

Transport and Environment Committee

10.00am, Thursday, 1 February 2024

Tram from Granton to BioQuarter and Beyond: Consultation for Strategic Business Case Development

Executive/routine
Wards

Executive
4 - Forth, 5 - Inverleith, 6 – Corstorphine/Murrayfield,
11 – City Centre, 15 – Southside/Newington, 16 –
Liberton/Gilmerton, 17 – Portobello/Craigmillar

1. Recommendations

1.1 Committee is asked to:

- 1.1.1 Note the engagement and consultation on the City Mobility Plan (CMP) 2021 – 2023, the associated findings and the findings of the Circulation Plan consultation that took place in 2023;
- 1.1.2 Note that, following detailed evaluation of the potential mass transit options from Granton to BioQuarter and beyond, the further development of the city's tram network has emerged as the preferred modal solution;
- 1.1.3 Note that the evaluation also concluded the preferred route would utilise the Roseburn corridor, and connect through the city centre and along the Bridges corridor to southside and onwards to the BioQuarter via Cameron Toll;
- 1.1.4 Approve the commencement of a 12-week period of public consultation in spring 2024 to inform the development of a Strategic Business Case which will build on the CMP consultation and highlight the preferred route for north – south tram; and

Paul Lawrence

Executive Director of Place

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- 1.1.5 Note that a report will be submitted to Committee in autumn 2024 with findings from the consultation and a draft Strategic Business Case.

Report

Tram from Granton to BioQuarter and Beyond: Consultation for Strategic Business Case Development

2. Executive Summary

- 2.1 This report outlines the consultation approach for a proposed north – south tram route from Granton to Bioquarter and beyond. This builds on national, regional and city objectives to deliver a sustainable future for Edinburgh and the city region.

3. Background

- 3.1 Edinburgh's population has grown at three times the rate of Scotland in the last decade. The city region has grown at two times the rate of Scotland over the same period. Future population projections show Edinburgh growing 6.6% compared to Scotland's 1.8%.
- 3.2 The City Vision 2050 consultation findings established that residents of Edinburgh want the city to be Thriving, Welcoming, Pioneering, and Fair.
- 3.3 The City of Edinburgh Council's Business Plan 2023 -2027 aspires to create good places to live and work, end poverty, and deliver a net zero city by 2030.
- 3.4 The City Mobility Plan (CMP) supports these aspirations across three key themes: People, Movement, and Place.
- 3.5 Consultation in advance of the approval of the CMP demonstrated significant support for the expansion of the tram network in Edinburgh and improvement to overall public transport provision, with 62% of respondents confirming they would like to see an expansion to the tram network in the city, while 89% would like to see a general improvement to public transport.
- 3.6 The Council undertook a consultation in 2023 which focused on the actions to deliver the CMP and included the proposed development of a circulation plan. The results of this were [reported](#) to Committee in October 2023.

- 3.7 The Scottish Government National Transport Strategy (NTS) and Transport Scotland's Strategic Transport Projects Review 2 (STPR2) have highlighted Edinburgh and South-East Scotland Mass Transit as an investment priority.

4. Main report

- 4.1 Edinburgh faces many transport challenges, including congestion and the associated poor air quality. The CMP is designed to tackle this while also delivering improved provision for walking and wheeling, cyclists, making streets safer, managing parking to reduce unnecessary car journeys, and protecting and strengthening public transport provision. The target is to reduce car kilometres in the city by 30% and deliver a net zero carbon city by 2030. This will: deliver improved health and well-being, equality, and inclusion; support inclusive and sustainable economic growth that responds to climate change; and protect and enhance the environment.
- 4.2 City Plan 2030 has identified priority investment zones in the city (Waterfront, West Edinburgh, City Centre, and South-East Edinburgh). Quality transport links between these four strategic areas will connect residents with job opportunities and support the sustainable development of housing for Edinburgh that the city region requires due to the projected rising population.
- 4.3 Through the Edinburgh and South East Scotland Region City Deal and Sestrans Chief Officers Working group, there has been engagement at the regional level, with particularly close working with Transport Scotland, East Lothian and Midlothian Councils, to ensure a collaborative approach.

Economic Development

- 4.4 A high quality public transport service connecting Granton to the Bioquarter and beyond would deliver significant economic benefits.
- 4.5 In addition to directly connecting three of the four priority investment zones (and potentially connecting with the fourth), improved public transport would support social inclusion and continued local regeneration of communities (particularly in north Edinburgh, around the BioQuarter and beyond) while the proposed route would connect the city's two principal hospitals (Edinburgh Royal Infirmary and Western General Hospital).
- 4.6 Also, recognising that the southside corridor is one of the busiest in the city, the proposed route through southside to the BioQuarter and beyond could significantly improve access to public transport while reducing travel time.
- 4.7 The route also recognises the significant employment opportunities which currently exist and the potential for further development (e.g. BioQuarter), enabling sustainable growth of employment in the priority investment zones, alongside leisure and housing.

Modal Summary

- 4.8 Appendix 2 summarises the outcome of assessments of both Bus Rapid Transit (BRT) and tram as possible modes to provide mass transit solutions along the corridors from Granton Waterfront and Edinburgh BioQuarter and concludes that further development of the city's tram network would be the preferred modal solution (compared to BRT or doing nothing). This conclusion is reached on the basis that tram would provide significantly better quality, capacity, journey time and journey time reliability on each of the main corridors. This also presents the potential for enhanced future connectivity and to accelerate sustainable delivery of the city's Strategic Development Areas.
- 4.9 Further development of the city's tram network also builds on the existing routes and enables effective interchange between routes (and connectivity with other modes).

