

Midlothian Local Transport Strategy:

Draft Stage 1&2 Technical Report

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1 Introduction

1.1 Purpose

1.1.1 Midlothian Council commissioned Stantec to produce a new Local Transport Strategy (LTS) for the Midlothian Council area. LTS documents provides a framework for the delivery of transport at the local level and a means for local authorities to set out how they intend to achieve both national and regional level policy objectives.

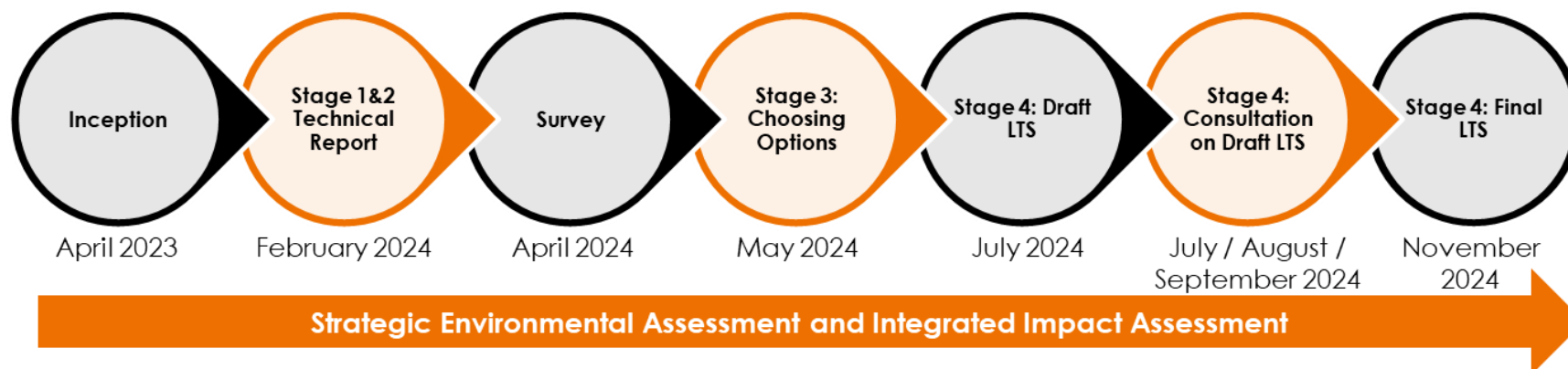
1.1.2 Transport Scotland produced draft guidance on the development of LTS documents (LTSDG) in March 2023¹. This guidance sets out a five stage LTS development process as follows:

- **Stage 1: Analysis of transport problems and opportunities** – a summary of the current and future transport problems in the local authority area
- **Stage 2: Setting outcomes** – a set of well-defined outcomes specifying what the LTS is seeking to achieve

- **Stage 3: Choosing options** – the identification, sifting and appraisal of a range of options which will help meet the LTS outcomes
- **Stage 4: Implementation** – the development and delivery of a plan for achieving the above
- **Stage 5: Monitoring and evaluation** – the development of a separate Monitoring and Evaluation Plan setting out how Midlothian Council will monitor the delivery of the LTS and determine whether it is achieving the Strategy Outcomes.

1.1.3 **This report sets out the detailed technical analysis which underpins Stages 1 and 2 and summarises the emerging outputs from this work.** It has been informed by a comprehensive data analysis exercise and engagement with key stakeholders.

1.1.4 As shown in the figure below, the **next stage of work involves an online public survey which aims to ensure the full range of problems (and any opportunities) relating to transport in Midlothian are captured and gather any thoughts on the emerging Strategy Outcomes.**



¹ [Local Transport Strategy: Draft Guidance](#)

1.1.5 The findings from this survey will then be used to inform Stage 3 (choosing options) and Stage 4 (the preparation of the LTS document).

1.1.6 A Strategic Environment Assessment (SEA) and Integrated Impact Assessment (IIA) is being undertaken in parallel with the LTS development stages, with SEA and IIA feeding into the overall shape and content of the final document.

1.2 Why is a new Local Transport Strategy for Midlothian needed?

1.2.1 There is no statutory requirement for a local authority to produce an LTS. However, Midlothian Council has elected to do so in order to:

- ensure there is a clear long-term plan for transport investment in Midlothian
- articulate how Midlothian will enact both national and regional transport policy objectives
- help maximise Midlothian Council's ability to overcome the transport challenges which the local authority area faces²

1.2.2 Forecast level of development in Midlothian are considerable, with the number of houses set to increase by approximately 26% by 2036. This rate of increase will have significant implications for transport demand. **Developing a new LTS provides an important opportunity to clearly set out a plan for meeting the significant challenge presented by this scale of development.**

1.2.3 There is also scope for major technological change in the transport sector in the medium term, including

decarbonisation and automation and there have been significant changes in both commuting patterns and the way we shop in recent years. **The new LTS provides an opportunity to ensure transport investment takes advantage of these changes and addresses any key challenges which they may pose.**

1.3 This Report

1.3.1 This report includes further chapters as follows:

- **Chapter 2** - provides a review of key national, regional, and local policy. For each document, a brief summary of the purpose, aims, and objectives is provided before setting out a short commentary on the implication for the LTS.
- **Chapter 3** - provides a review of relevant socio-economic data and considers recent and future housing and employment development and the consequence of this for transport demand and the LTS.
- **Chapter 4** – sets out the approach to identifying problems and opportunities which has been adopted in the development of this Stage 1&2 Report.
- **Chapters 5-7** – provides a baseline of active travel, public transport and road-based connectivity in Midlothian respectively and considers the potential problems associated with each of these modes.
- **Chapter 8** – sets out the Draft Strategy Outcomes and the main resulting changes in travel behaviour and societal impacts associated with these.
- **Chapter 9** – summarises the approach taken in delivering this Draft Stage 1&2 Report and sets out next steps.

²There are certain discretionary powers which a local authority may only exercise if they have an LTS which supports such activities. These powers are where the local authority has either a workplace parking licensing (WPL) scheme (under the Transport (Scotland) Act 2019) or a road user charging (RUC) scheme

(under the Transport (Scotland) Act 2001) in its area as well as a number of powers in relation to bus services under Part 2 of the 2001 Act.

2 Policy Review

2.1 Overview

- 2.1.1 There has been a significant shift in the national, regional, and local policy context in recent years with there now being a particular focus on emission reduction and reducing the need to travel, making better use of existing assets and, where a journey is required, ensuring that where possible this is made by active travel or public transport.
- 2.1.2 To help inform the strategic direction of the LTS, this chapter provides a review of relevant national, regional, and local policy documents. For each document, a brief summary of the purpose, aims, and objectives is provided before setting out a short commentary on the overall policy implication for the LTS. The chapter focuses on the key strategic documents. However, a wider range of relevant policy has been reviewed and is included in Appendix A Appendix A

2.2 National Policy

National Transport Strategy 2

- 2.2.1 Transport Scotland published its National Transport Strategy 2 (NTS2) which sets out the national action plan for improving and developing transport in Scotland in February 2020. The NTS2 sets the following 'Vision' for Scotland's transport system up to 2040:

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

- 2.2.2 The Vision is underpinned by four 'Priorities', namely:

- Reduce inequalities

- Take climate action
- Help deliver inclusive economic growth
- Improve our health and wellbeing

- 2.2.3 The NTS2 also establishes two 'hierarchies' which define how future transport investment decision making and services should be planned (see Figure 2-1). The **Sustainable Travel Hierarchy** defines the priority which will be given to each mode of transport in future investment planning, with walking and wheeling identified as the highest priority and single occupancy car travel the lowest priority. The Sustainable Travel Hierarchy is complemented by the **Sustainable Investment Hierarchy** which establishes a structured set of steps to be followed when planning investment in transport infrastructure, with 'targeted infrastructure improvements' afforded the lowest level of priority.

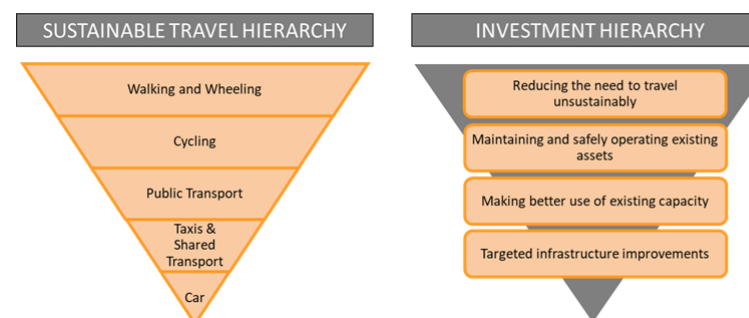


Figure 2-1: Sustainable Travel Hierarchy and Investment Hierarchy

Policy implication for the LTS: The LTS, and the interventions which ultimately emerge from it, must align with the Vision and Priorities within NTS2 and the Hierarchies which prioritise active travel and public transport while at the same time discouraging single occupant car journeys.

Climate Change (Emissions Reduction Targets) (Scotland) Act 2019

2.2.4 Under the 2019 Climate Change Act, the Scottish Government made a legally binding commitment to deliver net-zero carbon emissions by 2045. In addition, two interim targets were developed:

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

Policy implication for the LTS: The Scottish Government has made a legally binding commitment to deliver net-zero carbon emissions by 2045 and the LTS will need to support the delivery of this as a priority as well as the associated interim targets.

Climate Change Plan Update

2.2.5 The Climate Change Plan Update (2020) included two further commitments designed to support the delivery of the above targets:

- An aim to reduce vehicle kilometres travelled by car by 20% by 2030
- A commitment to phase out the need for new petrol and diesel cars and vans and for the conditions to be created to phase out the need for all new petrol and diesel vehicles in Scotland's public sector fleet by 2030
- a £120 million investment in zero emissions buses
- an investment of £50m to create active freeways

Policy implication for the LTS: The Climate Change Plan Update sets demanding targets for the reduction of vehicle kilometres and

the registration of new hydrocarbon vehicles. However, it also provides a range of opportunities associated with new funding streams and initiatives that could bring additional investment and improve transport options for communities and people in Midlothian.

Strategic Transport Projects Review 2

2.2.6 The Strategic Transport Projects Review 2 (STPR2) was published in December 2022 and sets out the Scottish Government's transport investment programme over the 20-year period 2022-2042, detailing how the government will deliver the Vision, Priorities and Outcomes of NTS2. The document splits Scotland into 11 regions and includes recommendations which are relevant to all regions, recommendations which are general but have particular benefit for certain regions, and recommendations which provide benefits across most parts of Scotland. Midlothian falls in the Edinburgh and South East Scotland Region. The recommendations for this region with particular relevance for the LTS include:

Recommendations specific to the Edinburgh and South East Scotland Region:

- 12) Edinburgh and South East Scotland Mass Transit - Develop and enhance the cross-boundary public transport system for the South East of Scotland, potentially comprising tram and bus-based transit modes including bus rapid transit (BRT) and bus priority measures.

Recommendations which are general but have particular benefit for the Edinburgh and South East Scotland region:

- (2) Active Freeways and Cycle Parking Hubs - development of active freeways on high-demand corridors in Scotland's large urban areas, with priority given initially to the larger cities. Comprehensive networks of active freeways would connect outlying neighbourhoods, including those with poor

existing links, to city/town centres and other important destinations.

Recommendations relevant across most parts of Scotland:

- (1) Connected Neighbourhoods – packages of improvements to active travel infrastructure in and around town and neighbourhood centres to encourage the development of 20-minute neighbourhoods
- (3) Village-town Active Travel Connections – the creation of new and improved active travel routes to connect smaller rural communities with nearby towns, using segregated paths and quiet routes.
- (4) Connecting Towns by Active Travel - the creation of new and improved active travel routes between Scotland's towns using segregated infrastructure.
- (5) Long-Distance Active Travel Network – the creation of new and improved active travel routes between connecting Scotland's cities, regions and major gateways
- (6) Behavioural change initiatives - building on existing programmes to deliver local, regional and national initiatives that encourage, enable and incentivise more people to make use of active and sustainable choices more often
- (7) Changing road user behaviour - implementation of speed enforcement technology and national road safety behaviour change campaigns, education and training initiatives
- (8) Increasing Active Travel to School – Improved and safer walking, wheeling and cycling routes to primary and secondary schools
- (9) Improving access to bikes – through interventions that would build on existing successful programmes and the work of established support groups
- (10) Expansion of 20 mph Limits and Zones – Scaling up current local programmes and initiatives to provide new or expanded 20mph limits and zones.
- (14) Provision of Strategic Bus Priority Measures – Implementing bus priority measures within Scotland's cities and towns where congestion is highest.
- (19) Infrastructure to provide access for all at railway stations - review of station accessibility across Scotland to identify and remove barriers to travel and improve access for all
- (20) Investment in Demand Responsive Transport and Mobility as a Service – Establishing whether existing resources could be better utilised across the public network, either on the basis of fixed route services or through flexible routing.
- (21) Improved Public Transport Interchange Facilities – Rolling out improved infrastructure design to, and within bus and railway stations, and improved information, signage and wayfinding, by upgrading the accessibility and quality of passenger facilities at existing bus stations and other transport interchanges, or where needed, construction of new facilities.
- (22) Framework for the Delivery of Mobility Hubs – A delivery framework for mobility hubs is developed in collaboration with stakeholders to facilitate the creation of high-quality mobility hubs across Scotland.
- (23) Smarter, Integrated Public Transport Ticketing – Building on the interventions and new services delivered under the 2018 Smart and Integrated Ticketing and Payments Delivery Strategy to continue with the support and ongoing delivery of fully integrated smart ticketing and payment services across all public transport modes.
- (25) Decarbonisation of the Rail Network – Conducting a business case assessment on the Tweedbank – Newcraighall (Borders Line) to determine the feasibility of decarbonisation.
- (26) Decarbonisation of the Bus Network – Providing further investment to stimulate the commercial roll out of zero emission buses.

- (28) Zero Emission Vehicles and Infrastructure Transition – A national framework for zero emission vehicles is established to support and accelerate the shift to zero emission mobility through targeted funding to enable investment in fleets, facilities and emerging technologies.

2.2.7 The recommendations identified in STPR2 include a wide range of interventions focused around improving active travel and public transport connections in line with the priorities identified in NTS2. In the South East Scotland region, the delivery of a mass transit system is identified as a key priority. This is intended to improve region wide connectivity by providing more options for cross boundary travel and reducing the need for unnecessary changes between services. STPR2 notes that the system would focus on key corridors of demand as well as where congestion impacts on bus services and where the public transport offer is more limited, including targeting more disadvantaged areas where there can be greater dependence on public transport

Policy implication for the LTS: STPR2 includes a range of interventions focused on improving active travel and public transport connections between communities, including the development of a mass transit system in Edinburgh and enhancing cross boundary connections. Given Edinburgh is a major focus for trips from Midlothian, the delivery of a mass transit system and options for improving cross border connections between the two local authority areas will be a key consideration for this LTS.

National Planning Framework 4

2.2.8 The Scottish Government published National Planning Framework 4 (NPF4) in February 2023. This sets out proposed priorities and policies for the planning system up to 2045. The document identifies six spatial principles which will guide the development of future places, namely:

- Just transition – ensuring the transition to net zero is fair and inclusive

- Conserving and recycling assets – making productive use of existing buildings, places, infrastructure, and services
- Living locally – support local liveability and ensure people can easily access services, greenspace, learning, work, and leisure locally
- Compact urban growth – limiting urban expansion
- Rebalanced development – targeting development in areas of past decline
- Rural revitalisation – encourage sustainable development in rural areas

2.2.9 The document also sets out a series of nationally important developments. Those with particular relevance for Midlothian include:

- Urban Mass / Rapid Transit Networks – development of mass / rapid transit systems for Edinburgh (through plans to extend the tram network) and the associated region in order to support placemaking and improve transport equity. NPF4 notes that such plans provide an opportunity to substantially reduce levels of car-based commuting, congestion, and emissions from transport at scale.
- Central Scotland Green Network – the creation and / or enhancement of multi-functional green infrastructure, including routes for active travel and / or recreation.
- National Walking, Cycling and Wheeling Network – New and / or upgraded routes suitable for a range of users for walking, cycling and wheeling that help create a national network that facilitates short and longer distance journeys and linkages to multi-modal hubs

2.2.10 NPF4 also identifies specific priorities for each region. Those for Central Scotland are as follows:

- Pioneer low carbon, resilient urban living by rolling out networks of 20-minute neighbourhoods, future proofing city and town centres, accelerating urban greening, investing in

net zero homes, and managing development on the edge of settlements

- Target economic investment and build community wealth to overcome disadvantage and support a greener well-being economy

2.2.11 The document discusses the growth of remote and local working since the COVID-19 pandemic and notes that “the creation of hubs within groups of settlements could significantly reduce the need to travel, whilst also helping to grow local business and communities”.³ The investment in significant development clusters in the Edinburgh City Region, including in Midlothian, is highlighted and the need to both take into account new development (which has the potential to compound existing capacity constraints and congestion) and prioritise sustainable choices is emphasised⁴.

2.2.12 NPF4 also sets out the ‘Minimum All-Tenure Housing Land Requirement’ (MATHLR) which is the minimum number of housing units to be provided in each planning authority in Scotland for a 10-year period. Further information on Midlothian’s MATHLR and the implications of this in terms of future development and transport demand are discussed in Section 3.3.

Policy implication for the LTS : While acknowledging the need for significant new housing stock, NTS2 sets out an approach which is focused around local living (including 20-minute neighbourhoods), limiting urban expansion, and encouraging sustainable transport connections to employment and key services. The document also references the development of a mass / rapid transit system for Edinburgh and the associated region as noted above as well as a national walking, cycling, and wheeling network. The principles established in the NTS2 will need to be reflected in both the LTS and Midlothian’s next LDP (see below).

³ p135

Sustainable Travel to Stations

2.2.13 Sustainable Travel to Stations is a Strategy document produced by Scotland’s Railways which aims to increase rail passenger numbers, contribute to a net zero economy, and help people live locally.

2.2.14 The document sets out Scotland’s Railways’ overarching aim to **carry twice as many customers as it did pre-pandemic by 2035** equating to at least 190 million passenger journeys. Achieving this target would involve a fundamental shift to rail travel, requiring an increase in passenger journeys of 126 million from the 64 million carried in 2022/23.

2.2.15 The document also includes specific targets for increasing sustainable travel to stations as follows:

- **1. Walking & Wheeling:** increase walking/wheeling trips to stations from 33% in 2022 to 50% in 2035. From 21 million in 2022 to 95 million trips in 2035.
- **2. Cycling:** increase cycling trips to stations from 9% in 2022 to 20% in 2035. From 6 million trips in 2022 to 38 million trips in 2035.
- **3. Bus:** increase bus trips to stations from 14% in 2022 to 20% in 2035. From 9 million trips in 2022 38 million trips in 2035.
- **4. Private car:** reduce percentage driving/being driven to stations from 27% in 2022 to 10% in 2035.

Policy implication for the LTS: Sustainable Travel to Stations includes an ambitious target to **increase rail passenger journeys by 126 million by 2035**. To achieve this overarching aim, it is likely that significant investment in the rail network would be

⁴ See p138

required. At the Midlothian level, encouraging rail travel and enhancing sustainable access to rail stations should be a key priority for the LTS in line with these wider policy objectives.

2.3 Regional Policy

SEStran 2035 Regional Transport Strategy

2.3.1 SEStran, the Regional Transport Partnership (RTP) for the South East of Scotland formally adopted its new Regional Transport Strategy (RTS) in June 2023. The RTS sets out the strategic framework for the development of transport in south east Scotland up to 2035. As a regional strategy, the RTS has a particular focus on regional travel i.e. travel between local authorities.

2.3.2 The overarching Vision of the RTS is:

‘A South-East of Scotland integrated transport system that will be efficient, connected and safe, creating inclusive, prosperous, and sustainable places to live, work and visit, affordable and accessible to all, enabling people to be healthier and delivering the region’s contribution to net zero emissions targets.’

2.3.3 This is supported by four Strategy Objectives as follows:

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

2.3.4 The document includes a summary of the key transport problems facing the region and sets out a Spatial Strategy which identifies a series of Regional Corridors on which there

should be a particular focus in terms of reducing car use and achieving modal shift.

2.3.5 In Midlothian, two Regional Corridors can be considered to exist. This document identifies them as follows:

- Midlothian East – connecting the Bonnyrigg / Dalkeith / Gorebridge triangle to Edinburgh and beyond
- Midlothian West – connecting Penicuik / Loanhead to Edinburgh and beyond

2.3.6 The document that outlines a set of Regional Mobility Themes (RMTs) and associated Policies and Actions which set out a direction of travel for the delivery of transport in the region up to 2035. The RMTs are as follows:

- Shaping development and place – ensuring the land use planning process and transport planning process are closely integrated with sustainable principles at their heart
- Delivering safe and active travel – improving and providing new infrastructure and facilities for walking, wheeling and cycling, including through completion of the SEStran Strategic Network and prioritising roadspace for active travel in towns and cities
- Enhancing access to and accessibility of public transport – improving the accessibility of public transport through both physical (improving vehicles and stops) and non physical interventions (improving information, including introducing Real Time Information, and making public transport affordable for all)
- Transforming and extending the bus service – introducing new bus services, more direct bus services and /or express services, increasing bus service frequency, and implementing bus priority measures. Associated Actions include undertaking a regional study to help identify bus corridors and bus priority interventions where Edinburgh is a focus

- Enhancing and extending rail services – including improving existing connections and delivering new connections, including the implementation of an Edinburgh and South East Scotland Mass Transit system
- Reallocating road-space on the regional and local network – re-allocating road space away from general traffic to specific groups of road users, including public transport and active travel
- Delivering seamless multi-modal journeys – a range of measures, including implementing integrated ticketing across all modes, delivering a network of multi-modal mobility hubs, and enhancing park and ride provision
- Decarbonising transport – measures to decarbonise the vehicle fleet, including the roll out of electric vehicle (EV) charging infrastructure
- Facilitating efficient freight movement and passenger travel – targeted infrastructure investment to tackle congestion hotspots and improve resilience and measures to facilitate freight modal shift from road to rail
- Working towards zero road deaths and serious injuries – road safety schemes, including the implementation of 20mph zones and other road safety measures in urban and rural environments
- Reducing car kilometres – a range of measures aimed at reducing car kilometres in line with Scotland's climate change commitments, including demand management, car sharing, enhancing park and ride provision and behavioural change measures
- Responding to the post-COVID-19 world – responding to changes in the way people travel following COVID-19.

Policy implication for the LTS: The RTS sets out the framework for the development of transport at the regional level and, mirroring the national level documents, focuses on improving active and

public transport connections and achieving modal shift so as to reduce car travel. This LTS will need to align with the objectives, policies, and actions set out within the RTS, focusing on the delivery of these at the local level.

Indicative Regional Spatial Strategy for Edinburgh and South East Scotland

- 2.3.7 The Planning (Scotland) Act 2019 removed the need for the preparation of Strategic Development Plans (SDP) and introduced the concept of Regional Spatial Strategies. These are non-statutory documents which provide a spatial representation of the key regional land use issues which need to be addressed across the region and are intended to help guide planning policy at the local level. Following the Planning (Scotland) Act, an interim Regional Spatial Strategy (iRSS) for Edinburgh and South East Scotland City Region⁵ was subsequently submitted to Scottish Government for consideration.
- 2.3.8 The iRSS notes that there is significant development planned in the region and that if this is to be delivered there needs to be “a transformational approach to transport and travel – connecting people and places by sustainable strategic public transport and active travel corridors”, with “better connectivity, physical and digital, and new infrastructure that allows sustainable movement” identified as critical to success.
- 2.3.9 The document is focused around three overarching themes as follows:
 - Adaptable Region – addressing climate change, ensuring conservation and good design

⁵ See [iRSS+final+.pdf \(squarespace.com\)](#)

- Accessible Region – viable sustainable transport options, access to employment, sustainable housing land, digital access
- Regional Recovery and Renewal – economic renewal, tackling inequality, environmental improvement

2.3.10 The document contains a section which focuses specifically on Midlothian and includes a Spatial Strategy for the local authority area. This section notes that the following are particularly important for Midlothian:

Maintaining the character of the area by:

- supporting and promoting existing town centres while also seeing key development sites of regional significance being delivered, in particular the Shawfair new settlement comprising over 5,000 new homes, a town centre, 70 hectares of employment allocations, and new schools and community facilities
- reinforcing the Green Belt and expanding cross boundary green network opportunities along the A720 City Bypass between Straiton, Lasswade, Gilmerton and Sheriffhall junctions to mitigate impacts of new development either side of the City bypass and maintain the character of the area
- continued development of the Midlothian Science Zone (the biotechnology campus at the Bush); the 60 hectare 'Midlothian Gateway' employment site at West Straiton (which it is hoped will incorporate a new arena to service the south east of Scotland and beyond) and the Salters Park employment site (which it is hoped will incorporate a new film and television studio)

2.3.11 In terms of transport, the iRSS references several specific schemes relevant to Midlothian including:

- improving economic cluster linkages by cross boundary tram connectivity e.g., from Edinburgh Bioquarter to the Bush in Midlothian

- improved north-south transport links such as the full dualling of the A68 and A7 road networks
- implementing existing commitments, including the new Sheriffhall junction, the A701 relief road and associated A702 link / active travel improvements, and the A7 urbanisation project – the document notes that while not the focus of climate policy, 'efficiency in roads is required to be addressed' and 'must be part of an overall zero carbon vehicle use strategy for the area'

2.3.12 More generally the document identifies a range of potential transport interventions, including:

- faster and more efficient bus services in and out of Edinburgh from surrounding areas
- the delivery of transport interchanges / hubs around Edinburgh
- increasing uptake of e-bikes
- identifying new Park and Ride opportunities
- upscaling electric vehicle (EV) charging infrastructure

Policy implication for the LTS: The iRSS clearly articulates the need for transformational change in terms of transport provision and delivery given the significant development proposed in the region. For Midlothian, several specific schemes are identified, including the potential of cross boundary tram connectivity into Edinburgh and several road improvement schemes. The document also identifies a range of more general measures designed to improve sustainable transport use, all of which should be considered within the LTS.

2.4 Local Policy

Midlothian Local Development Plan

2.4.1 The current Midlothian Local Development Plan (LDP) was adopted in November 2017. The LDP was produced in the

context of the SESplan SDP produced in 2013 and covers the period up to 2024. As noted above, the need for SDPs was removed under the Planning (Scotland) Act 2019, with NPF4 now forming part of the development plan alongside RSSs. In this context, Midlothian is currently preparing a new LDP (Midlothian Local Development Plan 2 – MLDP2). It is anticipated that this document will be adopted in December 2026, with the document covering the ten-year period between 2026 and 2036.

- 2.4.2 A detailed review of the Strategy for Development set out in the 2017 LDP is included in Section 3.3. In terms of transport, 'Policy Tran 2' in the 2017 LDP identifies a package of transport interventions designed to support the delivery of the strategy. These are detailed in the table below.
- 2.4.3 The 2017 LDP identifies the Edinburgh and South East Scotland City Region Deal as the agreed funding and delivery mechanism for the road interventions identified (the A701 Relief road and A702 link road; the A702/Bush Loan junction and the grade separation of Sheriffhall Roundabout).

Table 2-1: Midlothian Local Development Plan Transport Interventions⁶

Transport Issue	Transport Intervention
Trunk Roads	A720 Sheriffhall Junction Grade Separation ⁷
Strategic Roads	Shawfair Strategic Development Area: A720 / A68 Junction (Newton Farm)*
	A7/A68 Corridor Strategic Development Area: A7 Urbanisation*
	A701 Corridor Strategic Development Area: A701 Relief Road and A702 Link with Associated Junctions*
	Newton Farm Link Road*
	B6482 Bryans Road to Gowkshill Link**

Transport Issue	Transport Intervention
Local Roads Serving New Developments	South Mayfield Distributor**
	North West Penicuik Link**
Junction Improvements	A702 / Bush Loan*
	A702 / A703 Damhead*
	A701 / Graham's Road / Belwood Road*
	Lothian Street / High Street, Bonnyrigg*
	A7 / The Wisp*
Park and Ride	The Wisp / Millerhill Road*
	Sheriffhall (Extension)
	A68 North (Newton Farm)*
Public Transport	Lothianburn
	Orbital Bus Route (A720 City Bypass)
	Shawfair Infrastructure**
	Supported Bus Services in Connection with New Developments*
	Potential Rail Station at Redheugh**
	Tramline 3 to Dalkeith
Cycling / Walking	Millerhill-Loanhead Rail Safeguard
	Infrastructure Improvements to complement Borders Rail

Policy implication for the LTS: The current Midlothian LDP was produced in 2017 and Midlothian is currently preparing a new LDP which reflects the changing legislative and policy context. The LTS will be delivered in advance of this LDP and should reflect the

principles set out in NPF4. The previous LDP identified a range of transport interventions designed to support the development proposed within Midlothian, much of which are yet to be delivered. This development and the development requirements identified in NPF4 for MLDP2, notably the minimum 8,850 MATHLR housing requirement for MLDP2, should be considered during the option development stage of the LTS.

plans have been developed for Mayfield and Gorebridge, Further information on these is included in Appendix

Policy implication for the LTS: the Midlothian Single Plan contains a series of objectives, actions, and outcomes which are both directly and indirectly related to transport provision and should be reflected within the LTS.

Single Midlothian Plan 2023-2027

- 2.4.4 The Single Midlothian Plan sets out a shared plan to improve the lives of local people in Midlothian and is produced by the Midlothian Community Planning Partnerships (CPP) which draws together public, voluntary and private sector bodies. The Plan includes a series of objectives with a set of shared actions and outcomes set out under each of these. The objective most relevant to this strategy is 'Make Midlothian Greener'. Under this objective, the following actions are identified:
- promoting available active travel information and events
 - working with Sustrans, SEStran, and neighbouring local authorities to identify opportunities for bike / e-bike hire projects
 - increasing bike storage and the number of mobility hubs and encouraging multi-modal journeys
 - establishing a shared transport scheme across Midlothian
- 2.4.5 In addition to the above actions which explicitly relate to transport, enhancing transport provision could also help achieve wider outcomes such as improved health and well-being and reduced poverty (e.g., through enhancing access to employment and training opportunities) and making significant progress towards getting to net zero by 2030.
- 2.4.6 As part of the Single Midlothian Plan, Midlothian has developed Action Plans for priority areas and up to now action



3 Local Authority Profile

3.1 Overview

- 3.1.1 Understanding the current and potential future socio-economic and demographic context of an area is vital when developing a transport strategy. This chapter therefore provides a profile of the Midlothian local authority area. It includes:
- a review of key socio-economic and demographic metrics to understand the current position with regard to the population and employment in Midlothian
 - a detailed review of the scale of recent and future housing and employment development in Midlothian and consideration of the implications of this for transport demand, and the delivery of the LTS.

3.2 Socio-economic profile

Population

- 3.2.1 The population of Midlothian was 94,680 in 2021⁸. This is now estimated by the Council to be approximately 98,600. The population has continually increased since 2006 (see Figure 3-1) and Census 2022 show it grew by 16.1% between 2011 and 2022. This rate of increase is higher than any other local authority in the SEStran region and is considerably higher than the 3% growth seen at the Scottish level over a similar time period.
- 3.2.2 The growth in population is associated with a range of factors, most notably the significant housing development which has occurred in Midlothian over the recent period (see Section 3.2.7), with a large proportion of new housing estates having

been developed, many of which are located in greenfield locations.

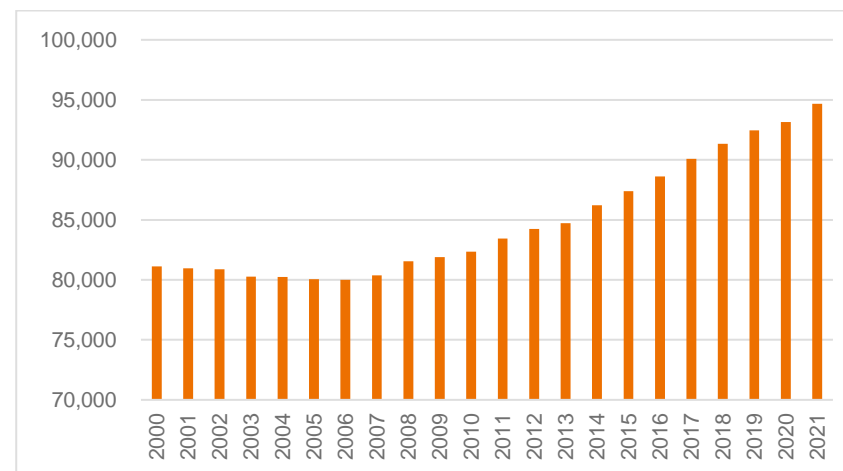


Figure 3-1: Midlothian populations 2000 - 2021 (Source: NRS mid-year population estimates 2021)

Key point: Driven in part by significant housing development, Midlothian's population has grown rapidly in the last decade, increasing by more than 16% between 2011 and 2022. This increase in population has placed increased demand on the transport network, contributing to capacity constraints and connectivity problems in some locations.

Age profile

- 3.2.3 The age profile of the Midlothian population in 2021, together with the comparator areas is shown in Figure 3-2.

⁸ National Records of Scotland Mid-Year Population Estimates, 2021

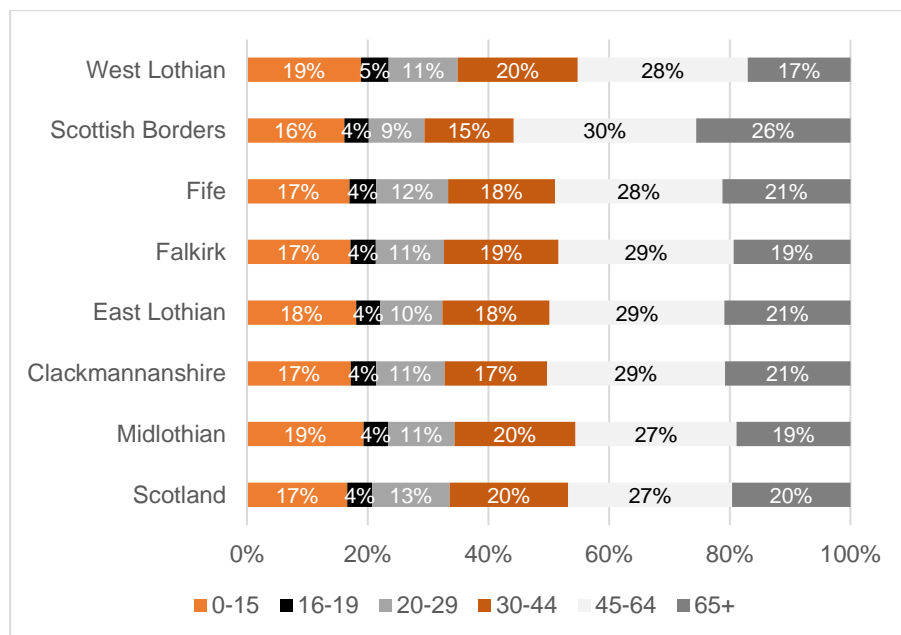


Figure 3-2: Age breakdown (Source: 2021 Mid-year population statistics, NRS)

- 3.2.4 Midlothian has a higher proportion of people aged 15 and below than any other local authority in the SEStran region. The younger demographic in Midlothian is again associated with recent housing development, much of which is lower density housing popular with families.
- 3.2.5 While the proportion of people aged 65 and above in Midlothian is lower than that of East Lothian, Fife and the Scottish Borders, the older demographic still makes up a considerable portion of the population, with figures above that

⁹ Completions in each financial year compared to population as at June 30 each year. (Population from 2021 rolled forward to 2022)

of both West Lothian and Edinburgh. The percentage of older people in Midlothian is also projected to increase.

- 3.2.6 Older people generally have more health-related issues which can have implications for transport delivery. For example, amongst the Midlothian respondents to the 2021 public survey undertaken to inform the development of the SEStran RTS, 14% (n=57) indicated they had a long-term health condition, with 56% of these (n= 32) noting that it affected their mobility and 28% (n=16) stating that it affected their ability to use bus and / or local rail services.

Key point: Midlothian has a high proportion of people in both the younger age categories and with around a fifth of residents aged 65+, and both have the potential to create pressures on certain public services, including public transport. Given that a large proportion of the population fall into the older demographic and the relationship between age and health issues, ensuring transport services are accessible for all will also be an important consideration for the LTS.

Housing

- 3.2.7 Figure 3-3 shows the new build completion rates per 10,000 population⁹ for Midlothian and the comparator areas between 2006/7 and 2022/23.
- 3.2.8 As shown, **new build completion rates in Midlothian have been consistently higher than the other local authority areas on a per capita basis** since the 2008 financial crisis. In 2022/23, there were 908 new build completions in Midlothian, higher than any other year¹⁰.
- 3.2.9 House prices in Midlothian are amongst the highest in Scotland, with the median selling price increasing by 65%

¹⁰ Midlothian Council Housing Land Audit 2023

between 2013 and 2023 compared to a 48% increase in Scotland as whole. In addition to higher demand for houses as buyers are priced out of the Edinburgh market, this increase in prices is also likely to be partly due to newer housing developments being composed of a higher proportion of larger, family homes.

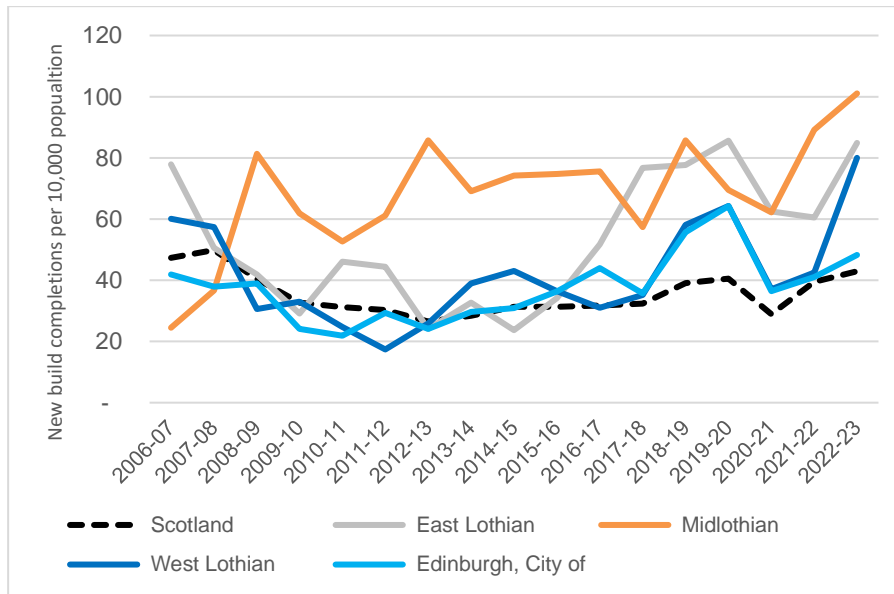


Figure 3-3: New build completion rates per 10,000 population by local authority area (Source: Scottish Government Housing Statistics)

Population Projections

3.2.10 Figure 3-4 shows National Records of Scotland (NRS) population projections for Midlothian, Scotland and the comparator areas for the period 2018 to 2043 and Figure 3-5 displays the estimated population change for children (ages 0 – 15), working-age people (16 – 64) and pensionable age (65+) between 2018 and 2038.

