Technical Note
August 2025

Trams to Granton, BioQuarter and Beyond: The Strategic Rationale

City of Edinburgh Council
Our ref: 23673608
Client ref: n/a

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A Strategic objectives against transport planning and STAG appraisal criteria

1 Introduction

Purpose of this report

1.1 This report aims to provide the explanation of why development of the Tram to Granton, BioQuarter and Beyond (TGBB) scheme in Edinburgh has a high level of strategic fit at a national, regional and local level has as well as delivering against the agreed locally important strategic and transport planning objectives as follows:

1. To support inclusive and sustainable economic growth;
2. To respond to climate change towards delivering net-zero;
3. To promote equality and inclusion and help tackle the city's housing emergency;
4. To improve health, wellbeing & safety; and
5. To protect and enhance our environment.

1.2 The document will assist City of Edinburgh Council clearly communicating the strategic benefits of TGBB both during consultation and forms part of a suite of reports developed to inform consultation activities relating to TGBB including the Options Assessment Report.

1.3 A range of route options are under consideration via the Option Assessment process, which will be documented in a further output, however the purpose of this report is to consider TGBB at a strategic level and does not explore any trade-offs between options.

1.4 This report will also inform the Strategic Case chapter of the Strategic Business Case (SBC) and further stages of work within the business case development process including the Risk Assessment and Monitoring and Evaluation Plan.

Structure of this report

1.5 This report is structured as follows:

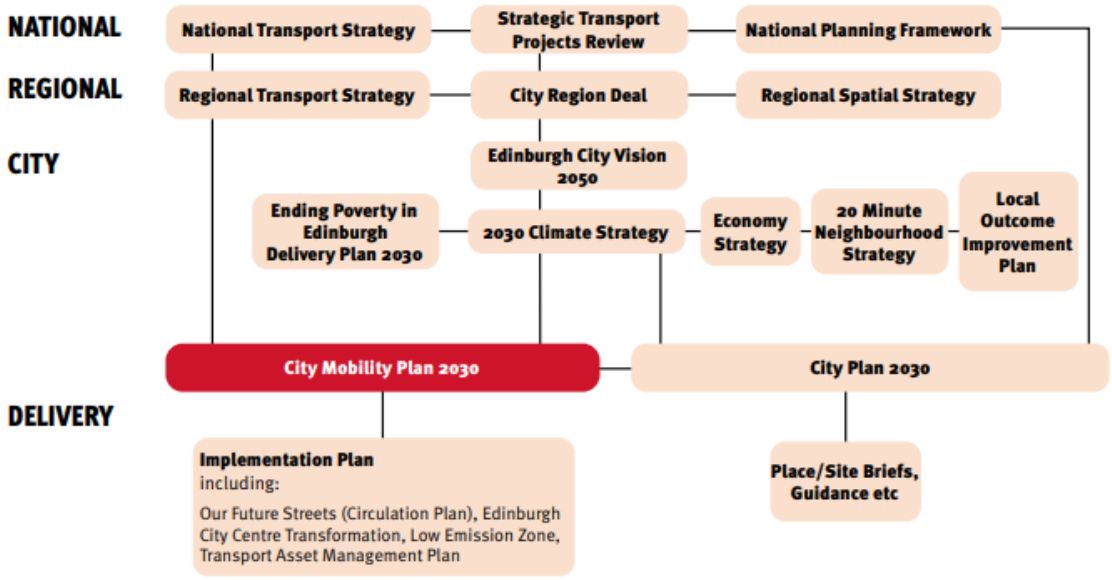
- **Strategic policy context**: the national, regional and local policy context is considered and how high-level policy objectives are supported by a range of STAG-aligned Transport Planning Objectives (TPOs).
- **Policy Alignment**: this section sets out how TGBB delivers a range of outputs, outcomes and longer term impacts, considers the role of TGBB in supporting four strategic priorities (broken down into five themes) and sets out the Case for Change.
- **Mode Selection:** provides analysis and commentary on the background to the choice of mode for mass transit in relation to TGBB.
- **Conclusion:** this section sets out how key conclusions from the strategic rational and how these will be used as TGBB develops further.

2 Strategic Policy Context

Introduction

2.1 Expansion of the tram network in Edinburgh north to Granton and south to BioQuarter and beyond has a strong policy fit at national, regional and local strategic levels. The following section explores the national, regional and City of Edinburgh local policy which is summarised in Figure 1 below.

Figure 1: National, regional and local policy context overview



Source: City Mobility Plan, City of Edinburgh Council, 2024 update

National Context

Introduction

2.2 Transport policy at a national level is guided by:

- National Transport Strategy 2 (NTS2), published in 2020, setting the national strategic objectives for transport in Scotland; and
- Strategic Transport Projects Review 2 (STPR2) published in 2022, which informs what transport investment will happen in Scotland over the next 20 years.

2.3 The following section sets out the implications of these national strategies for strategic transport improvement including TGBB.

National Transport Strategy 2

2.4 National Transport Strategy 2 (NTS2) sets out the vision for Scotland's transport system for the next 20 years, underpinned by four priorities. The NTS2 vision is:

> "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."

2.5 This vision is underpinned by four priorities and each priority is expressed through a set of three outcomes which helps to explain the effect the policy is seeking to achieve, as shown in Figure 2.

Figure 2: National Transport Strategy 2 Objectives

Source: NTS2, Transport Scotland, 2020

Strategic Transport Projects Review 2 (STPR2)

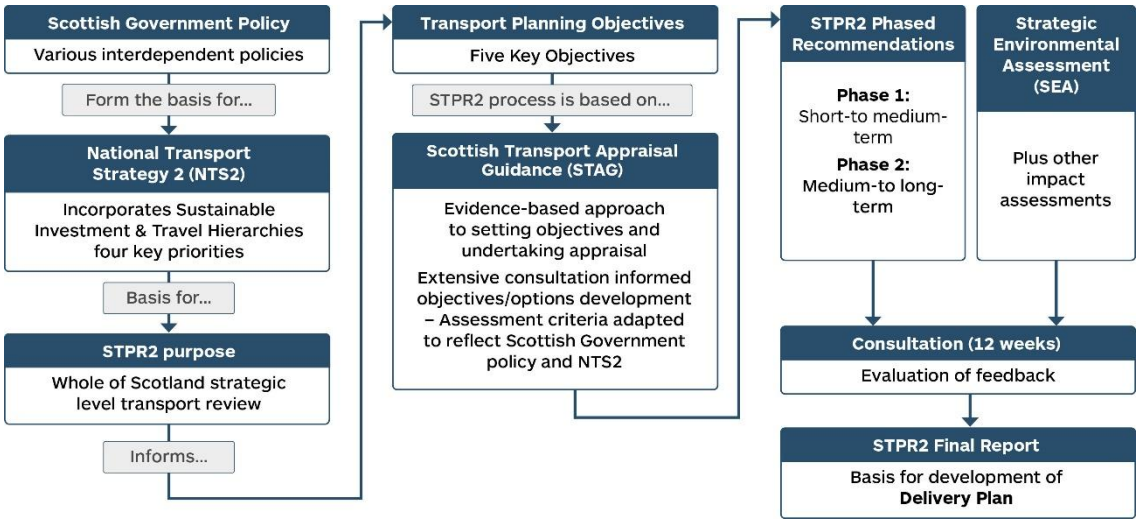
2.6 In 2019 Transport Scotland commenced the second Strategic Transport Projects Review (STPR2) to help inform transport investment in Scotland for the next 20 years. The STPR2 Final Technical Report and recommendations was published in 2022.

2.7 The STPR process:

- was guided by National Transport Strategy (NTS2) and aligned with other national plans such as the Climate Change Plan Update , the National Strategy for Economic Transformation (NSET) and the Revised Draft Fourth National Planning Framework (NPF4).
- involved the development of Transport Planning Objectives in line with STAG guidance which, in turn, informed the appraisal of transport projects undertaken as part of STPR2. These objectives reflect those of the NTS but introduced 'Increase Safey and Resilience' (to ensure consistency with STAG appraisal guidance).
- developed final recommendations including Recommendation 12 to develop "Edinburgh and South East Scotland Mass Transit" including tram (described further in paragraph 2.10 and Figure 5).

2.8 The STPR2 process is summarised in Figure 3.

Figure 3: STPR Development Process Summary



Source: STPR2 Final Technical Report, Transport Scotland,2022

STPR Transport Planning Objectives

2.9 STPR2's transport planning objectives are set out in Table 2.1 below and their alignment with the NTS2 and transport planning objectives in Figure 4.