Route Options

Granton to City Centre

- 4.10 From Granton Waterfront to city centre, via Crewe Toll, two route options were considered through an evidence-based evaluation. Subsequently, the Roseburn Corridor has emerged as the preferred option for public consultation.
- 4.11 Some of the alignment for this was safeguarded within the existing Local Development Plan and the Tram Act 2006. In addition, the revised route proposed enables the tram to directly serve the Western General Hospital. The potential impacts on amenity and ecology are summarised in the impact sections of this report and are detailed in Appendix 2.
- 4.12 The alternative route, the Orchard Brae Corridor, would enable the Roseburn Path to be retained as a dedicated active travel corridor and would avoid the environmental impacts along the path. However, there would be limited opportunity to enhance segregated cycling in conjunction with tram along this corridor and, at some locations (e.g. Crewe Road South), existing cycle provision may need to be removed. Furthermore, Dean Bridge is a significant constraint, and it would not be possible to provide segregated cycling facilities at this location without a new structure. Journey time and reliability for tram would be reduced due to the impact of traffic congestion and further constraints. There would also be local ecological impacts and wider impacts on current and potential bus and network capacity.
- 4.13 While the impact of tram construction and operation on the current use and amenity of the Roseburn Path should not be underestimated, it must be balanced against the benefit of using an off road alignment for tram. The Roseburn alignment provides better journey times for passengers living along the route, and crucially also gives superior journey time reliability, avoiding traffic congestion. It should be noted that the journey times set out in Appendix 2 are averages of journey time but peak is likely to be longer. The Orchard Brae alignment passes along Queensferry Road, Dean Bridge and Queensferry Street which is a key route into the city and

bus route. Congestion along this route will impact journey time, making the tram less attractive to passengers and impacting the benefit realisation.

- 4.14 The Roseburn corridor also provides more flexibility in serving the airport as it would be possible for a tram to turn right at Haymarket to directly serve the Airport from Granton. In the event that timetabling constraints mean that the Airport is not directly served from Granton, the interchange would be at Haymarket. A tram using the Orchard Brae alignment would not be able to turn right from Queensferry Street onto Shandwick Place and there would be no flexibility for a tram to serve the Airport from Granton. To access the Airport, passengers would have to interchange at Princes Street (assuming the Bridges corridor is utilised).

City Centre to BioQuarter and Beyond

- 4.15 The proposed route through the city centre follows the safeguarded alignment along North and South Bridges towards the southside. Appendix 2 highlights the alternative routes considered and the potential constraints and issues associated with each.
- 4.16 Within the city centre, a delta junction at Princes Street's connection with St Andrew Square is proposed to maximise service options and connectivity by linking all of the tram corridors.
- 4.17 For the route from the Southside to Cameron Toll and on to the BioQuarter, the proposed route follows the safeguarded alignment in the Local Development Plan.
- 4.18 The options beyond the Bioquarter are also outlined in more detail in Appendix 2, with four alignment options being considered.

Newhaven and Granton

- 4.19 The tramline between Newhaven and Granton, commonly referred to as Line 1C, will not form part of this consultation as it was not identified as a priority at this time. This line may, however, form part of further tram expansion in the future.

Public Consultation

- 4.20 To allow a Strategic Business Case to be developed, a consultation that builds on the findings from the CMP is proposed to take place in spring 2024 for a 12-week period. The consultation will show the recommended route across the four sections (Granton – City Centre; through the City Centre; City Centre – Bioquarter; and Bioquarter and beyond into the city region) and detail why it has been chosen. It will also give indicative locations for tram stops along the route. In addition, it will include details of the alternate routes that have been explored and the reasons why these have been discounted. Full details on route alignments on the four sections can be found in Appendix 2.
- 4.21 Consultees will be asked to respond to a series of multiple-choice questions and will have the opportunity to give fuller answers via a free-text box. The consultation will be hosted on the Council's Consultation Hub and a series of public drop-in events will take place during the consultation period. Details of the consultation and associated communications plan are attached in Appendix 3.

5. Next Steps

- 5.1 If Committee agree to proceed, the consultation will be launched in spring 2024 for a period of 12 weeks. A go-live date will be announced and widely publicised in due course.
- 5.2 The consultation responses will be reported to Committee in autumn 2024, alongside a draft Strategic Business Case. Consultation feedback will also be provided via the “You said, we did function” on the Consultation Hub.

6. Financial impact

- 6.1 There are no direct financial implications arising from this report. Costs for the consultation and development of the Strategic Business Case are contained within Placemaking and Mobility revenue budget for financial years 2023/24 and 2024/25.
- 6.2 Estimates at this stage of the project indicate the overall cost to build the scheme could be in the region of £2 billion. Details of the financial requirements will be outlined within the Strategic Business Case report later in the year.
- 6.3 The costs of developing an Outline Business Case and Final Business Case (and all associated workstreams pre-construction) are in the region of £44m, and the Council has no funding allocated at present for such costs.
- 6.4 It is expected that Scottish Government/Transport Scotland would allocate funding as the project moves forward given its inclusion in STPR2, but this is yet to be confirmed and is clearly uncertain given current Scottish Government financial constraints. However, there have been positive discussions with the Scottish Government and Transport Scotland on support to develop an Outline Business Case and Final Business Case in the future. As such, the Council Leader and Convener for the Transport and Environment Committee will be issuing a letter to the transport minister to formally request financial support.
- 6.5 It may be that alternative public/private delivery models need to be explored. This would be looked at in detail at the Outline Business Case stage.

7. Equality and Poverty Impact

- 7.1 The project has used the Integrated Impact Assessment process to identify key groups, including those with protected characteristics, and early engagement has been undertaken ahead of the public consultation going live to receive and encourage feedback on the proposals.

8. Climate and Nature Emergency Implications

- 8.1 Public transport is recognised as a key factor in the reduction of emissions. Measures which increase public transport uptake 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. The delivery of a tram between Granton and BioQuarter and beyond would be a key enabler of sustainable growth at key development sites within the city and region.