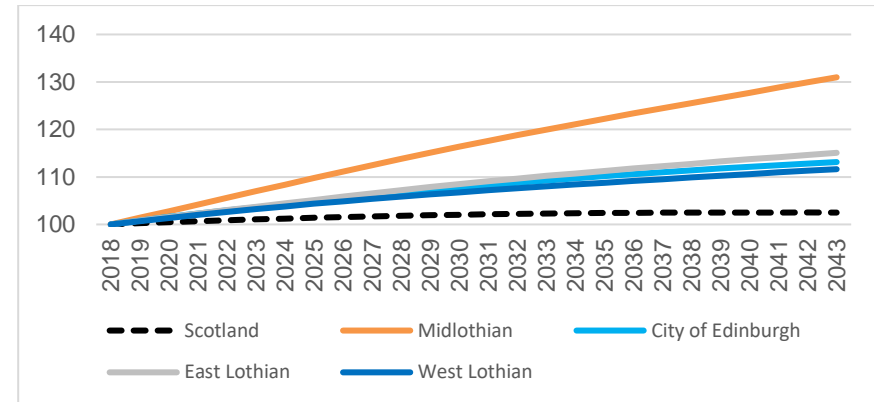


Figure 3-4: Population Projections 2018 - 2043 (Source: NRS, Population Projections for Scottish Areas (2018 Based)) (2018 = 100)

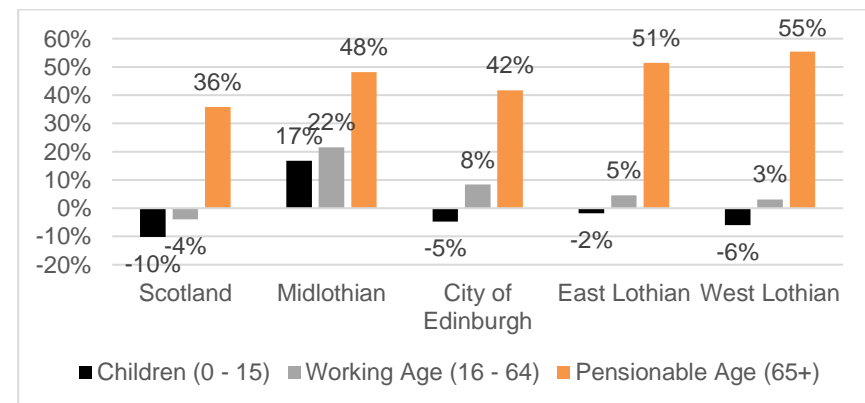


Figure 3-5: Population Estimates - Change in Age Group 2018 - 2038 (Source: NRS, Population Projections for Scottish Areas (2018 Based))

3.2.11 The main points from these graphs are as follows:

- Midlothian's population is projected to increase considerably, growing by 31% by 2043. This is the highest figure of any local authority in Scotland and compares with a 3% increase

at the Scottish level, a 15% increase in East Lothian, a 13% increase in Edinburgh and a 12% increase in West Lothian. The significant growth in Midlothian accords with the NPF4 housing targets which forecast a significant increase in the number of homes (see Section 3.3.11).

- Midlothian is forecast to see a considerable growth in the number of children (17%) compared to the comparator areas, all of which are set to see a decline in the proportion of this demographic.
- While the number of people aged 65 and over is set to grow at a slower rate in Midlothian than both East Lothian and West Lothian, this demographic is still set to increase by more than 48% up to 2043.
- Midlothian is forecast to see a much larger growth in the working age population (22%) compared to the comparator areas (5% and 3% in East Lothian and West Lothian respectively). However, the growth in the number of children and those aged 65 and over still results in an increase in the dependency ratio¹¹ (from 58% to 62%), meaning that fewer working people have to support a growing number of dependents (young and old).

Key point: The earlier trends outlined above are set to continue, with a continued growth in Midlothian's population, including an increase in both the older and younger demographics. This increase in population will place increased demand on the transport network, contributing to capacity constraints and connectivity problems in some locations. There will also be increasing demand for transport from both the older and younger age groups and therefore the LTS will need to ensure that transport services effectively cater to both groups.

¹¹ The dependency ratio is the ratio between the number of dependents (those aged 15 and under and 65 and over) and the working age population (aged 15-64).

Households with access to a car

3.2.12 Household car availability is one of the main determinants of travel behaviour. While this data is recorded in the Census, the most recent Census data available is 2011 which is now considerably out of date. In the absence of Census data, Figure 3-6 shows household car ownership as recorded via the 2021 Scottish Household Survey (SHS). The sample size for each area on which the data is based is shown in brackets in.

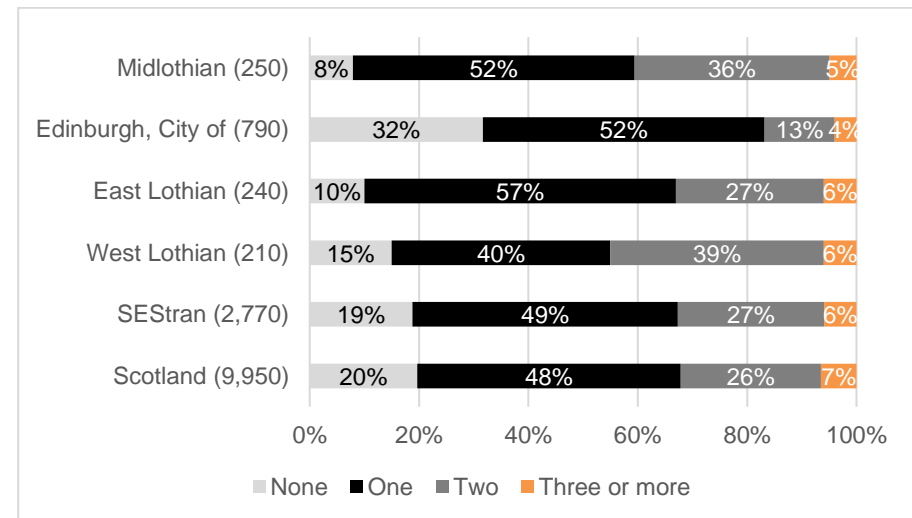


Figure 3-6: Number of cars available for private use by household (Scottish Household Survey Travel Diary, 2021)

3.2.13 According to this data, Midlothian has amongst the highest levels of car ownership of all the comparator areas, with just 8% of households without access to a vehicle. This compares to 10% in East Lothian and 15% in West Lothian.

Where the dependency ratio is large, it indicates that the working population faces a greater burden supporting the dependent population.

Midlothian also has amongst the highest number of households with access to two vehicles.

- 3.2.14 These figures imply a high degree of car dependency in Midlothian and underlines a particular challenge for the LTS given the prevailing national policy context which is focused on reducing car dependency and increasing opportunities for access to shared vehicles.

Key point: While somewhat out of date, available data suggests that there were high levels of car ownership in Midlothian in 2011. In line with wider policy, it is important that the LTS supports active and sustainable modes so as to reduce overall car dependency.

Deprivation

- 3.2.15 The Scottish Government produces the Scottish Index of Multiple Deprivation (SIMD) which is the official measure of relative deprivation for small areas in Scotland. SIMD measures deprivation at the data zone level and is made up of seven 'domains' or types of deprivation, namely: income; employment; health; education; skills and training; geographic access to services; crime; and housing.
- 3.2.16 Figure 3-7 shows the levels of deprivation in Midlothian. Each data zone is classified into one of ten deciles. The generally accepted point at which an area is defined as deprived is when it is classified in the '20% most deprived'.

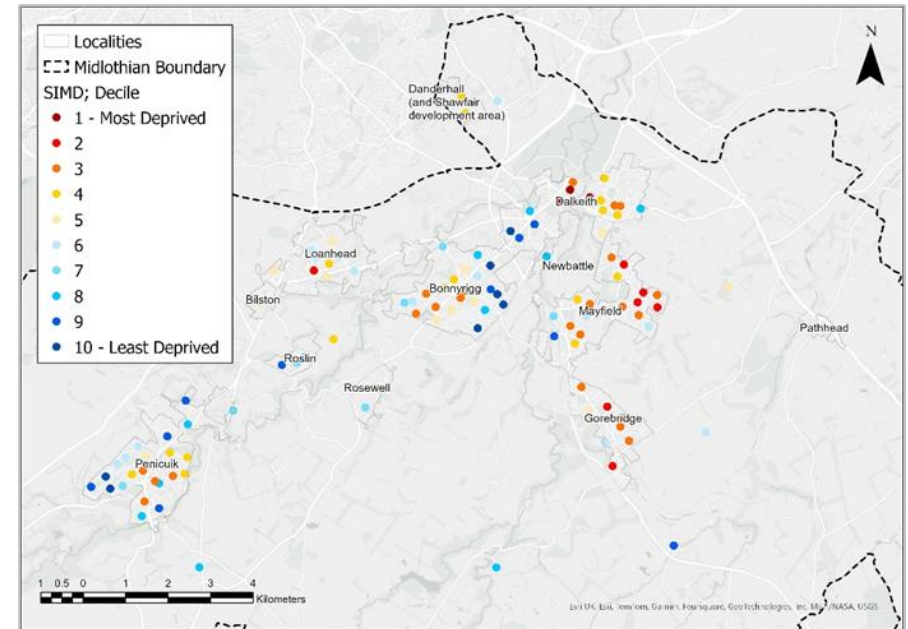


Figure 3-7: Midlothian Deprivation Decile Ranking (Source: Scottish Index of Multiple Deprivation 2020)

Economic Activity

- 3.2.17 Figure 3-8 shows levels of economic activity in Midlothian, the comparator areas, and Scotland as a whole in 2022. For clarity:
- The **economically active** are those aged 16-64 who are either in employment or defined as unemployed and seeking work using the International Labour Organisation (ILO) definition.
 - The **economically inactive** are those aged 16-64 who are neither in employment nor unemployed (on the ILO measure). This group includes people who are caring for their family or retired.

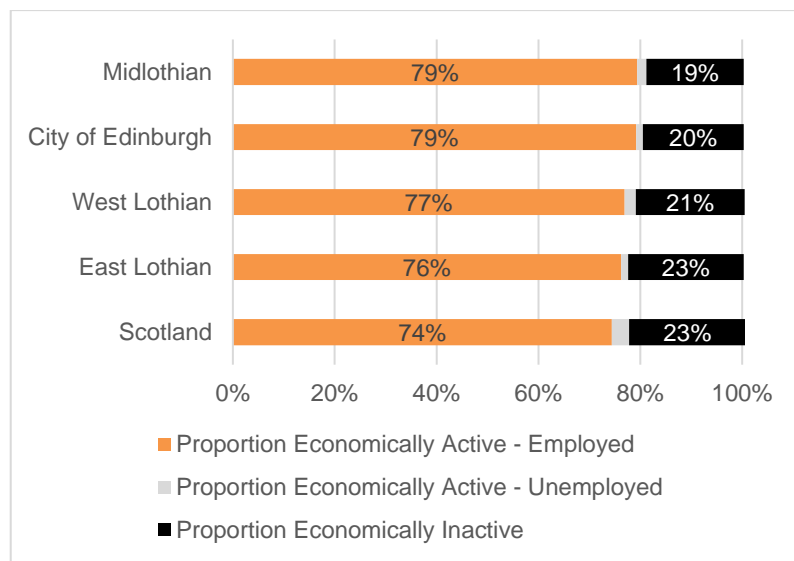


Figure 3-8: Economic Activity Rate (Source: Office National Statistics Annual Population Survey, 2022)

3.2.18 Midlothian performs very well compared to the other local authority areas, with a high rate of economic activity which is equivalent to the capital.

Commuting Patterns

3.2.19 The most comprehensive information on commuting patterns is the travel to work data recorded via the UK Census. Data from this source has been analysed and is presented below. It should be noted, however, that while the Census provides the most comprehensive source of information on this metric, the most recent data available is 2011 which is now somewhat out of date. A note of caution should therefore be taken when interpreting the results.

3.2.20 Figure 3-9 shows the workplace location of employed adults who reside in the different areas in Midlothian as recorded via the 2011 Census.

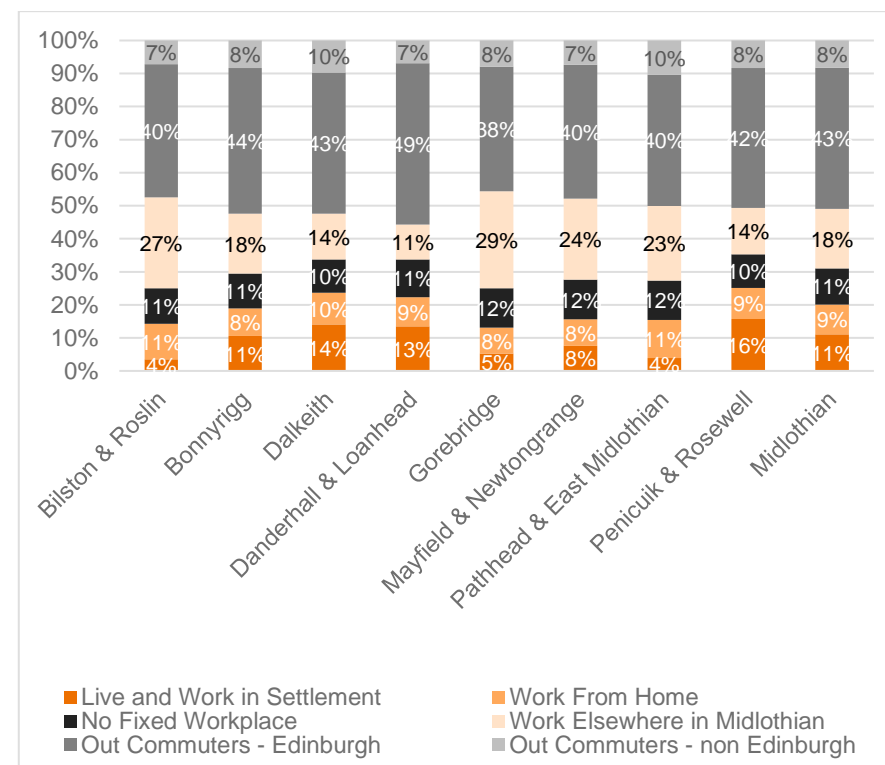


Figure 3-9: Workplace location of residents of Midlothian by area (Source: Census 2011)

3.2.21 At the Midlothian level, over 50% of residents in 2011 travelled outside of the local authority area for work, with the majority of these (43%) travelling into Edinburgh. This compared to approximately 38% who worked within Midlothian. The pattern at the local authority level was broadly replicated across the towns, with the proportions travelling out of the local authority area for work varying between 46% (Gorebridge) and 56% (Danderhall and

Loanhead). In addition to flows from Midlothian to Edinburgh, there are also flows from the Scottish Borders to Edinburgh which pass through Midlothian. Based on the 2011 Census, approximately 4,100 people travelled from the Scottish Borders to Edinburgh for work (compared to approximately 17,500 Midlothian residents), with 10.7% of Borders residents working in the Capital.

3.2.22 Figure 3-10 shows the method of travel to work for employed adults resident in the different areas in Midlothian.

3.2.23 At the Midlothian level, the most used travel to work mode in 2011 was car with over 60% of Midlothian residents driving to work and a further 6% travelling as car passengers. In total, 22% travelled to work by bus and 9% used active travel modes. Use of the car when commuting varied across the areas with the highest rates in Pathhead and East Midlothian where bus and active travel connections are relatively poor compared to other locations.

3.2.24 While the majority of Scottish Borders residents travelled to Edinburgh by car in 2011, the opening of the Borders Railway in 2015 as well as wider changes, including COVID-19 will likely have led to considerable changes in travel patterns and mode use.

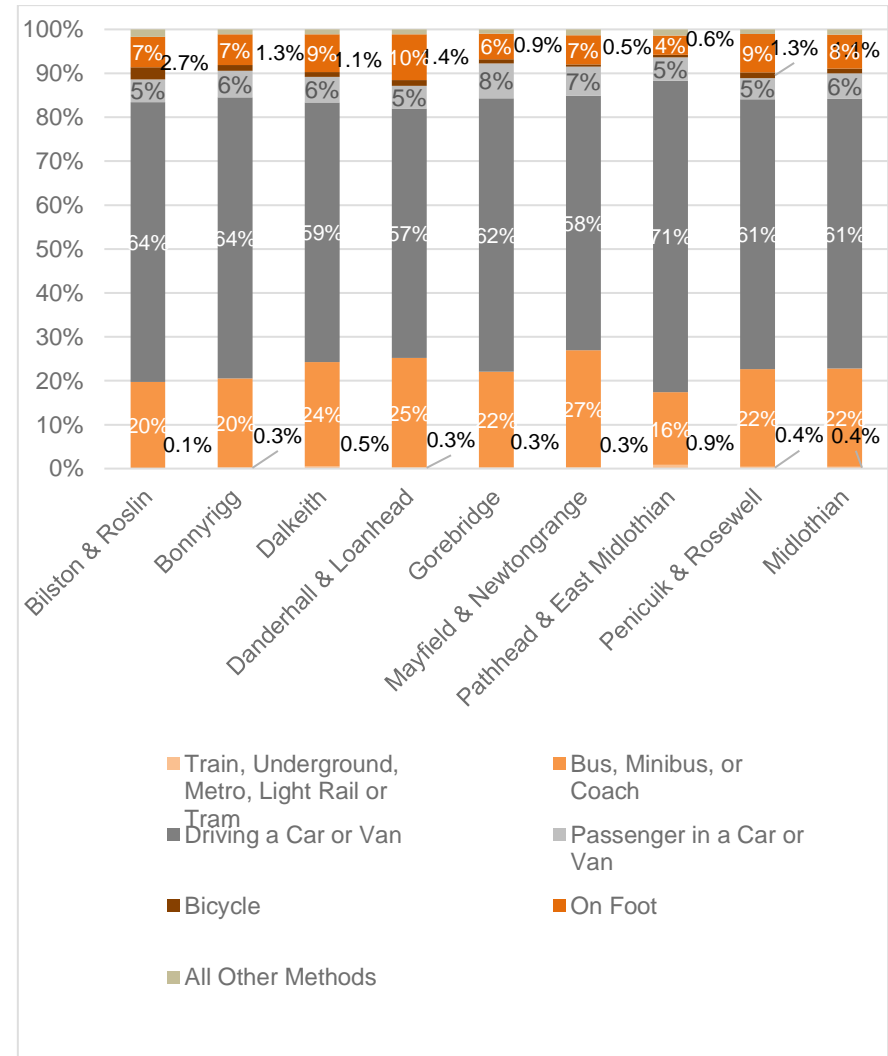


Figure 3-10: Method of travel to work of people residing in Midlothian by location (Source: Census 2011)

3.2.25 Data on commuting trips is also available via the Scottish Household Survey (SHS). This dataset is based on data covering the period 2015-2019 and is therefore more recent than the 2011 Census although it is noted that the data still pre-dates the COVID-19 pandemic. In contrast to the Census, the data is also based on a sample and figures are only available for the Lothians as a whole (i.e., Midlothian, West Lothian, and East Lothian combined). Figure 3-11 shows the percentage of employed adults in the Lothians who work in each council area based on data from this source.

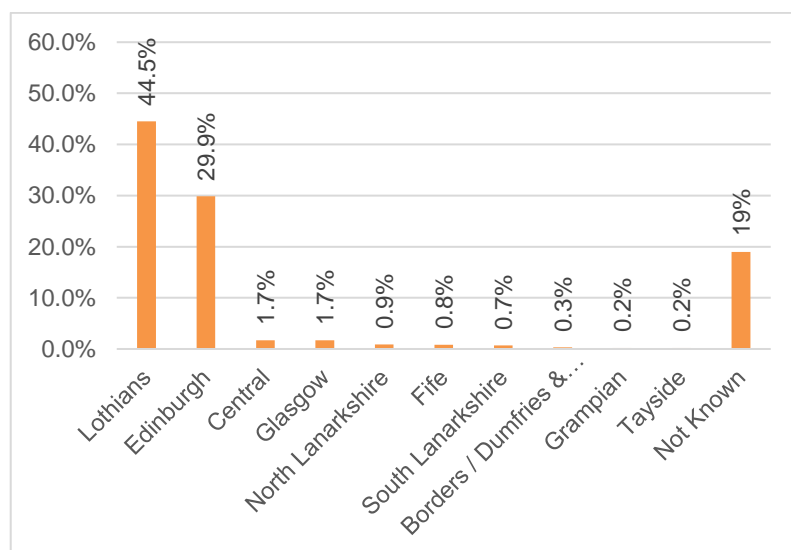


Figure 3-11: Percentage of employed adults in the Lothians who work in the Lothians and other council areas (2015-2019 combined)

3.2.26 The above graph suggests that there was a high proportion of out commuting from the Lothians to Edinburgh over the period covered by the data, with around 30% of employed people living in the Lothians commuting into the capital for work.

3.2.27 While also based on the pre-COVID-19 position, data recorded via the public survey undertaken to inform the SEStran RTS also indicates that there are high levels of out commuting from Midlothian to Edinburgh as well as smaller numbers of trips to both East Lothian and the Scottish Borders.

3.2.28 The high rates of out-commuting as recorded via the above sources is reinforced by the high rates of economic activity in Midlothian and the most recent jobs density data (2021) which suggests a job density figure of 0.64 – i.e., there are 0.64 jobs in Midlothian for every Midlothian resident of employment age, so fewer jobs than people. This implies that the place of employment for a proportion of workers is based outside of the local authority area. Job density in Midlothian has remained relatively stable since 2013 fluctuating between 0.62 and 0.65, albeit with a decline in 2020 during the COVID-19 Pandemic, highlighting the authority's long-term dependence on out-commuting for employment.

3.2.29 While the above commuting data pre-dates COVID-19 and the higher rates of hybrid and home working since the pandemic, it is likely that a large proportion of Midlothian residents continue to travel into the city for work for at least some of their working week.

Key point: There are fewer jobs than people in Midlothian. Despite changes in travel since COVID-19, a high proportion of residents in the local authority area therefore continue to commute out of Midlothian for work, with Edinburgh being a primary destination. There are also flows through Midlothian from the Scottish Borders to Edinburgh. This has important implications for transport demand and the development of the LTS, with a need to ensure that sustainable transport connections are provided to and from the capital.

Industrial Structure

3.2.30 Figure 3-12 below shows the percentage employee jobs by industry in 2021 for Midlothian, the comparator local authorities, and Scotland overall. The main points from this graph area as follows:

- Around 30% of employment is in the public sector (Education, Public Administration and Defence, and Health) which is slightly higher than both East Lothian and West Lothian. Education accounts for the highest proportion of this, with particular concentrations of education employment around the University of Edinburgh Easter Bush Estate near Bilston and the Edinburgh College Campus in Bonnyrigg. The presence of the Easter Bush Estate also likely contributes to a higher proportion of people in Professional, Scientific, and Technical roles in Midlothian than might be expected.
- In comparison to the Scottish average (10%), there is also a higher proportion of Retail jobs in Midlothian (11.8%). This can be attributed to the presence of a number of retail parks including the established Straiton Retail Park.
- Construction employment (10.3%) is also above the Scottish average (6%) and higher than each of the comparator areas (ranging from 2.8% -10.1%). The local authority also has a higher proportion (1.5%) of people employed in Property compared to both East Lothian (1%) and West Lothian (0.9%). These trends in part likely reflect the high level of development in Midlothian in recent years as discussed above.
- Overall, there is a high concentration of jobs in front-line employment which require travel to a workplace and / or shift work. This has implications for transport demand in Midlothian.
- In comparison to Edinburgh, there are fewer people employed in the Financial and Insurance and Information and Communication industries, with these roles typically centred

on the capital. These roles are typically higher paid and will likely attract workers from Midlothian, leading to out commuting to Edinburgh.

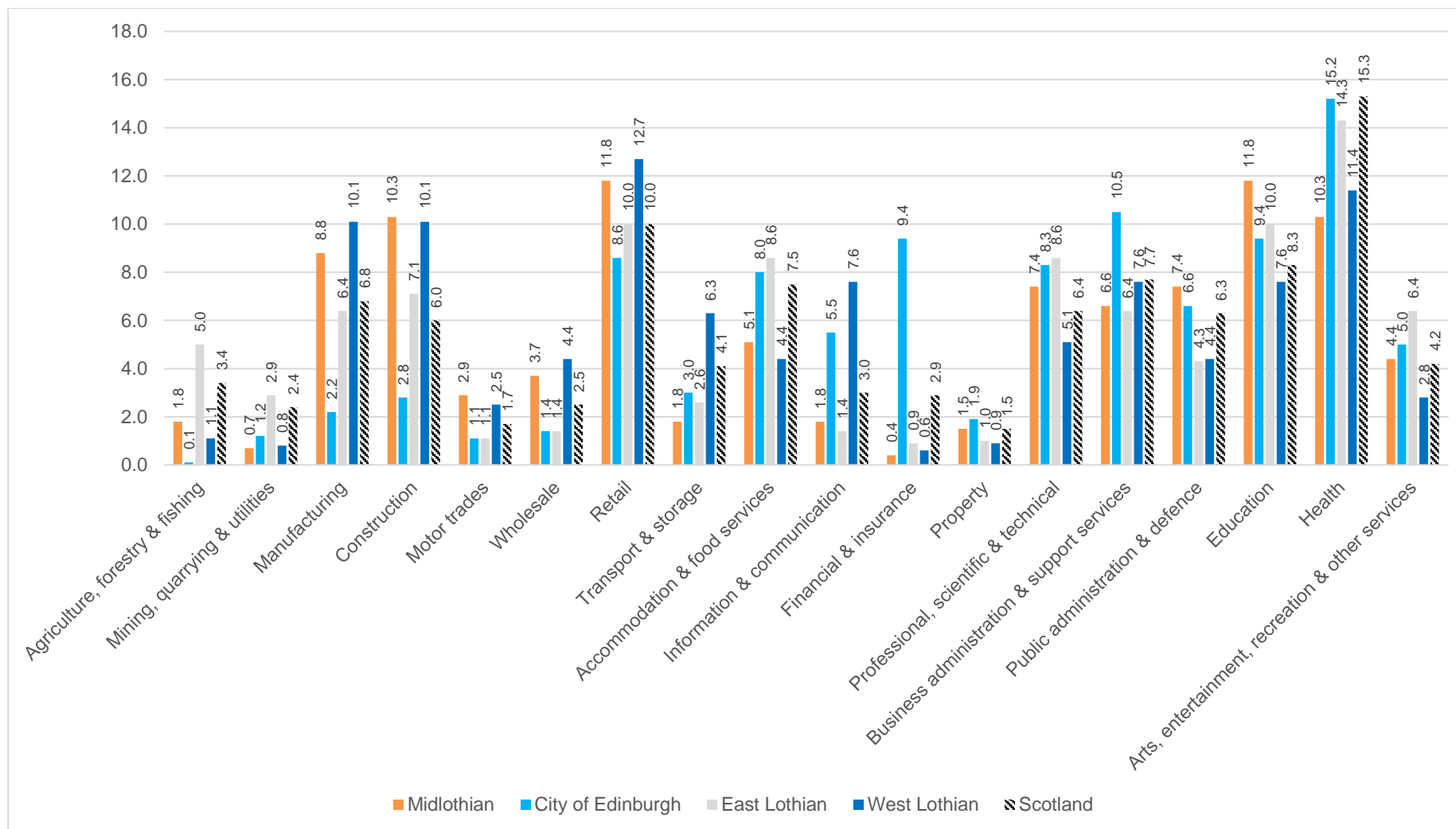


Figure 3-12: Percentage Employee Jobs by Industry 2021 (Source: BRES 2021)

3.3 Planning for the future

- 3.3.1 As discussed above, Midlothian's population has grown rapidly in recent years and, with significant housing development allocations, the population is projected to continue to increase over the lifetime of the LTS. This increase in population and the changing land use patterns will have a significant impact on transport demand. In light of this, this section sets out the scale of the planned development and considers its implications in terms of transport delivery.

Midlothian Local Development Plan

- 3.3.2 As discussed above, the current Midlothian LDP was adopted in November 2017 and Midlothian is currently preparing a new LDP which it is anticipated will be adopted in December 2026. In the absence of the new LDP, the discussion below sets out the extent to which the Strategy for Development outlined in the 2017 LDP has been delivered and considers the most up to date position with regard to housing and employment land supply in Midlothian.
- 3.3.3 The housing and employment allocations within the 2017 LDP were focused around three Strategic Development Areas (SDA) as follows:
- 1) **Shawfair Strategic Development Area** – a new town centre and housing and employment allocations at Shawfair
 - 2) **A7/ A68/ Borders Rail Corridor Strategic Development Area** – allocated housing in this area was spread across several communities (including at Redheugh, west of Gorebridge) with specific concentrations around the railway stations. Employment land allocations, and previous employment allocations, were identified in different communities, e.g. in the Dalkeith area. It was anticipated that there would be increased traffic on the A7 and, as a means to

improve bus use and pedestrian safety, an urbanisation scheme for this route was identified.

- 3) **A701 Corridor Strategic Development Area** – this area was intended to provide for a spread of new development with a number of existing communities expanded. There was a strong employment focus, including the continued expansion of the **Midlothian Science Zone (MSZ)**, further development to the west of the A701 at Straiton, and the development of a **'Midlothian Gateway'**. To help alleviate congestion, the plan identified the need for an **A701 relief road**.

- 3.3.4 The SDAs as outlined above are shown in Figure 3-13 which is taken from the 2017 LDP.

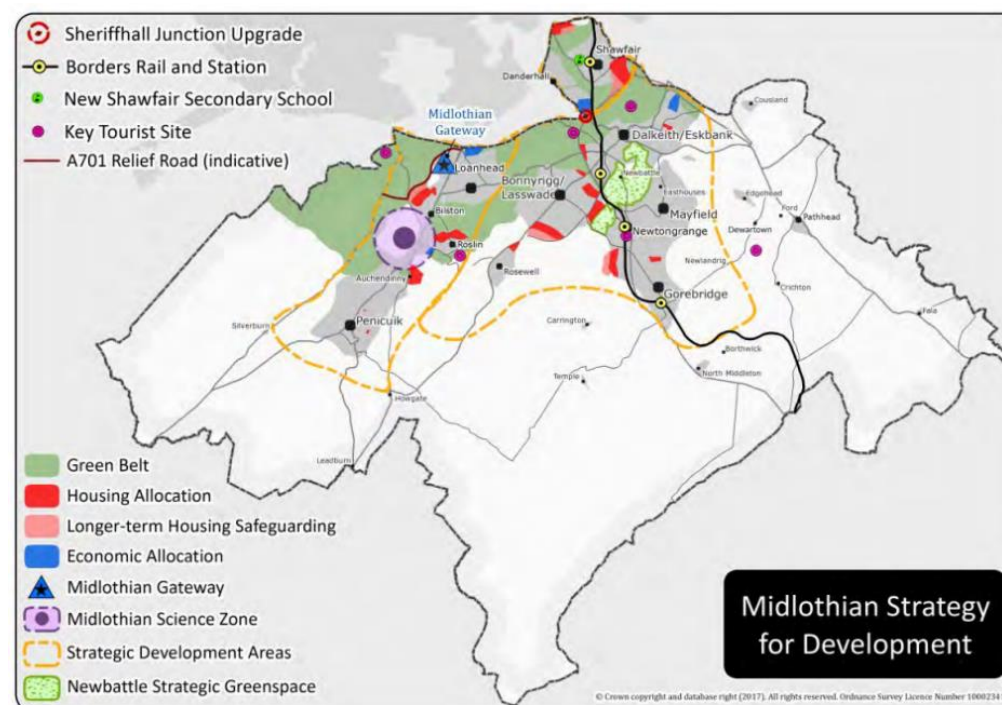




Figure 3-13: Midlothian Strategy for Development (Source: 2017 Midlothian Local Development Plan)

- 3.3.5 **The majority of the new housing and employment allocations included in the 2017 LDP were located on greenfield sites on the edge of settlements.** The document notes that this is because there were “*limited brownfield opportunities to meet the strategic land requirements*”. Furthermore, while the majority of the greenfield sites were on the edge of settlements, the document notes that “*a small number of additional housing development opportunities [are] outwith settlements*” and that these require “*measures to overcome sustainability, access and design concerns*”.

Midlothian Housing Land Audit

- 3.3.6 Midlothian Council produce a Housing Land Audit (HLA which sets out the most up to date published position with regard to housing land on an annual basis. The most recent HLA was approved by the Council in October 2023 and provides an update on the status of sites and sets out how much land is available, including both allocated sites (as set out in the 2017 LDP) and windfall sites (sites which were not allocated in the 2017 LDP).
- 3.3.7 Overall, the 2023 HLA identifies an effective land supply of 11,052 units as at 31st March 2023. The HLA includes 83 sites in its main schedule and a further ten that were completed in the audit year. The 83 sites can be broken down by status as follows:
- under construction (38 sites)
 - consented¹² or minded to consent (44 sites)
 - without consent (1 sites)

¹² With planning permission

¹³ Constrained sites are sites in the supply which are not effective and have obstacles preventing their development

- 3.3.8 Figure 3-14 shows the location of these sites across the local authority area along with the location of constrained sites¹³, safeguarded sites¹⁴, and sites which were completed during the period 2022-2023.

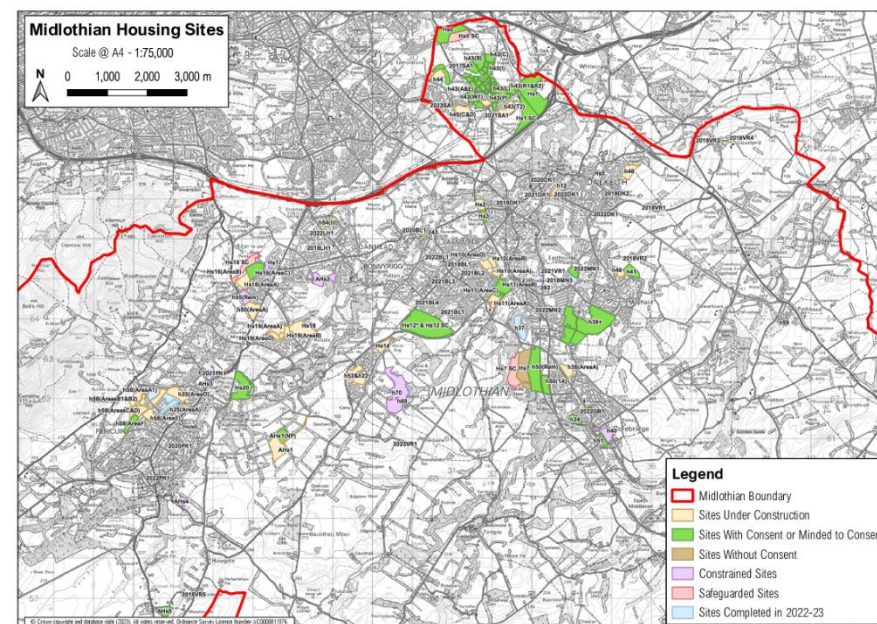


Figure 3-14: Location of Midlothian's housing sites (Source: Midlothian Housing Land Audit 2023)

- 3.3.9 As with the sites allocated within the LDP, while some of the sites which make up the effective land supply are on brownfield land, **the overwhelming majority are in greenfield locations**, with greenfield sites accounting for 67 of the 93 sites (72%) and 89% of the total area.

¹⁴ Safeguard sites are sites associated with housing allocations which have potential for further expansion in the medium to longer term and which could be brought forward through the next development plan, if required

Key point: The majority of identified sites in the housing land supply are in greenfield locations. The dominance of greenfield sites has implications for transport delivery with development in greenfield locations leading to spatial expansion and reduced density which can in turn make sustainable transport provision more challenging. Indeed, there is evidence that new greenfield residential development can lock in car dependency from the outset¹⁵. It is this dependency on car travel which the LTS must seek to overcome.

Midlothian Employment Land Audit

- 3.3.10 Similar to the HLA, Midlothian also produce an Employment Land Audit (ELA) which provides the most up-to-date position with regard to the supply and availability of employment land in Midlothian on an annual basis. The 2023 ELA is the most recent publication. In total, this identifies 48 employment sites, equating to a total area of 593ha. Figure 3-15 shows the location of these sites across the local authority area and the table below provides a breakdown of the sites and vacant land (ha) available by settlement. As indicated, the most significant areas of employment land are around Loanhead (10 sites, 152ha), Shawfair / Danderhall (5 sites, 147ha), and the MSZ (11 sites, 124ha).

Table 3-1: Employment land supply breakdown by settlement (Source: Midlothian Employment Land Audit 2023)¹⁶

Settlement	Number of sites	Gross Site Area (ha)
Bonnyrigg*	4	20.6
Dalkeith	7	68.7
Easthouses	1	1.8
Gorebridge	1	9.8
Loanhead*	10	152.4
Mayfield	1	23.8
Newtongrange	3	25.8
Penicuik	2	7.0
MSZ	11	124.2
Rosewell	1	1.8
Roslin	2	10.3
Shawfair/Danderhall	5	147
Total	48	593.2

¹⁵ see <https://www.theguardian.com/society/2022/feb/07/new-greenfield-housing-forcing-people-to-use-cars-report-finds>

¹⁶ Note: *indicates that this settlement's figures include both committed/allocated sites and also other economic sites with planning support

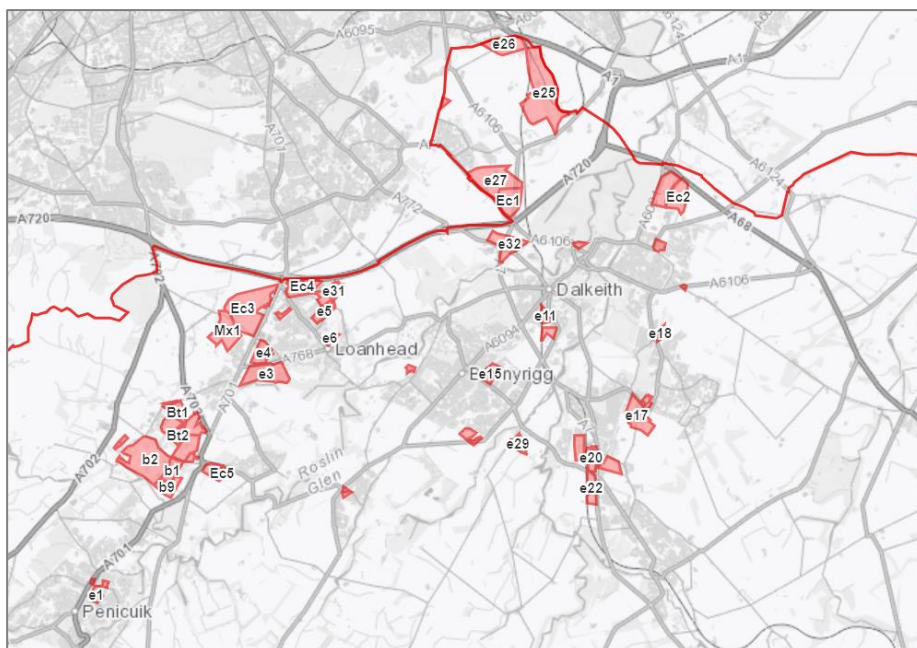


Figure 3-15: Location of Midlothian's employment sites (Source: Midlothian Employment Land Audit 2023)

Future Development

- 3.3.11 As discussed in Chapter 2, NPF4 sets out the MATHLR (minimum number of housing units that is to be provided in each planning authority in Scotland for a 10-year period) for each planning authority in Scotland. The MATHLR is designed to run concurrently with the lifespan of each planning authority's new LDP. In Midlothian, this would mean it would apply from 2026 to 2036 (assuming Midlothian adopts a new MLDP in 2026 as indicated in the current Development Plan Scheme). It is noted that the MATHLR is a minimum

¹⁷ These may come from existing safeguarded sites, new allocations, or additional windfall sites (sites that are not allocated for housing development in the MLDP) entering the supply.


value and, it is expected that the value will be exceeded in each planning authority's LDP.

- 3.3.12 The MATHLR for Midlothian as well as the other local authorities in the SEStran region along with the percentage increase the MATHLR represents on the 2022 housing stock is shown in Table 3-2. As shown, as a proportion of existing dwellings, **the MATHLR for Midlothian is considerably higher than that of all other local authorities in the SEStran region, equating to a 20% increase in the number of homes.**

Table 3-2: Minimum All-Tenure Housing Land Requirement for Midlothian (Source National Planning Framework 4)

Local authority	Housing land requirement	Total dwellings (2022)	Local authority
City of Edinburgh	36,750	261,000	14%
East Lothian	6,500	51,409	13%
Fife	7,300	181,405	4%
Midlothian	8,850	43,213	20%
Scottish Borders	4,800	59,557	8%
West Lothian	9,850	83,624	12%

- 3.3.13 This rate of increase is very significant. However, it does not provide the full picture. Of the 11,052 units identified in the HLA, 2,528 are programmed to be built by 2026, meaning that around 8,524 would remain at the time of the adoption of the new LDP and therefore an additional 326 units¹⁷ will be needed to meet the MATHLR target. In total, when taking into account the sites to be delivered in the current plan period, and those which need to be delivered over the period 2026-



2036 to achieve the MATHLR, **Midlothian will therefore see a minimum growth in housing units of 11,378 (26% of the total dwellings in Midlothian in 2022) by 2036.**

Key point: The level of development planned in Midlothian is considerable, with the number of houses set to increase by over 26% by 2036. This rate of increase will have significant implications for transport demand. High rates of development have the potential to result in high volumes of car traffic which would place significant pressure on key transport corridors across the local authority area. Furthermore, many of the residential sites identified are in greenfield locations, creating additional challenges in terms of the provision of sustainable transport options. In order to avoid increased car traffic, it is essential that the LTS prioritises both reducing the need to travel unsustainably and the delivery of new and improved public and active travel connections between the planned new developments and key trip attractors.