Table 2.1: STPR2 Transport Planning Objectives

NTS Objective	STPR Transport Planning Objective	Sub-Objective
Takes Climate Action	A sustainable strategic transport system that contributes	• reduce the consumption of fossil fuels through a shift to more sustainable modes of transport; • increase the mode share of active travel for shorter everyday journeys;

NTS Objective	STPR Transport Planning Objective	Sub-Objective
	significantly to the Scottish Government's net zero emissions target	• increase the mode share of public transport by providing viable alternatives to single occupancy private car use; • reduce emissions generated by the strategic transport system.
Reduces Inequalities	An inclusive strategic transport system that improves the affordability and accessibility of public transport	• increase public transport mode share by connecting sustainable modes of transport to facilitate integrated journeys; • improve mobility and inclusion, recognising the specific needs of disadvantaged and vulnerable users; • reduce transport poverty by increasing travel choice; • reduce the reliance on private car for access to key centres for healthcare, employment and education
Improves our health and wellbeing	A cohesive strategic transport system that enhances communities as places, supporting health and wellbeing	• reduce demand for unsustainable travel by embedding the place principle in the changes to the strategic transport system; • increase the mode share of active travel for shorter everyday journeys; • reduce demand for unsustainable travel arising from nationally significant growth areas, taking cognisance of the emerging NPF4.
Helps deliver inclusive economic growth	An integrated strategic transport system that contributes towards sustainable inclusive growth in Scotland	• increase sustainable access to labour markets and key centres for employment, education and training; • increase competitiveness of key domestic and international markets, by reducing costs and improving journey time reliability for commercial transport; • increase resilience of accesses to key domestic and international markets to encourage people to live, study, visit and invest in Scotland; • increase the mode share of freight by sustainable modes; • unlock housing development sites through provision of sustainable transport links to employment, education, health and leisure opportunities.
Increases Safety and Resilience	A reliable and resilient strategic transport system that is safe and secure for users	• improve resilience from disruption through adaption of Scotland's trunk road, rail and strategic ferry infrastructure; • reduce transport related casualties in line with reduction targets; • improve resilience through climate change adaptation within the management and

NTS Objective	STPR Transport Planning Objective	Sub-Objective
		maintenance of trunk road, rail and ferry infrastructure; • improve perceived and actual security of the strategic transport system.

Figure 4: STPR2 Transport Planning Objectives and their strategic alignment

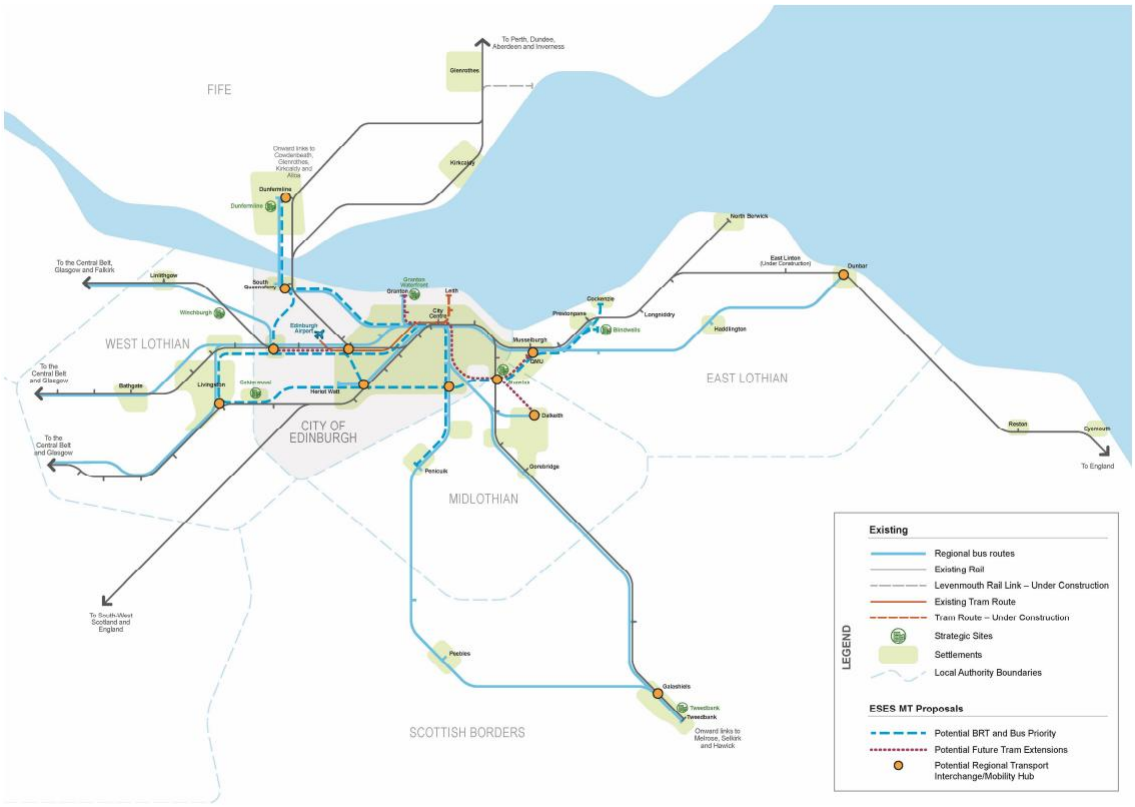
Key objectives	STPR2 aligns with and supports Scottish Government policies	STPR2 meets the second National Transport Strategy (NTS2) priorities	STPR2 reflects NTS2's Sustainable Investment and Travel Hierarchies	STPR2 meets Transport Planning Objectives to deliver:	STPR2 recommendations meet its stated purpose to:
Takes climate action	**Climate Change Plan Update (2020) & Route Map** target net zero Carbon by 2045 and a world leading 20% reduction in car km by 2030	Takes climate action	Reducing the need to travel unsustainably	A sustainable transport system that contributes to net zero emissions target	Create better connectivity with sustainable, smart, cleaner transport options
Addresses inequalities & accessibility	Delivering a **Just Transition** to net zero in a way that delivers fairness and tackles inequality **Addressing Child Poverty**	Reduces inequalities	Enhances choice and access to active travel and public transport	An inclusive transport system that improves affordability/ accessibility of public transport	Improve accessibility for residents, visitors and business
Improves health & wellbeing	**Cleaner Air For Scotland 2 (2021) & Delivery Plan** – STPR2 recommendations will deliver further air quality improvements	Improves our health & wellbeing	Priority given to walking and wheeling, then cycling	A cohesive transport system that enhances communities as places – supporting health/ wellbeing	Create better connectivity with sustainable, smart, cleaner transport options
Supports sustainable economic growth	The draft **Fourth National Planning Framework (NPF4)** – presents the opportunity to embed the importance of "place" across land-use planning and transport. **Scotland's National Strategy for Economic Transformation** sets out the priorities for Scotland's economy and recognises the role of transport investment in enabling and sustaining Scotland's economic growth.	Helps deliver inclusive economic growth	Making better use of existing capacity	An integrated transport system that contributes to sustainable inclusive growth	Enable and sustain economic growth Improve accessibility for residents, visitors and business
Increases safety & resilience	**National Transport Strategy 2** and **Scotland's Road Safety Framework to 2030**	Increases the safety of the transport system and meets casualty reduction targets	Maintain and safely operate existing assets	A reliable and resilient transport system – safe and secure for users	Improve accessibility for residents, visitors and business

Edinburgh and South East Scotland Mass Transit in STPR2

2.10 Recommendation 12 in STPR2 relates to Edinburgh & South East Scotland Mass Transit. The review recommends that Transport Scotland works with regional partners to develop and enhance the cross-boundary public transport system for the Edinburgh and South East Scotland region, potentially comprising tram and bus-based transit modes including bus rapid transit (BRT) and bus priority measures. This would complement and integrate with the region's current bus, tram and heavy rail networks, to provide improved connectivity between Edinburgh and the surrounding communities in the region, as well as more direct connections between communities outside Edinburgh.

2.11 STPR2 developed the plan shown in Figure 5 for future mass transit interventions in the Edinburgh City Region, published in December 2022.