- 8.2 As outlined in Appendix 2, although the ecological and amenity impacts are still being assessed for the proposed tram route along the Roseburn Corridor, it is likely that this will result in significant tree loss, with a necessary mitigation being replanting. It is anticipated that new structural and geotechnical technologies may enable improved planting strategies. Planting options will consider the most appropriate approach and the impact on habitats, including to reintroduce and enhance wildlife and pollinating corridors. A key design principle will be the requirements to support the minimise impacts on, and reintroduce as required, wildlife habits and pollinating corridors.
- 8.3 Delivery of the Orchard Brae route would necessitate removal of some protected trees to accommodate the alignment.
- 8.4 The potential impacts on the other preferred routes are outlined in detail in Appendix 2.
- 8.5 As part of the consultation, information will be given on potential environmental impacts and the project will encourage feedback on this.

9. Risk, policy, compliance, governance and community impact

- 9.1 The content of this report responds to national, regional and city priorities and consultations that have taken place regarding the delivery of a sustainable future for Edinburgh and the surrounding city region.
- 9.2 The consultation approach has been approved by the Council's Consultation Advisory Panel and developed in collaboration with officers in Corporate Services.
- 9.3 Early engagement has taken place with key stakeholders along the route (within the city and wider city region) and with other key organisations.
- 9.4 The proposed route along the Roseburn Corridor would enable the tram to directly serve the Western General Hospital, improving connectivity for staff, patients and visitors, without impacting on emergency services
- 9.5 While the proposed route along the Roseburn Corridor ensures that alignment is fully segregated, this is currently designated as an active travel route for the city. The proposal incorporates a 3-metre wide footpath for walking and wheeling adjacent to the tram line, with segregated cycling facilities provided on Queensferry Road and Orchard Brae. This will provide a direct link into the city centre and improved connectivity to the Western General Hospital via Crewe Road South.
- 9.6 The potential impacts on the other preferred routes are outlined in detail in Appendix 2.

10. Background reading/external references

- 10.1 [City Vision 2050 website](#)
- 10.2 [City of Edinburgh Council's Business Plan 2023 -2027](#)
- 10.3 [City Mobility Plan 2021-2030](#) (web pages)
- 10.4 [Scottish Government National Transport Strategy](#)
- 10.5 [Transport Scotland's Strategic Transport Projects Review 2 \(STPR2\)](#)
- 10.6 [Actions to Deliver Edinburgh's City Mobility Plan - Consultation Update](#)
- 10.7 [Circulation Plan Consultation Update](#)
- 10.8 [Edinburgh Economic Strategy](#)
- 10.9 [Edinburgh City Plan 2030](#)
- 10.10 [Reform of Transport Arm's Length External Organisations](#)
- 10.11 [2030 Climate Strategy](#)

11. Appendices

Appendix 1: Stakeholder Overview

Appendix 2: Tram: Granton Waterfront to Bioquarter and Beyond – Modal and Routing Summary

Appendix 3: Trams from Granton to Bioquarter and Beyond – Outline Communications Plan

Appendix 1 – Stakeholder Overview

Engagement / Consultation Check list		
	<u>Method of Engagement</u>	<u>Engagement to date</u>
<u>City of Edinburgh Council</u>		
a) Active Travel	In person	Ongoing
b) Public Transport	In person	Ongoing
c) Circulation Plan	In person	Ongoing
d) Planning	In person	Ongoing
e) Property	In person	Ongoing
f) Finance	In person	Ongoing
g) Legal	In person	Ongoing
h) Ecology	In person	Ongoing
i) Education	In person	Ongoing
<u>Elected Members</u>		
a) City of Edinburgh Council		
Labour Group	In person / in writing	Jan-24
SNP Group	In person / in writing	Jan-24
Conservative Group	In person / in writing	Jan-24
Liberal Democrat Group	In person / in writing	Jan-24
Green Group	In person / in writing	Jan-24
Independents	In person / in writing	Jan-24
b) Midlothian Council	In writing	Jan-24
c) East Lothian Council	In writing	Jan-24
<u>MSPs</u>		
Edinburgh		
Alex Cole-Hamilton	In writing	Jan-24
Daniel Johnson	In writing	Jan-24
Gordon McDonald	In writing	Jan-24
Ben Macpherson	In writing	Jan-24
Ash Regan	In writing	Jan-24
Angus Robertson	In writing	Jan-24
Jeremy Balfour (Region)	In writing	Jan-24
Sarah Boyack (Region)	In writing	Jan-24
Miles Briggs (Region)	In writing	Jan-24
Foysol Choudhury (Region)	In writing	Jan-24
Alison Johnstone (Region)	In writing	Jan-24
Lorna Slater (Region)	In writing	Jan-24
Sue Webber (Region)	In writing	Jan-24
Midlothian		
Colin Beattie	In writing	Jan-24
Christine Grahame	In writing	Jan-24

East Lothian		
Paul McLennan	In writing	Jan-24
<u>MPs</u>		
Edinburgh		
Deidre Brock	In writing	Jan-24
Joanna Cherry	In writing	Jan-24
Christine Jardine	In writing	Jan-24
Ian Murray	In writing	Jan-24
Tommy Sheppard	In writing	Jan-24
Midlothian		
Owen Thompson	In writing	Jan-24
East Lothian		
Kenny MacAskill	In writing	Jan-24
<u>Transport Scotland</u>	In person / in writing	Ongoing
<u>Midlothian Council</u>	In person / in writing	Ongoing
<u>East Lothian Council</u>	In person / in writing	Ongoing
<u>University of Edinburgh</u>	In person / in writing	Ongoing
<u>Public Transport User Forums</u>		
a) Edinburgh Bus User Group	In writing	Jan-24
b) Confederation of Passenger Transport	In writing	Jan-24
<u>City Region Deal Partners</u>		
a) Scottish Government	In writing	Jan-24
b) UK Government	In writing	Jan-24
c) SEStran	In writing	Jan-24
d) Other local authorities	In writing	Jan-24
e) Universities	In writing	Jan-24
<u>Active Travel, Accessibility and Placemaking</u>		
a) Spokes	In writing	Jan-24
b) Cycling Scotland	In writing	Jan-24
c) Living Streets	In writing	Jan-24
d) Sustrans	In person	Ongoing
e) Transform Scotland	In writing	Jan-24
f) Edinburgh Access Panel	In writing	Jan-24
<u>Business Forums</u>		

