist facilities and coach layover etc.	✓	✓	0	✓
	Improve resilience of roads, including appropriate diversionary routes.	0	✓	0	✓
	Increase overtaking opportunities on all roads	0	✓	0	
	Dual A7	0	✓	X	✓

Type of Option	Option Description	TPO 1: Improve interchange with and between sustainable travel modes	TPO 2: Improve journey times, reliability and safety to employment, key services and leisure	TPO 3: Integrate transportation and land-use opportunities to capitalise on the built and natural environment	TPO 4: Reduce business transport costs for economically competitive sectors
Road	Major improvements to A7	0	✓	0	✓
	Programme of safety measures on the A7	0	✓	0	0
	Major improvements to A68	0	✓	0	✓
	Dual A68	0	✓	X	✓
	Improvements to A698 (Hawick-Jedburgh-Kelso)	0	✓	0	✓
	Improvements to A699	0	✓	0	✓
	Improvements to A703	0	✓	0	✓
	Major improvements to key east-west routes	0	✓	0	✓
	Improve A697 linking Scottish Borders to North-umberland	0	✓	0	✓
	Improvements to A72 at Peebles	0	✓	0	✓
	A701 Relief Road and A702 road link	0	✓	0	✓
	Improvements to roads leading to Edinburgh A702	0	✓	0	0
	Increase road and structural maintenance, in-cluding winter and environmental maintenance	0	✓	0	✓
	Implement electric vehicle charging network, and associated promotion of alternative fuels	0	✓	✓	
Tourism	Implement Tourism Strategy which includes: • Tourism Signage & Interchange Strategy • 'Scenic Routes' • Supports sustainable tourism • Mobile apps • "Tourism-friendly infrastructure" to support tourism strategy [e.g. rest point, coach layover facilities etc.].	✓	✓	✓	0



Appendix - I
Implementability Criteria

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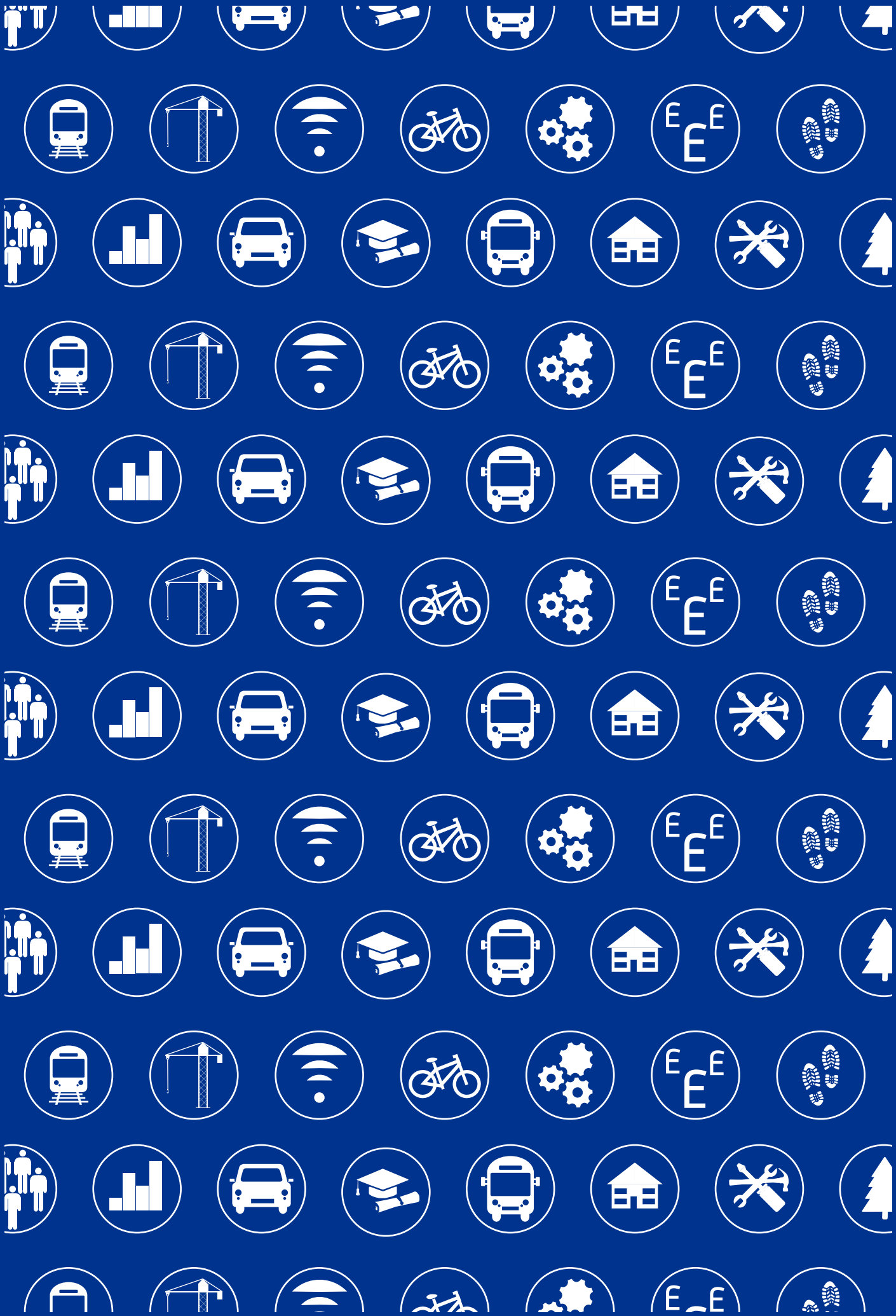
The table below shows the implementability criteria and provides details on sub criteria that covers delivery, operational, and demand and revenue related risks. The implementability criteria has been used to highlight potential issues / risks associated with delivery of the recommended multi-modal options.