4 Approach to Identifying Transport Problems and Opportunities in Midlothian

4.1 Problem Identification

4.1.1 An LTS has a potentially wide range of problems to address which can be relevant both now and in the future. Adopting a structure to organise and make sense of these problems is essential to create order and avoid fragmentation and omissions in the process.

4.1.2 The **Problems Framework** sets out the various aspects which define a transport trip for both all modes of travel and for public transport services specifically. All of the transport problems typically encountered by people fall into one of these categories. These are:

- **Applying to all modes of travel:**

- awareness of travel options (journey planning / information)
- cost of travel
- environmental concerns – that people have with using some modes of travel
- fuel / power issues
- integration of travel to onward travel modes (e.g. bike to train, car to bus P&R)
- journey information (during the journey)
- journey quality
- journey times

- personal accessibility – being able to access transport networks and services specifically from a disability / protected group perspective
- personal security (fear of crime)
- reliability of journey times (including public transport service punctuality)
- safety (transport)

- **Applying to only public transport more specifically:**

- Capacity – ability to get on / get a seat
- Comfort – passenger comfort
- connectivity / network coverage – availability of public transport services
- integration between services (within mode, e.g., bus to bus)
- service reliability (cancellations and punctuality)
- timetables (times of first and last services / frequency)
- long term uncertainty around services

4.1.3 The above framework is used in the following chapters as a 'checklist' to develop a set of current and future transport problems for each transport mode in the Midlothian context. Given the local nature of the strategy, problems are identified spatially where possible.

4.1.4 For each problem, the supply side causes (i.e. the issue with how transport is provided which results in the problem) are then identified. This step is important as the supply side cause will provide the basis for the generation of policies and actions in the LTS.

4.1.5 Each of the transport problems identified can have a **consequence in terms of travel behaviour** by:

- Adding cost or inconvenience to any trip – adding to the cost of travel, journey times / journey time reliability and / or impacting on health, education, and wellbeing
 - Meaning that people travel by a different (often less sustainable) mode (or they are forced to through lack of alternatives)
 - People not making trips with a range of consequences for them and society more generally
- 4.1.6 These travel consequences will in turn have a range of **negative societal consequences, including** impacts related to:
- Inequalities
 - Climate
 - Inclusive economic growth
 - Health and wellbeing
- 4.1.7 The chapters which follow take each mode of transport in turn, and set out:
- a detailed baseline of current transport provision and an analysis of available data on transport demand and travel patterns by that mode
 - the range of potential problems that (i) people may experience when travelling by that mode which impacts that journey or (ii) that prevent people travelling by that mode at all, or travelling as frequently as they would like
- 4.1.8 Where possible, the transport problems identified using the above Problems Framework have been corroborated with data analysis and / or feedback via stakeholder engagement undertaken to inform this strategy (see Appendix B as well as the outputs from previous public engagement activities,

including the outputs from the public survey undertaken in 2021 to inform the development of the SEStran RTS and the outputs from the public survey undertaken in 2021/2022 to inform the development of Midlothian Council's emerging Active Travel Strategy (ATS) 'On the Move Midlothian: Our Active Travel Strategy For Everyone' which is scheduled to be published in summer 2024.

- 4.1.9 As set out in Chapter 1, the next stage of work involves **an online public survey** which aims to ensure the full range of problems (and any opportunities) relating to transport in Midlothian are captured and gather any thoughts on the emerging Strategy Outcomes. The findings from this will then be used to inform the subsequent stages of the LTS development process (Stage 3 - choosing options and Stage 4 - the preparation of the LTS document itself.



5 Active Travel

5.1 Active travel provision

Existing connections

5.1.1 The existing active travel network in Midlothian is shown in Figure 5-1. As shown, Midlothian has four existing long distance cross boundary cycle routes which cross into adjoining local authority areas as follows:

- **National Cycle Route 1 (Newcastle to Edinburgh)** – this route is approximately 25km in length and is a mix of on-road and off-road provision. From its southern extent, the route is on road following the B7007, B6372, B704 as well as a number of more minor routes past Middleton, Temple, Carrington, and Bonnyrigg. At Bonnyrigg, the route changes to mainly off-road towards Dalkeith via Dalkeith Campus, continuing off-road towards Whitecraig in East Lothian and onto Edinburgh.
- **National Cycle Route 196 (Penicuik to East Lothian via Dalkeith)** – this route is approximately 16km in length and is mostly off-road. The route begins at Valleyfield in Penicuik and extends eastwards through Auchendinny, Roslin Glen, Rosewell, Bonnyrigg, Eskbank, and Dalkeith.
- **Eskbank to Gilmerton** - a combination of on-road cycle lanes along Melville Road and segregated cycleway along Gilmerton Road connects with the existing cycleway along Gilmerton Road in Edinburgh
- **Roslin to Shawfair** – this route connects Roslin, Loanhead, Straiton Pond Local Nature Reserve, Millerhill and Shawfair Railway Station. The route is primarily off-road and for part of

its length follows the line of the former railway line to Shawfair.

- 5.1.1 The **A720 City Bypass creates significant severance across the north of Midlothian**. The Eskbank to Gilmerton and Roslin to Shawfair routes both cross the bypass. However, while the latter uses the former railway tunnel, the former follows the road. In total, there five road crossing points, all of which experience high traffic volumes particularly during peak hours. Crossing the bypass by bike is therefore challenging and can act as a barrier to active travel uptake, particularly amongst new and less confident users.
- 5.1.2 In addition to the above cross boundary connections, there are also several shared use cycle routes (including on Old Dalkeith Road between Dalkeith and the Edinburgh City Bypass) and on-road cycle routes (including along the A701 between Penicuik and Straiton and along the A7 near Shawfair / Danderhall) in Midlothian.
- 5.1.3 Beyond these routes, there are a range of shorter connections within and between Midlothian's key localities. These are a mix of shared use cycleways / footways and Core Paths. The latter are defined as paths which are "sufficient for the purpose of giving the public reasonable access throughout the area¹⁸". While providing connections, Core Paths are not specifically designed for wheeling and cycling and are of varying quality, with many unsuitable for wheeled access.
- 5.1.1 In terms of local walking and wheeling trips, there are issues with pavement parking in several areas, especially in areas with rear parking / entrances. This can act to restrict access, particularly for those with mobility issues or visual impairments, or parents pushing prams and buggies. The Transport (Scotland) Act 2019 bans pavement parking, double parking and parking at dropped kerbs and Midlothian

¹⁸ [Midlothian Core Paths | Midlothian Council](#)

Council is planning to begin enforcing this law during 2024. There is also a problem with there being too many guardrails in Midlothian which can restrict access. The council is in the process of removing guardrail in some locations.

- 5.1.2 Cycle parking is currently available in every Midlothian town centre and at every school and leisure centre. Covered cycle parking is also available at every railway station in Midlothian. Information on the number of cycle spaces at each railway station is set out in Table 6 5. There are no formal mobility hubs in Midlothian.

Planned and committed schemes

- 5.1.3 There is a long-term aspiration to upgrade **Sheriffhall Roundabout** which is the only A720 at-grade junction. A preferred option for the scheme was identified in 2017 which includes dedicated grade-separated routes for non-motorised users (NMUs) through Sheriffhall Roundabout, with five subways providing connections to adjacent NMU routes on the A7 North, A7 South, A6106 Millerhill Road and A6106 Old Dalkeith Road¹⁹. In September 2021, the Edinburgh and South East Scotland City Region Deal Joint Committee ratified their support for the scheme, with £120m of City Region Deal funding committed for its delivery. However, STPR2 (published December 2022) did not specifically reference the scheme. In early 2023, a Public Local Inquiry to consider objections received to the proposed scheme was held and the independent reporter is now giving detailed consideration to all evidence before making recommendations to Scottish Ministers.

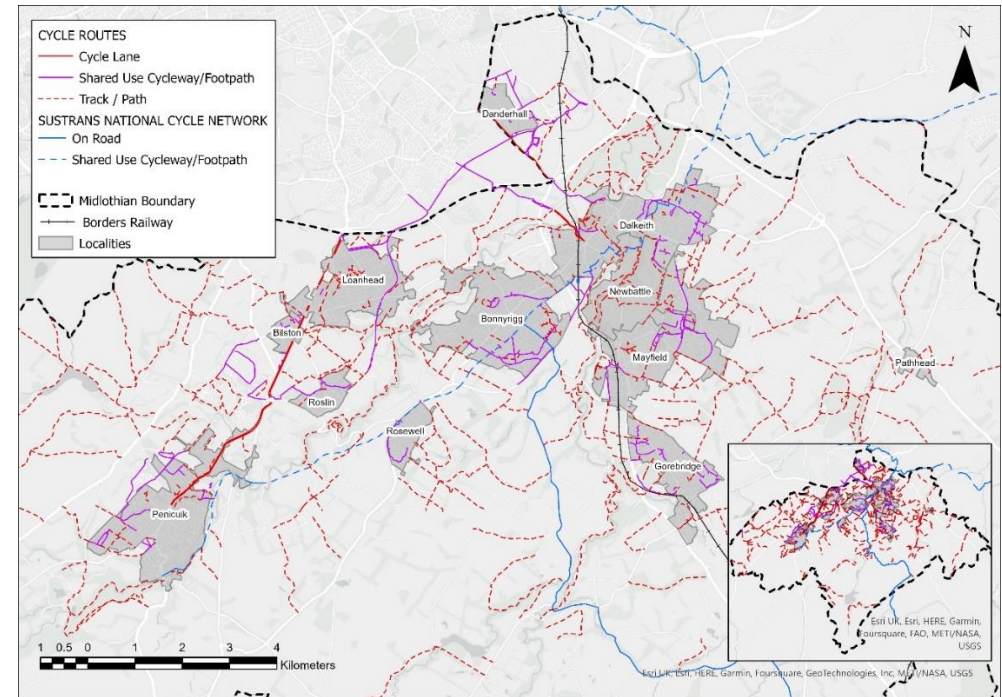


Figure 5-1: Midlothian existing active travel network

¹⁹ See [a720-sheriffhall-roundabout-exhibition-panels-december-2019-final.pdf](https://transport.gov.scot/a720-sheriffhall-roundabout-exhibition-panels-december-2019-final.pdf) (transport.gov.scot)

5.1.4 Beyond the above, in 2022, Midlothian Council was awarded Places for Everyone funding for three active travel projects, namely:

- **A7 Urbanisation Stages 0-2** – Stage 0 commenced in November 2023 and will look at the feasibility and potential design of active travel provision along the A7 between Gilmerton Road Roundabout and Dalhousie Road, Newtongrange.
- **Shawfair Connections Stages 0-2** – this project will commence in Q1 2024 and will consider priority routes for active travel infrastructure in the Shawfair area, with a particular focus on connections into the existing network and cross-boundary connections linking into active travel networks in other Local Authorities where possible.
- **Designing and Aligning Midlothian's Strategic Place with Active / Sustainable Travel** - Midlothian council is working with the charity Living Streets to complete an assessment of active / sustainable travel provision within and around new developments. The project will assess how sustainable travel can be made easier and more appealing through best-practice design and greater provision of infrastructure within and between areas of new development, with a focus on the design of new housing areas and the provision of local services within new development. The outcome of this study will inform future policy principles and design standards for new developments and help ensure that the choice of new housing sites encourages people to walk, wheel, cycle, or use public transport as far as possible.

5.1.5 Other work streams currently being progressed by Midlothian Council are set out below. It is noted that some of these projects are at a very early stage and may not be progressed:

- A feasibility study examining whether there is potential to extend the NCN196 from Penicuik south to Leadburn is being undertaken.

- Midlothian Council is awaiting the outcome of several applications for Places for Everyone Funding to deliver Stage 0-2 projects on potential schemes in the areas listed below. Stages 0-2 involves broadly defining the scope of a project and its desired outcomes as well as stakeholder engagement and the development of high-level costs.
 - Provision along the A703 from Easter Bush / Beeslack / Gowkley Moss to the junction with the A702 at Hillend, and onwards to Edinburgh via Fairmilehead.
 - connections into Dalkeith which will address journeys to Eskbank including Eskbank Toll roundabout.

5.1.6 Midlothian Council is also currently producing an update to the 2018-2021 ATS which is scheduled to be published in summer 2024. An overview of some of the outputs from the engagement activities undertaken to inform the development of the new ATS is provided in Section 5.4.

5.2 Active travel demand

5.2.1 Data on active travel demand in Midlothian is relatively limited. Currently, Strava Metro, a database of cycle trips developed from those recorded by Strava users, provides the most comprehensive source of data on cycling. However, it should be noted that Strava users are more likely to be 'committed' as opposed to 'casual' cyclists, with less frequent users and women less likely to record trips via Strava. The data is therefore not definitive.

5.2.2 Figure 5-2 shows the level of cycling trips in Midlothian across the calendar year from 2019 to 2023 inclusive as recorded via Strava Metro. Data for 2023 covers the period January to July only.

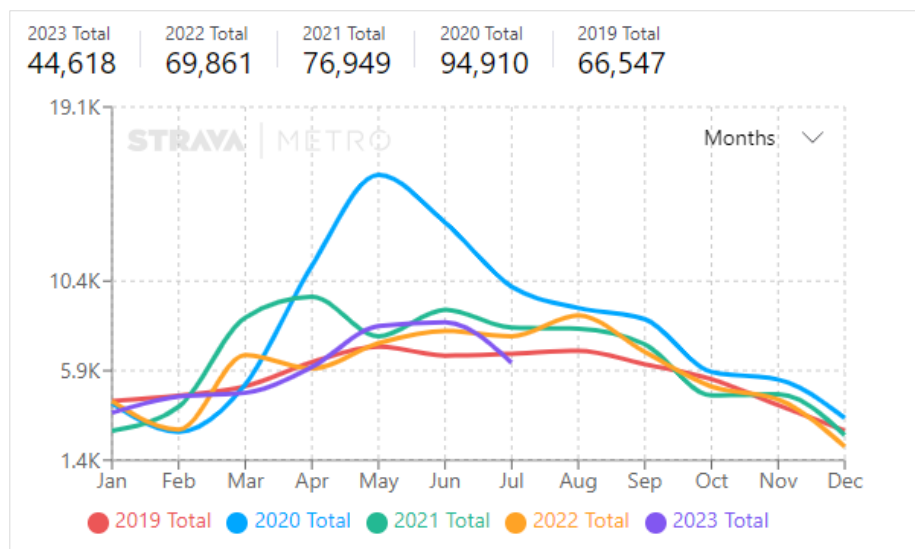


Figure 5-2: Trip counts by month (2019 - 2023)

- 5.2.3 As would be expected, there is a seasonal pattern to cycling trips with higher numbers during the warmer months. Due to the COVID-19 pandemic trips were significantly higher in 2020, with 2023 levels returning to something similar to 2019 albeit numbers were higher in May / June compared to the equivalent period in 2019. Figure 5-3 shows the age profile of those making cycling trips recorded in Midlothian via Strava Metro in 2023.

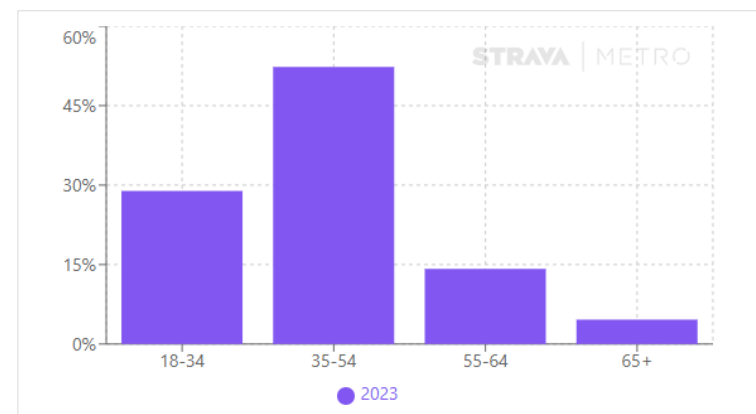


Figure 5-3: Age profile of Strava users in Midlothian (2023)

- 5.2.4 The 35 to 54 range dominates, accounting for over 50% of Strava cyclists. This reflects the age profile of the general population as shown in Figure 3-2 with a higher proportion of people in the middle-age age bracket.
- 5.2.5 Reflecting wider trends, the data from Strava Metro also suggests that there has been a considerable growth in the use of e-bikes in Midlothian in recent years, with the proportion of e-bike rides more than doubling between 2019 and 2023, albeit from a relatively low base (see Figure 5-4 and **Error! Reference source not found.**).

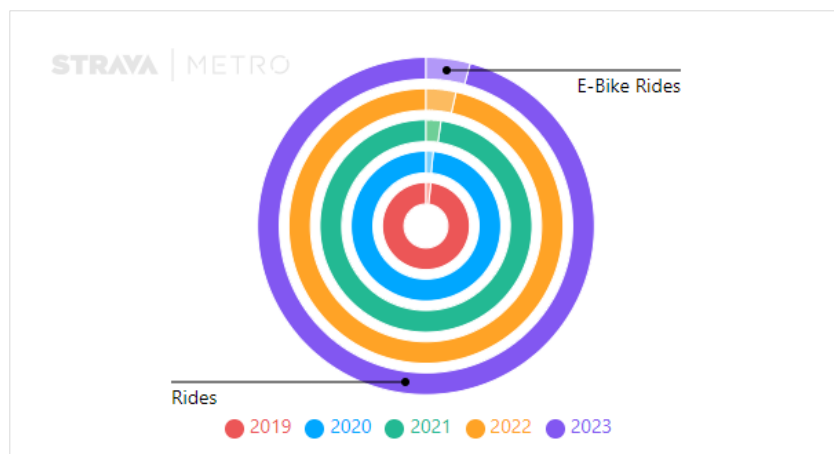


Figure 5-4: Split between rides undertaken on e-bikes and those undertaken on standard bikes - 2019 to 2023

5.2.6 Figure 5-5 and Figure 5-6 show 'Strava Heat Maps' for cycling and walking / running / hiking respectively based on data from February 2023 to January 2024. The dark

purple lines indicate lowest levels of activity while the white lines indicate the highest levels of activity.



Figure 5-5: Strava Metro Heat Map - Cycling

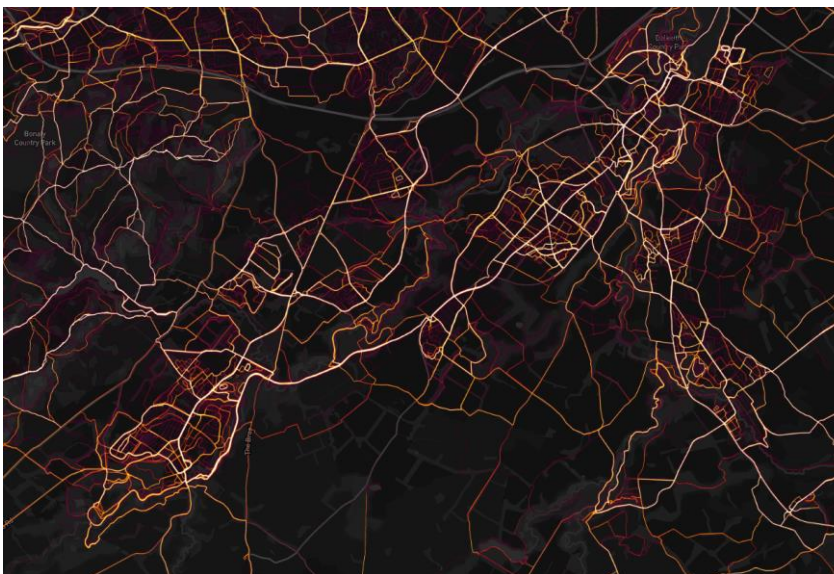


Figure 5-6: Strava Metro Heat Map – walking / running / hiking

- 5.2.7 The cycling heat map shows higher levels of activity between the main towns including along a number of Midlothian's off road cycling routes, including the National Cycle Routes and the Roslin to Shawfair path.
- 5.2.8 A similar pattern is evident for walking / running / hiking although as would be expected there is greater activity within the towns and residential areas.

5.3 Active travel collisions

- 5.3.1 Pedestrians and cyclists are recognised as 'vulnerable' road users and one of the key issues which deter people from cycling is safety concerns (see 0). The Department for Transport (DfT) publishes road casualty statistics on an

annual basis, including data on the number of collisions involving active travel users. This data is collated from STATS19 data²⁰ and **relates only to collisions which have been reported and involve a personal injury**. Near-misses or non-reported collisions are therefore not shown. Each collision is classified into one of three severity ratings based upon the most severely impacted casualty (fatal, serious, or slight).

- 5.3.2 Figure 5-7 and Figure 5-8 show the location of collisions involving pedestrians and cyclists in Midlothian between 2013 and 2022 based on this data, with the colours in each case indicating the casualty severity rating.
- 5.3.1 In total, there were 198 collisions involving pedestrians and 97 collisions involving cyclists during this period. While the majority of casualties involved had injuries which were classified as slight or serious, there were five pedestrian and two cyclist fatalities.

²⁰ see <https://www.gov.uk/government/publications/stats19-forms-and-guidance>

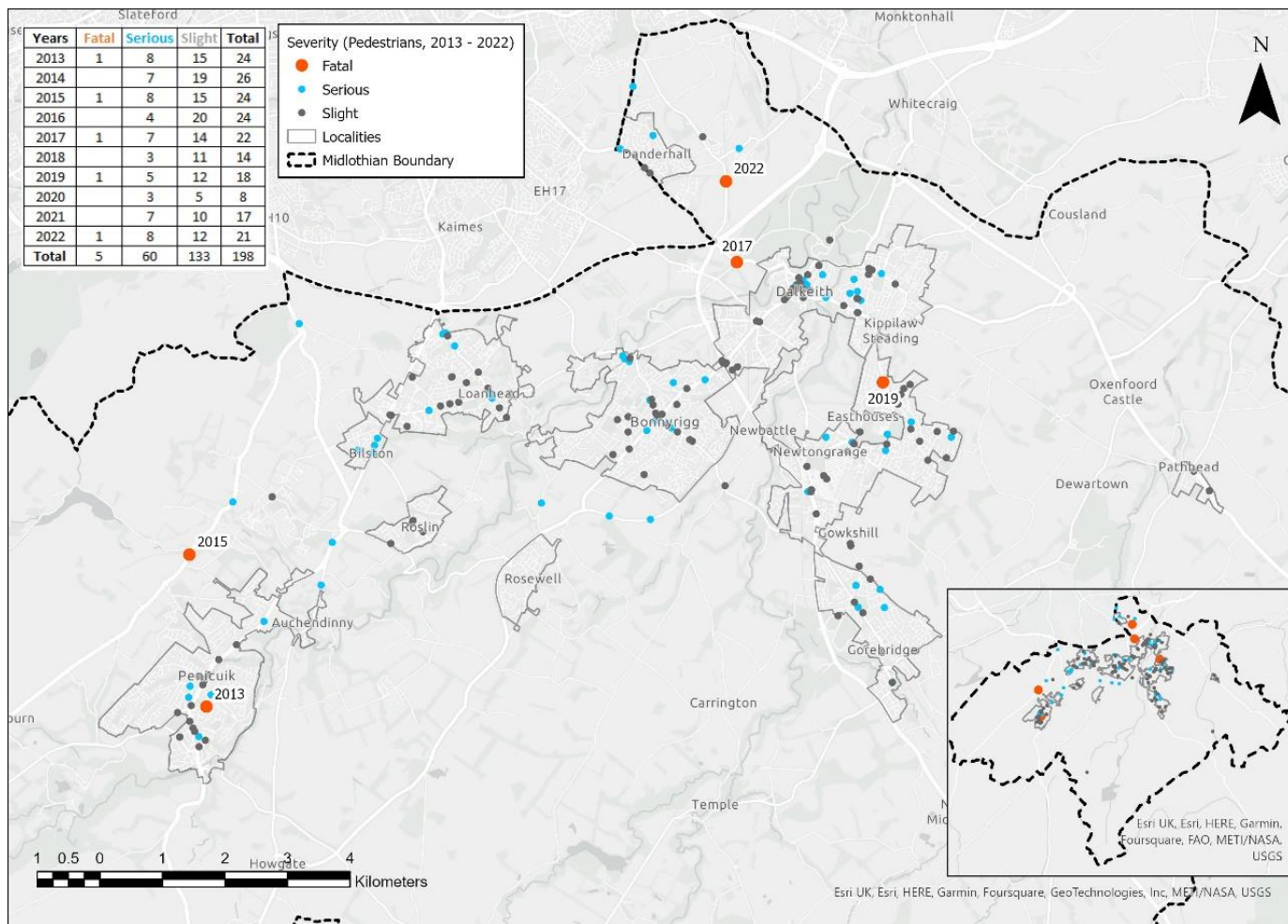


Figure 5-7: Collisions involving pedestrians between 2013 and 2022 by casualty severity

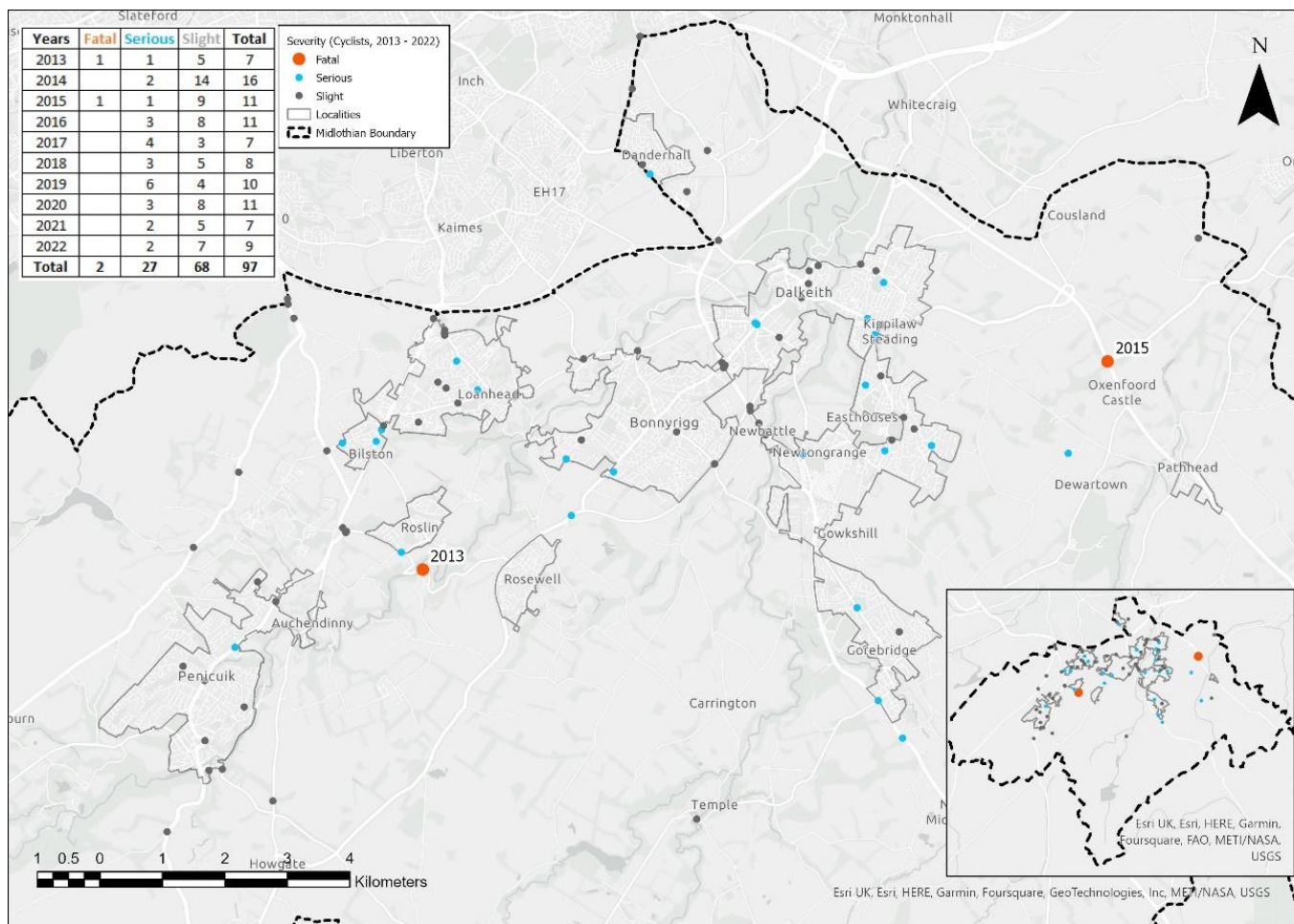


Figure 5-8: Collisions involving cyclists between 2013 and 2022 by casualty severity

5.4 Findings from previous public engagement activities

5.4.1 Figure 5-9 and Figure 5-10 show the levels of satisfaction with walking and cycling respectively amongst Midlothian respondents to the 2021 public survey undertaken to inform the SEStran RTS. The question on cycling was directed only to those who stated that they travel by bike in a typical month.



Figure 5-9: Satisfaction with walking prior to the Pandemic (n=330) (Source: SEStran Regional Transport Strategy Public Survey 2021)

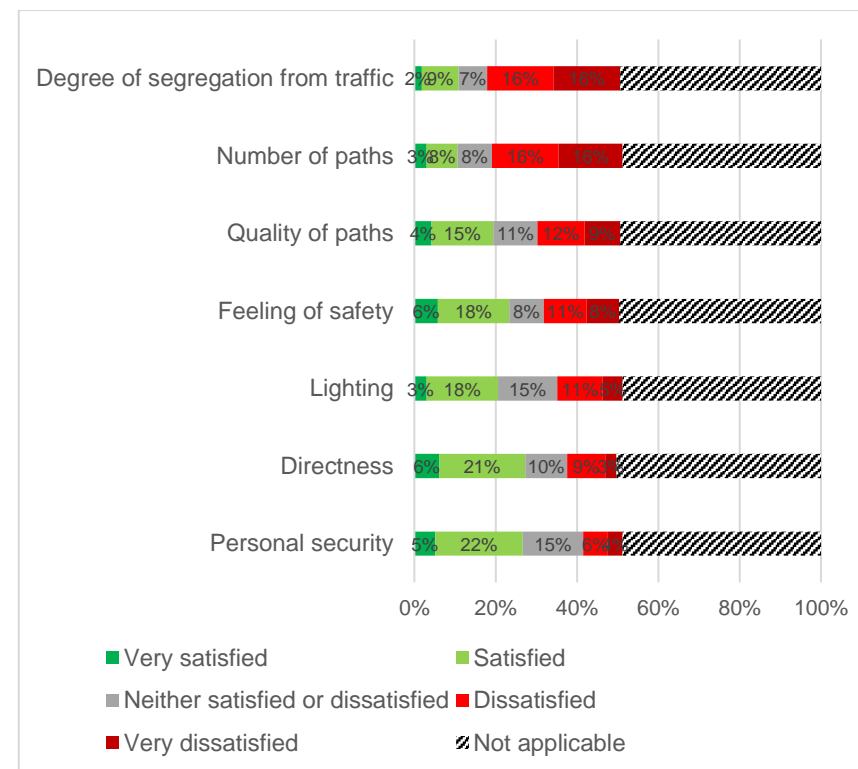


Figure 5-10: Satisfaction with cycling prior to the Pandemic (n=330) (Source: SEStran Regional Transport Strategy Public Survey 2021)

5.4.2 In terms of walking, the highest level of dissatisfaction was with the 'quality of walking paths' with 28% of respondents indicated they were dissatisfied. With respect to cycling, the highest levels of dissatisfaction were with the 'degree of segregation from traffic' with 64% of respondents indicating that they were dissatisfied with this aspect. There was also a high level of dissatisfaction with the number of paths available (63% dissatisfied), the quality of paths (41% dissatisfied), and the feeling of safety (37% dissatisfied).

- 5.4.3 Where respondents indicated they were dissatisfied with certain aspects, they were also invited to provide further comments if they wished. The key points raised relating to walking and cycling are set out in Table 5-1.

Table 5-1: Additional comments made by Midlothian respondents to the SEStran RTS Survey who indicated that they were dissatisfied with walking and cycling

Walking	Cycling
<ul style="list-style-type: none"> - too few well-maintained paths - cyclists travelling too fast on shared paths - cars ignoring speed limits making footways dangerous - anti-social behaviour on paths - poor parking and a lack of crossing places, making it more difficult for those in wheelchairs / using mobility scooters 	<ul style="list-style-type: none"> - a lack of segregated cycle paths - cycle paths not being joined-up - driver behaviour making the road dangerous - poor road surface quality

- 5.4.4 As discussed above, to help inform the development of the new ATS, Midlothian Council completed an extensive stakeholder and public consultation exercise between December 2021 and March 2022. This included the following activities:

- Stakeholder engagement - a series of stakeholder workshops and a stakeholder online survey
- Public consultation - a virtual consultation room which allowed visitors to review the existing strategy, along with interactive mapping of aspirational active travel routes in Midlothian, and an online survey

- School engagement - a separate online survey for school pupils, parents / guardians and teachers

- 5.4.5 A summary of the key problems with respect to active travel identified via these activities is provided below.

- Lack of cohesive network, indirect routes, and confusion over primary use of paths
- Poor active travel links between destinations
- Lack of segregated cycle paths
- Lack of safe crossing points for active travel, including at large roundabouts such as the Sheriffhall and Eskbank roundabouts
- High traffic speeds and volumes
- Accessibility issues for those with a disability
- Narrow footway provision and widths
- Physical barriers along routes
- Lack of public facilities (e.g. toilets, benches etc)
- Maintenance and poor condition of routes
- Insecure cycle parking at schools
- Safety concerns about walking to schools alongside busy roads
- Car parking being a safety issue in and around many schools in Midlothian
- Antisocial behaviour

- 5.4.6 The above findings along with the results of the Stakeholder Engagement undertaken to inform the development of this Stage 1&2 Technical Report (see Appendix B) have been used to help populate the problems framework as detailed below and will be a vital input into the subsequent option development process.

5.5 Problems Around Walking, Wheeling and Cycling in Midlothian

Walking and Wheeling		
Problem Theme	Transport Problem	Supply Side Cause(s)
Awareness of travel options	I do not know where safe and or accessible walking / wheeling routes are	- Lack of / poor quality / inappropriate information on active travel routes, particularly for protected groups
Cost of travel	<i>No problems identified</i>	
Environmental concerns	<i>No problems identified</i>	
Fuel / power issues	<i>No problems identified</i>	
Integration of travel to onward modes	Walking / wheeling links to my local bus stop / railway station are poor	<ul style="list-style-type: none"> - Walking links between nearest bus stops and Midlothian's rail stations are poor e.g., walking link between Tesco in Eskbank and the railway station has poor visibility and is not sufficiently wide - Difficulty accessing public transport in some new development locations / lack of dedicated mobility hubs - Absence of paths or footways requiring the user to walk on the road - footways being too narrow - Absence of lighting - Lack of suitable road crossing facilities - Obstacles on footway - Quality of streetscape - Quality of surfacing - Poor road sightlines - Narrow roads - Steps on routes
Journey information	I do not feel confident using walking / wheeling routes that I am unfamiliar with	Lack of / poor quality signage on active travel routes
Journey quality	I don't think my local environment is suitable for walking and wheeling	<ul style="list-style-type: none"> - Absence of paths requiring the user to walk on the road / across car parks - Absence of paths or footway to connect existing and planned communities / key destinations (e.g. Vogrie Country Park) - Absence of recreational walking opportunities - footways being too narrow - Intimidation caused by high traffic levels (including commercial vehicles) and speed, which will be exacerbated by traffic growth in Midlothian - Lack of suitable road crossing facilities - Obstacles on footway - Quality of streetscape - Quality of or absence of surfacing



Walking and Wheeling		
Problem Theme	Transport Problem	Supply Side Cause(s)
		<ul style="list-style-type: none"> - Narrow roads - Steps on routes - availability of seating / rest points - availability of public toilets
Journey times	Walking takes too long	<ul style="list-style-type: none"> - Longer journeys as a result of severance caused by major roads - Indirect walking and wheeling routes compared to crow fly
Personal accessibility	Walking is not a realistic option for me because of a disability	<ul style="list-style-type: none"> - Absence of suitable surfaced paths or footways for those with a disability - Paths being too narrow to accommodate wheelchairs / multiple users - Lack of appropriate enabling infrastructure including tactile paving etc - Obstacles on footway, visibility of obstacles - Parking on the footway in some locations (Note the council is planning to begin enforcing the ban on pavement parking in 2024) - Steps and other interruptions (e.g., gates) on routes
Personal security (fear of crime)	I sometimes do not feel secure when walking / wheeling	<ul style="list-style-type: none"> - Fear of crime in local environment - Lack of safe, well-lit, welcoming routes - Low levels of pedestrian and other activity
Reliability of journey times	<i>No problems identified</i>	
Safety (transport)	I sometimes do not feel safe when walking / wheeling	<ul style="list-style-type: none"> - Absence of paths requiring the user to walk on the road - Lack of segregation from traffic - High traffic speeds and intimidation by traffic - Lack of road crossing facilities - Location of road crossing facilities causes people to cross at more convenient, dangerous locations

Cycling		
Problem Theme	Transport Problem	Supply Side Cause(s)
Awareness of travel options	I do not know where there are safe cycling routes near me	<ul style="list-style-type: none"> - Lack of / poor quality information on active travel routes, particularly for protected groups
Cost of travel	I cannot afford to own / maintain a bike suitable for me	<ul style="list-style-type: none"> - Cost of buying and maintaining a bike - High cost of electric bikes



Cycling		
Problem Theme	Transport Problem	Supply Side Cause(s)
Environmental concerns	<i>No problems identified</i>	
Fuel / power issues	I cannot charge my ebike away from my home	- There is a lack of public charging facilities for e-bikes
Integration of travel to onward modes	Cycling links to my local railway station are poor	- Absence of dedicated cycling facilities - Limited signage - The roads are not appropriate for cycling because of factors including traffic levels, mix of traffic, traffic speeds, speed limits, road width, road sightlines, lighting etc
	I cannot use my bike to take the bus	- Absence of secure bike parking at bus stops / lack of dedicated mobility hubs - Only Borders Buses operate specialised bike buses operating in the area - Bike spaces on Borders Buses are on a first come, first served basis - For other operators, carriage of bikes on buses at operator discretion and therefore not possible in all cases / guaranteed
	I cannot always take my bike on the train	- Limited capacity for taking bikes on Borders Railway services and places are non-reservable
	It does not feel safe leaving my bike at the railway station	- Absence of secure, and weatherproofed bike parking at Midlothian stations - Quality of secure and weatherproofed bike parking at Midlothian stations
Journey information	I do not feel confident using cycling routes that I am unfamiliar with	Lack of / poor quality signage on active travel routes
Journey quality	I don't think my local environment is suitable for cycling	- Intimidation caused by high traffic levels (including commercial vehicles) and speed, which will be exacerbated by traffic growth in Midlothian - Absence of traffic free paths to connect communities / attractions (e.g. lack of dedicated active travel facilities connecting Gorebridge to Vogrie Country Park) - Advisory cycle lanes not fit for purpose in places - Quality of cycle routes, continuity of standard, fragmentation, gaps in routes, lack of segregation etc. - Routes are poorly maintained - The road surface is poor in places with dangerous potholes - Traffic levels and speeds are intimidating - Poor road sightlines
	There is nowhere for me to securely park my bike at my destination	- Lack of secure bike parking facilities in the public realm
	I need to be presentable at work	- Lack of facilities (e.g., showers, lockers, cycle parking etc) at my workplace
	I do not like cycling up hills	- Costs and availability of electric bikes



Cycling		
Problem Theme	Transport Problem	Supply Side Cause(s)
		<ul style="list-style-type: none"> - Cycling routes which are not defined to minimise the impact of gradients - Topography
Journey times	Journey times by bike are too long	<ul style="list-style-type: none"> - Indirect cycling routes required to avoid busy roads unsuitable for cycling - waiting times at signalised junctions or busy priority junctions
Personal accessibility	Cycling is not a realistic option for me because of a disability	<ul style="list-style-type: none"> - Cost of buying and maintaining a bespoke bike - Route constraints - Steps and other interruptions (e.g., gates) on routes
Personal security (fear of crime)	I sometimes do not feel secure when cycling	<ul style="list-style-type: none"> - Absence of other cyclists can lead to intimidation - Fear of crime or anti-social behaviour in local environment - Lack of safe, well-lit, welcoming routes - Poorly maintained routes (broken glass, overgrown vegetation, graffiti etc.) add to low amenity and an intimidating environment
Reliability of journey times	<i>No problems identified</i>	
Safety (transport)	I sometimes do not feel safe when cycling	<ul style="list-style-type: none"> - Absence of dedicated cycling facilities - Intimidation by noise and speed of vehicular traffic - Lack of segregation from general traffic - Lack of segregation from pedestrians - Requirement to cross major routes such as the A720, A7, A702 etc - Roundabouts on routes - Motorists not obeying on-road cycle lanes - The roads are not appropriate for cycling because of factors including traffic levels, mix of traffic, traffic speeds, speed limits, road width, road sightlines, lighting, motorists not obeying on-road cycle lanes etc - Unprotected right turns

6 Public Transport

6.1 Connectivity analysis

6.1.1 Prior to examining bus and rail-based connectivity in Midlothian on an individual mode basis, this section considers public transport connectivity as a whole i.e., bus and rail connectivity combined. Recognising public transport's role in providing connectivity to key employment and service centres and the impact that limited public transport connectivity to these centres can have on communities, this section:

- reviews public transport connectivity to Edinburgh City Centre from locations in Midlothian
- examines the relative public transport connectivity to employment (jobs) in Midlothian and nearby local authorities from locations in Midlothian
- identifies areas where there is a correlation between high levels of deprivation and poor public transport connectivity to the 'source' of this deprivation (e.g., employment-related deprivation and poor public transport connectivity to jobs). The identification of these areas is important as improvements in public transport connectivity in these locations have the potential to lead to wide ranging positive impacts associated with reduced deprivation.