a) Edinburgh Chamber of Commerce	In writing	Jan-24
b) Federation of Small Businesses	In writing	Jan-24
c) Essential Edinburgh	In writing	Jan-24
<u>Statutory Environmental Consultees</u>		
a) Scottish Environmental Protection Agency	In writing	Jan-24
b) Nature Scot	In writing	Jan-24
c) Historic Environment Scotland	In writing	Jan-24
d) City of Edinburgh Council (see above)	In writing	Jan-24
<u>Community Councils</u>		
a) Granton & District Council	In writing	Jan-24
b) West Pilton / West Granton	In writing	Jan-24
c) Drylaw / Telford	In writing	Jan-24
d) Craigleith / Blackhall	In writing	Jan-24
e) Stockbridge / Inverleith	In writing	Jan-24
f) Murrayfield	In writing	Jan-24
g) West End	In writing	Jan-24
h) New Town / Broughton	In writing	Jan-24
i) Old Town	In writing	Jan-24
j) Southside	In writing	Jan-24
k) Grange / Prestonfield	In writing	Jan-24
l) Gilmerton / Inch	In writing	Jan-24
m) Craigmillar	In writing	Jan-24
n) East Lothian / Mid Lothian Community Councils	In writing	Jan-24
<u>Emergency Service</u>		
Police Scotland	In writing	Jan-24
Fire Scotland	In writing	Jan-24
Scottish Ambulance Service	In writing	Jan-24
Maritime and Coastguard Agency	In writing	Jan-24
<u>NHS Lothian</u>		
a) Western General	In person	Ongoing
b) Edinburgh Royal Infirmary	In person	Ongoing
c) Lauriston Place	As above	As above
d) Princess Alexandria Eye Pavillion	As above	As above
<u>Utility Providers</u>		
a) Scottish Water	In writing	Jan-24
b) Scottish Gas	In writing	Jan-24
c) Scottish Power	In writing	Jan-24
d) Virgin	In writing	Jan-24
e) City Fibre	In writing	Jan-24
f) BT	In writing	Jan-24

g) Verizon	In writing	Jan-24
h) Vodafone	In writing	Jan-24
<u>Transport Providers</u>		
a) McGills	In writing	Jan-24
b) Stagecoach	In writing	Jan-24
c) Citylink	In writing	Jan-24
d) Borders Buses	In writing	Jan-24
e) Megabus	In writing	Jan-24
f) Scotrail	In writing	Jan-24
g) National Express	In writing	Jan-24
h) Edinburgh Bus Tours	In writing	Jan-24
i) Edinburgh Car Club	In writing	Jan-24
j) Central Taxis	In writing	Jan-24
k) Transport for Edinburgh	In person	Ongoing
l) Edinburgh Trams	In person	Ongoing
m) Lothian Buses	In person	Ongoing
<u>Community Organisations, Advocacy or Grassroots Groups</u>		
a) EVOG	In writing	Jan-24
b) Moray Feu	In writing	Jan-24
c) Cockburn Association	In writing	Jan-24
d) The Causey	In writing	Jan-24
<u>Groups representing people with protected characteristics</u>		
a) Age Scotland	In writing	Jan-24
b) Together (Scottish Alliance for Children's Rights)	In writing	Jan-24
c) Children in Scotland	In writing	Jan-24
d) Equalities and Rights Network	In writing	Jan-24
e) Equality Network	In writing	Jan-24
f) Stonewall Scotland	In writing	Jan-24
g) Scottish Trans Alliance	In writing	Jan-24
h) LGBT Youth Scotland	In writing	Jan-24
i) Engender	In writing	Jan-24
j) Scottish Women's Aid	In writing	Jan-24
k) Scottish Women's Convention	In writing	Jan-24
l) Rape Crisis Scotland	In writing	Jan-24
m) BEMIS	In writing	Jan-24
n) Council of Ethnic Minority Voluntary Organisations Scotland	In writing	Jan-24
o) Scottish Refugee Council	In writing	Jan-24
p) Interfaith Scotland	In writing	Jan-24
q) Edinburgh Interface Association	In writing	Jan-24
r) Inclusion Scotland	In writing	Jan-24
s) Euan's Guide	In writing	Jan-24
t) HCL Transport	In writing	Jan-24
v) Lothian Centre for inclusive living	In writing	Jan-24
w) National Federation for the Blind Scotland	In writing	Jan-24

y) Mobility and Access Committee for Scotland	In writing	Jan-24
z) People First (Scotland)	In writing	Jan-24
aa) Royal National Institute of Blind People	In writing	Jan-24
bb) Sight Scotland and Sight Scotland Veterans	In writing	Jan-24
cc) The Guide Dogs for the Blind Association (Scotland)	In writing	Jan-24
dd) The Scottish Assembly	In writing	Jan-24
ee) Edinburgh Accessibility Commission	In writing	Jan-24
ff) Edinburgh Poverty Commission	In writing	Jan-24
<u>Statutory Objectors</u>		
a) Scottish Canals	In writing	Jan-24
b) Network Rail	In person	Ongoing
c) CPO Landowners / lessees	In writing	Jan-24
<u>Cultural / Heritage</u>		
a) Edinburgh World Heritage	In writing	Jan-24
b) Visit Scotland	In writing	Jan-24
c) Event Scotland	In writing	Jan-24
d) Edinburgh Tourism Action Group	In writing	Jan-24
e) Surgeon's Hall	In writing	Jan-24
f) Usher Hall	In writing	Jan-24
g) Traverse Theatre	In writing	Jan-24
h) Lyceum Theatre	In writing	Jan-24
i) National Museum of Scotland	In person	Ongoing
j) National Galleries of Scotland	In person	Ongoing
k) Capital Theatres	Written	Jan-24
l) Queen's Hall	In writing	Jan-24
m) Festivals Edinburgh	In writing	Jan-24
n) Individual Festivals	In writing	Jan-24
o) Dovecot Studios	In writing	Jan-24
<u>Others</u>		
a) Haulage Association	In writing	Jan-24
b) Hotel Association	In writing	Jan-24
c) Edinburgh Leisure	In writing	Jan-24
d) Scottish Enterprise/ Bioquarter	In person	Ongoing
e) Logistics UK	In writing	Jan-24
f) Royal Mail	In writing	Jan-24
h) West End Business	In writing	Jan-24
i) Edinburgh St James	In writing	Jan-24
j) Bridges Corridor Businesses	In writing	Jan-24
k) Cameron Toll Shopping Centre	In person	Ongoing
l) Quartermile	In writing	Jan-24
m) Bridge Farm	In person	Nov-24
<u>Education</u>		
a) Stewarts Melville	In writing	Jan-24