Figure 5: Indicative extent of Edinburgh and South East Scotland Mass Transit



Source: STPR2 Final Technical Report, Transport Scotland,2022

2.12 The plan includes:

- Potential Bus Rapid Transit (BRT) and Bus Priority
  - South Fife to Edinburgh;
  - Livingston to Edinburgh (via both Gogar and Heriot-Watt);
  - Southern Orbital including links to Cockenzie/ Blindwells;
  - Penicuik to Edinburgh.
- Recognition of the (then) tram extension under construction from York Place to Newhaven.
- Potential Tram extensions:
  - West, from Gogar to around Newbridge;
  - North from Haymarket/West End to Granton;
  - South / South-East from City Centre to Dalkeith / Queen Margaret University

2.13 The development of these potential routes was driven by a number of contributing factors, such as:

- Current transport network provision;
- Location of strategic development sites;
- Focusing on major demand movements;
- Helping address SIMD challenges around access to opportunities; and
- Helping address both 20% reduction in car kilometres and decarbonisation.

Regional Context

Introduction

2.14 Key transport strategies for South East Scotland are:

- Regional Transport Strategy for South East Scotland;
- Regional Spatial Strategy;

2.15 The following section sets out the implications of these two regional strategies for strategic transport in south east Scotland and TGBB in particular.

Regional Transport Strategy for South East Scotland

2.16 The Regional Transport Strategy (RTS) for the South-East of Scotland was prepared by the South-East of Scotland Regional Transport Partnership (SEStran). It covers SEStran's eight constituent local authorities provide a strategic framework for transport management and investment for the Partnership area.

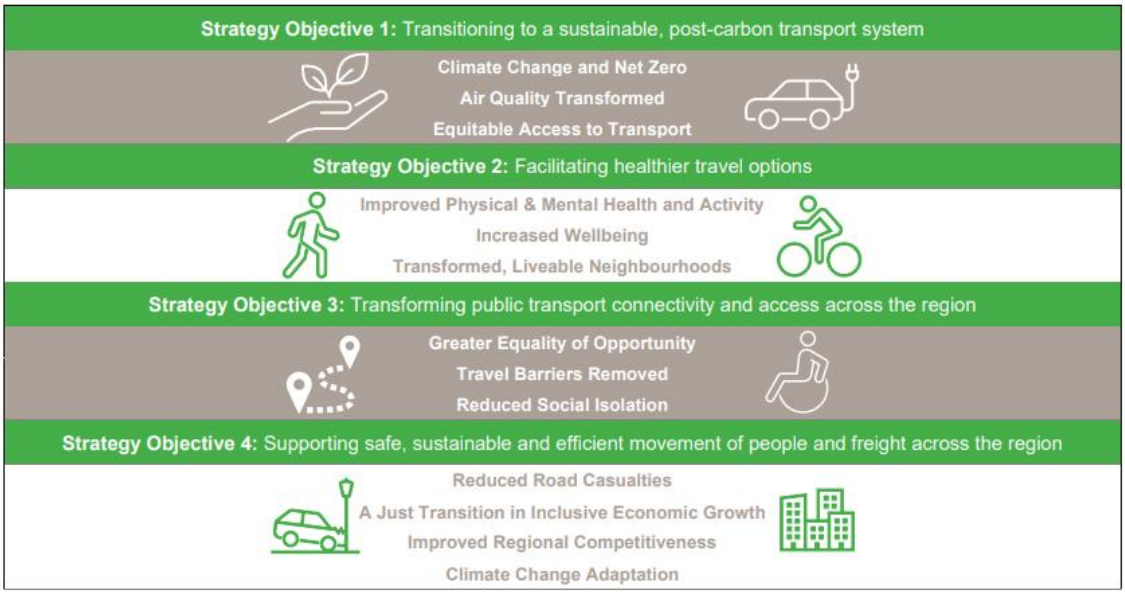
2.17 The RTS was developed within the policy framework provided by NTS2 and its four strategic priorities as well as defining a Sustainable Travel Hierarchy. The four priorities and hierarchy were used to guide the development of this RTS.

2.18 The RTS has the following vision:

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

2.19 The vision is supported by four objectives and associated desirable societal outcomes as summarised in Figure 6 below.

Figure 6: SEStran RTS objectives



Source: SEStran 2035 Regional Transport Strategy, SEStran, 2022

2.20 The RTS includes twelve mobility themes mapped to the four strategic objectives with each theme having a range of associated policies and actions. In terms of tram this is considered within the mobility theme of "Enhancing and extending rail services". This theme includes a policy

> "Implementation of an Edinburgh & South East Scotland Mass Transit system is supported in principle and should explore further opportunities to expand the regional light rail and tram network."

2.21 And an associated action of:

> "Undertake appraisal and business case development for an Edinburgh & South East Scotland Mass Transit system including new light rail and tram links within the region, based on a 'settlement connectivity' review."

Regional Spatial Strategy

2.22 The Planning (Scotland) Act 2019 introduced a new duty requiring local authorities to prepare a Regional Spatial Strategy (RSS). The RSS is a long-term spatial strategy for the strategic development of Edinburgh and South East Scotland City Region. Key themes include:

- Regional recovery and renewal including tacking inequality, environmental improvement and economic renewal;
- Adaptable, a more resilient region, including tackling climate change, building design and conservation.
- Accessible region including connectivity, infrastructure delivery and sustainable housing sites.

2.23 The RSS includes reference to mass rapid transit by tram or guided bus through north/south Edinburgh with cross boundary regional links to east, south and west, which would connect key development sites within the city, such as the Waterfront (both at Granton and Seafield) and the Bio Quarter / regional hospitals and for West Edinburgh, providing connectivity within the city and the city region to harness their full potential to provide necessary homes and nationally significant employment opportunities.

City Region Deal

2.24 The Edinburgh and South-East Scotland City Region (the city region) comprises of the local authorities of City of Edinburgh, East Lothian, Fife, Midlothian, Scottish Borders, West Lothian. In 2022, the region had a population of 1.4m, just under 700,000 jobs and GVA of £44.87 billion. This evidence's the significant role of the regional economy.

2.25 Supporting growth in Edinburgh and the Southeast Scotland region is therefore critical to the success of the overall economy. This means a need to attract inward investment, support housing growth and Strategic Employment Sites.

2.26 Despite the region's success economically, there remain significant challenges in terms of economic and health inequality, the climate challenge and wider environmental considerations.

2.27 The City Region Deal aims to accelerate growth, create new economic opportunities and new jobs that will help to reduce inequalities. The City Deal has five themes:

- Theme 1: Accelerating inclusive growth
- Theme 2: Removing physical barriers to growth
- Theme 3: A significant programme of construction
- Theme 4: Targeted employability and skills interventions
- Theme 5: Social benefit through innovation.

2.28 Theme 2 emphasises the unlocking physical barriers to growth including housing and transport connectivity, as a key component of the City Region Deal.

City of Edinburgh Context

Introduction

2.29 Key transport strategies for City of Edinburgh are City Plan 2030 and the City Mobility Plan.

2.30 The following section sets out the implications of these two regional strategies for strategic transport in Edinburgh and for TGBB specifically.

City Plan 2030

2.31 CEC prepared Edinburgh's new local development plan, named City Plan 2030, which sets out the strategy for development, proposals and policies to shape, development and inform planning decisions in the city over the next 10 years and beyond. It was approved in 2022. It has the following themes:

- A city where everyone shares in its economic success;
- A city in which everyone lives in a home which they can afford;
- A city where you don't need to own a car to move around; and
- A sustainable city which supports everyone's physical and mental wellbeing.

City Mobility Plan

2.32 The City Mobility Plan (CMP), approved in 2021 and updated in 2024, is fully consistent with National and Regional policies. The CMP sets out the Council's strategic approach to the sustainable, safe and effective movement of people and goods around Edinburgh up to 2030. It has the following vision:

> "Edinburgh will be connected by a safer and more inclusive net zero city transport system delivering a healthier, thriving, fairer and compact capital city and a higher quality of life for all residents."

This vision is supported by three high level aims and nine supporting objectives as set out in Table 2.2.