6.1.2 Each of the above bullets are discussed further below.

Public transport connectivity to Edinburgh City Centre

6.1.3 Figure 6-1 shows average public transport journey times between each postcode in Midlothian and Edinburgh City Centre (Princes Street) during the AM peak period (0600 - 1000) with green indicating postcodes with relatively short

journey times and red indicating postcodes with relatively long journey times.

6.1.4 As may be expected, journey times to Edinburgh City Centre are quicker from the main settlements as opposed to the more rural locations, with areas in close proximity to the main road corridors (and therefore key bus services) and the rail stations on the Borders Railway achieving the shortest overall journey times.

6.1.5 As outlined above, the level of development planned in Midlothian over the next 12 years is considerable and there is a risk that this development could result in high volumes of car traffic on the key transport corridors to Edinburgh and within Midlothian more generally. To overcome this challenge, it is essential that public and active travel connections are prioritised and that journey times via the former are competitive with those of car.

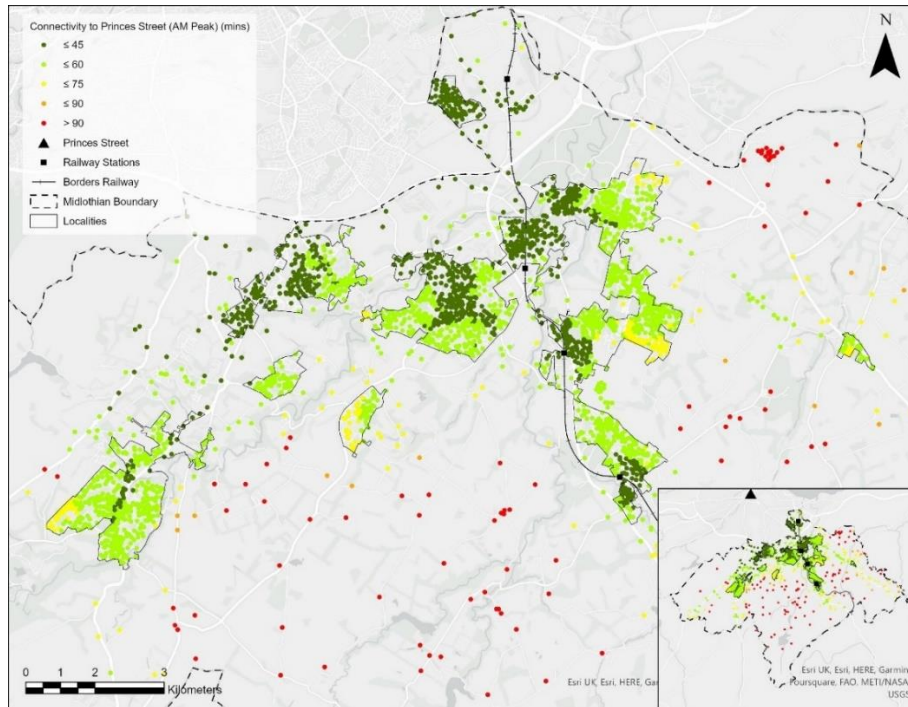


Figure 6-1: Connectivity to Edinburgh City Centre (Princes Street)

Public transport connectivity to employment

- 6.1.6 To develop a detailed picture of levels of public transport connectivity to jobs, two 'Hansen' indicators were developed. Hansen indicators provide a measure of the relative connectivity (based on travel times) of a set of 'origins' to all possible 'destinations' in a defined study area, weighted by a chosen destination 'criteria' (in this case the number of jobs at the destination), with resulting high scores indicating good connectivity and low scores suggesting poorer connectivity. A decay-function is applied in the calculation such that opportunities at more distant locations (i.e., with a longer travel time) are 'valued' less than opportunities closer by.

6.1.1 The two Hansen indicators calculated were as follows:

- the mean Hansen indicator for each of Midlothian's postcodes to all jobs within Midlothian, the City of Edinburgh, Falkirk, Scottish Borders, East Lothian, and West Lothian local authority areas by public transport
- the mean Hansen indicator for each of Midlothian's postcodes to all jobs within Midlothian only

6.1.2 The results are shown in Figure 6-2 and Figure 6-3 respectively. In both images, areas with good public transport connectivity to jobs are shown in green and areas with poor public transport connectivity to jobs are shown in red.

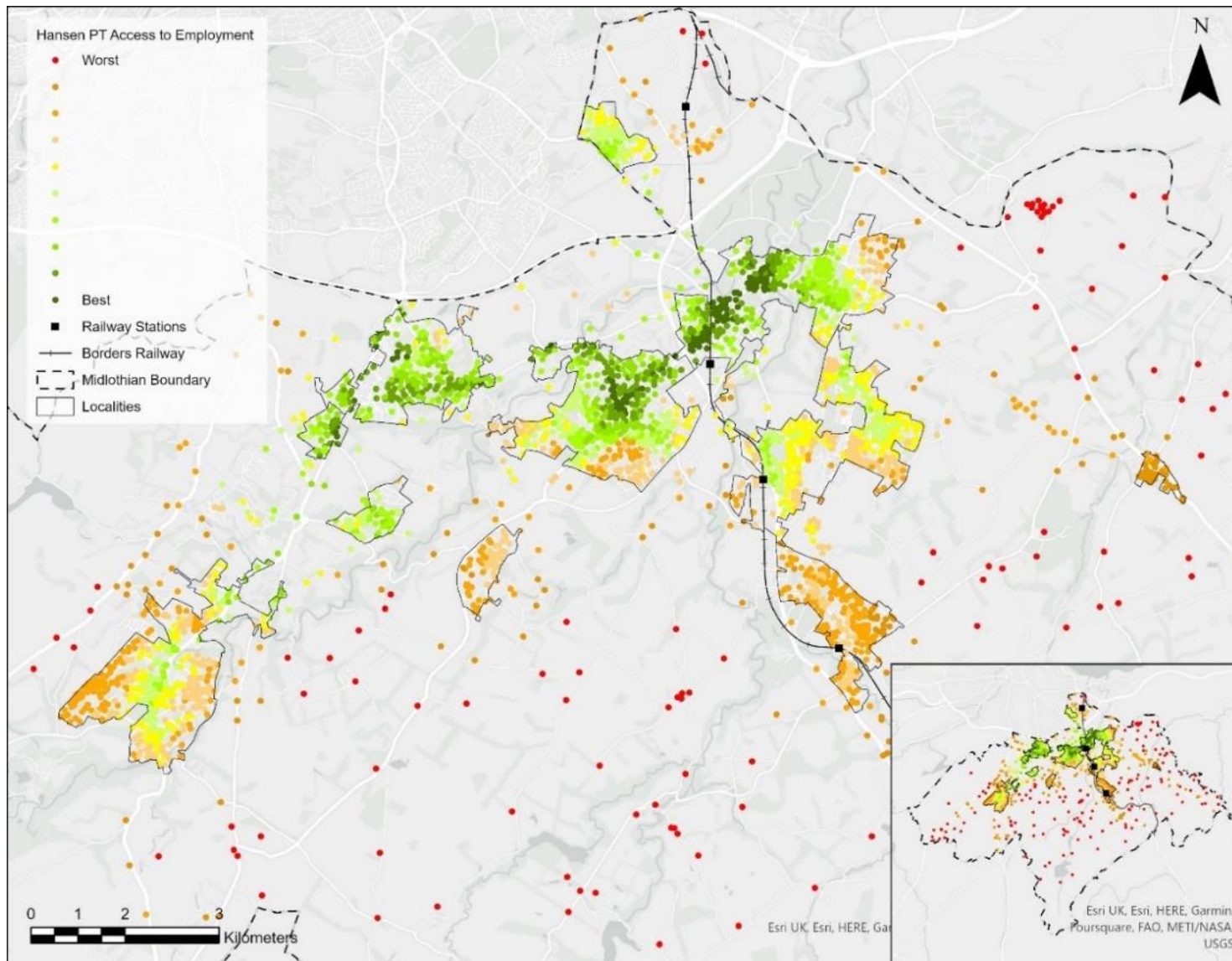


Figure 6-2: Connectivity from postcodes in Midlothian to Employment in Midlothian and the surrounding area

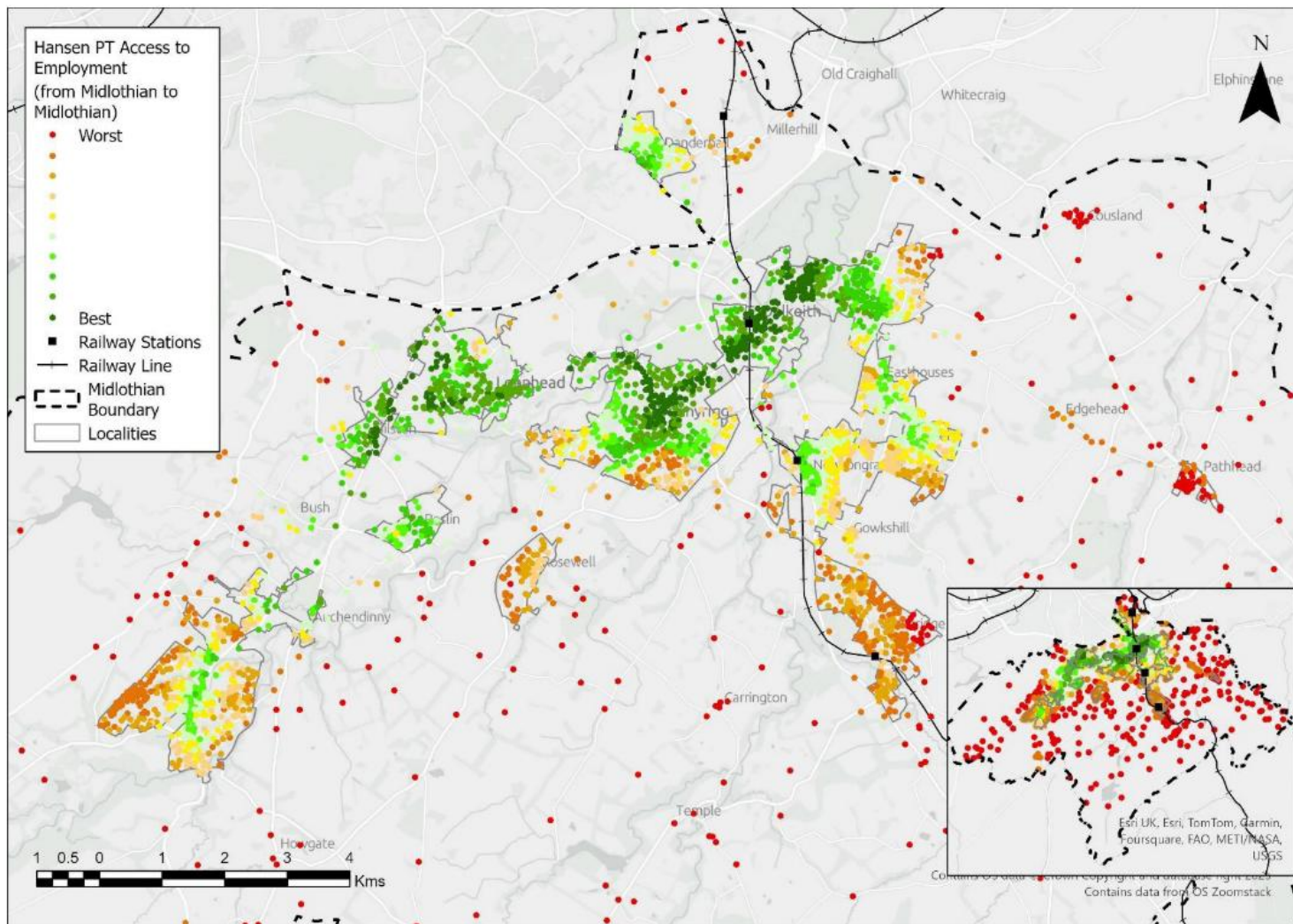


Figure 6-3: Connectivity from postcodes in Midlothian to Employment in Midlothian only

6.1.3 The analysis above highlights that:

- northern and central localities in Midlothian offer the best public transport connectivity to job destinations. Areas such as Dalkeith, Bonnyrigg, Loanhead, Penicuik, Danderhall, and Roslin have the highest average Hansen scores in the region.
- the more rural southern areas of Midlothian experience the poorest access to job destinations. Localities like Pathhead and Gorebridge have low Hansen scores, while even the rural area near Danderhall in the north, despite its proximity to Edinburgh, has a low Hansen score.
- A number of areas have better connectivity to employment in general than connectivity to employment in Midlothian. For example, Pathhead has poor connectivity to employment in general but when only employment in Midlothian is considered, it performs even less well. This highlights the poor east-west public transport connectivity in Midlothian.

6.1.4 While it is difficult to determine the overall impact the development in Midlothian will have on the above connectivity to employment patterns, it is worth noting that many of the sites within the housing land audit fall within areas where connectivity to employment is poor. In order to ensure this development does not result in high rates of car travel, it will be important to improve public transport connectivity to employment from these locations.

Connectivity Deprivation Audit Tool: understanding socio-economics and connectivity

6.1.5 To better understand access to services across Midlothian, analysis was undertaken using a bespoke Connectivity Deprivation Audit Tool (CDAT). This classifies areas into

three 'tiers' based on the correlation between i) the level of deprivation (drawing upon the Scottish Index of Multiple Deprivation 2020) in that area and ii) their level of public transport connectivity.

6.1.6 The analysis was undertaken at the Scottish Datazone (2011) level, with datazones then placed into one of three tiers depending on the level of correlation. These three tiers consist of:

- **Tier 1:** Datazones in this tier either display scores above the regional weighted average or show no correlation between the respective scores of the socio-economic indicators and travel times. For example, high levels of educational attainment but low levels of connectivity to educational institutions, or low levels of educational attainment but good connectivity to educational institutions.
- **Tier 2:** Datazones in this tier display scores on trend to the region weighted average in terms of performance against the socio-economic indicators and travel times slightly above the regional median travel times.
- **Tier 3:** Datazones in this tier are those that have high levels of deprivation combined with poor levels of connectivity to the associated opportunities / services. Specifically, they register scores of social deprivation below the regional (i.e. Midlothian) median and connectivity scores equal to or less than the regional median travel times. These areas may also see high levels of 'forced car ownership'²¹ as alternative transport options are limited.

6.1.7 Using this tiered approach identifies those areas which are in most need of further focus and potential intervention to help reduce the level of deprivation (i.e., Tier 3 datazones), and thus help improve access to services for the region's population. This facilitates a targeted approach towards

²¹ Where a person / household has to maintain a car despite the financial strain of doing so because of a lack of alternative transport options

identifying problems and development of objectives for the LTS.

- 6.1.8 Although this analysis has been undertaken looking at each destination type in terms of use, it is important to note, that many of these destinations are multi-purpose. For example, hospitals are a place for employment, health appointments and visiting. Therefore, this should be considered when studying the analysis in the following sections.
- 6.1.9 The following sections provide commentary on Midlothian's access to employment and education destinations.

Public transport access to employment

- 6.1.10 Enabling access to employment locations is vital to the growth and stability of any local economy. As such, analysis of connectivity to strategic employment, local employment and retail destinations was undertaken to ascertain which localities – in terms of employment – are 'connectivity deprived' within Midlothian in terms of access by public transport.
- 6.1.11 Figure 6-4 shows connectivity to employment destinations within Midlothian and adjoining local authority areas (City of Edinburgh, Falkirk, Scottish Borders, East Lothian, and West Lothian). These employment destinations have a relatively high concentration of jobs (in the context of the regional economy). NOMIS Business Register and Employment Survey (BRES) employment figures have been used as weighting factors to represent the 'value' of each destination.

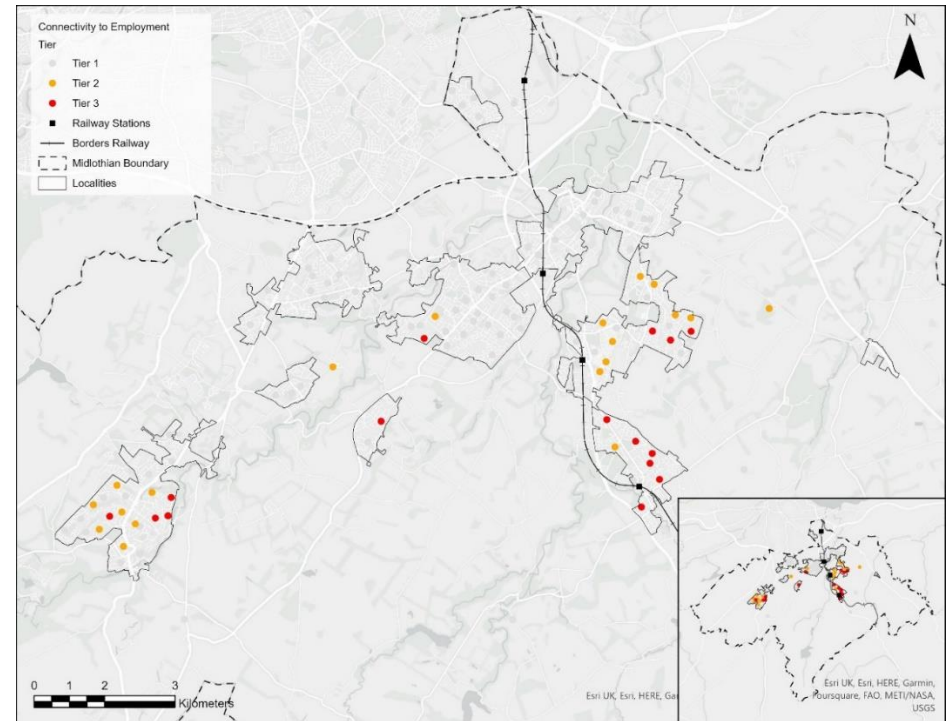


Figure 6-4: Connectivity to employment destinations

- 6.1.12 The figure shows how there is concentrations of Tier 3 locations within localities of Midlothian, with Penicuik, Mayfield and Gorebridge all seeing multiple Tier 3 locations. Additionally, Bonnyrigg and Rosewell each have one Tier 3 location. Overall, these Tier 3 locations constitute 12% (11,198) of the Midlothian region's population.
- 6.1.13 There is also a similar picture for the Tier 2 results, with there being numerous datazones in Penicuik and Mayfield. Additional datazones are also located throughout rural regions of the local authority area. Approximately 15%

(14,099) of the Midlothian region's population live in Tier 2 locations.

- 6.1.14 As noted above with respect to the Hansen scores, it is noted that many of the sites within the housing land audit fall within areas where there are concentrations of both Tier 2 and Tier 3 locations. In order to ensure this development does not result in high rates of car travel in these locations, it will be important to improve public transport connectivity to employment from these locations.

Public transport access to education

- 6.1.15 Facilitating better connectivity to education destinations is a highly effective way of reducing existing social inequalities and creating a fairer, more prosperous region. Consequently, this section analyses connectivity to further education facilities based in Midlothian and the surrounding local authorities.
- 6.1.16 Figure 6-5 shows **Error! Reference source not found.** connectivity to university destinations within and beyond Midlothian. As above, a travel time window of two hours was used as a selection criterion for the latter destinations. Only further education facilities affiliated with Universities Scotland were considered within the analysis.
- 6.1.17 This figure shows that there is a concentration of Tier 3 locations within several of the localities in Midlothian, with Penicuik, Loanhead, Danderhall and Dalkeith all seeing multiple Tier 3 locations. Additionally, Bonnyrigg has one Tier 3 location. Overall, these Tier 3 locations constitute 9% (8,714) of the Midlothian region's population.
- 6.1.18 There is also a similar picture for the Tier 2 results, with there being numerous datazones in Penicuik, Loanhead, Bonnyrigg and Dalkeith. Additional datazones are also located throughout rural regions of the local authority area. Approximately 14% (12,875) of Midlothian region's population live in Tier 2 locations.

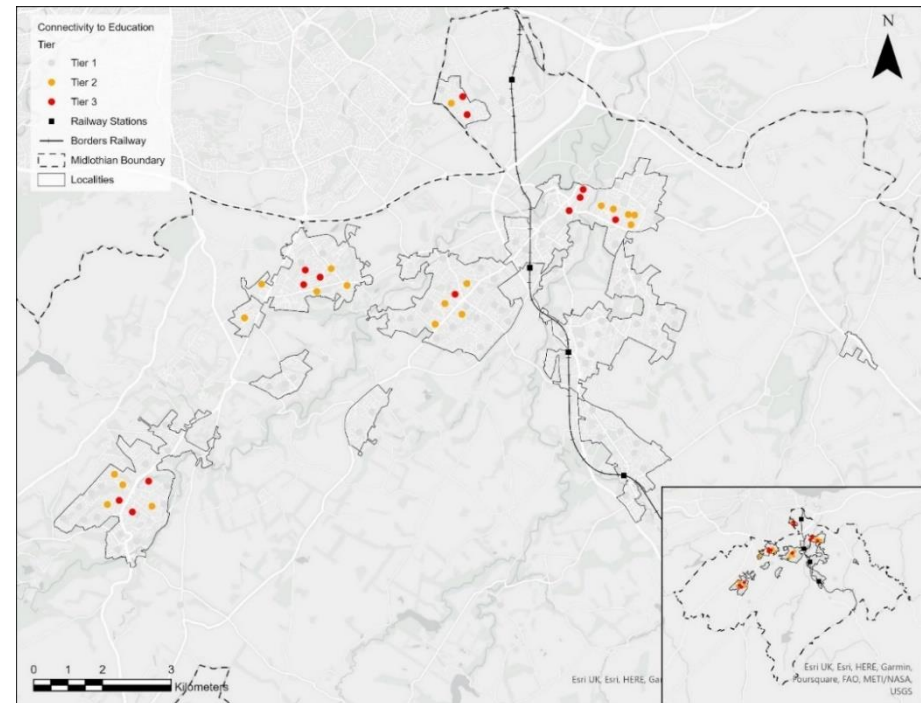


Figure 6-5: Connectivity to Education

6.2 Bus

Bus service overview

6.2.1 There are four bus operators active within Midlothian, namely:

- **Lothian Buses** – which predominantly provides connections between Midlothian and Edinburgh City Centre / Edinburgh suburbs.
- **Borders Buses** – which predominantly provides connections between Scottish Borders and Midlothian and onward travel to Edinburgh City Centre
- **East Coast Buses** – which provides one connection between Midlothian and Musselburgh (East Lothian) and one internal service serving Bonnyrigg and Dalkeith. East Coast Buses is part of the Lothian Buses Group.
- **Houston's Coaches** – which provides one service between Dumfries and Galloway / South Lanarkshire and Midlothian
- **Prentice of Haddington Coaches** - which provide one service between Haddington (East Lothian) and Royal Infirmary (Edinburgh), serving Millerhill and Danderhall settlements within Midlothian area.

6.2.2 A description of each bus service, including the service number, route, Midlothian settlements served, weekday frequency, and first and last departure to / from Edinburgh City Centre (where relevant) are set out in Appendix C Maps showing Lothian Bus services (which includes East Coast Buses services) and Borders Buses are provided in Figure 6-6 and Figure 6-7 respectively. It is noted that Borders Bus Services x70 and 339 ceased operation in 2020 and 2022 respectively.

6.2.3 Nearly all services are operated on a commercial basis therefore Midlothian Council has very limited control over bus services in the area. This also means there is no publicly

available data regarding bus passenger numbers in Midlothian.

6.2.4 The majority of services which serve Midlothian route beyond the local authority boundary, with most connecting to Edinburgh City Centre. There are relatively few east-west connections across the local authority area. This can act to reduce connectivity to key Midlothian employment centres such as Straiton and the MSZ for Midlothian residents. There is also a lack of bus connections to some key visitor locations, including Vogrie Country Park.

6.2.5 As with active travel connections, the **A720 City Bypass again creates significant severance across the north of Midlothian** which impacts bus connectivity. There are only five crossing points by road and routine congestion and incidents on the bypass can cause north-south traffic accessing the bypass to queue back and block north-south travel. This contributes to long bus journey times when travelling to the capital during peak times.

6.2.6 There are no bus services which specifically connect to the rail stations:

- Service 29 (Silverknowes to Gorebridge) and Service 139 (Dalkeith Campus to Midlothian Community Hospital) route near to Eskbank Station, stopping at the Tesco / Costa Coffee in Eskbank which is a two-minute walk from the station. However, during the engagement undertaken to inform this study, it was noted that this walking link is too narrow to accommodate wheelchairs and there is poor visibility.
- The X95 stops at Fourth Street, a four-minute walk from Newtongrange Station and Service 29 (Silverknowes to Gorebridge) and Service 48 (Gorebridge to Musselburgh) route past Gorebridge Station but do not connect directly to it.

6.2.7 In May 2023, Lothian Buses withdrew Service 49 which provided a direct connection from Rosewell to Edinburgh, with

residents of Rosewell now having to travel via Service 46 to the Royal Infirmary and interchange there for onward connections to Edinburgh.



Figure 6-6: Lothian Bus network map showing Lothian Buses and East Coast Buses which serve Midlothian (Source: Lothian Buses)

6.2.8 Services X62 (Galashiels to Edinburgh City Centre via Penicuik) and Service X95 (Carlisle to Edinburgh City Centre via the A7) which are operated by Borders Buses are 'bike buses' on which users can travel with their bike. The vehicles have between 2 and 4 bike spaces which operate on a first-come-first-serve basis. In July 2023, Borders Buses increased the frequency on the X95 service from two-hourly to hourly between Galashiels and Edinburgh, Monday to Saturday and extended the operating time with later journeys from Midlothian to Edinburgh and from Edinburgh to Midlothian.

6.2.9 In February 2022, the Scottish Government allocated funding to support Midlothian Bus Partnership in bringing forward improvements to bus services in Midlothian. As part of this work, proposals are currently being developed for the following corridors:

- A6094 Whitecraig to A6094 Eskbank
- B6392 Eskbank to A772 Gilmerton Junction
- A7 Gorebridge to A7 Danderhall
- A6094 Eskbank to A701 Straiton.

Community transport and taxi services

6.2.10 In addition to the above operators, **Lothian Community Transport Services (LCTS)** run a number of scheduled community bus routes (Services R1, R2, R3, R4, and R5) in areas that are less well served by the commercial bus network. These routes are available to all members of the public, including those with National Entitlement Cards (NEC) or Young Scot cards and are included in the bus connectivity analysis below. The services generally run just once a week

in each direction on either a Monday or a Thursday and are operated using minibuses with a max capacity of 15 passengers. Wheelchair users can use the service but have to book in advance²².

6.2.11 In addition, Midlothian Council support a **Ring & Go taxi service** for communities affected by the withdrawal of regular bus services. The Ring & Go service operates in five areas (as detailed in the table below) and is operated by Swift Taxis. The service operates on a timetable but only runs when pre-booked by scheme members. There are eight services a day running southbound from Dalkeith between 0710 and 2235 and nine services a day running northbound from Pathhead between 0625 and 2315. A membership card is required to access the service and users pay a fixed rate per single journey (£1.70 or £2.80 depending on route), with the council topping up the payment to an agreed contract price.

Table 6-1: Ring & Go Taxi Service schemes

Area covered	Provides links to
Auchendinny	Gowkley Moss, Milton Bridge or Penicuik
Cousland	Dalkeith
	Pathhead
Pathhead	Dalkeith via Edgehead, Whitehill
Howgate	Penicuik via Loanstone, Maybank
Hilltown	Hilltown, Moorfield, Cauldcoats to Danderhall

6.2.12 HCL Dial-A-Ride service also provide door-through-door transport service for people with mobility challenges who are resident in either Edinburgh or the Lothians. This includes older people; people with disabilities, additional support

²² Wheelchair users can also be picked up from their home where it is safe to park outside

needs, illness or health condition (long term or short term) affecting mobility; or those rurally isolated.

- 6.2.13 Users register in advance and once registered can call the local booking office to book their trip. The service operates 7 days a week, including evenings and will transport users wherever they wish to go, including across Scotland and to different parts of England. Dial-A-Ride is charged on a mileage basis at £6.00 for the first mile and then 75p per mile thereafter. The mileage is calculated 'as the crow flies', i.e., the most direct route.

Council support for bus services

- 6.2.14 Midlothian Council is a minority shareholder in Lothian Buses.
- 6.2.15 Currently, the council does not directly support any individual bus services, but it does make a contribution to East Lothian Council (ELC) and Scottish Borders Council (SBC) to help cover the cost of services which run through these areas and also serve Midlothian. In addition, the council provides funding for the Ring & Go service.
- 6.2.16 Figure 6-8 Shows Midlothian Council's expenditure on bus services between 2014/15 and 2022/23. Overall, total expenditure has declined by 40% over this period. This likely reflects the increasing downward pressure on budgets as well as reduced patronage figures since COVID-19.

Bus fares

- 6.2.17 Bus fares vary across the operators in Midlothian, with single adult tickets on Lothian Buses and East Coast Buses costing £2-£3, a single on Borders Buses costing £5.80, and a single on the Houston's Coaches services from Penicuik to Edinburgh costing £1.80. A range of day and season tickets are also available, including the Lothian Bus 'TapTapCap' system whereby passengers use a contactless card or device, and payments are automatically capped at the best adult daily or weekly fare. TapTapCap is available across the Lothian Bus network, including East Coast Buses.

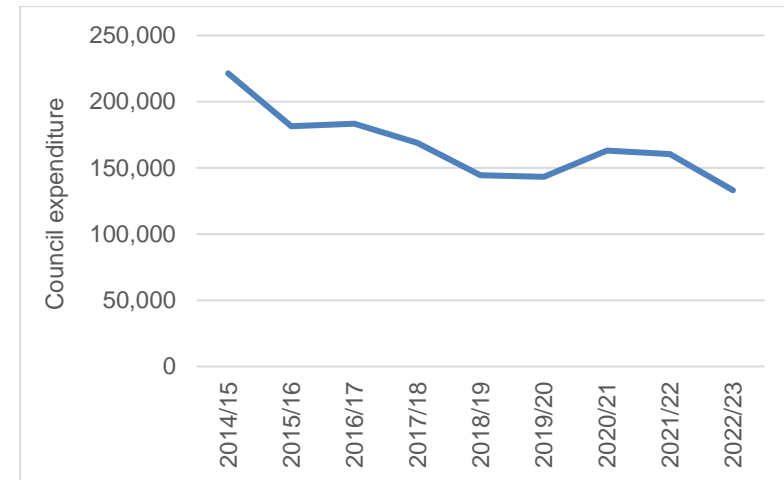


Figure 6-8: Midlothian Council supported bus expenditure 2014/15 to 2022/23

- 6.2.18 Where users wish to regularly travel across two operators, 'OneTicket' can be used. This is an app-based travel scheme which allows travel across multiple operators; currently Borders Buses, East Coast Buses, and Lothian Buses are part of the scheme. Tickets can be purchased for daily, multi-day bundles, weekly, or monthly use, ranging from £6.00 to £74.00, with an annual pass costing £841.00. These prices

are for an adult within the 'Edinburgh Smart Zone' which includes Midlothian and Edinburgh city centre.

- 6.2.19 During the engagement undertaken to inform the development of this Draft Stage 1&2 Report, reference was made to the high cost per mile when travelling by bus from some areas of Midlothian compared to elsewhere. For example, residents of Pathhead and residents of the Scottish Borders have to pay the same amount for either a single (£5.80) or a day (£10.15) ticket for travel across the Borders Bus network, an area which includes Carlisle, Scottish

Borders, Berwick, Lothian and Edinburgh. This means, for example, that someone travelling from Jedburgh to Edinburgh only pays £0.21 per mile whereas someone travelling from Pathhead to Edinburgh pays £0.83 per mile.

- 6.2.20 During the engagement undertaken to inform the development of this Draft Stage 1&2 Report, reference was made to the high cost per mile when travelling by bus from some areas of Midlothian compared to elsewhere. For example, residents of Pathhead and residents of the Scottish Borders have to pay the same amount for either a single (£5.80) or a day (£10.15) ticket for travel across the Borders Bus network, an area which includes Carlisle, Scottish Borders, Berwick, Lothian and Edinburgh. This means, for example, that someone travelling from Jedburgh to Edinburgh only pays £0.21 per mile whereas someone travelling from Pathhead to Edinburgh pays £0.83 per mile.

Bus service – connectivity analysis

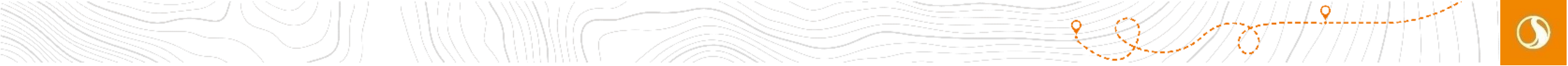
- 6.2.21 To provide an overview of the bus network, including both connectivity to the network itself, as well as the connectivity provided by the services, detailed spatial analysis has been

undertaken. The analysis has considered the extent to which there is convenient access to bus stops in Midlothian, the frequency of services, the availability of direct connections to Edinburgh, and the level of provision during the evening and on Sundays. The analysis has been undertaken at full-postcode level. This provides enhanced granularity, with each postcode representing a handful of households. Summing the associated number of households contained within each postcode which meet different criteria has enabled a detailed understanding of connectivity to the bus network and services, both across the local authority and for each of Midlothian's key towns.

Convenient access to a bus stop

- 6.2.21 In order to assess the level of access to bus stops across Midlothian and identify areas where bus stop provision is limited, an analysis of the walk distances to the nearest bus stop was undertaken at the postcode level. Walk distances were established using postcode centroids and a representation of the street and path networks in Midlothian. Drawing on the Scottish Government's Urban Rural six-fold classification²³, postcodes were then defined as having 'convenient access to a bus stop' where they met the following criteria:
- Postcodes located within 400m of a bus stop (in line with national guidance on the maximum desirable walking distance to a stop) and in a 'large urban area' or a 'other urban area'
 - Postcodes located within 600m of a bus stop and in an 'accessible small towns' or a 'rural small town'
 - Postcodes located within 800m of a bus stop and in an 'accessible rural area' or a 'remote rural area'

²³ See [2. Overview - Scottish Government Urban Rural Classification 2020 - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/urban-rural-classification-2020/pages/2-overview.aspx)



6.2.22 The location of the postcodes with and without convenient access to a bus stop according to the above definition is shown in Figure 6-9 and the proportion of households at the Midlothian level and within each locality in Midlothian without access is shown in Table 6.2.

6.2.23 The analysis indicates that, in total, **17% of households in Midlothian (approximately 7,500 households) do not have convenient access to a bus stop**, with some clear pockets experiencing particularly low rates of access (e.g., Newbattle, Penicuik, and Bonnyrigg).

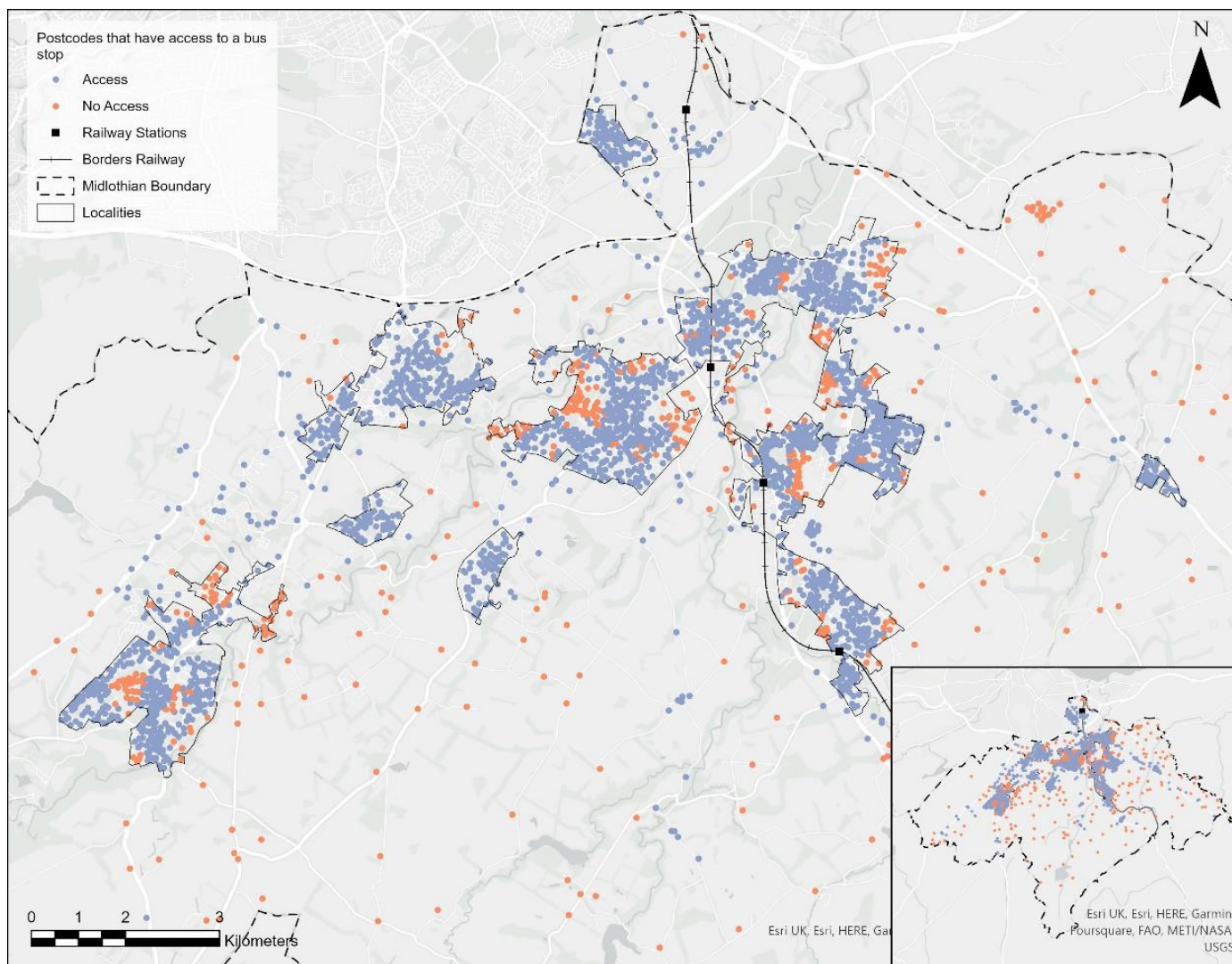


Figure 6-9: Postcodes with or without convenient access to a bus stop

Table 6-2: Number of households in Midlothian with convenient access (as defined above) to a bus stop

Location	Number of households without convenient access to a bus stop	% households without convenient access to a bus stop
Bilston	0	0%
Bonnyrigg	1,591	21%
Dalkeith	1,223	18%
Danderhall	0	0%
Gorebridge	581	15%
Loanhead	21	1%
Mayfield	1,034	17%
Newbattle	120	53%
Pathhead	0	0%
Penicuik	1,776	24%
Rosewell	0	0%
Roslin	0	0%
Other	1,199	35%
Midlothian	7,545	17%

Key point: Nearly 20% of households in Midlothian do not currently benefit from convenient access to a bus stop (as defined above). Residents in these areas have a longer walk than what would be reasonably expected given where they live and this is likely to deter some people in these locations from using the bus, with long walks being a particular barrier for certain equality groups, including those with mobility issues / young children and those with concerns around personal safety when using public transport / walking, particularly at night.