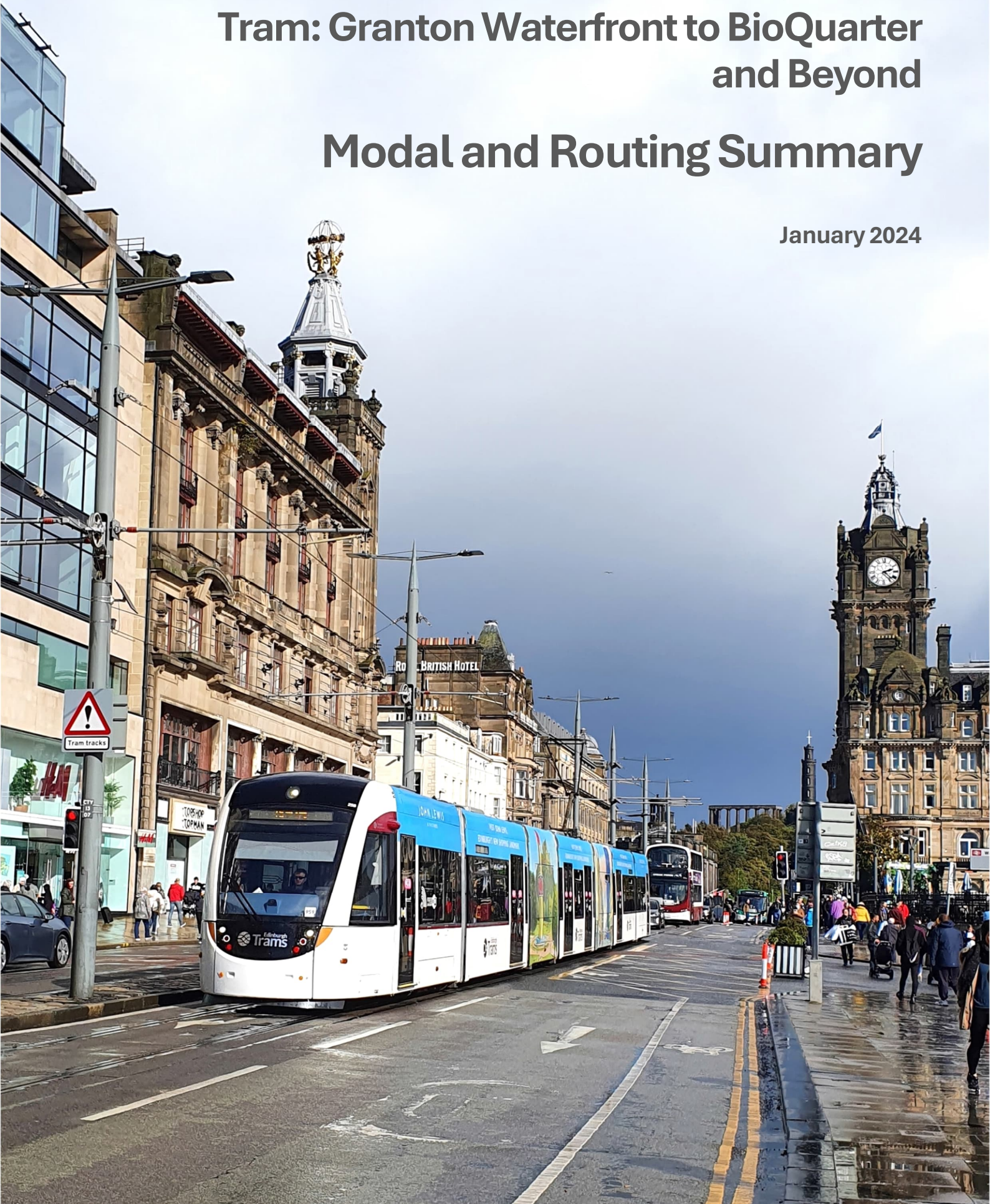
b) Mary Erskine	In writing	Jan-24
c) St George's School for Girls	In writing	Jan-24
d) Heriots	In writing	Jan-24
e) Fettes	In writing	Jan-24
f) Edinburgh Academy	In writing	Jan-24
g) City of Edinburgh Council Primary Schools	In writing	Jan-24
h) City of Edinburgh Council Secondary Schools	In writing	Jan-24
i) Napier University	In writing	Jan-24
j) QMU	In writing	Jan-24
k) Heriot Watt	In writing	Jan-24
l) Edinburgh College of Art	In writing	Jan-24
m) Edinburgh College	In writing	Jan-24

The City of Edinburgh Council

Tram: Granton Waterfront to BioQuarter and Beyond

Modal and Routing Summary

January 2024



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Tram: Granton Waterfront to BioQuarter and Beyond Strategic Business Case - Summary January 2024

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1. Introduction

1.1 Introduction

This note summarises work undertaken to assess modal and route options, supporting the development of a second tram route between Granton Waterfront, the BioQuarter and Beyond. It follows previous work (Edinburgh Strategic Sustainable Transport Study (ESSTS) Phases 1 and 2 which reaffirmed the case for transit on key corridors, as a means of delivering against the City of Edinburgh Council (CEC) policy priorities and outcomes. Tram underpins City Plan 2030 and the City Mobility Plan and is key in helping the city meet net zero targets.