Table 2.2: City Mobility Plan Objectives

CMP aim	CMP Objective
People: To improve health, wellbeing, equality and inclusion	Encourage behaviour change to support the use of sustainable travel modes. Ensure that transport options in the city are inclusive and affordable.
Movement: To support inclusive and sustainable economic growth and respond to climate change:	Increase the proportion of trips people make by active and sustainable travel modes. Improve sustainable travel choices for all travelling into, out of and across the city. Reduce harmful emissions from road transport. Improve the safety for all travelling within our city. Maximise the efficiency of our streets to better move people and goods
Place: To protect and enhance our environment	Reduce the need to travel and distances travelled. Reduce vehicular dominance and improve the quality of our streets

Edinburgh Strategic Sustainable Transport Study Phases 1 and 2

2.33 Edinburgh Strategic Sustainable Transport Study (ESSTS) took place over several years with final reporting in 2021. Phase 1 was tasked with investigating and collating the policy-led rationale for future mass transit in the city. The study considered ten corridors where transit could best support policy outcomes. Four were recommended for further consideration with two prioritised for further development in the near term; Granton to the city centre, and the city centre to the south-east (Edinburgh BioQuarter and beyond). Phase 2 of ESSTS was tasked with carrying out further analyse of the Granton and South-East corridors, establishing corridor specific objectives, assessing possible route options, and carrying out preliminary analysis to support the case for mass transit. Work was also undertaken to consider potential mode options for the Granton and South-East corridors.

STAG Transport Policy Objectives

2.34 Scottish Transport Appraisal Guidance (STAG) requires the setting of specific, measurable, achievable, realistic and timebound (SMART) Transport Planning Objectives (TPOs) which must capture the essence of the evidence-based problem to be addressed or opportunity being undertaken.

2.35 The STAG Transport Planning Objectives for TGBB reflect:

- The policy outcomes based on national, city and regional objectives, described earlier in this section. These are represented through the 'high-level policy objectives' which are relate direct to policies as national, regional and local level. These are shown in the final column of Table 2.3 along with the adopted policies within which these 'nest'.
- The specific TPOs for TGBB are articulated through development of sub-objectives that reflect specific ways in which the scheme could support / impact on specific objectives. These are shown in Figure 7 and detailed further in Appendix A.

2.36 The STAG TPOs for have been developed to ensure they capture both the positive contribution that tram can make to achieving desired outcomes, and areas where there likely to be key policy related trade-offs, and choices between:

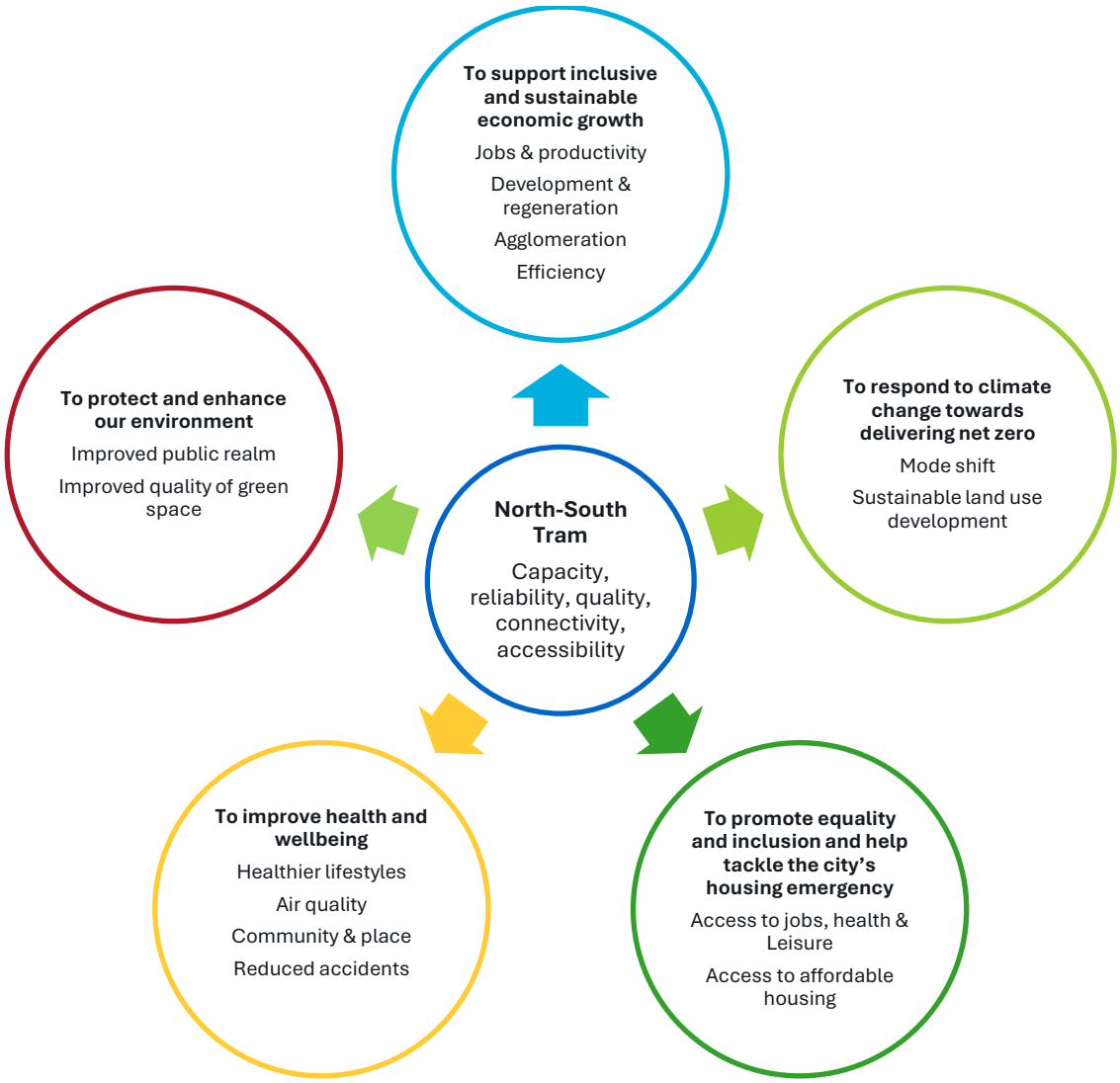
- The development of tram route which delivers against the critical success factors (CSFs) which will underpin the delivery of successful outcomes. These include achieving fast and reliable journey times to deliver strong operational and financial performance, and the wider connectivity that will drive tram demand, mode shift and positive economic, social and environmental outcomes.
- Trade-offs between tram and other modes/ road-users on on-street sections of route.
- Trade-off between tram and other priorities on route sections identified as supporting bio-diversity, of ecological importance, part of the Green-Blue Network, open space or of heritage value.

Table 2.3: National, Regional and Local Transport Objectives mapped to Strategic Objectives for Tram

NTS2	STPR2 TPOs	City Plan 2030	City Mobility Plan	High-Level Policy Objectives for Tram
Helps our economy prosper • Will get us where we need to get to • Will be reliable, efficient and high quality • Will use beneficial innovation	An integrated strategic transport system that contributes towards sustainable inclusive growth in Scotland	• A city where everyone shares in its economic success	Movement: To support inclusive and sustainable economic growth and respond to climate change	To support inclusive and sustainable economic growth
Takes climate action • Will adapt to the effects of climate change • Will help deliver our net-zero target • Will promote greener, cleaner choices	A sustainable strategic transport system that contributes significantly to the Scottish Government's net zero emissions target			To respond to climate change towards delivering net-zero
Promotes equality • Will be affordable for all • Will be easy to use for all • Will provide fair access to the services we need	An inclusive strategic transport system that improves the affordability and accessibility of public transport	• A city in which everyone lives in a home which they can afford • A city where you don't need to own a car to move around	People: To improve health, wellbeing, equality and inclusion	To promote equality and inclusion and help tackle the city's housing emergency

NTS2	STPR2 TPOs	City Plan 2030	City Mobility Plan	High-Level Policy Objectives for Tram
Improves our Health and wellbeing • Will be safe and secure for all • Will enable us to make healthy travel choices • Will help make our communities great places to live	A cohesive strategic transport system that enhances communities as places, supporting health and wellbeing	• A sustainable city which supports everyone's physical and mental wellbeing	Place: To protect and enhance our environment	To improve health, wellbeing & safety To protect and enhance our environment
Increases Safety and Resilience	A reliable and resilient strategic transport system that is safe and secure for users			

Figure 7: Strategic Objectives and associated outcomes of Trams to Granton, BioQuarter and Beyond



3 Policy Alignment

3.1 The Strategic Rationale aims to clearly communicate the strategic benefits of TGBB during consultation and during further development of the Strategic Business Case.