Weekday service frequency

6.2.24 Bus service frequency has an important bearing on whether an individual deems the bus to be a viable option for their trip. To visualise bus frequency across the local authority area, two maps were produced as follows:

- Figure 6-10 shows the cumulative number of buses (all services) on each road corridor between 0500 and 2359 on a typical weekday with thicker lines indicating higher frequencies.

- Figure 6-11 shows the cumulative number of buses (all services) serving each bus stop within Midlothian between 0500 and 2359 on a typical weekday with red indicating relatively low frequency and green indicating relatively high frequency bus stops.

6.2.25 Both maps are based upon the published bus network as of the second week of October 2023.

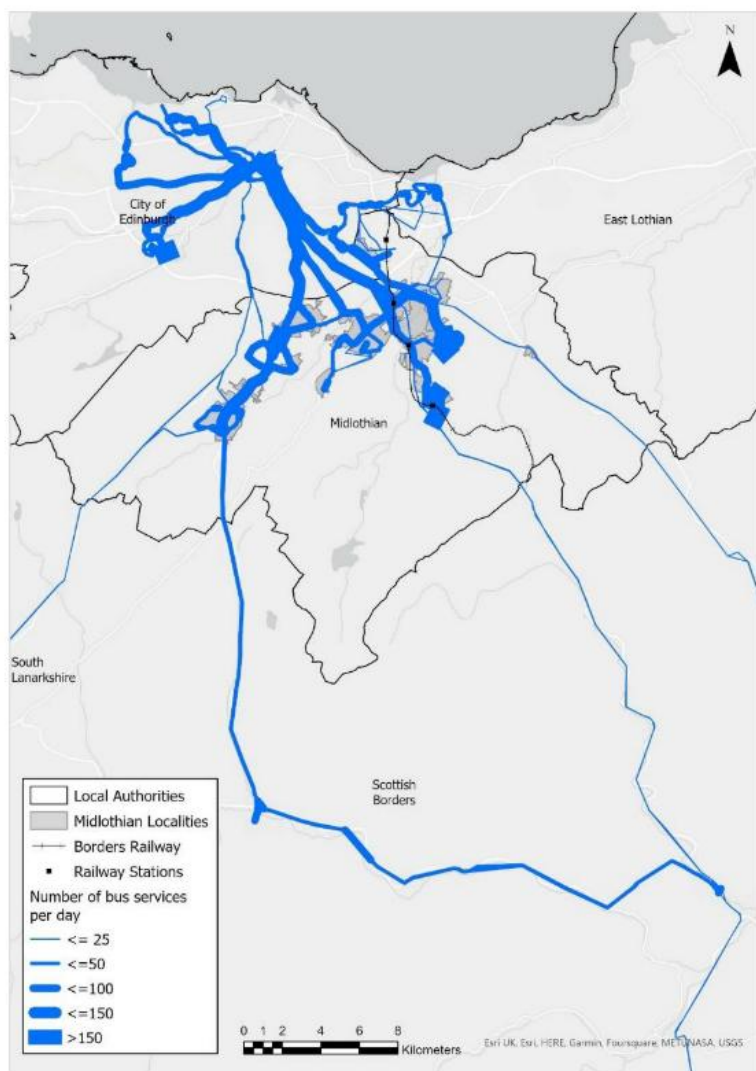


Figure 6-10: Frequency of bus services by road corridor – Weekday 0500-2359

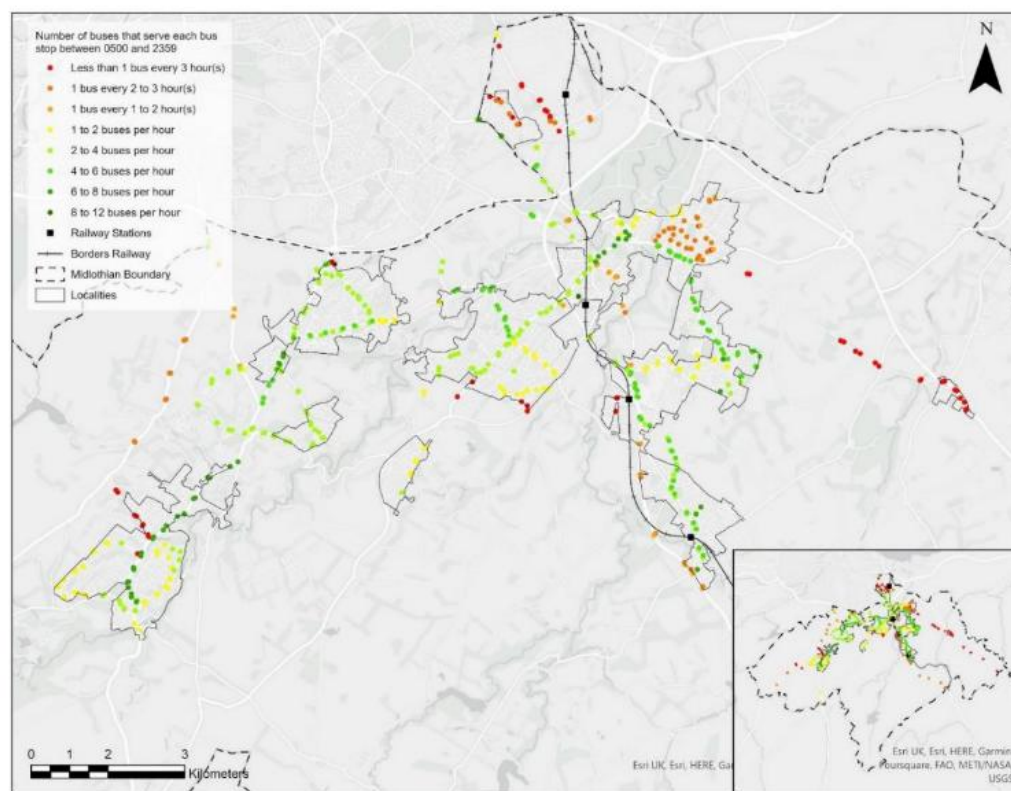


Figure 6-11: Frequency of bus services by stop - Weekday 0500-2359

6.2.26 As would be expected, service frequency is higher on the main road corridors through the key settlements, with lower frequency on less major routes and in more rural locations. The key road corridors for bus services into Edinburgh are the A701, Lasswade Road, the A772, and the A7, with frequency on the northern sections of these routes particularly high.

6.2.27 Figure 6-11 shows that there are several bus stops where bus frequency is less than one bus every three hours. These stops are those served by the LCTS community bus routes (services R1, R2, R3, R4, and R5) which operate once a week on either a Monday or a Thursday.

6.2.28 The most frequently served stops are located on the A701 through Penicuik and Bilston, and on the A6094 through Bonnyrigg and Dalkeith as well as the A6106 and the B6482 between Dalkeith and Mayfield and the A7 south of Danderhall. However, there are also stops within these settlements which are less well served. The co-occurrence of high frequency stops and lower frequency stops within settlements may mean that residents must choose to either use their closer – but more sporadic – services, or travel further to access more frequent bus services. This can have a particular impact on those with limited mobility and / or childcare responsibilities for whom a longer walk may be challenging.

6.2.29 The level of household access to bus stops served by frequent bus services at both the Midlothian level and for each locality in Midlothian is shown in Figure 6-12 and Figure 6-13 respectively. This analysis is based upon the most frequently served bus stop within a convenient walk (as defined above) of each household.

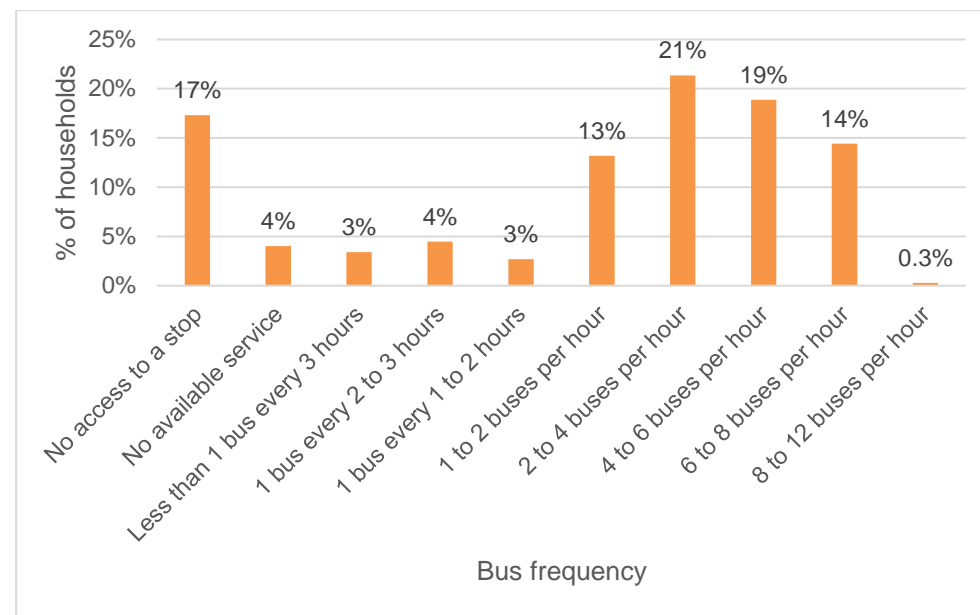


Figure 6-12: Percentage of households in Midlothian as a whole with defined bus frequencies

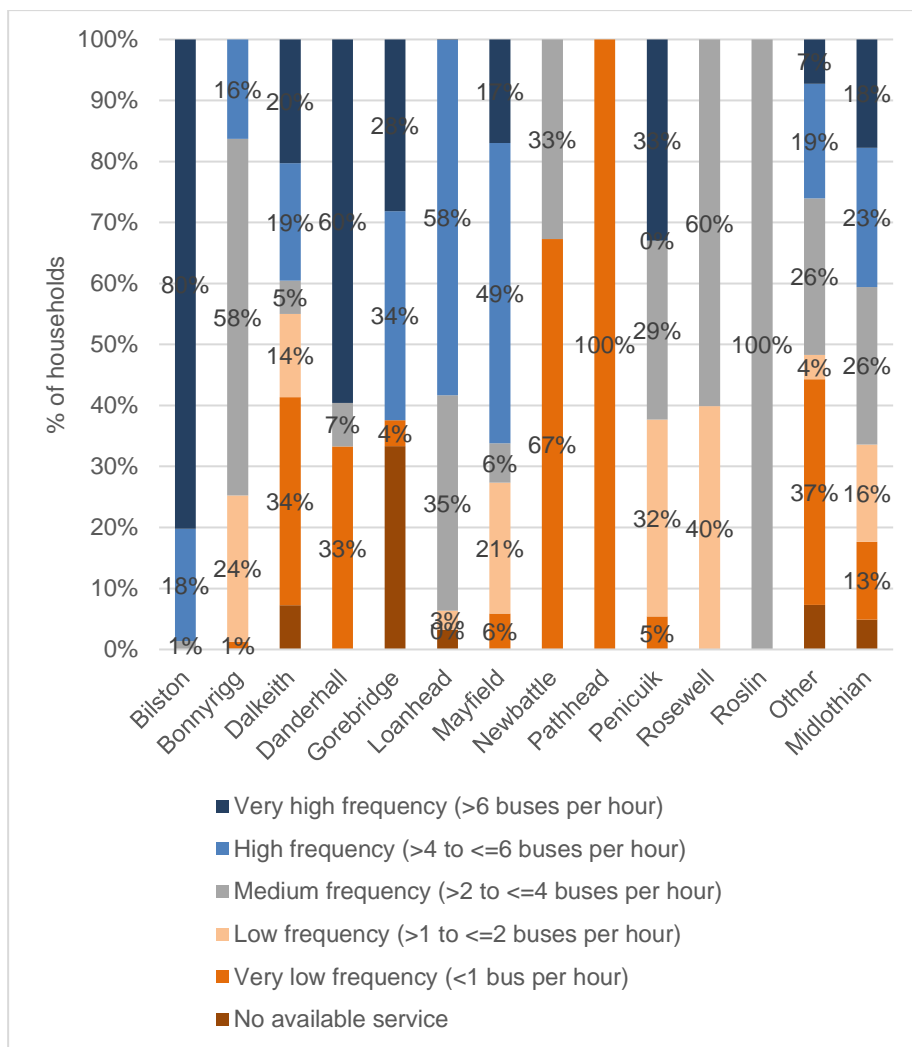


Figure 6-13: Percentage of households in with defined bus frequencies by locality

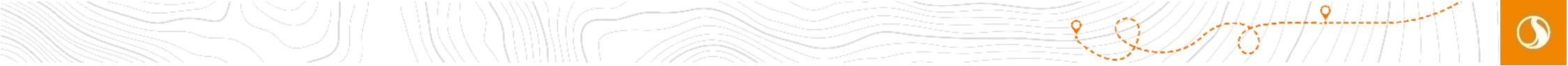
6.2.30 Over half of households in Midlothian benefit from convenient access to bus stops with services frequencies of two or more


buses services per hour. However, **around 10% of households can only conveniently access bus stops with service frequencies of less than one bus every two hours.** Amongst Midlothian's localities, Pathhead which is located some distance from the higher frequent road corridors, has the lowest service frequency, with only one bus every 2-3 hours serving each stop.

Key point: Around 10% of households in Midlothian only have convenient access to bus stops with poor service frequency (less than one bus every hour). While some of these households are in more rural locations, the analysis indicates that there are also households in Midlothian's settlements falling into this category. While some households may opt to walk further to access more frequent services, as discussed above, long walks to bus stops can be particularly challenging for some equality groups, resulting in inequalities in access.

Weekday direct connections to Edinburgh

- 6.2.31 As discussed in Chapter 3, a large proportion of Midlothian's residents travel into Edinburgh for work. The capital is also the major hub for education, healthcare, retail and social and leisure services and opportunities.
- 6.2.32 When making public transport trips, the requirement to interchange can be a significant barrier to use. This is because the need to interchange adds to overall journey times, can add to costs, and introduces uncertainty in making connections. The need to interchange can also be a particular barrier for more vulnerable users, including those with mobility issues / young children, young people wishing to travel independently, and other groups who may experience greater personal security fears when using public transport.
- 6.2.33 An analysis of the extent to which households in Midlothian can access direct bus connections to Edinburgh City Centre (taking Waverley Station as the destination point) across the day and evening was therefore undertaken. This considered



only those households who have convenient access to a bus stop as defined above. The results of the analysis by time of day are shown in  Overall, the analysis suggests that 14% of households with convenient access to a bus stop do not have a direct connection into Edinburgh City Centre during the AM peak (0700-1000), with this figure increasing to above 30% during the evening period.

- 6.2.34 The level of direct bus connectivity to Edinburgh varies by locality with Rosewell and Pathhead being particularly poorly connected. As noted above, Rosewell previously benefitted from a direct connection to Edinburgh City Centre (Service 49) but this was withdrawn by Lothian Buses in May 2023. Interestingly, a relatively high proportion of households in Dalkeith, Danderhall, and Gorebridge have no access to direct connections, with direct connectivity from Dalkeith more limited in the evenings.

Key point: Around 14% of households in Midlothian are unable to conveniently access a direct connection to Edinburgh City Centre, with the proportion of households falling into this category varying across the local authority area. Furthermore, the figure increases to 30% during the evening. Given that the requirement to interchange is a significant barrier to public transport use, the lack of a direct service could be contributing to higher levels of car use as well as 'forced car ownership' in these areas, with the lack of a direct evening service likely to be particularly challenging for those working evening shifts.

- 6.2.35 Table 6-3. It is noted that this analysis considers to and from Edinburgh City Centre. Overall, the analysis suggests that 14% of households with convenient access to a bus stop do not have a direct connection into Edinburgh City Centre during the AM peak (0700-1000), with this figure increasing to above 30% during the evening period.
- 6.2.36 The level of direct bus connectivity to Edinburgh varies by locality with Rosewell and Pathhead being particularly poorly connected. As noted above, Rosewell previously benefitted from a direct connection to Edinburgh City Centre (Service 49) but this was withdrawn by Lothian Buses in May 2023. Interestingly, a relatively high proportion of households in Dalkeith, Danderhall, and Gorebridge have no access to direct connections, with direct connectivity from Dalkeith more limited in the evenings.

Key point: Around 14% of households in Midlothian are unable to conveniently access a direct connection to Edinburgh City Centre, with the proportion of households falling into this category varying across the local authority area. Furthermore, the figure increases to 30% during the evening. Given that the requirement to interchange is a significant barrier to public transport use, the lack of a direct service could be contributing to higher levels of car use as well as 'forced car ownership' in these areas, with the lack of a direct evening service likely to be particularly challenging for those working evening shifts.

Table 6-3: Proportion of households in Midlothian with convenient access to a bus stop but without access to a direct bus connection to Edinburgh City Centre

	7:00-10:00	10:00-16:00	16:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00
Bilston	0%	0%	0%	0%	0%	1%	1%	1%
Bonnyrigg	17%	17%	17%	17%	17%	17%	45%	45%
Dalkeith	33%	55%	36%	55%	57%	60%	60%	60%
Danderhall	33%	33%	33%	33%	33%	33%	33%	33%
Gorebridge	33%	33%	33%	33%	33%	33%	38%	38%
Loanhead	6%	6%	6%	6%	6%	6%	6%	6%
Mayfield	1%	26%	2%	21%	26%	26%	27%	27%
Newbattle	0%	0%	0%	0%	8%	67%	67%	67%
Pathhead	0%	0%	0%	0%	100%	100%	100%	100%
Penicuik	0%	0%	0%	0%	5%	2%	7%	9%
Rosewell	2%	100%	0%	100%	100%	100%	100%	100%
Roslin	0%	0%	0%	0%	0%	0%	0%	0%
Other	16%	17%	16%	21%	35%	37%	57%	57%
Midlothian	14%	15%	28%	35%	22%	31%	15%	28%

Operating hours

- 6.2.37 The operating hours of a service are the length of time over which the service runs from the first service until the final service of the day. Where operating hours are short, this can limit opportunities for people to undertake certain activities, including going to and returning home from employment, shift work, and / or going out to leisure and social events in the evening. To help visualise and identify issues with operating hours, Figure 6-14 and Figure 6-15 show the time of the first and last bus at each bus stop in Midlothian between 0500 and 2359 on a typical weekday. As above, this analysis is based upon the published bus network in the October 2023.
- 6.2.38 Overall, the majority of bus stops are served by early morning services (prior to 07:00 and after 23:00). As with the bus frequency maps:
- there are several areas where the map suggests that services don't start until after 09:00 and / or finish before 15:00 – these relate to the LCTS community bus routes as discussed above
 - bus stops with the earliest and latest services tend to be located on the main A and B roads running through Midlothian's settlements
 - outside of these main corridors, there are some stops in settlements which have relatively short operating hours. These include several in Dalkeith for which the last service is prior to 19:00. As above, the co-occurrence of stops with longer and shorter operating hours within settlements could mean people have to walk further to access services, elongating travel times and having a particular impact on those with limited mobility and / or childcare responsibilities.
 - operating hours are generally shorter in the less populated more rural areas, with bus services on the A68 and the southern section of the A7 finishing relatively early (prior to 19:00)

Key point: The majority of bus stops in Midlothian are served by both early morning and late-night services. However, there are several locations, including certain stops within Midlothian's key towns, where the operating day is relatively short. This could impact the ability of residents in these areas to access employment, key services and social and leisure opportunities and could contribute to forced car ownership and higher car use.

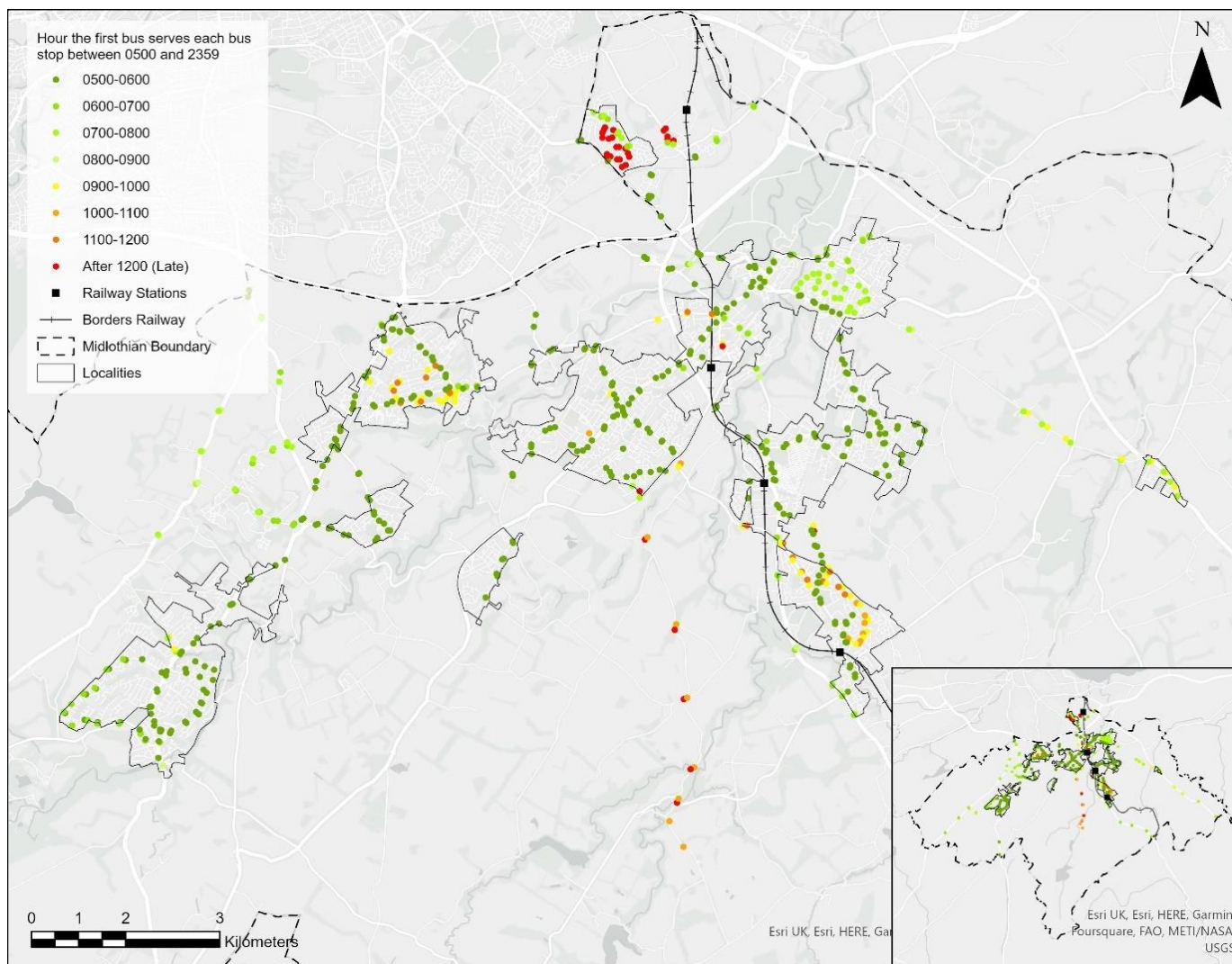


Figure 6-14: First Bus Service for each Bus Stop within Midlothian

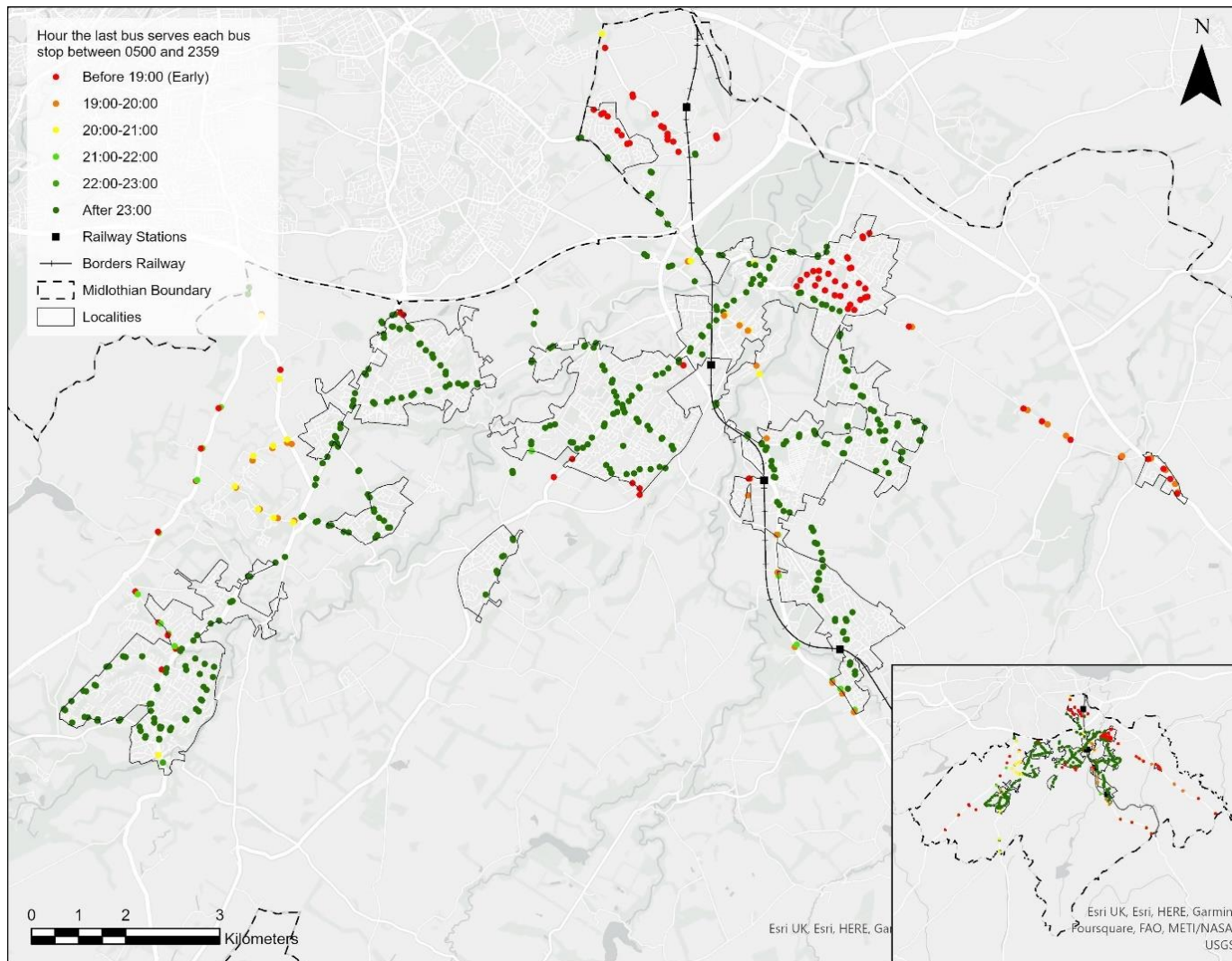


Figure 6-15: Last Bus Service for each Bus Stop within Midlothian



6.3 Findings from previous public engagement activities

6.3.1 Figure 6-16 shows satisfaction with the bus services amongst Midlothian respondents to the 2021 public survey undertaken to inform the SEStran RTS. Responses are shown for only those who indicated that they typically travel by bus at least monthly.

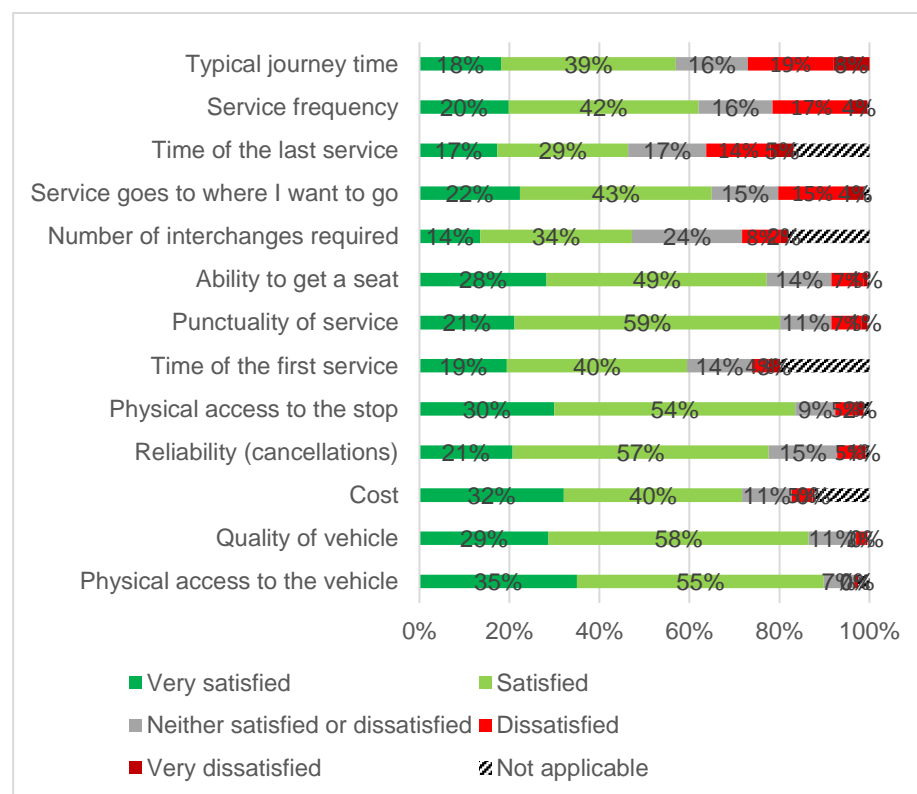


Figure 6-16: Satisfaction with the bus prior to the Pandemic (n=237) (Source: SEStran Regional Transport Strategy Public Survey 2021)

6.3.2 The highest levels of dissatisfaction were with bus journey times and service frequency with 27% and 21% respectively indicating that they were dissatisfied with these aspects. There were also high levels of dissatisfaction with the time of the last service, the destinations served, and the number of interchanges required.

6.3.3 Where respondents indicated they were dissatisfied with certain aspects, they were also invited to provide further comments if they wished. The key points raised with respect to bus travel were as follows:

- long journey times (20 comments)
- lack of early and late services (15 comments)
- lack of direct services / need for interchange (13 comments)
- unreliable services (4 comments)
- overcrowded services (4 comments)
- no service available (4 comments)
- low frequency (3 comments)
- roads not fit for buses (1 comment)
- anti-social behaviour of passengers on buses (1 comments)
- lack of covered bus shelters (1 comment)
- bus service being too expensive (1 comment).

6.3.4 During the stakeholder and public engagement activities undertaken in 2021/2022 to inform the development of Midlothian's new ATS, respondents were also asked about public transport services. Key problems identified included:

- Long journey times by bus to Edinburgh
- Insufficient public transport connectivity between different areas of Midlothian
- Lack of connectivity to the Pentlands

6.3.5 The above findings along with the results of the Stakeholder Engagement undertaken to inform the development of this Stage 1&2 Technical Report (see Appendix B) have been used to help populate the problems framework as detailed below and will be a vital input into the subsequent option development process.

6.4 Problems Around Bus Travel in Midlothian

Problem Theme	Transport Problem	Supply Side Cause(s)
Awareness of travel options	I am not aware of the bus services available to me / cannot access bus service information	<ul style="list-style-type: none"> - A particular issue for occasional or infrequent users, including visitors to Midlothian for whom information has to be readily accessible, understandable and reliable - Level of, accessibility of, and promotion of bus routes, fares and vehicle information by all stakeholders providing services in Midlothian
Cost of travel	I cannot afford to travel by bus regularly	<ul style="list-style-type: none"> - Concessionary travel entitlement regime means that some low-income groups do not benefit - Level of fares, including arrangements for regular bus users vary by operator - People who cannot afford up front cost cannot benefit from season tickets / Ridacards etc. so spend more per journey - People unable to / not comfortable with using apps etc may have to pay full single fares
	Travelling by bus uses a high proportion of my disposable income	
Environmental concerns	I am concerned about the environmental impact of travelling by bus	<ul style="list-style-type: none"> - Many buses serving Midlothian are diesel powered
Fuel / power issues	Electric buses cannot be charged in Midlothian limiting their use on Midlothian routes	<ul style="list-style-type: none"> - There are no depots / charging facilities in Midlothian for buses
Integration of travel to onward modes	I cannot realistically take a bus to catch the train	<ul style="list-style-type: none"> - lack of bus services which connect directly to Midlothian's rail stations
	I have to buy two tickets to travel by bus and rail which is a hassle	<ul style="list-style-type: none"> - Competition between rail and bus services limits the incentives to provide combined offering - Limited availability of, and or lack of awareness of integrated PlusBus bus / train tickets
Journey information	I don't know if my bus is going to be on time	Absence of real time journey bus information at bus stops and via apps etc.
Journey quality	Travelling by bus does not feel like a high quality experience	<ul style="list-style-type: none"> - Absence of other facilities such as reliable Wi-Fi and plug points on some routes - Age and quality of some vehicles - Customer experience / driver interaction - Driving standards can vary (e.g., acceleration / braking) - On board temperatures can be too hot or too cold - Quality of bus stop infrastructure can be poor - Quality of road surfaces makes by travel noisy and uncomfortable - Ride quality on vehicles
	I cannot easily work on the bus	<ul style="list-style-type: none"> - Absence of / limited availability of tables - Quality of road surfaces and level of comfort can lead to motion sickness
	I am exposed to weather at bus stop	<ul style="list-style-type: none"> - Inadequate availability / quality of bus shelters

Problem Theme	Transport Problem	Supply Side Cause(s)
Journey times	It takes a long time to travel by bus, particularly compared to travel by car	<ul style="list-style-type: none"> - Circuitous service routing - Bus travel to many key employment and other locations requires at least one interchange as bus services generally run radially between Edinburgh city centre and Midlothian - Routine congestion which affects bus timetabling associated with absence of bus priority at key locations - Absence of bus priority (vehicle detection) at signalised junctions - High frequency of bus stops - Road formation, use of bus lay-bys, alignment and quality means that average speeds are low - bus stop dwell times can be long as drivers have to process each passenger
	It takes a long time to walk to the nearest bus stop	<ul style="list-style-type: none"> - Many households are located further from a bus stop than is desirable as many routes serve the main Midlothian corridors only - Difficulty accessing public transport in some development locations, sometimes due to low housing density - Some residential developments are not designed to accommodate bus services - Lack of bus service to key visitor locations, e.g., Vogrie Country Park
Personal accessibility	I find it difficult to, or am unable, to travel by bus due to a disability	<ul style="list-style-type: none"> - Absence of journey assistance offer for those unable to travel unaccompanied - Access and egress routes to / from bus stops - Combination of bus station / stop location and design, and bus design - Issues with driving standards - Limited space for wheelchairs on board means I sometimes cannot get on the bus - Buses are sometimes standing room only limiting access for those that require a seat - Not all bus stops are fully accessible
Personal security (fear of crime)	I do not feel secure travelling on the bus	<ul style="list-style-type: none"> - Anti-social behaviour on buses, perhaps amplified by recent Under 22s free travel initiative - Infection control measures in the wake of the COVID-19 pandemic - Lack of CCTV on board all buses - Low bus occupancy in places can make people feel vulnerable
	I do not feel secure at bus stops	<ul style="list-style-type: none"> - Absence of formal bus stops in some rural locations where buses can be hailed at any safe spot - Absence of other people passing in area of bus stops - Anti-social behaviour in the vicinity of bus stops - Combination of bus station and bus stop location and design, lighting - Lack of CCTV coverage
Reliability of journey times (including public transport service punctuality)	Journey times by bus are not reliable	<ul style="list-style-type: none"> - Delays due to driver availability issues - Delays due to incidents on the road - Delays due to routes which are more congested than normal and associated absence of bus priority in all areas where congestion can be a problem - these issues will be further pronounced with projected population growth if accompanied by increased road traffic - Delays due to vehicle mechanical issues, sometimes associated with older vehicles



Problem Theme	Transport Problem	Supply Side Cause(s)
		- Long route distances for services which run from the Borders to Edinburgh – adds to scope for delay
	My bus is sometimes cancelled meaning a long wait until the next one	- Driver availability issues - Vehicle mechanical issues, sometimes associated with older vehicles
Safety	<i>No issues identified</i>	
Capacity	I sometimes cannot get on the bus	- Bus is full and does not stop - Use of single deck buses where there is normally a double decker
Comfort	I do not find travel comfortable	- Some of the bus fleet is ageing which will impact on ride comfort, noise, temperature control etc. - Buses being busy and having to stand
Connectivity / network coverage	There are no bus services where I live	- Absence of services in some settlements in rural areas (e.g., Auchendinny, Cousland) - Difficulty accessing public transport in some new development locations
	There are bus services but they don't go where I want to go	- Limited east-west bus services connecting rural areas and localities within Midlothian - Coverage provided by current scheduled bus and DRT network - Lack of direct connections to key locations across Edinburgh - Lack of bus connections to key visitor attractions e.g. Vogrie Country Park
Integration between services (within mode, e.g., bus to bus)	I have to change buses to get where I want to go	- Current timetables and routeing options which are mainly radially focussed between Midlothian and Edinburgh
	I have to buy two tickets to travel by different operators	- Absence of multi-journey or multi-day tickets across different operators
Service reliability (cancellations)	The bus sometimes does not show up	- Cancellations due to driver shortages - Cancellation due to vehicle issues - Cancellations due to incident on the road network caused by traffic incident or weather
Timetables (first and last / frequency)	The bus service is not frequent enough meaning bus travel is inconvenient	- Service frequency lower in more rural areas and is beyond the reach of some
	There is no bus at the time I want to travel	- Extent of current scheduled bus timetable means some communities do not have e.g., an evening service, such as Pathhead - limited network in more rural areas
	I can't get to early morning appointments / shift work or attend late night social events / shift work by bus	- Extent of current scheduled bus timetable means some communities do not have e.g., an evening service, such as Pathhead - limited network in more rural areas
	I can't use the bus on a Sunday	- Extent of current scheduled bus timetable means that some communities have a very limited or no service on a Sunday



Problem Theme	Transport Problem	Supply Side Cause(s)
Long term uncertainty around services	I don't feel I can rely on bus services in the long term	<ul style="list-style-type: none">- Long-range services which originate beyond Midlothian at least in part rely on funding contributions from other local authorities- Services can be changed / withdrawn at short notice- Some routes (e.g., Dumfries-Edinburgh) have a long history of threatened withdrawal- Bus services have been reduced over time due to cost and human resource issues

6.5 Rail

Rail network

- 6.5.1 The Borders Rail Line is the only rail line in Midlothian (see Figure 6-17). The line opened in September 2015 and connects Tweedbank and Galashiels in the Scottish Borders with Edinburgh City Centre. There are four stations located in Midlothian, namely Gorebridge, Newtongrange, Eskbank, and Shawfair. As discussed above, Shawfair was identified as a Strategic Development Area in the Midlothian 2017 LDP and there has been significant development in this location in recent years.
- 6.5.2 The Borders Railway was built as a largely single-track line with passive provision for electrification. The route includes three dynamic passing loops providing around 15km of double track which enables the provision of half hourly services. The Scottish Government has committed to decarbonising the route and the most recent Network Rail Delivery Plan update on Scotland's Railway noted that this would be achieved by 2024²⁴.
- 6.5.3 Services are provided using a mix of Class 158 Express Sprinter diesel multiple units (DMU) and more recently Class 170 Turbostar DMU trains. Both (especially the latter) are relatively modern rolling stock offering a good quality of journey.