Given the significant projected demand along the corridor, work has identified tram as the most suitable and best performing mode. Route options have been developed but final preferred route options will be confirmed on completion of the engagement and public consultation exercise being conducted in early 2024.

1.2 Regional Dimension

1.2.1 National Transport Strategy 2

National Transport Strategy 2 (NTS2) was published in February 2020 and provides the national transport policy framework, setting out a clear vision of a sustainable, inclusive, safe and accessible transport system which helps deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. It sets out key priorities and outcomes to support that vision:

- Reduces inequalities - Everyone in Scotland will share in the benefits of a modern and accessible transport system.
- Takes climate action - People will be able to make travel choices that minimise the long-term impacts on our climate and the wellbeing of future generations.
- Helps deliver inclusive economic growth - Scotland will have a transport system that will help deliver sustainable and inclusive economic growth enabling the whole country to flourish.
- Improves our health and wellbeing - Scotland's transport system will be safe and enable a healthy, active and fit nation.

NTS2 sets out the Sustainable Travel Hierarchy that promotes walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use for the movement of people. It also outlines the Sustainable Investment Hierarchy to inform future investment decisions and ensure transport options that focus on reducing inequalities and the need to travel sustainably are prioritised.

1.2.2 Strategic Transport Projects Review 2

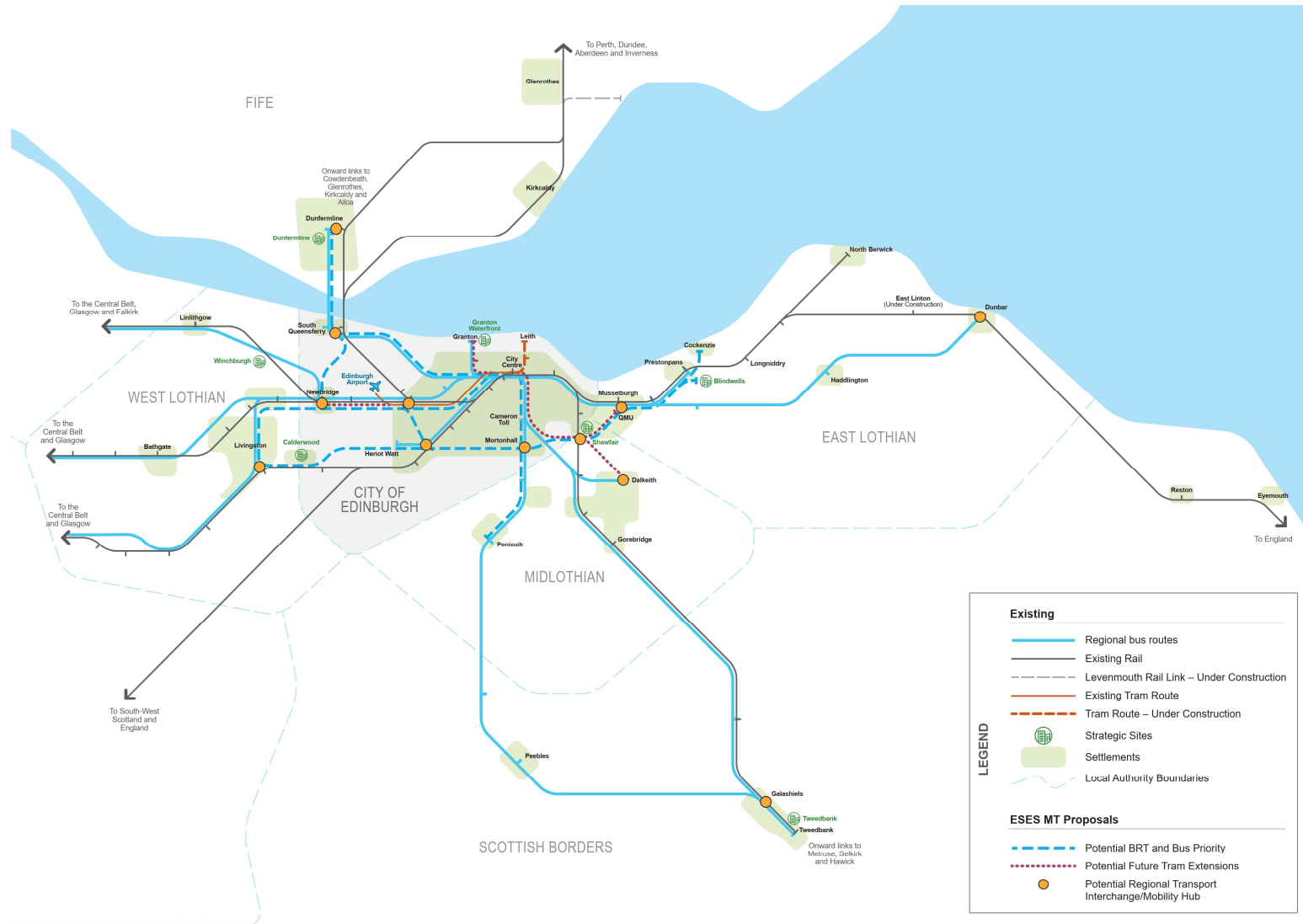
The Strategic Transport Projects Review 2 (STPR2) has identified nationally significant projects which deliver NTS2 outcomes and priorities. Recommendation 12 considers the delivery of a step-change in public transport provision within the Edinburgh and South East Scotland (ESES) Region, captured under the term 'Edinburgh and South East Scotland Mass Transit (ESES MT)'.

An ESES MT system would increase public transport options for cross-boundary travel, facilitating end-to-end sustainable travel choices, and reduce public transport journey times making these competitive compared to travel by private car. It is envisaged the system could comprise a mix of tram and bus-based transit modes, including Bus Rapid Transit (BRT), and involve reallocating existing road space to reduce the impact of congestion on public transport journey times and reliability. The system would complement and integrate with the Region's current bus, tram, heavy rail and active travel networks.