3.2 The high-level policy and associated STAG TPOs are summarised in Table 3.1. Following this, Table 3.2 sets out the role that TGBB has in supporting these objectives.

Table 3.1: Strategic Objectives and Transport Planning Objectives for TGBB

High-Level Policy Objectives	STAG Transport Planning Objectives (TPOs)
To support inclusive and sustainable economic growth	• To support economic growth at the city, region and national level • To support the development and success of Strategic Development Areas • To ensure growth is inclusive and sustainable
To respond to climate change towards delivering net-zero	• Encourage mode shift to more sustainable modes of transport • Improve the attractiveness of public transport through increased efficiency, journey time reliability and service quality • Support sustainable land-use development, aligned with spatial planning and development policies
To promote equality and inclusion and help tackle the city's housing emergency	• Increase public transport accessibility to jobs, education, healthcare and leisure, especially for disadvantaged and vulnerable users. • Improve mobility through improving the physical accessibility of transport. • To support access to affordable housing and support housing growth
To improve health, wellbeing & safety	• Reduce collisions and casualties from road transport through modal-shift to safer public transport and active travel methods. • Increase safety and security of the transport network. • Increase the attractiveness of the active travel network and increase active travel use. • Improve local air quality
To protect and enhance our environment	• To protect and enhance the built and natural environment and support the enhancement of 'place'.

Table 3.2: The role of TGBB in supporting Transport Planning Objectives

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
To support inclusive and sustainable economic growth	
To support economic growth at the city, regional and national level	*Context* • The Edinburgh City Region (ECR) accounts for **26%** of Scotland's population, **27%** of its jobs and **30%** of its GVA. City of Edinburgh Council (CEC) area itself accounts for almost **10%** of the Scottish population, **14%** of jobs and **17%** of GVA. Within the ECR itself, CEC accounts for **37%** of the population, **52%** of job and **57%** of GVA. This highlights both the ECR and CEC's important role in the Scottish economy. • The higher GVA reflects employment in high-value knowledge economy sectors e.g. Bio-Science etc. Edinburgh competes internationally in these sectors, and therefore supporting the continued success and growth of these sectors can deliver inward investment and net additional growth to the Scottish and UK economy. • Jobs growth has been concentrated in Edinburgh City. Over the last decade City of Edinburgh has experienced significant employment growth (of 10.6% between 2013 and 2023) and accounts for 75.6% of the growth in the City Region. Future forecast jobs growth will be concentrated in Edinburgh City Centre (12% from 2022 to 2042)[1] while significant population growth is forecasts across the ECR (11% in the same period). • Supporting the continued economic success and growth of the ECR and CEC area is vital to support the growth of Scottish economy a whole. *Role of Tram* The connectivity, capacity and accessibility provided by a mass transit network will be fundamental to the economic growth and success of Edinburgh and the wider ECR and, by extension, deliver net additional growth at the national and UK-level. This was the fundamental conclusion of an NIC study[2]. This will be achieved in the following ways: • **Expanded labour market catchments**: Providing better access for workers to jobs, and employers to a larger workforce catchment. In the Edinburgh region, disparities in journey times and accessibility exist. Enhancing connectivity can make key employment areas more attractive for business investment, location, and growth by enabling easier recruitment and better job access.

[1] Trams to Granton, BioQuarter and Beyond Strategic Modelling Report, *Draft (City of Edinburgh Council, 2025)*

[2] Second National Infrastructure Assessment (National Infrastructure Commission, 2023)

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	• **Enabling Additional Housing and Employment Growth:** TGBB can directly support the delivery of additional homes and jobs, especially those focused within Strategic Development Areas (SDAs). The Edinburgh Tram network has been developed to serve and connect the city's major SDAs. The existing line connects major hubs including the City Centre, Airport, West Edinburgh, and Leith Waterfront. The proposed TGBB extension would link Granton Waterfront to the BioQuarter and potentially Shawfair. By improving connectivity, the tram enables higher-density development and accelerates the delivery of homes and jobs in these areas. • **Relieving Capacity Constraints:** Overcoming transport capacity constraints that would, in the absence of tram, limit the ability of the transport network to accommodate planned growth. This is particularly important on key radial routes (such as the A701 and A7 in the Southeast) and through the City Centre – that would otherwise restrict planned growth. As demand increases, these constraints are expected to worsen. By increasing the effective capacity of the transport system, the tram enables the network to accommodate future growth more sustainably. • **Increasing Productivity:** By improving connectivity, the tram network will enable greater agglomeration – bringing high-value knowledge sectors closer together and increasing the effective density of employment. This is particularly impactful for Edinburgh's professional, scientific, technical, financial, and insurance industries. The proposed TGBB route will strengthen clustering in these sectors, supporting collaboration, attracting investment, and boosting overall productivity. Overall, NS tram has the potential to deliver both additional jobs (at SDAs, though inward investment and relieving capacity constraints) and to increase the productivity (GVA per worker) though agglomeration.
To support the development and success of Strategic Development Areas	*Context* • Growth in Edinburgh and South East Scotland is planned to take place in identified SDAs as set out in City Plan 2030 and Edinburgh and South East Scotland Strategic Sites Programme. There are four SDAs in the City of Edinburgh. These are: Granton Waterfront; BioQuarter; West Edinburgh; and the City Centre. In addition to these, Shawfair is a is identified (along with Granton) as one of seven strategic housing sites by the Joint Committee • The tram network is specifically developed to support the development of these sites, providing high quality, reliable public transport connectivity to and between *Role of Tram* The role of TGBB in terms of helping support the development of the SDAs is as follows: • **Provides accessibility/connectivity to, from and between SDAs:** SDAs are located in areas of relatively poor public transport connectivity in the north, west and south of the city. TGBB provides this high-quality public transport connectivity.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	• **Increases attractiveness of SDAs as a location for people to live, businesses to locate and increases the inherent value of SDA locations:** In the absence of high-quality public transport connectivity the effective labour market catchment of SDA will be severely constrained. Constrained labour market access will affect the attractiveness of these sites to developers and businesses and the ability of businesses to attract the best workers from across the ECR. • **Provides high-quality public transport link:** this is important as it provides access to expanded labour markets and connectivity to key gateways such as Edinburgh Airport, and interchange with national rail. • **More attractive to developers:** this helps accelerate development and at a higher density and higher value. • **More sustainable:** TGBB provides a cleaner and greener transport option for travel to, from and between the SDAs.
To ensure growth is inclusive and sustainable	*Context* • Accommodating future growth in an inclusive and sustainable manner is at the heart of City Plan 2030 and the City Mobility Plan. • Inclusion relates to tacking deprivation through addressing physical accessibility. • In terms of sustainability, this relates to provision of transport options which have a lower impacted on the environment. *Role of Tram* The role of TGBB in terms of ensuring growth is sustainable is as follows: • **Supporting higher-density housing and employment development**: By serving brownfield sites such as Granton Waterfront, the tram encourages compact urban growth, reducing the need for long-distance travel and promoting walking, cycling, and public transport use. Higher-density development also lowers the carbon cost of infrastructure and services. The tram corridor increases land values, helping to unlock commercial and employment development at scale. • **Improving transport network efficiency**: The tram alleviates pressure on congested corridors, particularly where bus journey times have deteriorated over the past decade. With faster, more reliable service, TGBB reduces the economic costs of congestion, accidents, and emissions, while improving the competitiveness of public transport. • **Providing a low-emission transport option**: TGBB offers sustainable connectivity to development areas that would otherwise face poor accessibility and high car dependency. In terms of inclusive growth, TGBB contributes by: • **Connecting areas of deprivation**: Including parts of Granton, Craigmillar, and Shawfair, improving access to employment, education, and services.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	• **Improving physical accessibility**: Through step-free access, level boarding, and integration with other modes, the tram enhances mobility for people with disabilities, older adults, and families. • **Enhancing personal safety**: On-board conductors and visible staff presence contribute to a safer travel environment, particularly benefiting women, elderly passengers, and minority groups.
To respond to climate change towards delivering net-zero	
Encourage mode shift to more sustainable modes of transport	*Context* Targets within City of Edinburgh Council's Mobility Plan include reducing vehicle kilometres by 30%, increasing the proportion of journeys made by active travel and enhancing public transport options to make them more efficient and accessible. *Role of Tram* TGBB can facilitate mode shift to more sustainable modes of transport in the following key ways: • **provision of a public transport option which is attractive to those who would otherwise drive:** TTGB will provide an attractive public transport alternative providing a fast, frequent, reliable, comfortable, safe and low carbon public transport option. • **provision of new public transport infrastructure and routes which improves public transport accessibility:** TGBB increases the public transport provision providing direct linkage to, from and between key areas of population and housing growth (such as Granton and Shawfair with key current and future potential destinations including at The BioQuarter, Edinburgh Royal Infirmary, Western General Hospital, Edinburgh City Centre, West Edinburgh. • **enhances integration with the existing (and future) public transport and active travel network:** TGBB provides an opportunity for integration with bus services in Edinburgh, where capacity is freed by tram for enhancements to the wider bus network in the city. This may also include integration with orbital bus services and/or integration with a re-introduced South Suburban rail line. Mobility hubs at tram stops would also support mode shift between tram, bus, cycling walking and wheeling. • **supports mode shift for longer journeys in the city region, nationally and internationally through enhanced integration with City of Edinburgh and city region's public transport network.** TGBB provides new opportunities for access to north and west Edinburgh for those travelling from Midlothian and the Scottish Borders (via interchange at Shawfair). TGBB also provides the opportunity for enhanced integration with national rail services at Waverley, Edinburgh Gateway and Edinburgh