Key point: The east of Midlothian benefits from good rail links to Edinburgh via the Borders Rail Line with a relatively frequent service, long operating hours, and journey times which are quicker than the equivalent journey by car. There are, however, no rail links in the west of the local authority area.

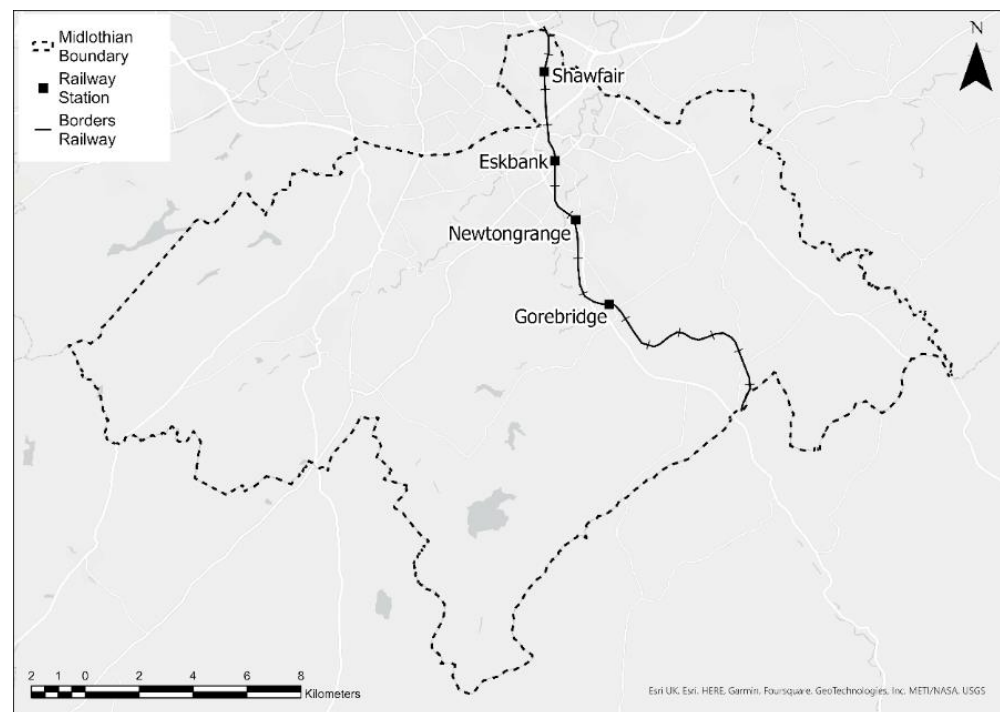



Figure 6-17: Midlothian Rail Network

- 6.5.4 Table 6-4 provides a summary of the operating hours on weekdays, Saturdays, and Sundays on the route along with an approximate journey time from each station to Edinburgh Waverley.
- 6.5.5 There are two trains per hour in each direction from each station in Midlothian during the week / Saturdays and an hourly service on Sundays. Operating hours are long, with, on weekdays and Saturdays, the first train to Edinburgh between 06:00 and 06:30 and the last train back to Midlothian at approximately 23.45. The operating day is slightly reduced

²⁴ [Scotland's Railway delivery plan \(networkrail.co.uk\)](https://www.networkrail.co.uk/Scotland's-Railway-delivery-plan)



on Sunday with the first departures post 09:00 and the last train from Edinburgh at 23.11. Journey times from the rail stations to Edinburgh are generally quicker by rail than by car, particularly during the morning and evening peaks.

Station facilities

- 6.5.6 Free parking is provided at each of the stations (see Table 6-5). All four of the Midlothian stations are single platform and have step-free access and are therefore classified as 'Category A' stations under ScotRail's accessibility classification system. None of the stations have a staffed ticket office. Eskbank and Gorebridge Stations are completely unstaffed, while Shawfair and Newtongrange have on-train staff who can provide help to boarding and alighting passengers.

Key point: The east of Midlothian benefits from good rail links to Edinburgh via the Borders Rail Line with a relatively frequent service, long operating hours, and journey times which are quicker than the equivalent journey by car. There are, however, no rail links in the west of the local authority area.

Table 6-4: Operating Day and Journey Time to Edinburgh on the Borders Railway
(ScotRail train times 21st May – 9th December 2023²⁵)

Station	Weekday		Saturday		Sunday		Approximate Journey Time to Edinburgh Waverly
	First Train (to Edinburgh)	Last Train (From Edinburgh)	First Train (to Edinburgh)	Last Train (From Edinburgh)	First Train (to Edinburgh)	Last Train (From Edinburgh)	
Shawfair	06:32	23:43	06:32	23:44	09:28	23:11	14 minutes
Eskbank	06:25	23:43	06:25	23:44	09:24	23:11	19 minutes
Newtongrange	06:22	23:43	06:22	23:44	09:21	23:11	22 minutes
Gorebridge	06:19	23:43	06:19	23:44	09:18	23:11	25 minutes

Table 6-5: Number of parking spaces at each rail station in Midlothian

Station	Car spaces ²⁶	Disabled spaces ²⁷	Electric vehicle charging spaces ²⁸	Cycle parking
Shawfair	53	3	2	20
Eskbank	248	11	2	30
Newtongrange	53	3	2	20
Gorebridge	73	5	2	20
Total	427	22	8	90

²⁵ [sr492_edinburgh-newcraighall_tweedbank_may_2023.pdf](https://www.scotrail.co.uk/sr492_edinburgh-newcraighall_tweedbank_may_2023.pdf) (scotrail.co.uk)

²⁶ [ScotRail station information](https://www.scotrail.co.uk/station-information) (accessed July 2023)

²⁷ [ScotRail station information](https://www.scotrail.co.uk/station-information) (accessed July 2023)

²⁸ <https://chargeplacescotland.org/>

Rail fares

- 6.5.1 The current single and return fares to Edinburgh from each station in Midlothian are set out in the table below.

Table 6-6: Cost of single and return tickets to Edinburgh from each station in Midlothian

	Single	Return
Shawfair	£4.10	£4.40
Eskbank	£5.40	£5.70
Newtongrange	£5.90	£6.20
Gorebridge	£6.60	£7.00

- 6.5.2 As part of the ScotRail Peak Fares Removal Pilot, between 2nd October 2023 and 29th March 2023, all off-peak fares and products that are set and controlled by ScotRail are valid for travel all day²⁹. This has resulted in a significant reduction in fares for commuters with a fall in the cost of a peak time return ticket to Edinburgh of between £2.30 and £3.70 depending on origin station. While rail travel is not included in the National or Under-22s Concessionary Travel Schemes, paid railcards are available. The OneTicket scheme above which allows travel across multiple operators (bus and rail) does not cover the Borders Railway.

Rail demand

- 6.5.3 Figure 6-18 shows the total passenger entries and exits as recorded in the Office for Road and Rail (ORR) data since the Borders Railway opened in 2015 for each Midlothian station. It is noted that since the line opened in September, the data for 2015-16 does not represent a whole year.

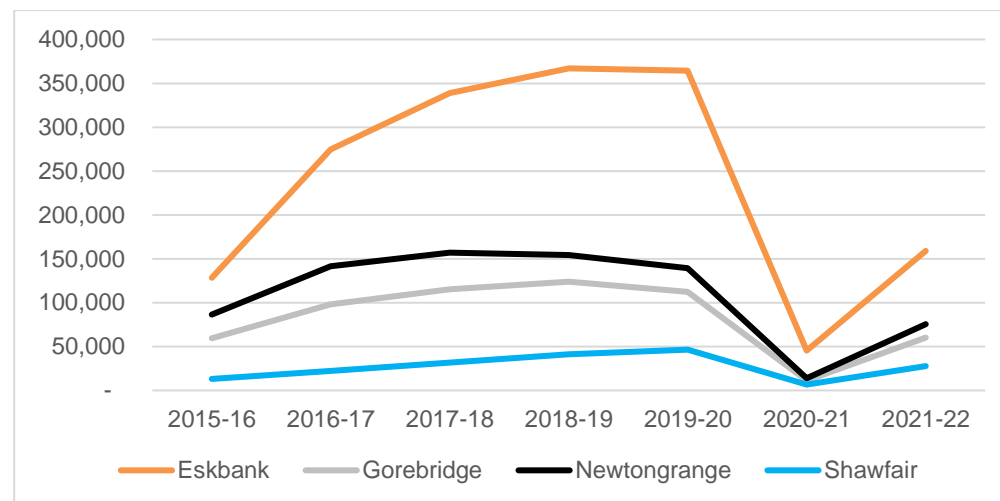


Figure 6-18: Passenger entries and exits by station 2015/16 – 2021/22 (Office of Road and Rail, 2022)

- 6.5.4 Overall, Eskbank is the busiest station in Midlothian, accounting for nearly 50% of the total number of passengers using the service from one of the Midlothian stations. This is followed by Newtongrange, Gorebridge, and Shawfair.
- 6.5.5 Since the line opened in 2015, the number of people using the service had been steady increasing, reaching a peak in 2018/19. The rate of increase in passenger numbers at Shawfair was particularly high over this period, with numbers almost doubling between 2016/17 and 2019/20, reflecting significant residential development in this area during this time.
- 6.5.6 From 2019/20 there was a significant fall as a result of the COVID-19 pandemic, with COVID-19 restrictions continuing into 2022. While station by station ORR data is not yet available post 2021/22, the most recent GB level datasets

²⁹ <https://www.transport.gov.scot/news/peak-fares-removal-pilot-dates-confirmed/>

indicate that rail usage has not yet returned to pre-COVID-19 levels. Data published by the ORR³⁰ shows that in the quarter January to March 2023) national passenger journeys were **88%** of the same quarter four years ago (i.e., pre-pandemic), however if the Elizabeth Line (which has had a major impact on the statistics) is excluded from the comparison this reduces to **73%**.

Key point: Use of the Midlothian Borders Railway stations had been increasing since the stations opened in 2015. However, there was a sharp fall in numbers as a result of COVID-19. While station by station counts covering the post-COVID period are not currently available, national level datasets indicate that rail use has not yet returned to pre-COVID-19 levels.

Punctuality

- 6.5.7 ScotRail publishes figures covering the following for the terminal stations on the ScotRail network:
- **On time** – the percentage of services which terminate at the station on time, where 'on time' is defined as arriving within 59 seconds of their booked arrival time, having called at all booked stations on the route
 - **Public Performance Measure (PPM)** - the percentage of ScotRail services that arrive within 5 minutes of their booked arrival time, having called at all booked stations on the route
- 6.5.8 Data for Tweedbank (the terminal station of the Borders Railway) for the 12-month period up to mid-September 2023 is set out in Table 6-7.

Table 6-7: Punctuality data for the Borders Railway (Source: ScotRail³¹)

	On time	PPM

Tweedbank	51.7%	88.2%
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- 6.5.9 The target PPM figure for the entire ScotRail network is 92.5%. The above data for Tweedbank is below this figure and suggests that punctuality is an issue on the Borders Railway.

Key point: the most recent data suggests that the Borders Railway is not meeting ScotRail's PPM.

6.6 Findings from previous public engagement activities

- 6.6.1 Figure 6-19 shows satisfaction with the rail services amongst Midlothian respondents to the 2021 public survey undertaken to inform the SEStran RTS. Responses are shown for only those who indicated that they typically travel by train at least monthly.

³⁰ <https://dataportal.orr.gov.uk/media/2207/passenger-rail-usage-jan-mar-2023.pdf>

³¹ <https://www.scotrail.co.uk/performance-and-reliability>

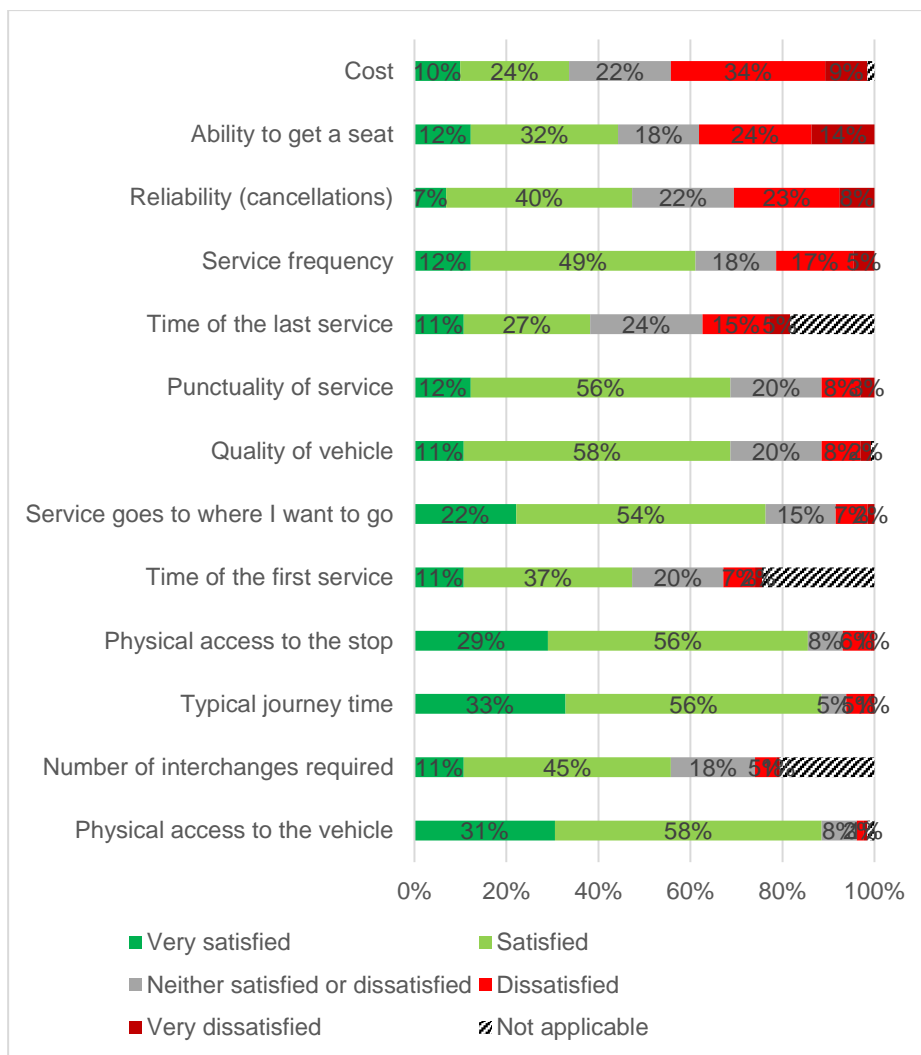


Figure 6-19: Satisfaction with the train prior to the Pandemic (n=131) (Source: SEStran Regional Transport Strategy Public Survey 2021)

6.6.2 The highest levels of dissatisfaction were with the cost of rail travel. Satisfaction with rail fares may now be slightly higher than in 2021 given the ScotRail Peak Fares Removal Pilot. There were also high levels of dissatisfaction with the ability to get a seat, and service reliability and frequency. Where respondents indicated they were dissatisfied with certain aspects, they were also invited to provide further comments if they wished. The key points raised with respect to rail travel were as follows:

- rail fares are too expensive (16 comments)
- poor quality trains (5 comments)
- overcrowded services (16 comments)
- poor reliability (14 comments)
- a lack of early or late services (2 comments)
- poor integration with bus services (1 comment)
- insufficient space for cyclists (1 comment)

6.6.3 The above findings along with the results of the Stakeholder Engagement undertaken to inform the development of this Stage 1&2 Technical Report (see Appendix B) have been used to help populate the problems framework as detailed below and will be a vital input into the subsequent option development process.

6.7 Potential Problems Around Rail Travel in Midlothian

Problem Theme	Transport Problem	Supply Side Cause(s)
Awareness of travel options	<i>No particular problems identified</i>	
Cost of travel	I can't afford to travel by train regularly	<ul style="list-style-type: none"> - high cost of rail travel compared to bus travel - prohibitive cost of peak rail fares (temporarily resolved) - low awareness of discount products-
	Travel by train uses a high proportion of my disposable income	<ul style="list-style-type: none"> - People who cannot afford up front cost cannot benefit from season tickets so spend more per journey
Environmental concerns	I am concerned about the environmental impacts when I travel by train	<ul style="list-style-type: none"> - Borders Railway services are provided by diesel trains as the line is not electrified
Fuel / power issues	No user problem other than 'environmental concerns' above	
Integration of travel to onward modes	<i>No particular problems identified</i>	
Journey information	<i>No particular problems identified</i>	
Journey quality	My local station has poor facilities	<ul style="list-style-type: none"> - Midlothian stations are very basic – for example there are no ticket offices, waiting rooms or public toilets - All stations are unstaffed
Journey times	Journey times by train are long compared to other rail services serving Edinburgh	<ul style="list-style-type: none"> - number of station stops (6) in the 12 miles or so between Newtongrange and Edinburgh - line speeds - services slow down to join East Coast Main Line - use of diesel trains which are slower to accelerate and deceleration
Personal accessibility	I find it difficult to, or am unable to travel by train due to a disability	<ul style="list-style-type: none"> - Absence of journey assistance offer for those unable to travel unaccompanied - Stations have some poor access routes to / from stations
Personal security (fear of crime)	I do not feel secure when travelling by train	<ul style="list-style-type: none"> - Low volumes of people on train and at stations can make people feel vulnerable
	I do not feel secure at rail stations	<ul style="list-style-type: none"> - Low station usage levels can make users feel vulnerable - Unstaffed stations can make users feel vulnerable
Reliability of journey times (including public transport service punctuality)	Travel by train in Midlothian is unreliable	<ul style="list-style-type: none"> - The Borders Railway is mainly single track which impacts reliability - The Borders Railway interfaces with the East Coast Main Line which impacts reliability - Industrial action can affect services

Problem Theme	Transport Problem	Supply Side Cause(s)
		<ul style="list-style-type: none"> - Weather events, some linked to climate change - PPM at Tweedbank is below the ScotRail target
Safety	<i>No particular problems identified</i>	
Capacity	I sometimes cannot get a seat on the train	<ul style="list-style-type: none"> - overcrowding due to one-off events - knock on effects of train cancellations
Comfort	<i>No particular problems identified other than through lack of capacity (above)</i>	
Connectivity (availability of services)	There is no railway station near where I live so it's not practical for me to use the train	- absence of rail network in the west of Midlothian
	I cannot travel south by rail beyond Tweedbank without going via Edinburgh	- the rail network terminates at Tweedbank
Integration between services (within mode, e.g., bus to bus)	I have to wait a long time to make a connection at Waverley	<ul style="list-style-type: none"> - trains are half hourly and hourly on a Sunday - late running trains
Service reliability (cancellations)	The train is sometimes cancelled	<ul style="list-style-type: none"> - incidents on the line and weather events - train crew shortages - train crew shortages can cause cancellations - train set failures - PPM at Tweedbank is below the ScotRail target
Timetables (first and last / frequency)	The train service is not frequent enough	- infrastructure constraints on the line preclude a more frequent service on the line
Long term uncertainty around services	<i>No particular problems identified</i>	

7 Road

7.1 Road network

7.1.1 This section provides an overview of the road network in Midlothian. While focused on car and freight use of the network, it is worth noting that the road network is also relevant for both public transport and active travel users.

7.1.2 Midlothian is traversed by several key A and B roads travelling north-south through the local authority area, the majority of which connect to the City of Edinburgh Bypass (A720) which skirts / traverses the northern extent of Midlothian (see Figure 7-1). The key routes include the:

- **A702** – trunk road which connects the Lothianburn Junction at the City of Edinburgh Bypass (A720), with the A74(M) in South Lanarkshire, passing through Hillend (Midlothian), West Linton and Carlops (Scottish Borders) and Biggar (South Lanarkshire). Within the Midlothian local authority boundary, the route skirts the eastern extent of the Pentland Hills Regional Park.
- **A701 / A703 Corridor** – which connects the Straiton Junction at the City of Edinburgh Bypass (A720), with Peebles (Scottish Borders), passing through the Straiton Retail Park, Loanhead, Bilston and Penicuik. At Leadburn at the southern extent of Midlothian, the route splits into the A701 for Moffat and the A703 for Peebles. The A6094 via Howgate is used by most north-south traffic to avoid Penicuik.
- **A7** – trunk road which connects the Sheriffhall Roundabout at the junction with the City of Edinburgh Bypass (A720) to Newtongrange and Gorebridge (Midlothian) and onward to Galashiels (Scottish Borders)
- **A68** – trunk road which connects the Millerhill Junction with the City of Edinburgh Bypass (A720) with Pathhead (Midlothian) and onward to Lauder (Scottish Borders)

- **A6904** – which connects Bonnyrigg (Midlothian) with Leadburn and the junction with the A703 / A701 in the south-west of the local authority area, passing around Rosewell.

7.1.3 In contrast to the north-south connections, direct east-west connections are more limited with the bypass providing the key east-west link.

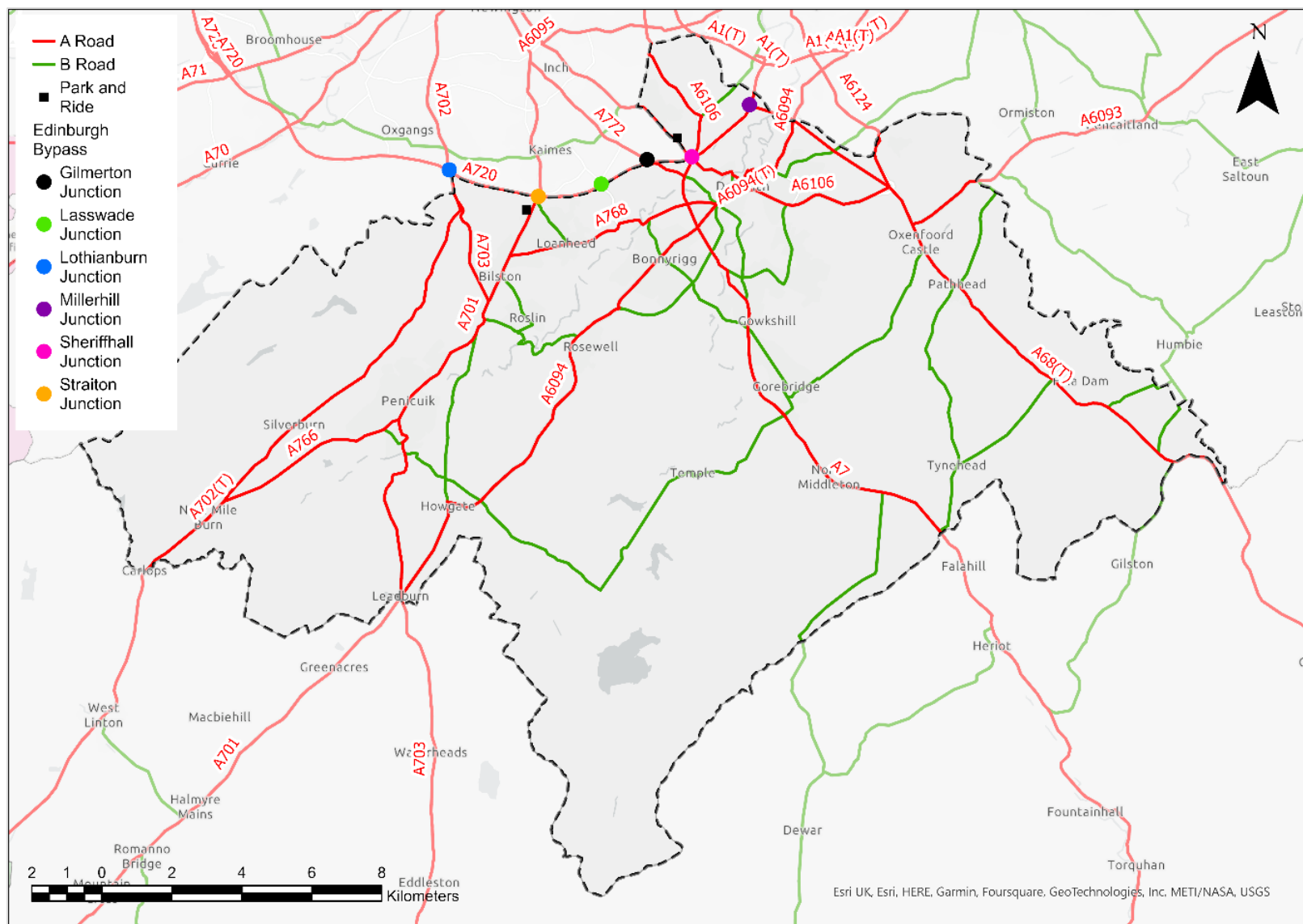


Figure 7-1: Midlothian A and B Road Overview

7.1.4 The **A720 City Bypass creates significant severance across the north of Midlothian**. There are only five crossing points by road and routine congestion and incidents on the bypass can cause north-south traffic accessing the bypass to queue back and block north-south travel.

7.1.5 As discussed in Section 5.1, **Sheriffhall Roundabout** is the only A720 at-grade junction. As a result there is often significant queuing, especially during peak hours. There has been a long-term ambition to upgrade the junction to help relieve traffic congestion and the need for grade-separation was initially identified in the first STPR in 2008, with a preferred option for the scheme identified in 2017. As previously noted, in September 2021, the Edinburgh and South East Scotland City Region Deal Joint Committee ratified their support for the scheme, with £120m of City Region Deal funding committed for its delivery. However, STPR2 (published December 2022) did not specifically reference the scheme. In early 2023, a Public Local Inquiry to consider objections received to the proposed scheme was held and the independent reporter has now made recommendations to Scottish Ministers.

7.1.6 A As discussed in Section 2.4.1 and 3.3, to ease congestion on the A701 and support development in the A701 corridor, including at the Easter Bush Campus and wider Midlothian Science Zone, the 2017 LDP identified the need for an A701 relief road. Midlothian Council completed a consultation on various route options for this link in October 2021 and subsequently announced its preferred route. Following an increase in estimated costs, the council is exploring ways to deliver the project in phases as funds become available.

Key point: The Edinburgh Bypass creates significant severance issues across the north of Midlothian and incidents on the bypass can cause issues on the key north south links through the local authority with significant congestion during peak hours. In terms of aspirations for improvements, there are long-term ambitions to provide grade separation at Sheriffhall Roundabout and deliver the

A703 relief road in order to help relieve traffic congestion and support development. It is understood that provision for active travel and public transport modes have been incorporated into both schemes.

7.2 Speed limits

7.2.1 The default speed limit for urban areas in Midlothian is currently 30mph. This is in contrast to the neighbouring authorities of the City of Edinburgh and Scottish Borders where the limit is 20mph. However, in April 2023, Midlothian Council undertook a Speed Limit Review which considered speed limits across the Council area with a view to adjusting speed limits to 20mph in appropriate locations. This review identified 850 streets where it was recommended that the speed limit should be changed from 30mph to 20mph and just 70 streets where it was recommended that the current 30mph speed limit be retained. The Speed Limit Review was subsequently approved by Councillors in May 2023 and the statutory process to introduce the new speed limits and associated traffic calming measures is now underway.

7.3 Traffic volumes

7.3.1 Figure 7-2 shows motorised vehicle traffic levels in Midlothian between 2000 and 2021, split between trunk roads and local authority roads.

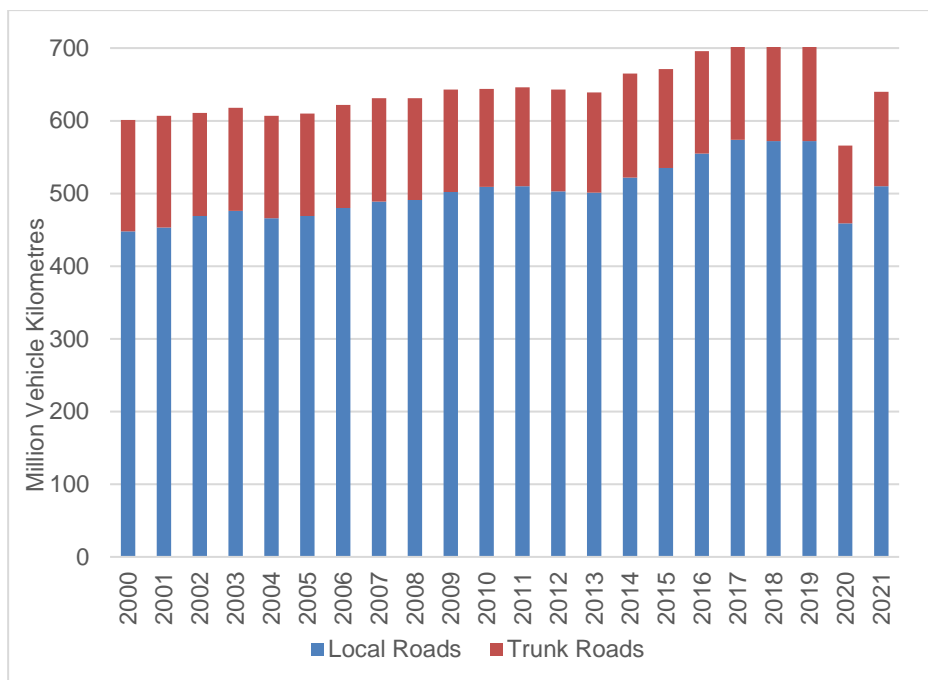


Figure 7-2: Motorised traffic in Midlothian between 2000 and 2021 (Scottish Transport Statistics)

7.3.2 Traffic levels were therefore broadly flat between 2000 and 2013 (up 6% in 13 years) before growing faster between 2013 and 2019 (up by 13% in six years). During the COVID-19 pandemic, there was a fall of around 20% with the data indicating that there has been some level of recovery to pre-COVID-19 levels by 2021. This pattern broadly reflects the growth in population between 2010 and 2021, with population growing by 12% over this period compared to a 11% growth in traffic or so seen previously.

7.3.3 At the Great Britain level, as of September 2023, 'car' traffic has returned to pre-pandemic levels with 'all motor vehicle' traffic (which includes commercial vehicles) typically at or slightly above pre-pandemic levels. This is important context

and illustrates the scale of the challenge associated with Transport Scotland's target to reduce car-kilometres by 20% by 2030 (based on 2019 traffic).

7.3.4 Data from Transport Scotland's permanent count sites on the key routes in Midlothian was collated to determine the current Average Annual Daily Traffic (AADT) flows. Figure 5:2 shows the 2022 AADT flows and percentage HGVs at the count sites across Midlothian.

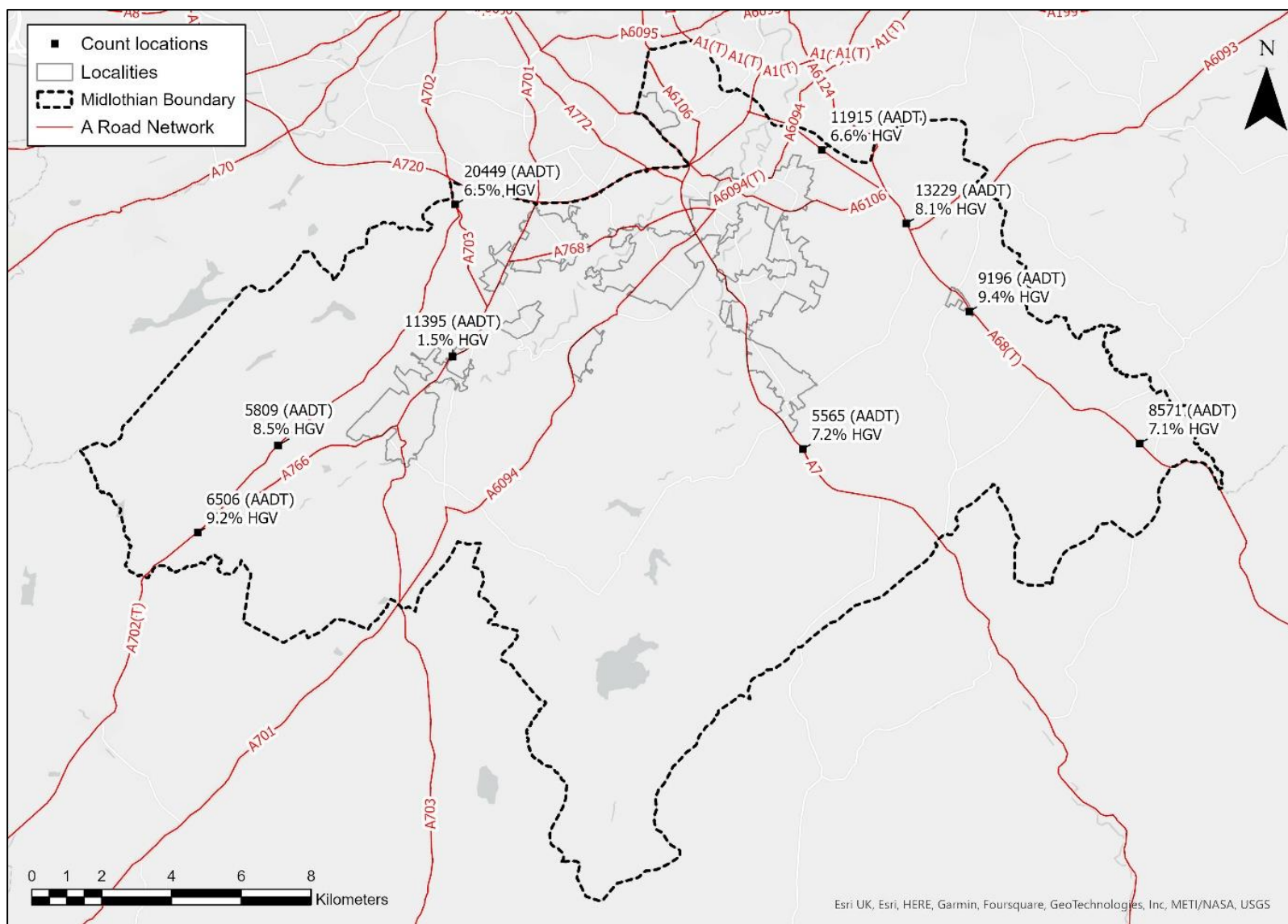


Figure 7-3: 2022 AADT Counts on key routes

- 7.3.5 As shown, AADT flows are higher further north in Midlothian, reflecting the dominate traffic flows to and from Edinburgh. Flows are particularly high at the junctions on the Edinburgh City Bypass, with around 20,500 vehicles per day on the A703 south of the Lothian Burn junction and 12,000 vehicles per day on the A68 south of the Millerhill junction.

Key point: Traffic levels in Midlothian have grown broadly in line with population increases in the recent period and have now likely returned to pre-COVID-19 levels. Given the significant level of development planned, should this continue to the case, vehicle kilometres and traffic congestion in Midlothian would increase. In line with wider policy, the LTS must focus on both reducing the need to travel and encouraging the use of sustainable modes.

7.4 Journey time reliability

- 7.4.1 Traffic congestion is a regular problem which affects many routes in Midlothian. In order to assess journey time reliability in the local authority area, 2022 INRIX journey time data on license from Transport Scotland³² was reviewed for the corridors shown in Figure 7-4. Table 7 1 shows the traffic profile across the day on each of these corridors and provides a summary of the key trends in each case. The discussion includes comparisons between the 5th (fastest) and 95th (slowest) percentile journey times, with large differences between these figures indicating that journey times are variable and therefore the routes are more congested.

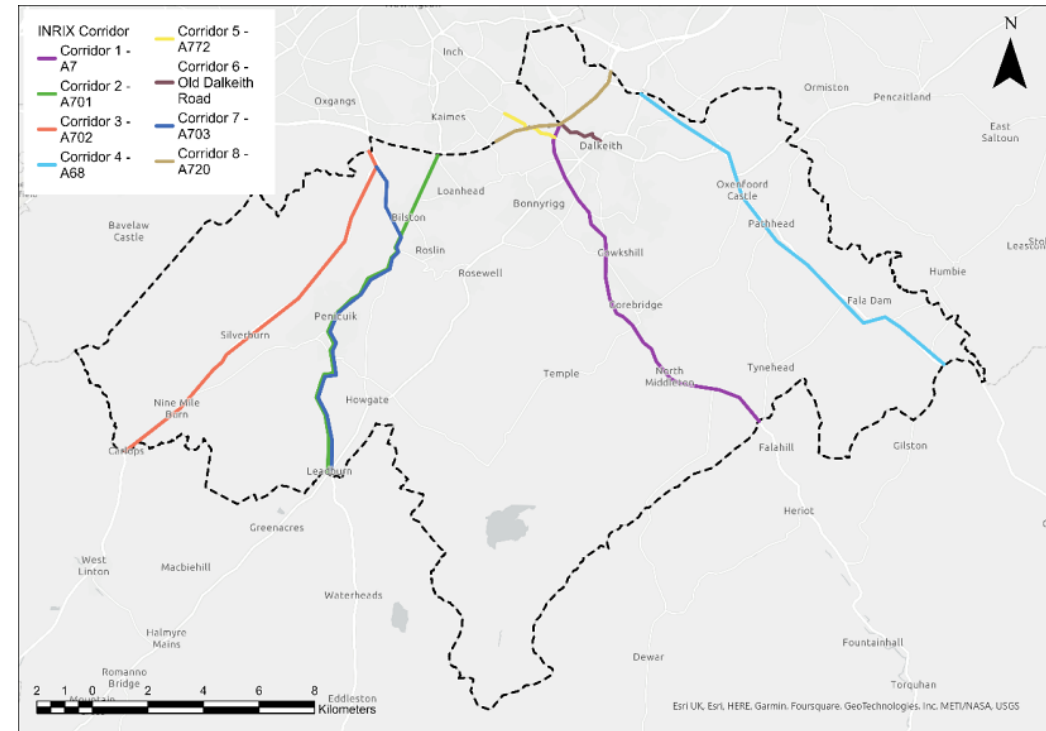


Figure 7-4: Road Corridors for which INRIX journey time data was reviewed

³² <https://inrix.com/products/speed/>, with permission from Transport Scotland



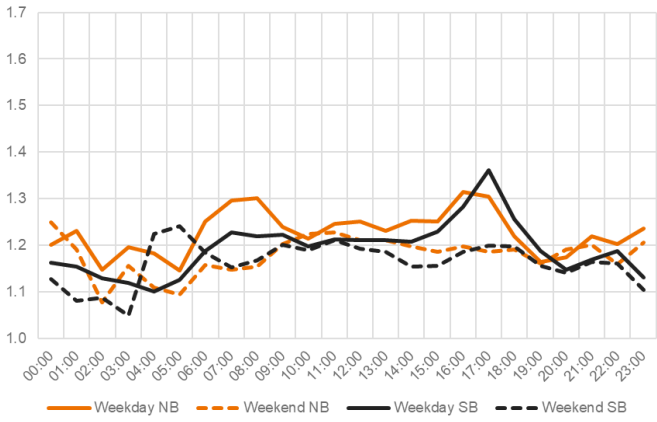
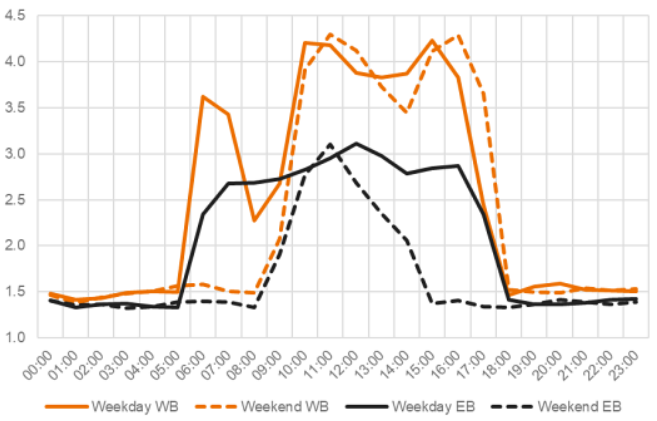
Table 7-1: Journey time variability for key road corridors in Midlothian

Route	Northbound and Southbound traffic across the day – Weekday and weekend	Comments
(1) A7 Middelton-Sheriffhall		<p>The greatest variability is seen in the northbound AM peak associated with queuing at Sheriffhall where the slowest journeys can be 24 minutes compared to a free flow time of around 13 minutes.</p> <p>Weekend variation peaks northbound around the middle of the day</p> <p>Southbound variation is greatest in the PM peak period although not as significant as for the AM peak northbound.</p>
(2) A701 Leadburn to Straiton		<p>Outbound traffic from Edinburgh in the weekday PM peak sees the highest variability with the 95th percentile journey time some 8 minutes longer than the 5th percentile journey time.</p> <p>The PM peak sees more variability than the AM inbound period.</p> <p>Weekend journey time variability peaks around midday reflecting traffic to the Straiton retail park.</p>
(3) A702 Carlops to A720 Hillend		<p>Northbound weekday AM peak travel sees the greatest variability with a 95th percentile time of 18 minutes compared to an uncongested time of 11 minutes.</p> <p>This northbound route can be affected by traffic queuing back from the Edinburgh City Bypass.</p>



Route	Northbound and Southbound traffic across the day – Weekday and weekend	Comments
(4) A68 Midlothian		<p>The A68 on this section includes the relatively recent A68 northern bypass section to the A720.</p> <p>There is much less variability on this route than the others considered here indicating the road is generally free flow reflecting the absence of junctions and high route standard.</p>
(5) A772 (A7 to B701)		<p>This is a short section so journey time variability is exaggerated.</p> <p>Eastbound PM peak weekday traffic sees significant variability of journey times.</p>
(6) Old Dalkeith Road – Dalkeith to A720		<p>This is a short section so journey time variability is exaggerated.</p> <p>As expected westbound (to Sheriffhall) traffic sees the greatest variation associated with traffic conditions at Sheriffhall.</p>



Route	Northbound and Southbound traffic across the day – Weekday and weekend	Comments
(7) A703 Leadburn to Hillend	 <p>Weekday NB Weekend NB Weekday SB Weekend SB</p>	Weekday northbound traffic experiences the largest variability with peaks in the AM and PM period. Southbound traffic sees a larger peak in the PM period.
(8) A720 A68 to Lasswade junctions	 <p>Weekday WB Weekend WB Weekday EB Weekend EB</p>	Freeflow conditions on this section of the A720 would see travel times of around 3 minutes. 95 th percentile travel times increase to 12 minutes westbound for much of the day. The A720 therefore evidences very significant levels of journey time variability which would be amplified across a longer stretch of the route.