Criteria	Sub Criteria	
Feasibility	Technical Issues / Risks	• Are any untried technologies involved in the intervention? Are there any significant technical issues/risks related to the implementation of this intervention? E.g. physical constraints or land availability? Consideration of the need for any departure from design standards that may be required?
	Operational Issues / Risks	• Are there any factors which might adversely affect the ability to operate the intervention over its projected life? Who would operate the option, including, if relevant, their statutory powers to operate a proposal and any other issues [e.g. cost] which may impact on its operation?
Affordability	Financial Risks / Issues	• What is the scale of the financing burden on the promoting authority and other possible funding organisations, and what are the risks associated with these? What is the level of risk associated with ongoing operating or maintenance costs and its likely operating revenues (if applicable)?
	Costs / Value for money	• What is the estimated cost? NB cost ranges (low, medium, high) provided based on professional knowledge and judgement; detailed cost estimates are not provided
Acceptability	Public / Political	• Has the proposal been made public? Is it acceptable to the public? Are there objections from particular sections of the community or from particular areas? • Does the proposal fit within current policy and strategy? What are the risks to political acceptability?



Appendix - J Sifted Out Options

J

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The sifted out options shown in the tables below have not been taken forward for the purpose of this study. They have been grouped in to one of the following categories:

- Local
- Out of Scope
- In progress

Sifted out options that fall in to the **'Local'** category could be considered further by Scottish Borders Council and SEStran Regional Transport Partnership.

Sifted out options that fall in to the **'Out of Scope'** category do not fall within the scope of this Pre-Appraisal study or are not deemed a transport option. These could also be considered further by Scottish Borders Council and SEStran Regional Transport Partnership.

Sifted out options that fall in to the **'In progress'** category are currently being considered by other parts of Scottish Government and are therefore not being taken forward as part of this study.

Table 28: Sifted Options, Local category

Type of Option	Option Description	Rationale for Removing at this stage
Accessibility	Adequate space on public transport services in the Borders for disabled access	To be considered under recommended Accessibility options aimed at improving physical accessibility for disabled people through vehicle and infrastructure improvements.
	Increase provision of public transport from villages to education facilities	The option is not strategic as this relates to local education facilities.
	Increase provision of public transport from villages to tertiary education facilities	Option is not strategic as this relates to local education facilities.
Active Travel	Improved active travel signage	To be considered as part of dedicated Borders Active Travel Network option
	Increase active travel connectivity between settlements	To be considered as part of dedicated Borders Active Travel Network option
	Improve the existing and increase the amount of active travel infrastructure	To be considered as part of dedicated Borders Active Travel Network option
	Introduce Borders cycle hire scheme in settlements	To be considered as part of dedicated Borders Active Travel Network option
	Increase provision of cycle parking in settlements	To be considered as part of dedicated Borders Active Travel Network option
	Improve equestrian infrastructure	To be considered as part of dedicated Borders Active Travel Network option
Freight	Build a timber processing facility and timber mill in the Scottish Borders	Option is not within the remit of Transport Scotland, however could be considered by Scottish Borders Council as part of its Land Use planning policy
	A central distribution hub / hubs for freight and delivery services for key markets and transport hubs	Option is not within the remit of Transport Scotland, however could be considered by Scottish Borders Council as part of its Land Use planning policy
Policy, Funding & Land use	Implement developer contributions scheme to tackle road maintenance issues	This is not directly a strategic option, however could be considered by Scottish Borders Council for further investigation