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	Park. TGBB can also support international accessibility via improved links by tram from Shawfair and the BioQuarter in the south and from Granton in the north, to Edinburgh Airport.
Improve the attractiveness of public transport through increased efficiency, journey time reliability and service quality	*Context* • Improving attractiveness of public transport, and tram specifically, is fundamental to achieving the spatial planning priorities underpinning the City Plan and the transport objectives within the City Mobility Plan. • Key facets of improving public transport are efficiency, journey time reliability and service quality. • Bus infrastructure has reached maximum capacity. Princes Street caters for the maximum number of buses possible, leaving no room for further expansion. *Role of Tram* • **TGBB will connect the city's four major public transport corridors** and their associated levels of high population, high density and major development. Tram will provide a more efficient and effective means of transport on these high demand corridors. • **Tram is inherently a high-quality mode:** Evidence from Line 1 indicates excellent passenger perceptions and strong usage. • **Tram will support planned growth**: The future planned growth cannot be accommodated by expanding bus provision alone, as the volume of buses on the South East corridor and through the city centre is already at effective capacity. • Tram will achieve improved journey times and journey time reliability on the key radial links.
Support sustainable land-use development, aligned with spatial planning and development policies	*Context* • The Regional Spatial Strategy (RSS) includes reference to mass rapid transit with cross boundary regional links to east, south and west. It emphasises how mass transit could support the potential for new homes and employment, connecting key development sites and existing regionally significant sites such key hospitals. • City Plan 2030 includes tram line safeguards for TGBB, showing how these safeguarded routes support sustainable access to major development and employment areas within the council boundary such as Edinburgh Waterfront and the BioQuarter. *Role of Tram* • **Planned to support spatial planning objectives:** Tram has been planned from the outset to align with the spatial planning goals of the city and wider region, supporting sustainable growth and urban regeneration.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	• **Support SDAs:** TGBB supports the development of key SDAs and Shawfair, as outlined earlier in this section, by improving accessibility and enabling coordinated land use and transport planning. • **Supports higher-density land use:** The tram's accessibility, capacity, and connectivity enable higher-density development, which in turn encourages greater public transport and active travel use, reducing reliance on private vehicles.
To promote equality and inclusion and help tackle the city's housing emergency	
Increase public transport accessibility to jobs, education, healthcare and leisure, especially for disadvantaged and vulnerable users.	*Context* • Promoting equity is a core objective at a national, regional and local level. There is a consensus over time that improved transport can be a factor to counter social exclusion/promote social inclusion and thus support equity. • Public transport accessibility is essential to those in the most deprived communities, especially for those with no access to a car. Approximately 14% of households in the city have no adult in employment, and 23% of residents are economically inactive (a rate no better than the Scottish average). Poverty within Edinburgh is potentially much higher to locations outside the city centre with many health and education sites poorly served. *Role of Tram* • **Serves areas of high deprivation and low car ownership:** TGBB would serve some of the most deprived areas of Edinburgh. Many of these would be connected by the proposed tram corridor, including Granton; Muirhouse / Drylaw; The Inch / Moredun; and Craigmillar/ Greendykes. These locations have relatively poor public transport accessibility, with a reliance on bus. The introduction of TGBB in these areas would increase public transport accessibility to jobs, education healthcare and leisure. • **TGBB would open up opportunities for cross-city journeys:** key examples include between Edinburgh's two principal hospitals (Edinburgh Royal Infirmary and the Western General) and from The Inch/Moredun to employment opportunities in the city centre and West of Edinburgh. Young people could benefit from improved access to employment, educational, health, and open space and leisure facilities.
Improve mobility through improving the physical accessibility of transport.	*Context* The City Mobility Plan highlights the critical need for people of all abilities to be able to move around the city safely and conveniently and stated measures will be put in place to support a range of accessible travel options.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	Role of Tram • **Fully accessible design:** TGBB can improve mobility through improving the physical accessibility of transport as tram's low floor design is fully accessible to those with mobility constraints. New stations/ stops and access will require to be fully DDA compliant and there will be an opportunity with new infrastructure to design-in level access from the outset. Tram is also more legible than typical bus routes making it more attractive to infrequent users. • **Tram provides a fixed network**: Fixed networks, with bespoke branding, aid mental mapping of the users' environment, and are particularly important to the elderly and passengers with a disability who might otherwise find the perceived complexity of public transport a barrier to use. • **Travelling with confidence**: conductors enable more vulnerable users to travel with greater confidence, providing reassurance and improved perception of personal safety onboard.
To support access to affordable housing and support housing growth	*Context* A housing emergency was declared in Edinburgh in November 2023 due to significant pressures on the city's housing market, including homelessness rates and housing costs. A Housing Emergency Action Plan was published in March 2024 which sets out a six key priorities to address housing challenges faced in Edinburgh. The City of Edinburgh Council Strategic Housing Investment Plan identifies the need for 9,500 new houses to be built by 2029 to keep up with projected population increases in Edinburgh. *Role of Tram* • **Supports access to affordable housing and supports housing growth** by providing direct links for new homes delivered in Granton, Shawfair, West Edinburgh and BioQuarter to the opportunities they need to access. • **Ensures that housing development focussed in the SDAs is well connected to essential opportunities:** to ensure that those living in these new homes can access the opportunities they require including employment, education, leisure and retail. • **Improves accessibility to key opportunities from affordable housing in the Edinburgh City Region:** within the City Region, housing affordability is highest in the Scottish Borders and West Lothian. TGBB via integration with Borders Rail at Shawfair, provides improved access to employment opportunities via sustainable means from the Scottish Borders to employment opportunities in the BioQuarter as well as West Edinburgh.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
To improve health, wellbeing & safety	
Reduce collisions and casualties from road transport through modal-shift to safer public transport and active travel methods.	*Context* • Targets within City of Edinburgh Council's Mobility Plan include reducing vehicle kilometres by 30% and improving road safety and reduce traffic-related injuries. *Role of Tram* • **An attractive alternative to travel by private car:** TGBB provides a fast, reliable, frequent public transport alternative to the private car which will support a reduction in vehicle kilometres. • **Collision reduction**: TGBB can reduce collisions and casualties from road transport through modal-shift to safer public transport and active travel methods at a broad spatial level (through modal shift and reduced car kilometres travelled), and through integrated design involving the reduction of traffic in transit corridors and associated reductions in. • **Improved perception of safety:** conductors enable more vulnerable users to travel with greater confidence, providing reassurance and improved perception of personal safety onboard.
Increase safety and security of the transport network.	*Context* The environment of major streets, including Princes Street and North and South Bridge, is heavily influenced by bus, creating a poor pedestrian experience. The rapidly changing retail environment and the need to consider the purpose of the city centre provide an opportunity for change. *Role of Tram* The TGBB tram extension supports a safer and more secure transport network by: • **Providing a safer mode of travel**: Public transport, including tram, has significantly lower casualty rates per kilometre travelled compared to private vehicles. According to national statistics produced by ORR Rail Safety Statistics (2023/2024), there was one fatality involving a collision between a member of the public and a tram during that period. In the same period, approximately 130,000 cars and over 3,000 buses involved in collisions that led to injuries. • **Reducing collisions through design**: Tram infrastructure enables segregation from pedestrians and cyclists, allowing for wider footways and safer junctions. As seen with the Newhaven extension, tram projects can deliver substantial improvements to the active travel environment.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	• **Reducing road traffic incidents through mode shift**: By encouraging a shift from car to tram and active travel, TGBB can reduce overall traffic volumes and associated collisions and casualties. • **Improving personal security**: On-board conductors enhance the perception of safety, particularly for vulnerable users such as women, older adults, and minority groups, encouraging greater public transport use.
Increase the attractiveness of the active travel network and increase active travel use.	*Context* Edinburgh's active travel network is expanding within a complex transport and socio-economic context marked by rapid population growth, spatial inequality, and infrastructure constraints. While the city has made significant investments in walking and cycling infrastructure – such as the City Centre West to East Link (CCWEL) – many areas still face fragmented or disconnected routes, limited safe crossings, and inconsistent maintenance. These gaps are particularly evident in peripheral communities and areas of deprivation, where reliance on car travel remains high due to poor access to reliable alternatives. Addressing these issues by enhancing the quality, safety, and integration of active travel infrastructure is essential for encouraging mode shift, reducing emissions, and supporting inclusive access to jobs, services, and education. *Role of Tram* • **Direct provision of active travel infrastructure:** expanding opportunities for first mile-last mile trips by active modes; and facilitating improvements to public realm. • **presents additional opportunities to increase trips by active modes as part of first mile-last mile movements:** the expanded network will increase the 800m catchment of Edinburgh Tram's network significantly and thus enable local walking, wheeling and cycling trips as people access expanded Edinburgh Tram network and the associated new stops • **acts as a catalyst for associated public realm improvements along the corridors:** the recent Newhaven extension again provides evidence of the improvements TGBB would support particularly as part of new development in Granton and Shawfair, and established communities such as Muirhouse, Drylaw, Moredun and the Inch.
Improve local air quality	*Context* • As indicated in City of Edinburgh's Mobility Plan, transport accounts for one third of the air pollution caused by nitrogen oxides and one sixth caused by fine particles. Most of these emissions are caused by road transport. • Air pollution causes or contributes to a range of physical and mental conditions and is in part attributable to cutting short over 2,700 lives a year in Scotland and costs the Scottish economy £1.1bn per year in days lost at work and costs to the NHS.