The system would also connect with existing and new mobility hubs/transport interchange locations in the Region, alongside the wider local network to further facilitate cross-boundary connectivity. This would extend the reach of mass transit and improve connectivity for more rural as well as urban areas to encourage mode shift from car to public transport and other more sustainable travel options.

Tram: Granton Waterfront to BioQuarter and Beyond Modal and Routing Summary

Figure 1.1: STPR2 Recommendation 12, Edinburgh and South East Scotland Mass Transit



1.2.3 City Mobility Plan

Within Edinburgh, transport is one of the biggest contributors to greenhouse gas emissions, including carbon, and central to the damage being done to the environment. If the city is to meet the challenge of becoming net carbon zero by 2030, transport policies and practises must change.

The vision of the City Mobility Plan is that “Edinburgh will be connected by a safer and more inclusive net zero carbon transport system delivering a healthier, thriving, fairer and compact capital city and a higher quality of life for all residents”.

Over the past ten years Edinburgh has made significant progress with investment in greener and more affordable public transport and active travel provision. While the Covid-19 pandemic has changed why and how people move around the city, the delivery of a more efficient public transport network, helping reduce car travel and emissions, is a key outcome that continues to be supported.

The City Mobility Plan’s aim for 2030 is a city transformed. The vision is that the mass transit network, including tram, will have been extended to connect the Waterfront in the north to the Edinburgh Royal Infirmary in the south and beyond. The city region’s seven Park & Ride facilities will be upgraded to support fast and frequent public transport along strategic bus lanes and mass rapid transit routes travel from these interchanges into the city. Additional regional interchanges will have been developed to support a wider regional strategy. This will give people travelling to the city a better choice to leave their cars at multi-modal journey hubs and travel around the city on a fast, efficient public transport network.

1.3 Scope of the Assessment

The purpose of the route assessment has been to identify the advantages and disadvantages of alternative route options between Granton, the BioQuarter and Beyond. Analysis has been undertaken to ensure that options are deliverable and that key technical issues and environmental impacts are understood.

Workstreams have included:

- Structures, geotechnical and environmental assessments supporting the identification of a Preferred Option
- Strategic modelling to inform patronage forecasts
- Microsimulation modelling to identify traffic impacts and tram journey times
- Client and stakeholder engagement

Public Consultation and further engagement will inform the identification of a preferred option to be developed for the Strategic Business Case (SBC). This document will set out the case for investment and the evidence-base to inform decision-makers on whether and how the scheme should proceed.

Work has gone beyond the scope of a typical routing assessment at this stage, in respect of a number of key areas that are critical to CEC being able to convey the level of evidence to decision makers. Examples include:

- structures, geotechnical and ecology assessments on the Roseburn corridor, including a review of the feasibility of an alignment via Telford Road, and
- feasibility design, including microsimulation modelling of the on-street section of route from North Bridge to Cameron Toll in the south.

Candidate designs have helped demonstrate what the tram concept and associated provision for other modes could look like, how it might interface with active travel and other transport modes and how it might help achieve a sense of place.

Alignment constraints have been identified and initial discussion have been held with CEC Planning Officers to help identify mitigation strategies and necessary safeguards. Discussions have also been held with Midlothian Council and East Lothian Council regarding route options. Work has been undertaken on the financial case for the project

with a key focus on project cashflows. Project governance has ensured that work is consistent with Transport and Works (Scotland) processes.

1.4 Summary of Transport Recommendations by Corridor

The 2019 Edinburgh Strategic Sustainable Transport Corridors study identified four routes as being more suitable for the consideration and development of transit solutions:

- Corridor 3 – South East via BioQuarter
- Corridor 6 – Granton
- Corridor 7 – towards Newbridge
- Corridor 8 – West of Hermiston

Based on a high-level appraisal of benefits, including an assessment of future development opportunities, Granton and the South East via BioQuarter corridors scored most strongly and these have subsequently been taken forward for further assessment.

1.4.1 Corridor 6: Granton

The corridor serves major existing destinations such as the Western General Hospital, Edinburgh College and Craighleith Retail Park or Comely Bank, and connects areas of multiple deprivation, including Muirhouse and Pilton. In addition, the northern section of the corridor includes major brownfield development opportunities around the Waterfront area. There is also an opportunity to integrate tram with the emerging Granton Masterplan, which is currently under development.

1.4.2 Corridor 3 – South East via BioQuarter

The South East Corridor contains all the key elements that support the development of a successful tram corridor. These include having strong existing demand generators (the University of Edinburgh, Cameron Toll, Royal Infirmary), designated major employment centres (the BioQuarter), the potential for supporting further sustainable housing and mixed-use development, and the presence of strategic Park & Ride. The corridor could also serve existing and planned housing and employment areas in Midlothian, reinforce the development of Shawfair town centre, and provide interchange with the Borders Railway. A route to East Lothian has the potential to serve Queen Margaret University and provide interchange with the East Coast Mainline at Musselburgh Station.

2. Mass Transit Options

2.1 Modal Option Assessment - Tram v BRT

Bus Rapid Transit (BRT) has several characteristics that differentiate it from tram:

- BRT offers greater flexibility in terms of routing. For example, it can run on-street and serve more than one corridor, can be delivered in less time and in terms of engineering alignment, gradients can be steeper and radii tighter than tram.
- BRT would typically be a lower capital cost alternative to tram. However, achieving quality approaching that of tram can narrow this cost differential substantially. For example, in order to achieve the same levels of reliability on BRT there would still be a requirement to divert utilities as is required for tram.
- BRT does have lower vehicle capacity, and this means it could not deliver the same overall corridor capacity as tram. In the UK, BRT therefore tends to operate either in 'secondary' cities and towns (Cambridge, Luton-Dunstable) or in lower capacity corridors within larger conurbations (e.g. Leigh Guided Busway in Manchester).
- Operating costs for BRT can be high, certainly on high-demand routes. That is because more drivers are needed to transport the same number of passengers, unit costs are higher, and there is a shorter replacement horizon.