Key point: The significant routine and less predictable congestion which affects many routes in Midlothian leads to variable journey times. This means that more time needs to be allowed for trips which require arriving at a certain time. This affects personal travel and also commercial vehicle traffic. The levels of routine congestion in Midlothian suggests that many routes are currently operating beyond capacity. Given this, any additional traffic associated with new development would likely have a considerable impact on congestion, with even small increases leading to significant delays.

7.5 Road Collisions

7.5.1 Figure 7-5 shows the location of the collisions involving vehicles in Midlothian during the period 2013 to 2022, with the colours in each case indicating casualty severity. It is noted that the below map includes the collisions shown in Figure 5-7 and Figure 5-8 where the collision involved both a pedestrian and a vehicle or a cyclist and a vehicle.

7.5.1 In total, there were 1,347 collisions involving vehicles in Midlothian during this period, a 35% fall on 2013 figures. In total, there 1,823 casualties. Of these, the majority (81.3%, n=1,482) were categorised as slight, while 17.4% (n=318) were serious and 1.3% (n=23) were fatal. As would be expected, the location of collisions reflects traffic patterns with higher concentrations on the northern sections of the key routes in the local authority area.

7.6 Parking

Park and ride

7.6.1 There are two bus park and ride (P&R) sites in Midlothian (these are shown in Figure 7-1). These are as follows:

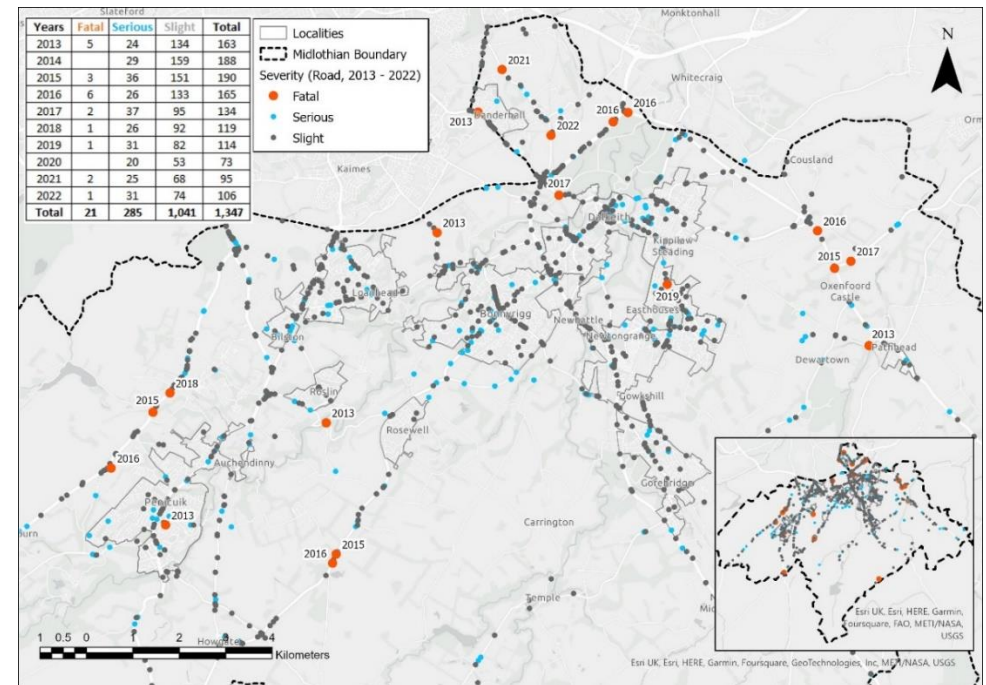


Figure 7-5: Road Collisions between 2013 and 2022 by casualty severity

- **Straiton P&R** – located to the south of the Edinburgh Bypass near the Straiton Retail Park. This facility is operated by the City of Edinburgh Council. It has 600³³ spaces and is served by the following bus services:
 - Service x37 (Penicuik / Loanhead-Granton via Edinburgh City Centre) – peak express service with three AM services to Edinburgh and three PM return services to Straiton
 - Service 47 (Penicuik – Cammo via Edinburgh City Centre) – Every 20 minutes

³³ [Straiton Park and Ride – The City of Edinburgh Council](#)

- Service 47B (Penicuik – Cammo via Easter Bush and Edinburgh City Centre) - Peak time service with nine AM peak services to Easter Bush and six PM peak services to Edinburgh / Cammo
- **Sheriffhall P&R** – located to the north of the Edinburgh Bypass and Sheriffhall Roundabout at Danderhall. This facility has 561 spaces³⁴ and is served by the following bus services:
 - Service 33 (Wester Hailes to Millerhill via Edinburgh City Centre) – Every 20 minutes
 - Service 48 (Gorebridge to Musselburgh via Fort Kinnaird – Every 30 minutes

7.6.2 Both Straiton P&R and Sheriffhall P&R are purpose-built sites and operate 24 hours a day. Parking is free and a single Lothian Bus ticket costs £2.00. The sites are now unstaffed, and the facilities buildings are not currently in use. This has led to some security concerns amongst some users. Midlothian Council upgraded the lighting at Sheriffhall P&R in 23/24 and CCTV at the site will be upgraded in 2024.

7.6.3 The SEStran Park and Ride Strategic Study, produced in June 2020 noted that neither P&R was operating at capacity, with Sheriffhall 70% utilised and Straiton just 25% utilised at that time.³⁵

7.6.4 There is no evidence as to the origins of those using the P&R sites and the destinations to which people are travelling to.

Town centre parking

7.6.5 In total, there are nine dedicated council owned public car parks in Midlothian³⁶. There are also council car parks associated with council buildings, such as schools. Information on the location of the dedicated council car

parking sites, the number of spaces and the max occupancy and average duration of stay at each is set out in Table 7-2. It is noted that the max occupancy and average duration of stay figures are based on surveys undertaken in May 2016 to inform the development of the 2017 Midlothian Parking Strategy and are therefore somewhat out of date. All but two of the council owned car parks are free to use with charges as set out below applicable in North Wynd and St Andrews in Dalkeith:

- 1 Hour - Free
- 2 Hours - £1.00
- 3 Hours - £2.00
- 4 Hours - £4.00
- Max - £10.00

7.6.6 Midlothian Council is in the process of developing new planning guidance on parking standards, which, once adopted, will set out new requirements for new planning applications in relation to bike, car (including EV) and disabled bay parking requirements. The new guidance aligns with NPF4 and includes guidance for new town centres.

³⁴ [Sheriffhall Park and Ride – The City of Edinburgh Council](#)

³⁵ See [SEStran-Park-and-Ride-Strategy.pdf](#)

³⁶ https://www.midlothian.gov.uk/info/200294/parking/540/car_parks



Table 7-2: Council car parks in Midlothian

Location	Car Park	Spaces	Disabled spaces	Max occupancy (May 2016)	Average duration of stay (May 2016)
Bonnyrigg	Campview Road	34	2	~80%	3.8 hours – 19% stay for more than 5 hours
	High Street	36	2	~85%	4 hours – 22% stay for more than 5 hours
Dalkeith	Croft Street	65	2	>90% most of the day	5.6 hours – 38% stay 5 -10 hours
	Ramsay Croft	250	4	+100% most of the day	6.8 hours – 58% stay 5 -10 hours
	North Wynd	90	-	~75%	<2 hours
	St Andrews	43	-	~50%	1.3 hours
Gorebridge	Hunterfield Road	64	3	80% (10-11am)	2.7 hours - 9% stay 5 -10 hours
Loanhead	Loanhead	46	3	69%	4 hours – 8% stay for 5-10 hours
Penicuik	Jackson Street	24	2	77%	4 hours - 26% stay for more than 6 hours

On-street parking and enforcement

- 7.6.8 In addition to dedicated public car parks, there is also on-street parking which is mostly unrestricted, particularly in residential and rural locations. There are, however, some parking restrictions in some town centre locations and in areas where road safety is a concern (e.g., at junctions or at schools). These restrictions are managed via decriminalised parking enforcement (DPE) which was introduced in Midlothian in April 2018. A high-level overview of the parking restrictions in each locality in Midlothian is set out in Table 7-3.

- 7.6.7 The surveys undertaken in 2016 suggest capacity was an issue in the car parks in Dalkeith with Ramsay Street particularly oversubscribed. In some locations, there were a high proportion of vehicles staying longer than 5 hours. This was attributed to people using the facilities as informal park and rides, whereby they park and commute via public transport to their place of employment in Edinburgh. The lack of a direct bus connection to Edinburgh from some localities may be contributing to this pattern.

Table 7-3: Overview of on-street parking restrictions by locality (Source: Midlothian Council)³⁷

Locality	Parking restrictions
Bilston	<ul style="list-style-type: none"> - Double yellow parking controls on the A701 - Short length (4 spaces) of on-road parking restrictions restricting stay to 30 minutes (Mon-Sat) outside shops on Meadow Place
Bonnyrigg	<ul style="list-style-type: none"> - Single / double yellow parking controls around schools and within town centre - On-road parking restrictions in town centre restricting stay to 30 minutes (Mon-Sat) - Vehicle loading and unloading zones in town centre
Dalkeith	<ul style="list-style-type: none"> - Single / double yellow parking controls around schools and within town centre - On-road parking restrictions in town centre restricting stay to 30 minutes (Mon-Sat) - Vehicle loading and unloading zones in town centre
Danderhall	<ul style="list-style-type: none"> - Single / double yellow parking controls around school
Gorebridge	<ul style="list-style-type: none"> - Single / double yellow lines on Main Street - On-road parking restrictions outside shops on the main through route (Main Street / Station Road) restricting stay to 30 minutes (Mon-Sat)
Loanhead	<ul style="list-style-type: none"> - Double yellow parking controls on the A701 - On-road parking restrictions restricting stay to 30 minutes (Mon-Sat) in town centre on B702
Mayfield	<ul style="list-style-type: none"> - Double yellow parking controls around school and some isolated junctions.
Pathhead	<ul style="list-style-type: none"> - No parking restrictions
Penicuik	<ul style="list-style-type: none"> - Single / double yellow lines on A701 - On-road parking restrictions restricting stay to 30 minutes (Mon-Sat) in town centre on A701
Rosewell	<ul style="list-style-type: none"> - No parking restrictions
Roslin	<ul style="list-style-type: none"> - Double yellow lines at key junctions - Vehicle loading / unloading bays on Main Street

³⁷ See [Parking restrictions map](#) | [Parking restrictions](#) | [Midlothian Council](#)

7.6.9 The 2017 Parking Strategy (which was produced prior to the implementation of Decriminalised Parking Enforcement (DPE)) identified a series of problems with respect to parking in Midlothian at that time along with a set of objectives and policies to be delivered to help resolve these issues. While somewhat out of date, key issues identified included:

- **Overspill parking** – parking on surrounding streets around schools, rail stations and retail parks
- **Lack of enforcement of restrictions** – leading to illegal parking and low turnover of spaces – as above DPE was introduced following the delivery of the strategy and therefore this issue is likely to be somewhat resolved
- **Balance of parking supply** – lack of balance between short, medium and long stay parking, with use of car parks and on-street provision as informal park and rides in some locations, resulting in a lack of short stay parking for those wishing to use local shops.
- **General issues with parking and loading** – including lack of disabled parking, lack of residential parking management, poor signage / lack of awareness, and loading issues.

7.7 Electric Vehicle Charging

7.7.1 The Scottish Government has made a legal commitment to deliver net zero carbon emissions by 2045 and set out a number of interim targets, including phasing out the need for new petrol and diesel cars and vans by 2030. While reducing car use in favour of active travel (walking, wheeling, and cycling) and public transport will be key to reaching the

overarching goals with respect to climate change, it will also be necessary for there to be a transformative shift to zero emission vehicles, such as electric vehicles (EV).

- 7.7.2 Reflective of this wider policy context, the number of EVs in Midlothian has grown by 39% between 2015-2021 and forecasts suggest there may be 4,500 EVs in Midlothian by 2026 and 15,000 by 2030³⁸.
- 7.7.3 A lack of convenient public EV charging infrastructure has been identified as a key barrier to the uptake of EVs. Wave 7 of the DfT's National Travel Attitudes Survey (NTAS) focussed on attitudes towards ultra-low emission vehicles (ULEV)³⁹. This found that 59% of respondents believe that there are not enough public EV charge points, with 67% stating that 'more convenient charging infrastructure' and 58% stating that 'more local chargepoints' would encourage them to buy a low emission vehicle, the third and fourth most popular responses after lower purchase and lower running costs. The availability of public EV chargepoints is particularly important for residents without access to off-road parking who have no ability to charge their vehicle at home.

As of February 2024, there were approximately 71 public EV chargepoints in Midlothian, 34 owned by the Council and 37 independently provided. Note that no private household charging infrastructure were included in these figures.

³⁸ [More information to help you fill in the survey | EV charging network consultation | Midlothian Council](#)

³⁹ <https://www.gov.uk/government/statistics/national-travel-attitudes-study-wave-7/national-travel-attitudes-study-ntas-wave-7>

7.7.4 Table 7-4 provides a breakdown of the available charge points by charger type.



Table 7-4: Existing EVCI within Midlothian (Source: Midlothian Council, ChargePlace Scotland, DfT National Chargepoint Registry)

	Destination Slow (7kW)	Destination Fast (22kW)	Rapid (50 kW)	Total
Midlothian Council	2	28	4	34
Independently Provided	14	10	13	37
Total	16	38	17	71

7.7.5 In common with other local authorities in Scotland, Midlothian Council is currently producing a public EV Charging Strategy using funding from the Electric Vehicle Infrastructure Fund (EVIF). The Strategy will set out how public EVCI in Midlothian will be expanded up to 2026 and will be published in mid to late 2024. The plan will be reviewed by the EVIF Programme Board who will make recommendations to Transport Scotland as to the level of EVIF capital funding to be allocated to Midlothian Council over the period up to 2026.

Key Point: To meet the Scottish Government's targets around phasing out petrol and diesel vehicles and cater to the increasing levels of demand for EVs in Midlothian (particularly given Midlothian's projected increase in population), there will need to be a significant expansion of public EV charging infrastructure over the coming years. This should include both public charging facilities and bus based charging facilities.

7.8 Car Pooling and Car Sharing

7.8.1 Car-pooling and car sharing are forms of shared mobility. They can be defined as follows:

- **Car-pooling** - ride sharing where people with similar travel requirements share one vehicle rather than make separate trips. Can be informal or organised via an organisation such as an employer or coordinated via an online platform or app via a dedicated car-pooling organisation.
- **Car-sharing** – car clubs where people share access to a vehicle, rather than sharing a journey with someone. Customers typically access vehicles by joining a car sharing organisation that provides a fleet of vehicles in the local area. Vehicles can then be booked online or via a smartphone app. The operator provides fuel, parking and maintenance with users paying a fee each time they use the vehicle.

7.8.2 There are a number of commercial carpooling websites on which you can search for particular journeys ⁴⁰. However, it is understood that there are no council supported / promoted car-pooling schemes and there are no formal car clubs operating in Midlothian.

Key Point: There is a lack of formalised council supported / promoted car-pooling and car-sharing options in Midlothian and there is potentially an opportunity through the LTS to develop such schemes.

7.9 Findings from previous public engagement activities

7.9.1 Figure 7-6 shows satisfaction with car travel amongst Midlothian respondents to the 2021 public survey undertaken to inform the SEStran RTS.

⁴⁰ For example, see [Carpool to your next destination | BlaBlaCar](#)

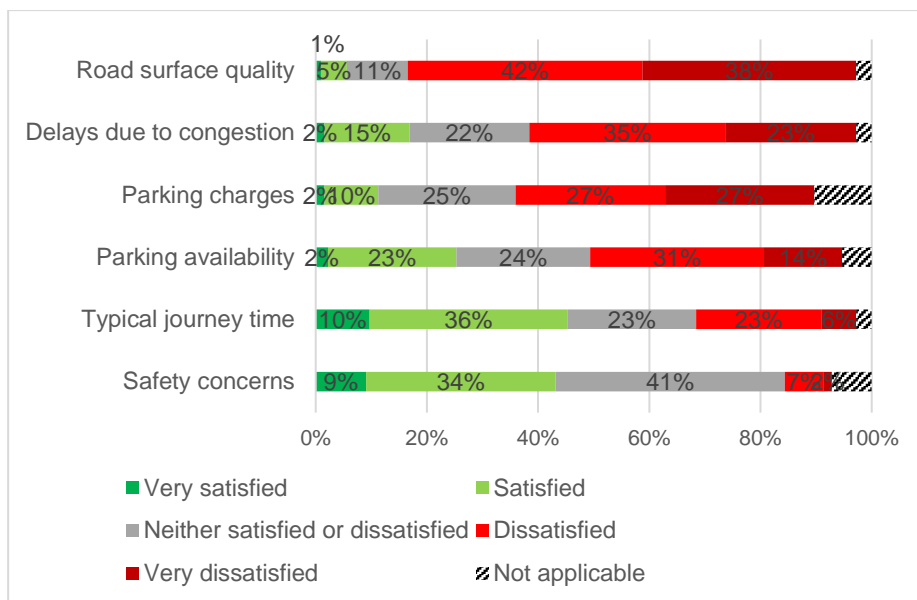


Figure 7-6: Satisfaction with car travel prior to the Pandemic (n=320) (Source: SEStran Regional Transport Strategy Public Survey 2021)

7.9.2 The highest levels of dissatisfaction were with road surface quality with over 80% (n=258) of those surveyed indicating that they were dissatisfied with this aspect. Respondents from Midlothian and Scottish Borders had the second highest levels of dissatisfaction with this aspect, differentiating by just 1% from residents of Fife (81%) which came first. All other local authorities had dissatisfaction rates of 65% or less. It should be noted though that during the engagement undertaken to inform this CfC, Lothian Buses noted that road condition and maintenance in Midlothian was reasonable compared to other locations.

7.9.3 There were also high levels of dissatisfaction with delays due to congestion for which 58% (n=188) indicated they were dissatisfied. This accords with the analysis above which

suggests several of Midlothian's key routes experience congestion delays on a routine basis.

7.9.4 Where respondents indicated they were dissatisfied with certain aspects, they were also invited to provide further comments if they wished. The key points raised with respect to car travel were as follows:

- pop-up infrastructure causing further delays
- congestion, particularly at Sheriffhall Roundabout
- poor road surface quality
- Sheriffhall P&R is poorly located and is not fit for purpose
- poor planning for new developments
- cyclists causing tailbacks.

7.9.5 The above findings along with the results of the Stakeholder Engagement undertaken to inform the development of this Stage 1&2 Technical Report (see Appendix B) have been used to help populate the problems framework as detailed below and will be a vital input into the subsequent option development process.

7.10 Potential Problems Around Road-Based Travel in Midlothian

Problem Theme	Transport Problem	Supply Side Cause(s)
Awareness of travel options	<i>No problems identified</i>	
Cost of travel	I cannot afford to run a car	- Cost of purchase, operation (insurance, fuel, parking, VED) and maintenance
	The cost of using a taxi is too high for me	- Higher costs during travel at anti-social hours - Absence of competition to traditional taxi model e.g., Uber-type operations
	I cannot afford an electric vehicle	- EV prices are higher than petrol / diesel equivalent and low supplies of second hand EVs mean they are unaffordable for many at present
Environmental concerns	I am concerned about the environmental impact when I travel by car or taxi	- High ongoing use of fossil fuelled vehicles generating greenhouse gases and other pollutants - Embedded carbon in EVs - Absence of alternatives to car use for many
Fuel / power issues	I cannot charge an electric vehicle at home / when away from home on a longer journey	- Lack of public EV charging infrastructure - Homes without suitable off-street parking - Cost of converting off-street space for home charging
Integration of travel to onward modes	Bus-based Park and Ride is not an attractive option	- Location of bus P&R sites, particularly in relation to congestion - Quality of / environment at P&R sites - Frequency of P&R bus services - Bus journey times from P&R sites (especially off peak when there are no limited stop services) - Connectivity provided by P&R bus services and the need to interchange
	Rail-based Park and Ride is not an attractive option	- Location of bus P&R sites, particularly in relation to congestion - Frequency of P&R train services - Train journey times from P&R sites
	I cannot park at my preferred station	- Station car parks are too small relative to demand for parking
Journey information	I do not know if there are incidents on the road when I set off	- Limited real time traffic information other than that provided by app, local radio etc
Journey quality	I find the quality of the road surfaces poor	- Level of road maintenance - Increases in severe weather events linked to climate change
	I cannot park where I need to park as a disabled person	- Lack of disabled parking bays and increasing number of blue badge holders
Journey times	Journey times by road are long for passenger travel and road freight	- Routine congestion during peak times around key hot spots including A720 junctions - parking search times at busy periods in Midlothian settlements

Problem Theme	Transport Problem	Supply Side Cause(s)
Personal accessibility	I am unable to access taxi services due to a disability	<ul style="list-style-type: none"> - Availability of fully accessible taxis - Lack of text-based booking options for those with hearing difficulties
Personal security (fear of crime)	I do not feel secure travelling by taxi	- Perception of taxi drivers / driver training and certification
	I do not feel secure when using the P&R	- Security concerns amongst some users at Sheriffhall P&R due to the facility being unstaffed
Reliability of journey times	Journey times by road are variable meaning longer journeys at times or having to leave extra time to travel for an appointment, also affects road freight and just-in-time delivery schedules	<ul style="list-style-type: none"> - Congestion caused by incidents on the network – breakdowns, accidents, weather (likely to be exacerbated by climate change) - Congestion caused by higher-than-normal traffic levels - Congestion blocking back onto other roads, particularly A720 City Bypass traffic blocking back onto north-south routes - These issues will be further pronounced with projected population growth if accompanied by increased road traffic
Safety (transport)	I am concerned about the risk of road collisions despite the reduction in the number of accidents	<ul style="list-style-type: none"> - rural nature of some routes - road surface conditions - volume of traffic on Midlothian's roads - junction layouts at accident hotspots (e.g., A703/A702, Leadburn)

8 Strategy Outcomes

8.1 Overview

- 8.1.1 As discussed in Chapter 2, the LTS sits in a policy context driven by Transport Scotland's NTS2 and the SEStran RTS. The vision and objectives associated with each of these documents is provided in full in Figure 8-1 and Figure 8-2.



Figure 8-1: National Transport Strategy Vision, Priorities and Outcomes

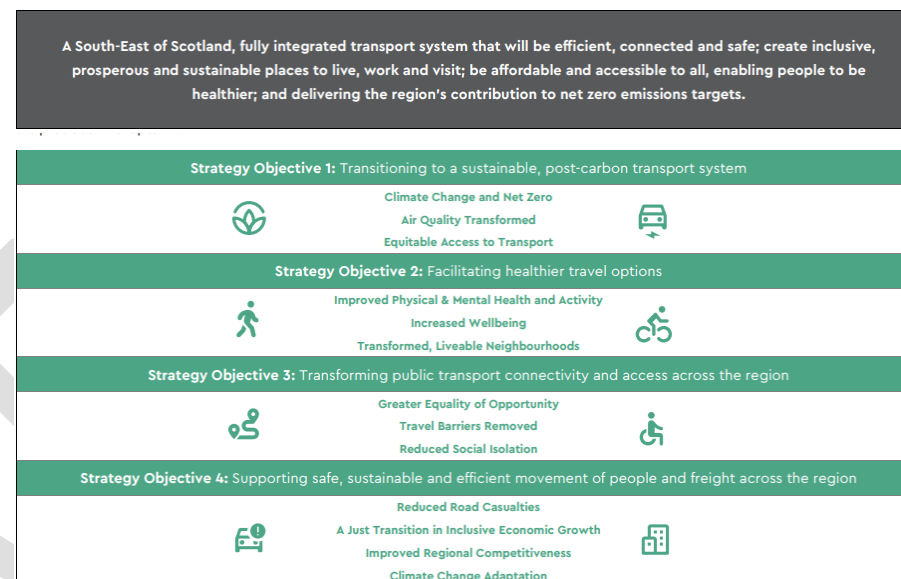


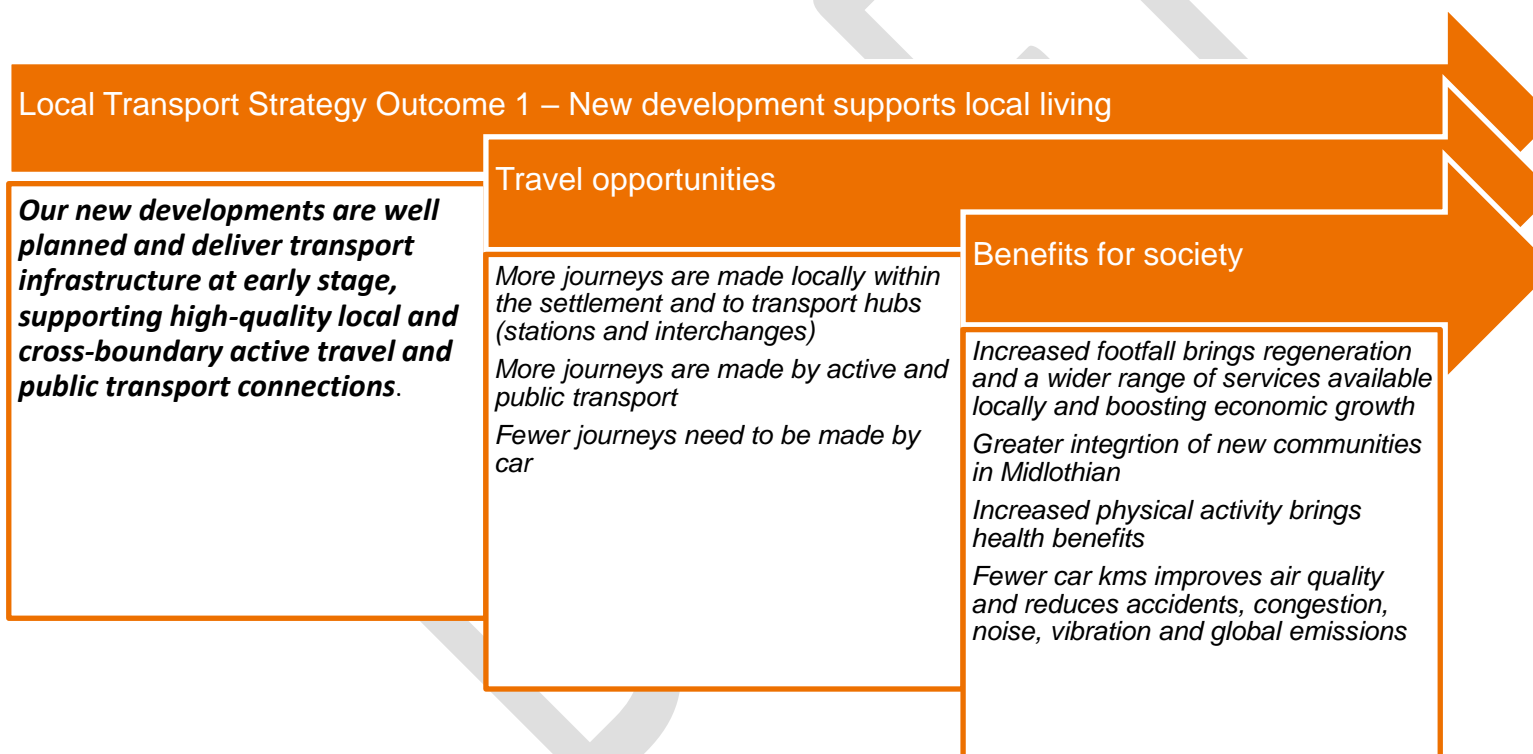
Figure 8-2: Regional Transport Strategy Vision and Objectives

- 8.1.2 Transport Scotland's LTSDG used the terminology of 'outcomes' rather than 'objectives', noting that 'outcomes' should encapsulate *what the local authority sees transport as enabling in their communities i.e., what do we want people to have access to - employment, education, leisure, family and friends, healthcare.*
- 8.1.3 The outcomes noted below express the transport supply-side changes we will seek to deliver through the LTS and working in partnership with others. In each case, the main resulting changes in travel behaviour and societal impacts associated with these supply side changes are noted.

8.2 Local Transport Strategy Outcomes

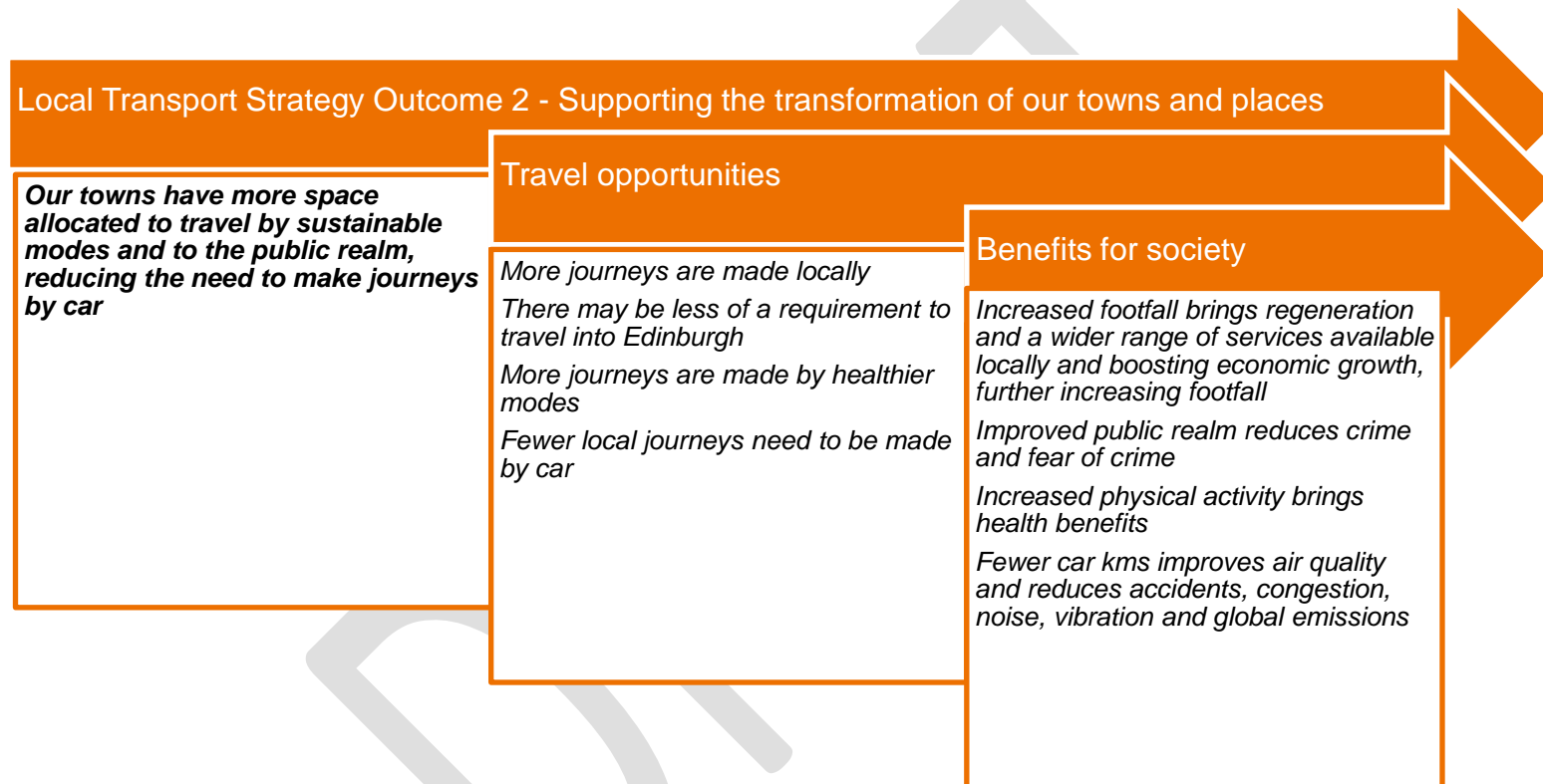
Local Transport Strategy Draft Outcome 1 – New development supports local living

- 8.2.1** Midlothian's population has grown rapidly in recent years and this growth is expected to continue in the next two decades with this being reflected in a substantial allocation of new housing. There is a risk that much of this development will generate high levels of car use which would have a range of negative impacts. If developments are not well connected to existing communities, there is a further risk of developments acting as 'dormitory' communities focussed on Edinburgh for employment, retail, leisure etc. The LTS seeks to accommodate this growth through integrating transport and land use planning and ensuring development is well connected by active travel and public transport to neighbouring towns and villages and travel hubs.



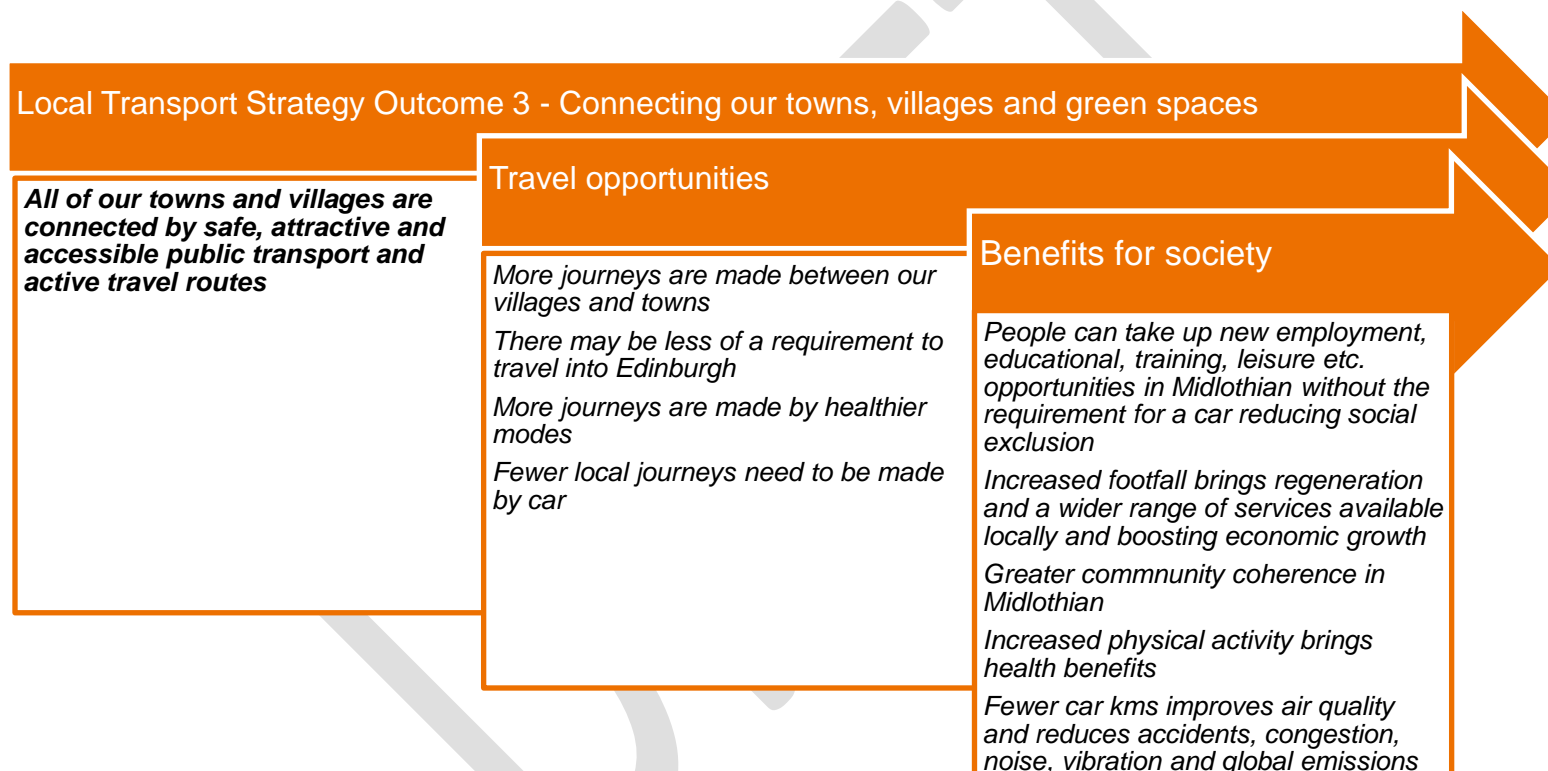
Local Transport Strategy Draft Outcome 2 – Supporting the transformation of our towns and places

- 8.2.2 We need to make our towns more attractive places, enabling people to make healthier and more sustainable travel choices, and encouraging more people to spend time and money in our High Streets. Population growth in the area provides an opportunity to grow the retail and leisure 'offer' in our towns and promote more local employment opportunities, all reducing 'leakage' to Edinburgh and growing the local economy.



Local Transport Strategy Draft Outcome 3 – Connecting our towns, villages and green spaces

- 8.2.3 Midlothian is a compact area, and our centres of population are in relatively close proximity. However public transport services between some of our localities are poor and opportunities for safe walking / cycling are limited. Bus services tend to be focussed on north-south travel with poorer east-west connections and this limits opportunities for those without access to a car. Improving connections between our localities for active and public transport will provide new opportunities for those without access to a car and provide alternatives for those who would rather not use a car.