High Level Policy Objective/Transport Planning Objective	The Role of Trams to Granton, BioQuarter and Beyond in supporting Objective
	Role of Tram • **New public transport options provide low emission alternative to driving:** introduction of new public transport routes in locations currently not served or poorly served, will make a positive contribution to carbon emissions reductions, improved air quality, a reduction in vehicle usage, and contribute to Edinburgh being a net zero city by 2030. Additionally, operation of TGBB by electric or battery power will help to improve air quality.
To protect and enhance our environment	
To protect and enhance the built and natural environment and support the enhancement of 'place'.	*Context* Edinburgh City Council has developed an ambitious plan for City Centre Transformation, focused on enhancing the quality of the city centre environment for all users, and prioritising the role of streets as 'destinations' rather than for 'transitory / movement spaces'. *Role of Tram* • **Urban Integration & Public Realm**: Trams are seen as a modern, attractive transport mode that integrates more harmoniously into historic city centres than buses. They support enhancements to public spaces and are complemented by traffic and demand management strategies. • **City Attractiveness & Quality of Life**: For businesses and high-value sector workers, quality of life is crucial. Trams contribute to a broader transport strategy aimed at reducing car dependency, improving the city centre environment, and enhancing neighbourhoods. • **Environmental & Heritage Considerations**: While ecological and amenity impacts of route options are still under review, the design will prioritise minimising disruption to wildlife habitats and heritage assets, with mitigation and reintroduction strategies as needed. • **Climate & Sustainability Goals**: Current regional transport actions are insufficient for carbon reduction. Trams, powered by electric or battery systems, are expected to positively impact climate goals by improving air quality and reducing greenhouse gas emissions.

4 Mode Selection

The Challenges for Mode Selection

Spatial Considerations

4.1 Edinburgh is a historic city, with a streetscape that is reflective of this. Major routes around the city are radial in nature and, aside from around 1.5km of the Western Approach Road, there are no urban 'expressway' or 'motorway' type routes within the contiguous urban area. It is also the case that many of the radial routes are relatively narrow in terms of the building-to-building width and have frontage development along significant proportions of their length, in comparison to other cities where boulevard-style main routes can be more common. The practical implications of this are that these routes have to service multiple roles and the split of space among users is complex and often a compromise.

4.2 This situation has led City of Edinburgh to commissioning work on the Street Allocation Framework, which was a key component in informing the City Mobility Plan (CMP). The CMP sets out how the city's route network should be utilised for the movement of people and goods, and how to achieve the best overall outcome by balancing the needs, constraints and opportunities afforded by different modes.

The City Centre

4.3 The issues discussed in Section 4.1 are equally applicable to the city centre, with the addition of further constraints. The nature of the city centre means that there is a practical limitation on the number of bus services that can be accommodated. This is a function of:

- Capacity at the Bus Station;
- On-street stop capacity on key routes including Princes Street; and
- Junction capacity at key city centre entry points.

4.4 With reference to the junction capacity point, the city centre is the primary focus of radial routes. The practical implications of this are the need to facilitate east-west movements with conflicting north-south movements; both of which may include active travel and public transport services. This creates a degree of fundamental capacity constraint on the city centre network's ability to cater for enhanced and new services. The practical implication of this is that, where practically possible, using mode solutions that maximise carrying capacity per vehicle movement should facilitate the highest level of potential public transport capacity into the city centre. This has to be balanced with the need to serve the demand across a wide area, ranging from local city services to regional and national routes. So, from an operational perspective, there has to be a presumption that, where possible, it will be necessary to serve high demand corridors and/or movements with vehicles that have higher carrying capacity per vehicle, to create and protect residual

network public transport capacity for areas where high-capacity vehicles are not appropriate given the demand and/or spatial characteristics.

Developments

4.5 The city region plans to support continued economic growth have identified seven strategic sites for development, comprising:

- Edinburgh Waterfront (Granton), City of Edinburgh;
- Shawfair, Midlothian;
- Blindwells, East Lothian;
- Calderwood, West Lothian;
- Winchburgh, West Lothian.
- Dunfermline, Fife; and
- Tweedbank, Scottish Borders.

4.6 While there is some existing (and planned) connectivity to the rail network, most of the public transport demand will fall on bus/BRT and Tram. For those centres that are outside of the contiguous urban area, STPR2 and other policies/plans identify bus/BRT as being the most appropriate solution (layering with rail as necessary); leaving the two sites at Granton and Shawfair as being most capable of being serviced by tram.

Implications for mode choice

4.7 The combination of the issues discussed in this section means that the mode choice for the north-south corridor is important in the wider context of transport for the city region.

4.8 As identified in STPR2, there are a number of locations in the city region where BRT would be a more appropriate solution. It is not intended to reproduce STPR2 analysis here, but the suite of documents are available via the Transport Scotland website. In summary, the selection of BRT as a potential solution was due to attributes including:

- Flexibility;
- Spacing between demand centres;
- Leveraging existing assets;
- Level of demand; and
- Physical geography/alignment constraints.

4.9 It is therefore important that consideration is given to maintaining future network capacity to operate these routes in support of the wider regional growth agenda.

4.10 Similarly, STPR2 has identified potential extensions to the Tram network. In summary, the selection of tram was based on attributes including:

- Relationship to the existing tram network;
- Existing development density / planned development density to generate sufficient demand; and
- Operational viability.

4.11 A key point of the STPR2 analysis is that the overall public transport solution needs to make best use of rail, tram, BRT and bus to provide optimal capacity in a resource and space constrained environment.

4.12 The sustainable investment hierarchy encourages a situation that makes the most of existing assets; including enhancing these before introducing wholesale new infrastructure; so-called 'sweating-the-asset'.

Further developments relating to the South Suburban Line and Tram-Train

4.13 Since STPR2 was published in December 2022 other work has taken place considering the South Suburban Line and potential passenger services.