Policy, Funding & Land use	Develop a Low Carbon Economic Strategy for the Scottish Borders	Not progressed as it is outwith the remit of the study, however option for electric charging points network in Scottish Borders has progressed which would contribute to a Low Carbon Economic Strategy
Public Transport	Improve the operation of bus travel	Option not within the remit of this study as it relates to the regulation of bus services in the Scottish Borders, however could be considered in an update to local transport strategy
	Introduce DRT public transport	Option not progressed as it is not a strategic transport option
	Bus priority in north towards Edinburgh	Not progressed as it is outwith the remit of this study, however could be considered in an update to Midlothian local transport strategy
	Introduce subsidised public transport fare schemes	Not progressed as it is outwith the remit of this study, however could be considered by Scottish Borders Council and SEStran RTP
Roads	Improvements to A6105	A6105 not a strategic route, therefore a local road option which could be included in an update to local transport strategy
	New bridge over River Tweed at Peebles	Option is local and does not directly affect the strategic transport network, however could be considered in an update to local transport strategy
	New bridge over River Tweed at Lowood	Option is local and does not directly affect the strategic transport network, however could be considered in an update to local transport strategy
Soft Measures	Implement Travel Demand Management strategy across Borders, including Smarter Travel initiative	Option not progressed as it is not a strategic transport option, however could be considered in an update to local transport strategy
	Promote and support car sharing and community car clubs across Borders (including flexible demand and fleet management)	Option not progressed as it is not a strategic transport option, however could be considered in an update to local transport strategy
	Increase support and funding for community buses	Option not progressed as it is not a strategic transport option, however could be considered in an update to local transport strategy
	Implement 'Uber' type service which caters for local travel needs, with possibility of incorporating delivery traffic.	Not progressed as it is aimed at local and not strategic transport movements, however could be considered in an update to local transport strategy
	Implement Mobility as a Service (MaaS) across the Borders	Not progressed as it is aimed at local and not strategic transport movements, however could be considered in an update to local transport strategy
Tourism	Implement Tourism Strategy which includes: • Tourism Signage & Interchange Strategy • 'Scenic Routes' • Supports sustainable tourism • Mobile apps "Tourism-friendly infrastructure" to support tourism strategy [e.g. rest point, coach layover facilities etc.].	Could be considered as part of a dedicated Scottish Borders Tourism strategy

Table 29: Sifted Options, Out of Scope category

Type of Option	Option Description	Rationale for Removing at this stage
Connectivity	Increase the proportion of homes and businesses with access to quality broadband service	Not strictly a transport option and is outwith the remit of this study
Freight	HGV levy contributing to road maintenance costs	Option outwith the remit of this study
	Review of HGV speed limits on key HGV routes and update accordingly [NB – arguments for both raising and lowering speeds]	Option outwith the remit of this study
Policy, Funding & Land use	Ensure land use planning policy encourages and supports accessible transport infrastructure	Not strictly a transport option, however could be considered in an update to both local and regional transport strategies
	Improve land use planning around location of key services	Option resembles land use and planning policy, therefore not directly a transport option
	Use funding mechanisms (e.g. City Deal) for equitable inward investment across the Scottish Borders	Option relates to funding and economic investment and is therefore not a transport option
Public Transport	Develop Berwick-upon-Tweed into a multimodal hub	Option is outwith the remit of Transport Scotland, however could be included in an update to transport strategy in Northumberland
	Improve bus service links and punctuality between settlements	Option has already been considered in Public Transport options which have been progressed at a strategic level
	Capacity and speed improvements on English Rail Lines	Option is not within the remit of this study or Transport Scotland
	Increase rail junction capacity in Edinburgh	Option is outwith the remit of this study, however could be considered by City of Edinburgh Council and SEStran RTP
Roads	Improve performance of Edinburgh Bypass, especially to encourage Public Transport	Option is outwith the remit of the study, however could be considered by City of Edinburgh Council and SEStran RTP
	Road User Charging initiative	Option outwith the remit of this study
	Improvements to key roads in England with links to the Scottish Borders: M6 / M74 Junction 44 [A6071] and A69 (Newcastle - Carlisle)	Option is outwith the remit of Transport Scotland, however could be considered by English authorities
	A701 Relief Road and A702 road link	Option outwith the remit of this study, but is being considered by Midlothian Council
Other	Increase collaboration between councils, agencies and private sector (e.g. working groups)	Option outwith the remit of this study

Table 30: Sifted Out Options, In-progress category

Type of Option	Option Description	Rationale for Removing at this stage
Connectivity	Improve the provision of real time traffic and passenger information in the Scottish Borders for all modes	Already in progress at a national level
Public Transport	Integrated ticketing and timetables between modes	Option is already in progress. Transport Scotland has recently closed a consultation process on smart ticketing and payment which will help shape their smart delivery strategy
	Construct an east-west rail link (heavy or light) linking key settlements in the Borders	Similar bus options already under consideration to deliver the east-west links.
	Extend ScotRail services from Dunbar to beyond (south)	Already being looked at as part of the Reston Station study.
Road	Increase road and structural maintenance, including winter and environmental maintenance	Already in progress at a national and local authority level.
	Implement network of charging points for electric vehicles, and associated promotion of alternative fuels	Already in progress at a national level.