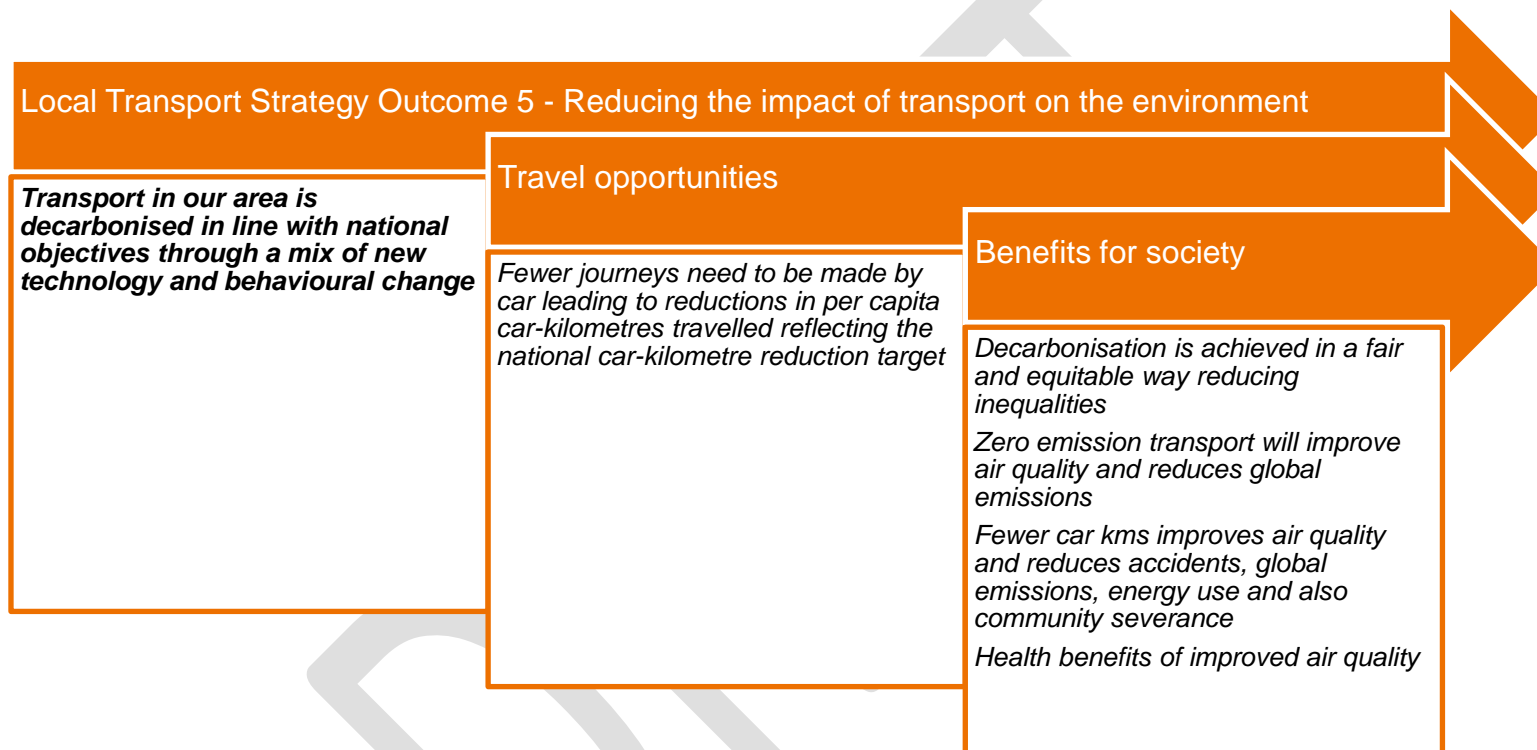
Local Transport Strategy Draft Outcome 4 – Journeys to / from Edinburgh and the region

- 8.2.4 Midlothian's location in the region inevitably means that many residents travel frequently to locations across Edinburgh, and beyond, for work, education and training, healthcare, business and leisure. Travel time by bus tends to be long and some localities are less well served by public transport, so many of these trips are made by car. Overall, those most poorly served by public transport, and those without access to a car are less able to access opportunities away from the main bus corridors into Edinburgh.



Local Transport Strategy Draft Outcome 5 – Reducing the impact of transport on the environment

- 8.2.5** Transport is still a major contributor to carbon emissions. In addition, roads and road traffic can have a negative impact on our communities in terms of noise, air quality, vibration and community severance. Reducing traffic volumes would therefore bring a range of benefits.



8.3 Summary

8.3.1 In summary, the five draft LTS outcomes are:

- **LTS Outcome 1:** Our new developments are well planned and deliver transport infrastructure at early stage, supporting high-quality local and cross-boundary active travel and public transport connections.
- **LTS Outcome 2:** Our towns have more space allocated to travel by sustainable modes and to the public realm, reducing the need to make journeys by car.
- **LTS Outcome 3:** All of our towns and villages are connected by safe, attractive and accessible public transport and active travel routes.
- **LTS Outcome 4:** All of our towns and villages are connected to key locations in Edinburgh and beyond by attractive, accessible and affordable public transport that is competitive against the private car, and by high quality active travel routes.
- **LTS Outcome 5:** Transport in our area is decarbonised in line with national objectives through a mix of new technology and behavioural change.

8.3.2 The table below shows how the proposed LTS Outcomes link to the four NTS2 Priorities and the five RTS Strategy Objectives.

Table 8-1: Relationship between LTS Outcomes and NTS2 Priorities / RTS Strategy Objectives.

	LTS Outcome 1: Our new developments are well planned and deliver transport infrastructure at early stage, supporting high-quality local and cross-boundary active travel and public transport connections	LTS Outcome 2: Our towns have more space allocated to travel by sustainable modes and to the public realm, reducing the need to make journeys by car	LTS Outcome 3: All of our towns and villages are connected by safe, attractive and accessible public transport and active travel routes	LTS Outcome 4: All of our towns and villages are connected to key locations across Edinburgh and beyond by attractive, accessible and affordable public transport that is competitive against the private car, and by high quality active travel routes	LTS Outcome 5: Transport in our area is decarbonised in line with national objectives through a mix of new technology and behavioural change
National Transport Strategy 2 Priorities:					
Reduces inequalities	✓	✓	✓	✓	✓
Tackles climate change	✓	✓	✓	✓	✓
Helps deliver inclusive economic growth	✓	✓	✓	✓	✓
Improves our health and wellbeing	✓	✓	✓	✓	✓
SEStran Regional Transport Strategy Objectives:					
Transitioning to a sustainable, post-carbon transport system					✓
Facilitating healthier travel options	✓	✓	✓	✓	
Widening public transport connectivity and access across the region	✓		✓	✓	

	LTS Outcome 1: Our new developments are well planned and deliver transport infrastructure at early stage, supporting high-quality local and cross-boundary active travel and public transport connections	LTS Outcome 2: Our towns have more space allocated to travel by sustainable modes and to the public realm, reducing the need to make journeys by car	LTS Outcome 3: All of our towns and villages are connected by safe, attractive and accessible public transport and active travel routes	LTS Outcome 4: All of our towns and villages are connected to key locations across Edinburgh and beyond by attractive, accessible and affordable public transport that is competitive against the private car, and by high quality active travel routes	LTS Outcome 5: Transport in our area is decarbonised in line with national objectives through a mix of new technology and behavioural change
Supporting safe, sustainable and efficient movement of people and freight across the region	✓	✓	✓	✓	

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9 Next Steps

9.1 Overview

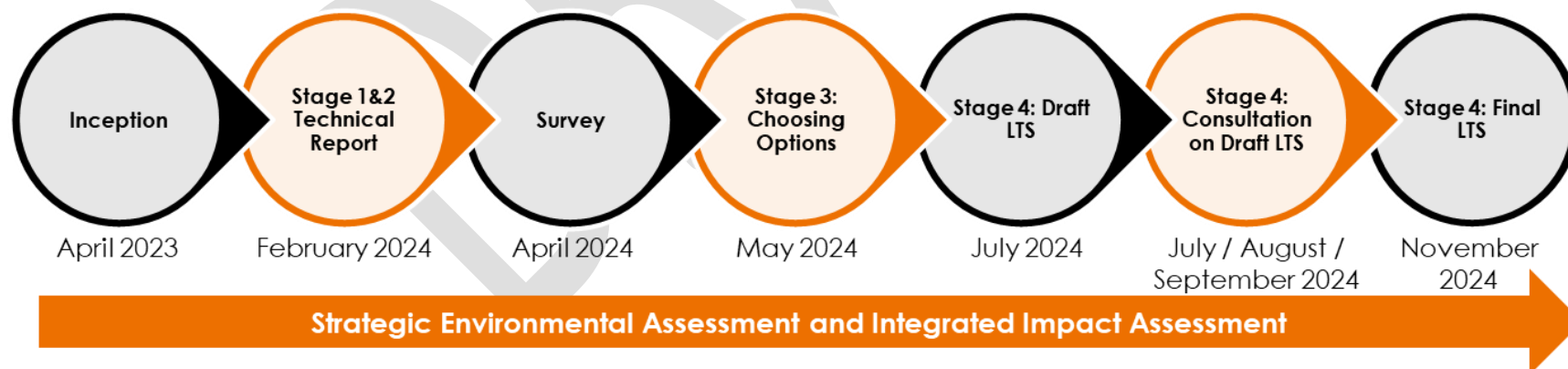
9.1.1 This Stage 1&2 Technical Report has set out the detailed technical analysis which underpins Stages 1 and 2 of the LTS development process and summarised the emerging outputs from this work.

9.1.2 The document has been produced in line with Transport Scotland's LTSDG and the principles of the refreshed STAG and includes a:

- detailed **review of national, regional, and local policy and the associated policy implications for the development of the LTS**
- detailed **baseline of current transport provision and transport demand in Midlothian** by transport mode
- **structured approach to the identification of transport problems**, as well as their supply side cause and travel behaviour and societal consequences

- set of **transport problems** by mode along with their supply side cause
- set of **Draft Strategy Outcomes** and the main resulting changes in travel behaviour and societal impacts associated with these.

9.1.3 As shown in Figure xx, the next stage of work involves an online public survey which aims to ensure the full range of problems (and any opportunities) relating to transport in Midlothian are captured and gather any thoughts on the emerging Strategy Outcomes. The findings from this engagement will then be used to inform Stage 3 (choosing options) and Stage 4 (the preparation of the LTS document).



Appendix A Wider Policy Documents

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Appendix B Stakeholder Engagement

B.1 Overview

B.1.1 This appendix provides a summary of the stakeholder engagement undertaken to inform the evidence review. In line with STAG, the engagement focused on gathering information on the current and future transport problems within the localities of Midlothian. Discussions covered active travel, public transport, and other road-based transport; including suggestions on how identified problems could be alleviated.

B.1.2 The engagement involved a series of stakeholder workshops as well as a one-to-one meeting with Lothian Buses. Further information on each of these is provided below.

B.2 Stakeholder workshops

B.2.1 Three stakeholder workshops were held as follows:

- Midlothian Council Workshop – 6th November 2023
- External Stakeholder Workshop – 22nd and 27th November 2023

B.2.2 Each workshop was held remotely via Microsoft Teams. The workshops included a brief presentation on the aims and objectives of the study before an open discussion covering transport problems and opportunities in Midlothian. To help structure the discussion, the local authority area was divided into the following six separate areas with dedicated time allocated to each of these:

- Penicuik / Loanhead / Bilston / Roslin

- Bonnyrigg / Rosewell
- Dalkeith / Newbattle
- Mayfield / Gorebridge
- Danderhall / Shawfair
- Pathhead and other rural locations outside of the above settlements

B.2.3 An online Mural page was set which was open to stakeholders before, during, and after the workshop, allowing them to leave comments on maps of the six areas. The Mural page remained open for one week after the meeting for any further comments and reflections. A project email address was also set up and stakeholders could also provide comments directly via this means.

Findings

B.2.4 The following sections provide a summary of the points raised in the workshops and recorded via the Mural page and / or sent via email to the project email address.

Penicuik / Loanhead / Bilston / Roslin

Planned and committed schemes

- The A701 Bypass / Relief Road is a committed scheme and plans are progressing, with delivery anticipated to be 2028. The scheme aims to reduce congestion on the A701. The new route alignment bypasses the landfill site.
- Large development at Auchendinny and Beeslack High School which will have a larger catchment area is being relocated to the A703. Safe routes to school will need to be provided.

- New high school being delivered at Bilston with associated improvements in active travel connections to the site.
- University of Edinburgh is planning to expand Easter Bush campus and the wider 'triangle' site
- Redevelopment of Hillend's Sport centre with development of a new junction (still in the design process, Transport Scotland) which will allow buses to serve the sports centre and will accommodate cycle lanes.

Existing Problems

Active travel

- Edinburgh to Easter Bush is a very significant active travel route but there is currently no cycling infrastructure, and the footways are narrow.
- Cycle provision is lacking or poor connecting Penicuik to Bilston, the Bush and onward to Edinburgh. While there are on road cycle lanes from Penicuik to Straiton, the roads are busy.
- Topography (steep gradients) is a barrier, particularly between Roslin, Rosewell, and Loanhead.
- Regarding off-road cycling infrastructure, there are several well-used off-road routes, including NCN 196. However, links to railway stations are limited. The Roslin to Shawfair route is lit, but part of the Penicuik to Dalkeith route is not.
- Links to the Roslin to Shawfair route could be improved.
- The footways on roads linking Roslin to the A701 are narrow and the speed limit is relatively high (40mph on the B7006).

- The Shawfair to Roslin path is good for leisure, but not great for commuting.
- Several Mural comments suggested designated cycle routes, including from Bush to Fairmilehead, Penicuik to Edinburgh via Loanhead/Straiton, and Gowkley Moss to Straiton, as well as an increase to public transport provision.

Public transport

- There are few east-west links across the local authority area
- Connectivity by non-car modes to the Pentlands is poor.
- The bus route from Dumfries to Penicuik and onward to Hillend (Houstons Coaches services 101 / 101A / 102) is infrequent, runs late and is unreliable.
- Residents in Roslin have difficulties accessing buses to / from Penicuik and the Borders because they must go to the main corridors (A701 or A702).
- Bus service 15 from Damhead no longer stops in Penicuik despite Penicuik being the local high school for Damhead.
- There is a lack of buses for students accessing Bush junction, which affects the community's accessibility.

Other road-based transport

- A702 / A703 junction at Hillend is problematic with poor sightlines and resultant delays and collisions. Topography at the junction makes improvements challenging. Potential to signalise the junction.
- Bush Loan / A702 junction used as an alternative resulting in delays at this junction also. Providing two lanes of traffic and

realigning the right hand turn to Edinburgh coming from Bush Loan may improve traffic flow at the junction.

- The A701 / Niven's Knowe Road junction (towards Loanhead), causes delays because of right-turning vehicles, resulting in traffic congestion up to the Bilston roundabout.
- Traffic congestion on the A701 in general - a Park and Ride south of Penicuik to allow people to park and then take the bus to Edinburgh would be beneficial.
- Edinburgh City Bypass causes severance and delays.

Bonnyrigg / Rosewell

Planned and committed schemes

- There is a major development planned to the south side of Bonnyrigg which involves a large expansion of 200 houses.

Existing problems

Active travel

- Bonnyrigg and Rosewell are largely residential and the current speed limit is an issue for active travel users. There is a proposal to introduce 20mph speed limits for current 30mph roads.

Public transport

- In May 2023, Lothian Buses withdrew Service 49 which provided a direct connection from Rosewell to Edinburgh, with residents of Rosewell now having to travel via Service 46 to the Royal Infirmary and interchange there for onward connections to Edinburgh.

- Bus connections from Bonnyrigg to Edinburgh / Edinburgh Royal Infirmary are unreliable and have long journey times, with no bus priority and a lack of integration between buses causing long wait times.

Dalkeith / Newbattle

Planned and committed schemes

- New primary school is being provided in Easthouses, Dalkeith and associated improvements in active travel connections to the site
- Bus priority (signalisation) is being provided in Dalkeith
- Midlothian Council has secured funding from Sustrans to improve active travel connections between Sheriffhall Roundabout and Newtongrange. The scheme is at an early stage but will likely involve separate plans for pedestrians and cyclists.
- A7 Urbanisation Scheme being progressed by Midlothian Council along the A7 between Gilmerton Road Roundabout and Dalhousie Road, Newtongrange.

Existing problems

Active travel

- Sheriffhall Roundabout is a barrier to active travel
- Penicuik to Dalkeith walkway (riverside) is well used but cyclists complain about the surface of the route.
- Lack of accessibility and safety at Eskbank Toll roundabout – barrier for active travel.

- Roads in Dalkeith are very busy and unappealing for family cycling. Eskbank Toll is challenging for active travel.
- Unpleasant and insecure environment when accessing Eskbank rail station, with narrow pathways, high fencing walls.

Public transport

- Dalkeith is the most important hub in terms of bus services, but there is a lot of traffic resulting in delays.
- The live information boards in Dalkeith need to be replaced. Lothian Buses is aware of the issues in the area. Around 45 need to be replaced but there is a need to secure funding.
- There is a lack of public transport in the Easter Langside development.
- There is no bus stop outside Dalkeith Country Park
- There are no bus stops on the A7 (it is understood the provision of bus stops will be considered as part of the A7 Urbanisation scheme).

Other road-based transport

- Congestion at Sheriffhall Roundabout resulting in delays
- Lack of parking in Dalkeith town centre

Mayfield / Gorebridge

Planned and committed schemes

- There is a proposal for two large-scale developments in the south side of Mayfield / Industrial Estate although these are in a very early stage of development

Existing problems

Active travel

- The school that serves Gorebridge is based in Mayfield but there is no safe walking and cycling route between the areas.

Public transport

- Beneficial to have a connection from Gorebridge Railway Station to Vogrie Country Park.

Danderhall / Shawfair

Planned and committed schemes

- A crematorium is due to be built in Old Craighall
- Old Craighall Road is closed because of a new development. The link will be closed for about 2 months. Active travel provision on the link will be improved prior to it re-opening.

Existing problems

Active travel

- Edinburgh City Bypass causes severance issues; it would be beneficial to have a connection avoiding the Sheriffhall roundabout e.g., Dalkeith Country Park to Shawfair.
- Lack of footways around schools in Shawfair

Public transport

- Lack of public transport connections between Shawfair and Edinburgh

- East-west connection desirable to help link Musselburgh and Queen Margaret University to Little France and Fort Kinnaird.

Other road-based transport

- Rat-running on the Whitehill Road and Cauldcoats Road (from Fort Kinnaird) during busy periods (e.g. Christmas)

Pathhead and other rural locations outside of the above settlements

Planned and committed schemes

- Plans for 20mph limits and narrowing of roads as part of 20mph proposals

Existing problems

Active travel

- Footways in rural areas are not well maintained. A number of specific comments were made on this within the Mural including flooding on the road connecting Gorebridge to Vogrie Country Park;
- Lack of active travel connections were noted within Mural, including between Vogrie Country Park and the A68, Pathhead and Dalkeith, and Edgehead and Whitehill, contributing to high car use– it is noted that a survey of users of Vogrie Country Park was undertaken in July 2022 and this demonstrated that 91% of the 138 people surveyed had travelled to the site by car.
- Local road network used by larger vehicles when there are delays on the A68 which makes active travel unappealing
- Feedback from the ATS engagement suggested that high speeds on rural roads are a significant barrier to active travel,

especially on winding roads, for example Gorebridge to Temple, and to Gladhouse. Reduced road speeds may encourage more active travel.

Public transport

- Pathhead has only one bus service. Midlothian Council is exploring transporting school children by public bus to increase demand and encourage bus companies to provide a service.
- Borders Buses bus timetables are not suitable for Midlothian residents, with the service not starting early enough and finishing too early – this impacts all users, restricting connectivity to employment, education and leisure opportunities. This is particularly the case without access to a car who are therefore dependent on public transport, including older and younger people, those with disabilities who are unable to drive, and those on lower incomes.
- Pathhead has a much larger fare cost per mile compared to other locations.
- Lack of east-west public transport connections.

Other road-based transport

- Issues regarding the competing demands of a national trunk road and the needs and demands of local traffic.
- Lack of suitable alternative routes. When there are delays on the A68, diverted traffic causes problems on the local road network which is not designed for larger vehicles.
- Lack of EV charging points in rural areas and problems with provision of EV charging points in areas where off-road parking is limited.

- Several junctions were isolated on the Mural page and regarded as unsafe, including the A6093 / A68 junction, a five-way junction between Pathead and Ford, and the Roman Camp and Main Street junction.

B.3 Overview

B.3.1 The tables below provide a summary of the wider national, regional, and local policy documents reviewed to inform the development of this Case for Change Report.

Table B-1: Wider national policy documents reviewed

Policy	Description
A Route Map to Achieve a 20 per cent Reduction in Car Kilometres by 2030 (2022)	This document sets out a route map of how Scotland will achieve a 20% reduction in car kilometres by 2030. The documents presents a framework of sustainable travel behaviours (namely: reducing the need to travel; living well locally; switching modes to walk, wheel, cycle or public transport where feasible; and combining trips or sharing journeys) and sets out a series of actions which will be taken forward to support each of these. The latter includes extending superfast broadband; improving town centres; increasing investment in active travel; introducing low emission zones (LEZ); investing in the public transport network; and testing Mobility as a Service (MaaS).
A Fairer, Greener Scotland: Programme for Government 2022 - 23	<p>The Scottish Government's Programme for Scotland sets out the Government's ambitions for each fiscal year. The document provides strategies and policies across all departments of Government, including transport. Within this document, there is a focus on Scotland's transition to a Net Zero Nation in a fair and just way. There are six policy interventions that will shape the development of the LTS, namely:</p> <ul style="list-style-type: none"> Removing the majority of diesel buses from public transport by the end of 2023 Reducing car kilometres by 20% by 2030 Decarbonising Scotland's railways by 2035

Policy	Description
	<ul style="list-style-type: none"> Phasing out the sale of new petrol and diesel cars by 2030 Nationwide free bus travel for young people under the age of 22 Spending at least £320 million or 10% of the total transport budget on active travel (beginning in 2024-2025) <p>The vision for increased spending on active travel and free bus travel for under 22s will promote these modes of transport, while reducing private vehicle usage. The introduction of new rail traction and buses also has the potential to decrease travel times and decarbonise the transport network (depending on the technology used).</p>
Scotland's Road Safety Framework to 2030	Sets out a Vision and Outcomes for Scotland to have the best road safety performance in the world by 2030 and a long term goal where no one is seriously injured or killed on our roads by 2050.
Just Transition Commission: A National Mission for a fairer, greener Scotland (2021)	<p>Includes 24 headline recommendations including:</p> <ul style="list-style-type: none"> Scottish Government, Local Authorities and Developers must commit to creating communities that embed low-carbon lifestyles, while improving our health and wellbeing Ensure sufficiently developed roadmaps exist for the net zero transition in Scotland, including for key technology options Implement Green Participatory Budgeting with agreed target levels of funding
Active Travel Framework	The Active Travel Framework brings together the key policy approaches to improving the uptake of walking and cycling in Scotland for travel.
Scotland's Accessible Travel Framework (2016)	<p>Vision: All disabled people can travel with the same freedom, choice, dignity and opportunity as other citizens.</p> <ul style="list-style-type: none"> Outcome 1: more disabled people make successful door-to-door journeys, more often

Policy	Description
	<ul style="list-style-type: none"> • Outcome 2: disabled people are more involved in the design, development and improvement of transport policies, services and infrastructure. • Outcome 3: everyone involved in delivering transport information, services and infrastructure will help to enable disabled people to travel. • Outcome 4: disabled people feel comfortable and safe using public transport – this includes being free from hate crime, bullying and harassment when travelling
A Network fit for the Future: Draft Vision for Scotland's Public Electric Vehicle Charging Network	<p>Transport Scotland published a draft vision for Scotland's public electric vehicle (EV) charging network in late January 2022. The plan aims to encourage the uptake of zero emission vehicles through increasing the number of publicly available EV chargers.</p> <p>The strategy includes a Vision and four main objectives as follows:</p> <ul style="list-style-type: none"> • A People Focused Network – ensuring that people have access to a well-designed and comprehensive charging network which works for everyone, regardless of age, health, income or other needs. • Accelerating Commercial Investment – enabling new models of public electric ChargePoint funding to allow for private investment; and ensuring public funds are targeted at areas where commercial investment is unable to fully deliver. • Coordinating With the Electricity Network - Creating a new partnership with the energy network to allow for new electricity storage opportunities, end-to-end net zero energy generation, and ensuring optimal capacity on Scotland's power grid • Integration with Scotland's Sustainable Transport System - Locating EV charge points where they can promote active and public transport usage inline with the 20% reduction in car KM and sustainable transport hierarchy <p>Funding has been made available for each Local Authority to produce its own public EV Infrastructure Strategy. Midlothian Council has produced a draft of this document. This is discussed further below</p>

Policy	Description
Transport (Scotland) Act 2019	<p>The Transport (Scotland) Act 2019 is an important legal framework that was designed to help make Scotland's transport network cleaner and more accessible. The law grants new powers to local authorities in the areas of bus provision, parking, low emission zones, road works, and smart ticketing. A summary of new powers available to local authorities is provided below:</p> <p>Bus Services:</p> <ul style="list-style-type: none"> • Allowance of Bus Service Improvement Partnerships (BSIPs) • New local franchising powers • New/extended powers for local transport authorities to provide bus services to meet social needs • Powers to require bus operators to make more information available to the public on services, including routes, timetables and fares • Powers to require operators withdrawing services to provide more information to local transport authorities <p>Smart Ticketing:</p> <ul style="list-style-type: none"> • Extending existing ticketing arrangements and schemes to include connecting services • Giving Scottish Ministers the power to set a national technological standard for smart ticketing • Creating a National Smart Ticketing Advisory Board • Providing a guide for a consistent approach for smart ticketing arrangements and schemes, and clearer processes for implementation • The requirement for local transport authorities to produce annual reports on ticketing arrangements and schemes to evaluate and adapt for best practices • Scottish Ministers have new powers to direct a local transport authority to make or adjust a ticketing scheme <p>Low Emission Zones (LEZs):</p> <ul style="list-style-type: none"> • Local authorities are able to create, enforce, operate or revoke a low emissions zone in their area, and are able to design the shape, size and vehicle scope of the LEZ <p>The ability for local authorities to promote permanent and/or time-limited exemptions from the requirements of</p>

Policy	Description
	<p>a low emission zone, in line with Scottish Minister regulations</p> <ul style="list-style-type: none"> Local authorities are required to ring-fence the funds received from penalties to facilitate the achievement of LEZ scheme objectives <p>Workplace Parking Licensing:</p> <ul style="list-style-type: none"> Local authorities are able to implement workplace parking licensing locally, and shape proposals to suit local circumstances Local authorities may use revenues from the workplace parking levy to support the policies in their Local Transport Strategy

Table B-2: Wider regional policy documents reviewed

Policy	Description
SEStran Park and Ride Strategic Study (June 2020)	<p>An update to the existing SEStran Park and Ride Strategy (2009) was published in 2020. The study acts as an evidence base and will inform future investment priorities for enhancement of Park and Ride facilities. The study identifies the following interventions for further consideration to provide a more sustainable transport network in the SEStran region:</p> <ul style="list-style-type: none"> Support active travel to Park and Ride facilities – developing joined up routes that are safe and secure for all users Orbital Park and Ride investment – constructing new Park and Ride sites to encourage Park and Ride usage Improve connectivity within Edinburgh – facilitating more ‘cross-city’ journeys via public transport to encourage public transport usage Peripheral Park and Ride facilities – building new Park and Ride sites at locations near to strategic roads and transport links to encourage modal shift on journeys into Edinburgh Park and Ride Digital twin – developing live utilisation and turn over capture mechanism to provide information to users, local authorities and SEStran Public transport as a service – Integrating MaaS at Park and Ride locations

Policy	Description
SEStran Strategic Network – Cross Boundary Active Travel Routes, Connecting People and Place (May 2020)	<p>The SEStran Strategic Network provides a framework for the coordinated development of cross boundary active travel routes. The Network builds on the 2015 SEStran Strategic Cross Boundary Cycle Development study. The study included a review of the network, identification of problems and the option development. Problems included:</p> <ul style="list-style-type: none"> Many existing junctions on strategic network corridors are difficult to negotiate acting as significant barriers for active travel Awareness of some routes is low, particularly those that are off-road <p>The route options identified for progression in Midlothian include:</p> <ul style="list-style-type: none"> S1 – Little France to Eskbank Station S2 – Dalkeith to Bonnyrigg S3 – Danderhall to Straiton S4 – Straiton to Cameron Toll S5 – Straiton to Penicuik S6 – Bilston to Easter Bush
City Region Deal Workforce Mobility Project	<p>This project aims to work across sectors to improve communication, and the effectiveness of local transport to support access to employment, training and education. The first phase of the Workforce Mobility Project, to be complete in March 2024, is focused on working with partners to improve bus services through the use of demand data from the existing commuting workforce (not currently using public transport). This data will be collected and analysed to provide the opportunity to optimise the public transport network, and cater for a new demand that supports a viable alternative to the private car</p>

Table B-3: Wider local policy documents reviewed

Policy	Description
Midlothian Parking Strategy	<p>The Midlothian Parking Strategy was developed in 2017 to supplement the Midlothian Local Transport Strategy and to assist the Council's application to assume powers in relation to decriminalised parking enforcement (DPE). The strategy set out</p>



Policy	Description
	<p>a series of problems with respect to parking in Midlothian at that time along with a set of objectives and policies to be delivered to help resolve these issues. While somewhat out of date, key issues identified included:</p> <ul style="list-style-type: none">• Overspill parking – parking on surrounding streets around schools, rail stations and retail parks• Lack of enforcement of restrictions – leading to illegal parking and low turnover of spaces – as above DPE was introduced following the delivery of the strategy and therefore this issue is likely to be somewhat resolved• Balance of parking supply – lack of balance between short, medium and long stay parking, with long-stay parking in inappropriate locations – the latter included use of town centres as informal park and rides with commuters travelling into Edinburgh parking in town centres and travelling by bus into the city, resulting a lack parking for those wishing to use local shops.• General issues with parking and loading – including lack of disabled parking, lack of residential parking management, poor signage / lack of awareness, and loading issues. <p>The objectives were as follows:</p> <ul style="list-style-type: none">• To provide balanced and appropriate parking facilities that support the economic, environmental and accessibility requirements of Midlothian's towns• To maximise the efficient use of parking provision• To provide a stimulus for economic activity• To assist with controlling air pollution <p>In total, 25 parking policies were outlined. These covered a wide spectrum of topics, including introducing decriminalised parking enforcement (DPE), improved parking management, more park and ride provision, and the delivery of cycle parking at key locations. Following the development of Strategy Midlothian Council introduced DPE in April 2018.</p>

Policy	Description
Dalkeith Town Regeneration	Midlothian Council is currently updating the regeneration masterplan for Dalkeith. An initial set of proposals for the town were developed and consulted upon between 25 August and 4 September 2022. Comments received indicated that there was support for pedestrianising some of the town centre, so that people can feel safe walking, wheeling and cycling. The consultation also indicated that there was support for providing new, safe transport connections between local places and the town centre, especially Eskbank station, with some suggesting cycle routes and improved accessibility for pedestrians and wheelchair users. Following the consultation, work is now underway on an updated Draft of the Masterplan.
Electric Vehicle Infrastructure Strategy	In common with other local authorities in Scotland, Midlothian Council is currently producing a public EV Charging Strategy using funding from the Electric Vehicle Infrastructure Fund (EVIF). The Plan will set out how public EVCI in Midlothian will be expanded up to 2026 and will be completed by the end of March 2024. The plan will be reviewed by the EVIF Programme Board who will make recommendations to Transport Scotland as to the level of EVIF capital funding to be allocated to Midlothian Council over the period up to 2026.
Midlothian Speed Policy / Speed Limit Review	Following the completion of the Roads Hierarchy Review in early 2022, Midlothian Council produced an updated Speed Policy and, in April 2023, completed a Speed Limit Review. The latter considered speed limits across the Council area with a view to adjusting speed limits to 20mph in appropriate locations. This review identified 850 streets where it was recommended that the speed limit should be changed from 30mph to 20mph and just 70 streets where it was recommended that the current 30mph speed limit be retained. The Speed Limit Review was subsequently approved by Councillors in May 2023 and the statutory process to introduce the new speed limits and associated traffic calming measures is now underway.



Policy	Description
Gorebridge Community Action Plan 2015-2020	<p>A plan was published in 2015 and it is understood an update to this plan is currently being developed. The 2015 plan includes a vision for Gorebridge which includes the ambition that:</p> <p><i>“Gorebridge will be accessible to all, with good transport links for rail, road, pedestrians and cyclists. There will be an excellent network of local paths for walkers and cyclists, giving access to our beautiful countryside”. The plan includes a number of priorities. Those with specific relevance to transport include: continuing to lobby for improved bus services, identify additional parking areas in Gorebridge, and develop a tourism/economic strategy to make the most of the opportunities presented by rail.</i></p>

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Appendix C Midlothian Bus Services

C.1 Overview

C.1.1 The table below provides a summary of the bus routes which serve Midlothian as of August 2023. For ease of reference, the services have been grouped into the following categories based on the areas they connect:

- Midlothian and Edinburgh City Centre
- Scottish Borders and Midlothian (and onward to Edinburgh City Centre)
- Dumfries and Galloway / South Lanarkshire and Midlothian (and onward to Edinburgh City Centre)
- Midlothian and East Lothian
- Local services largely internal to Midlothian

C.1.2 For each service, information is included on the operator, service number, route, Midlothian settlements served and weekday frequency.

Table C-1: Summary of Midlothian bus services

	Operator	Service number	Route	Settlements served	Weekday Frequency
Midlothian and Edinburgh City Centre	Lothian Buses	3	Mayfield (Midlothian) - Clovenstone (West Edinburgh) via Edinburgh City Centre	Mayfield, Easthouses, Dalkeith, Eskbank	Every 12 mins
		15	Easter Bush, Midlothian - Waterloo Place (Edinburgh City Centre)	Bilston	Hourly
		29	Gorebridge (Midlothian) - Silverknowes (north Edinburgh) via Edinburgh City Centre	Gorebridge, Newbattle, Newtongrange	Every 20 mins
		X29	Gorebridge (Midlothian) -Waterfront Gait (north Edinburgh) via Edinburgh City Centre	Gorebridge, Newbattle, Newtongrange	Peak Express service (two in the morning to Edinburgh and two return services in the evening)
		31	Bonnyrigg / Polton Mill (Midlothian) - East Craigs (west Edinburgh) via Edinburgh City Centre (Usher Hall) and Gyle Shopping Centre	Polton, Bonnyrigg, Lasswade	Every 30 minutes to / from each of the branch lines (Bonnyrigg and Polton Mill) and therefore every 15 minutes on the core line
		X31	Rosewell – Edinburgh (West Maitland Street)	Rosewell, Bonnyrigg	Peak Express service (3 morning to Edinburgh and 3 evening return)
		33	Wester Hailes – Millerhill via Edinburgh City Centre and Sheriffhall P&R	Danderhall, Sheriffhall P&R, Millerhill	2-3 per hour
		37	Penicuik / Loanhead (Midlothian) – Silverknowes (north Edinburgh) via Edinburgh City Centre	Loanhead, Roslin, Penicuik	Every 30 mins to/from Penicuik and every 15 from Loanhead
		X37	Penicuik / Loanhead (Midlothian) – Granton (north Edinburgh) via Straiton P&R and Edinburgh City Centre	Straiton P&R, Loanhead, Roslin, Penicuik	Peak Express service (3 morning to Edinburgh and 3 evening return)

	Operator	Service number	Route	Settlements served	Weekday Frequency
		47 ⁴¹	Penicuik (Midlothian) – Cammo (northwest Edinburgh) via Straiton P&R and Edinburgh City Centre	Penicuik, Bilston, Straiton, Straiton P&R	Every 20 mins
		47B	Penicuik (Midlothian) – Cammo (northwest Edinburgh) via Easter Bush Straiton P&R and Edinburgh City Centre	Penicuik, Easter Bush, Bilston, Straiton, Straiton P&R	Peak time service – nine AM peak services to Easter Bush and six PM peak services to Cammo
		N3	Haymarket – Gorebridge (Midlothian) via Edinburgh City Centre	Dalkeith, Mayfield, Newtongrange, Gorebridge	Hourly
		N31	Edinburgh City Centre - Bonnyrigg	Bonnyrigg	2 departures
		N37	Silverknowes (northwest Edinburgh) – Penicuik	Loanhead, Bilston, Roslin, Penicuik	Hourly
Scottish Borders and Midlothian (and onward to Edinburgh City Centre)	Borders Buses	51 / 52	St Boswells (Scottish Borders) to Edinburgh City Centre (Edinburgh Bus Station)	Fala, Pathhead, Edgehead, Dalkeith, Danderhall	Every 1.5 hours
		X62 (bike bus)	Galashiels to Edinburgh City Centre (Edinburgh Bus Station)	Penicuik	Every 30 mins
		X95 (bike bus)	Carlisle to Edinburgh City Centre (Edinburgh Bus Station)	Middleton, Newtongrange, Eskbank, Danderhall	Every hour

⁴¹ This service was revised on 28th May 2023, with services now terminating at Cammo instead of Granton

	Operator	Service number	Route	Settlements served	Weekday Frequency
Dumfries and Galloway / South Lanarkshire and Midlothian (and onward to Edinburgh City Centre)	Houstons Coaches	101 / 101A / 102	101: Biggar (South Lanarkshire) - Edinburgh City Centre (Edinburgh Bus Station) 101A Dumfries – Edinburgh City Centre (Edinburgh Bus Station) – excluding Penicuik 102: Dumfries – Edinburgh City Centre (Edinburgh Bus Station) – stopping in Penicuik	Penicuik	Hourly from Biggar, with one service every four hours beginning in Dumfries
Midlothian and East Lothian	East Coast Buses	140/141 ⁴²	Penicuik - Musselburgh	Penicuik, Easterbush (141), Roslin (140), Loanhead, Bonnyrigg, Eskbank, Dalkeith	Each service runs hourly providing 2 buses per hour
	Lothian Buses	46	Rosewell - Musselburgh	Rosewell, Eskbank, Dalkeith, Musselburgh	Every 30 mins
	Lothian Buses	48 ⁴³	Gorebridge (Midlothian) – Musselburgh via Fort Kinnaird (southeast Edinburgh) and Sheriffhall P&R	Gorebridge, Newtongrange, Mayfield, Easthouses, Dalkeith, Sheriffhall P&R	Every 30 mins
	Prentice of Haddington	111/111A	Haddington (East Lothian) to Royal Infirmary (Edinburgh)	Millerhill, Danderhall	Hourly
Internal Midlothian only	East Coast Buses	139	Midlothian Community Hospital (Bonnyrigg) - Dalkeith	Bilston, Dalkeith	Hourly
	Lothian Community Transport Services	R1	Dalkeith, Bonnyrigg, Carrington, Temple, Gorebridge, Tesco	Dalkeith, Eskbank, Bonnyrigg, Gorebridge,	Two services every Thursday

⁴² 141 diverts via Easter Bush

⁴³ This service was revised on 28th May 2023. The service previously terminated at Fort Kinnard via Edinburgh City Centre. The revision saw the service extended to serve Musselburgh and route via Fort Kinnard.



	Operator	Service number	Route	Settlements served	Weekday Frequency
		R2	Dalkeith, Gorebridge, Bonnyrigg, Tesco (Eskbank)	Dalkeith, Bonnyrigg, Gorebridge,	One service every Thursday
		R3	Dalkeith, Danderhall, Newton Village, Millerhill, ASDA (The Jewel)	Dalkeith, Danderhall	One service every Thursday
		R4	Dalkeith, Lasswade, Loanhead, Sainsbury's and ASDA (Straiton)	Dalkeith, Eskbank, Loanhead	One service every Monday
		R5	ASDA (Straiton), Bonnyrigg, Carrington, Temple, Gorebridge	Loanhead, Bonnyrigg, Gorebridge, Lasswade	One service every Monday

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