4.14 Following an assessment process, Network Rail has confirmed that there are no plans to reintroduce passenger services on to the South Suburban Line. This work has also confirmed the continuing importance of the route for freight movements, moving empty rolling stock, and related roles. The work does however conclude that it may be possible to deliver a Tram-Train solution on the route; building on experience gained in the UK pilot study in Sheffield. The potential for Tram-Train operation on the South Suburban Line would require further study and consideration to demonstrate that it was able to help address current problems and/or leverage future opportunities. This could be linked with wider future work to take forward other aspects of STPR2 and provide a more operationalised plan for the region based on the STPR2 foundations.

4.15 It is not part of the remit of work on TGBB to undertake this wider work, but it is prudent that planning and development of TGBB takes into account this changed situation and the potential implications ; notwithstanding that these would need to be studied further and be subject to appraisal and business case scrutiny. This allows future flexibility to be 'baked-in' to this project at this early stage. While future potential Tram-Train operations on the South Suburban line would not directly impact the majority of the TGBB route, there are two key considerations:

1. Making a design assumption to facilitate (via passive provision and neighbouring stop location) a future tram stop at the intersection between the north-south route and the South Suburban line on Mayfield Gardens/Craigmillar Park (A701); and
2. The critical relationship between any future Tram-Train operations on the South Suburban and the extant route reservation via Craigmillar (Niddrie Mains Road).

4.16 Point 1 above is a relatively easy adjustment and is reflected in modelling/ route development. Point 2 suggests matters relating to the route reservation via Craigmillar should be more appropriately considered in future work to investigate the South Suburban Line, but the development of the north-south project should not adversely impact the status of the route reservation and should retain flexibility for this to be brought back in at a later stage development or delivery.

4.17 This position is maintained through the specimen route by maintaining the potential connection at Little France Drive / Tobias Street / Pringle Drive.

Validating STPR2 Mode Selection

4.18 A key question for TGBB is whether the STPR2 position in favour of Tram mode remains valid and preferred from a technical perspective.

4.19 There are no indications at this time of fundamental shifts in future demand patterns that would invalidate or substantially change the base assumptions around the TGBB corridor. Edinburgh Waterfront (Granton) remains a key development area; high levels of demand

are evident around the Bridges corridor associated with Waverley Station, the Royal Mile and the University of Edinburgh; Cameron Toll remains an opportunity location; the Royal Infirmary and Edinburgh BioQuarter continue to expand; and development continues around Shawfair.

4.20 In applying the transport investment hierarchy, making best use of the existing tram infrastructure means (i) optimising the potential for the existing services to carry passengers (the role of Edinburgh Trams Ltd), and (ii) leveraging spare capacity in the core part of the network (e.g. the city centre section), which is a 'sunk cost' to deliver enhancements through targeted extension. There are also important considerations in providing a network that is coherent and passenger-focussed.

4.21 This does not however mean that there should be a simple acceptance that only tram can provide the necessary enhancement to the 'supply' side, and it is necessary to validate the position from STPR2.

4.22 Much of the consideration around mode attempts to balance the competing aspects of:

- The 'Ask' – the role and outcomes that the network requires and the particular mode is able to deliver, including aspects such as service frequency and quality, the role in supporting economic growth, the 'step-change' in public transport supply;
- CAPEX – the capital cost of delivering new infrastructure / rolling stock;
- OPEX – the operational expenditure necessary to run the network (staff, maintenance, renewals, etc);
- Spatial capacity – the ability of the 'host' transport network to accommodate new infrastructure and services with an acceptable level of impact on other users; and
- Technical characteristics – the passenger capacity per unit, the kinetic design envelope (the physical space [length x breadth x height] and swept path required for safe operation).

4.23 The Multi-Criteria Assessment Framework in the SBC provides a structured approach to understanding the relationship between and among these aspects, and ultimately the selected mode (if it is to proceed to the next stage of design and business case development) will require to demonstrate that it is the optimal solution in meeting the project objectives.

4.24 In terms of the strategic rational, it is therefore concluded that there are no issues or combination of issues that suggest a move away from tram as the presumed mode for the purposes of modelling and testing is warranted, but it will be for the assessment process to present the justification for the mode choice delivering against the project outcomes.

5 Conclusion

Implications for Trams to Granton, BioQuarter and Beyond

5.1 The TGBB project represents a comprehensive approach to addressing multiple strategic objectives at national, regional, and local levels. By enhancing public transport infrastructure, it aims to foster economic growth, promote social inclusion, and contribute to environmental sustainability. These interventions will have a significant impact on Edinburgh's transport landscape and overall urban development.

5.2 The development of the tram network as part of the TGBB project is expected to have significant positive implications for Edinburgh and the surrounding areas. The trams will provide a reliable and efficient mode of transport, reduce traffic congestion and lower carbon emissions. This shift towards sustainable transport will support Edinburgh's net-zero targets by 2030 and improve air quality, contributing to better public health and wellbeing.

5.3 Moreover, the tram network will enhance connectivity across the city, making it easier for residents to access employment, education, and healthcare facilities. This improved accessibility will promote social inclusion, particularly for disadvantaged communities, and support the development of affordable housing initiatives.

5.4 TGBB will also play a crucial role in stimulating economic growth by connecting key development areas such as Granton and BioQuarter. These areas are vital for housing and employment, and the enhanced transport links will attract investment and support the creation of new jobs.

5.5 Considering the strategic rationale for mode there are no issues or combination of issues that suggest a move away from tram as the presumed mode for the purposes of modelling and testing is warranted, but it will be for the assessment process to present the justification for the mode choice delivering against the project outcomes.

5.6 In summary, the TGBB project, with its focus on developing the tram network, will significantly impact Edinburgh's transport landscape and overall urban development, making the city more sustainable, inclusive, and economically vibrant.

Appendices

A Strategic objectives against transport planning and STAG appraisal criteria

Figure A.1: Strategic Objectives mapped against Transport Planning Objectives and STAG appraisal criteria for TGBB

High-Level Policy Objectives	STAG Transport Planning Objectives (TPOs)	Alignment with STAG Appraisal Criteria
To support inclusive and sustainable economic growth	**Objectives** • To support economic growth at the city, region and national level • To support the development and success of Strategic Development Areas • To ensure growth is inclusive and sustainable	**Economy** • **Transport Economic Efficiency (TEE)** covers the benefits captured by standard cost-benefit analysis. • **Wider Economic Impacts (WEIs)** refer to any economic impacts which are additional to transport user benefits. These reflect where tram can help attract new jobs, help existing businesses, open appropriate land for development.
To respond to climate change towards delivering net-zero	**Objectives** • Encourage mode shift to more sustainable modes of transport • Improve the attractiveness of public transport through increased efficiency, journey time reliability and service quality • Support sustainable land-use development, aligned with spatial planning and development policies **Key Impacts (Trade-Offs)** • Ecology, biodiversity and network resilience	**Climate Change** • Greenhouse Gas Emissions • Vulnerability to the Effects of Climate Change • Potential to Adapt to the Effects of Climate Change
To promote equality and inclusion and help tackle the city's	**Objectives** • Increase public transport accessibility to jobs, education, healthcare and leisure, especially for disadvantaged and vulnerable users.	**Equality and Accessibility** • Public Transport Network Coverage • Active Travel Network Coverage • Comparative Access by People Group

High-Level Policy Objectives	STAG Transport Planning Objectives (TPOs)	Alignment with STAG Appraisal Criteria
housing emergency	• Improve mobility through improving the physical accessibility of transport. • To support access to affordable housing and support housing growth **Key Impacts (Trade-Offs)** • Affordability of public transport	• Comparative Access by Geographic Location • Affordability
To improve health, wellbeing & safety	**Objectives** • Reduce collisions and casualties from road transport through modal-shift to safer public transport and active travel methods. • Increase safety and security of the transport network. • Increase the attractiveness of the active travel network and increase active travel use. • Improve local air quality **Key Impacts (Trade-Offs)** • Impact on key designations including the Green-Blue Network and Local Nature Conservation Area	**Health, Safety and Wellbeing** • Accidents • Security • Health Outcomes • Access to Health and Wellbeing Infrastructure • Visual Amenity
To protect and enhance our environment	**Objectives** • To protect and enhance the built and natural environment and support the enhancement of 'place'. **Key Impacts (Trade-Offs)** • Biodiversity and habitats • Heritage	**Environment** • Biodiversity and Habitats • Geology and Soils • Land Use (including Agriculture and Forestry) • Water, Drainage and Flooding • Air Quality • Historic Environment • Landscape • Noise and Vibration

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