- In general, tram tends to be a more appropriate solution on higher demand corridors in larger cities (Manchester Metrolink, Midland Metro, Nottingham NET, Sheffield Supertram). These cities have all developed, and continue to develop, successful tram networks following the implementation of an initial route.

2.1.1 Key Issues in an Edinburgh Context

There are several specific issues when considering the BRT alternative in an Edinburgh context for the SBC corridors, as summarised in Table 2.1.

Table 2.1: BRT Option – Key Considerations

Route Section	Issue for Consideration
City centre - Modal mix and complexity	<ul style="list-style-type: none"> ▪ Tram and buses (at high frequency) both operate within the city centre. ▪ The historic nature of the city centre means than space is constrained, and the feasibility and practicality of providing a new BRT mode would be complex.
City centre – Consistency with City Centre Transformation Objectives	<ul style="list-style-type: none"> ▪ Ability to reduce car traffic and buses in the central area (in line with Circulation Plan ambitions). The realisation of the Circulation Plan relies on achieving a significant reduction in traffic through mode change to public transport and active travel. BRT’s ability to achieve this is more limited due to: <ul style="list-style-type: none"> ▪ Higher number of BRT vehicles required to carry equivalent passenger capacity. ▪ Greater attractiveness of tram in terms of attracting transfer from car and achieving modal shift. It would be more difficult for BRT to provide the quality and attractiveness that provides an attractive and viable alternative to car.
South East corridor (Inner sections)	<ul style="list-style-type: none"> ▪ Key issue in corridor is high volume of buses (c 80 per hour per direction) and poor bus journey times and journey time reliability associated with high bus volumes operating through a space-constrained corridor. ▪ Tram would be designed to deliver high levels of priority and achieve significant improvements in journey time and journey time reliability. ▪ Ability to secure comparable journey times and journey time reliability with BRT is uncertain, and there is significantly less scope for reduction in bus services with BRT.
Cross-City Connectivity	<ul style="list-style-type: none"> ▪ A transit network providing linkages between the key strategic development areas across the city would support the achievement of the City’s spatial planning, economic development, and transport sustainability objectives. ▪ The existing tram network provides high quality direct connectivity between the Airport, Edinburgh Park, the city centre and Leith Waterfront. A tram route from Granton and along the South East corridor would connect the remaining Strategic Development Areas (Granton Waterfront and BioQuarter). ▪ This cross-city connectivity is more challenging to provide via BRT, given: <ul style="list-style-type: none"> ▪ That any BRT to tram service would require interchange in the city centre. Designing for quality interchange would be challenging given the existing tram and bus routes and stops in the city centre. ▪ The capacity, speed, reliability, and quality of BRT connections would be lower.
Development Potential	<ul style="list-style-type: none"> ▪ A key objective of tram is to support the sustainable development of the Granton Waterfront and BioQuarter Strategic Development Areas. For the reasons outlines above, tram offers greater potential in helping support a higher overall level and density of development, and to provide for this growth in a more sustainable manner.

2.2 Tram v BRT Assessment against Transport Planning, STAG Objectives and Deliverability

An assessment of the benefits of Tram versus BRT has been undertaken across Transport Planning, STAG Objectives and Deliverability criteria¹.

Comparing against Transport Planning Objectives, tram performs better than BRT against each sub objective. Differences are most pronounced in terms of sustainable economic growth and development and contribution to the City of Edinburgh’s zero emissions targets.

¹ <https://www.transport.gov.scot/media/10165/idm-guidance-annex-d-business-case-guidance-for-publication-jan-2016.pdf>

Tram also performs better than BRT across a range of STAG Objectives, particularly around economic benefits, accessibility and integration.

In terms of Deliverability, both options have a range of similar challenges. However, operationally, tram is more deliverable than BRT. Tram provides connectivity with the existing route, enabling a range of destinations to be served, BRT frequencies would be similar to existing bus and interchange with other modes would be complex. As a result BRT does not deliver against wider city centre transformation objectives.

Powers and consents, stakeholder acceptability and financial performance would also present greater challenges to BRT deliverability than tram. There is however greater scope for BRT to avoid potential land take and associated risks due to ability to run on-street and have greater route flexibility, but this may compromise scheme performance and contribution to objectives.

2.3 Tram v BRT Conclusion

The modal options assessment has identified that further development of the City's tram network is the preferred modal solution (compared to a BRT alternative or doing nothing) to support the City's key spatial development, climate change, inclusion, safety and 'place' related objectives.

- Tram would provide significantly better quality, capacity, journey time and journey time reliability than a BRT-based alternative on each of the main corridors.
- As a development of the existing tram network, tram would also provide high-quality cross-city connectivity across corridors and connect all the city's major Strategic Development Areas.
- Within the city centre, tram would be a fundamental enabler of the reduction in vehicular traffic and buses that is central to the achievement of the City Centre Transformation Vision to enhance provision for active modes, improve the pedestrian and built environment. Tram would achieve this by providing the public transport capacity, through connectivity and overall attractiveness to support modal shift, that could not be achieved with BRT. Indeed, any BRT solution would add to the existing modal mix (bus and existing tram) in the city centre. This would add greater complexity and additional need for interchange from a passenger perspective and be challenging to accommodate in terms of route and stop infrastructure, without compromising the ability to deliver desired City Centre Transformation priorities.
- The better performance and quality of tram also underpin its greater potential to support several strategic planning objectives, including to support and accelerate the sustainable delivery of Strategic Development Areas and other areas of designated growth. Tram provides enhanced regional connectivity via strategic interchange (P&R and rail) and potential extensions to Dalkeith or East Lothian.
- Given the early stage of development, there remain a number of deliverability challenges in developing and delivering tram expansion. However, the routing work concludes that tram is technically feasible and that there are no 'showstopper' deliverability risks.
- The acceptability of BRT is less certain, given its comparatively poor performance compared to tram in meeting the City's objectives. This represents a key risk to the deliverability of this option.

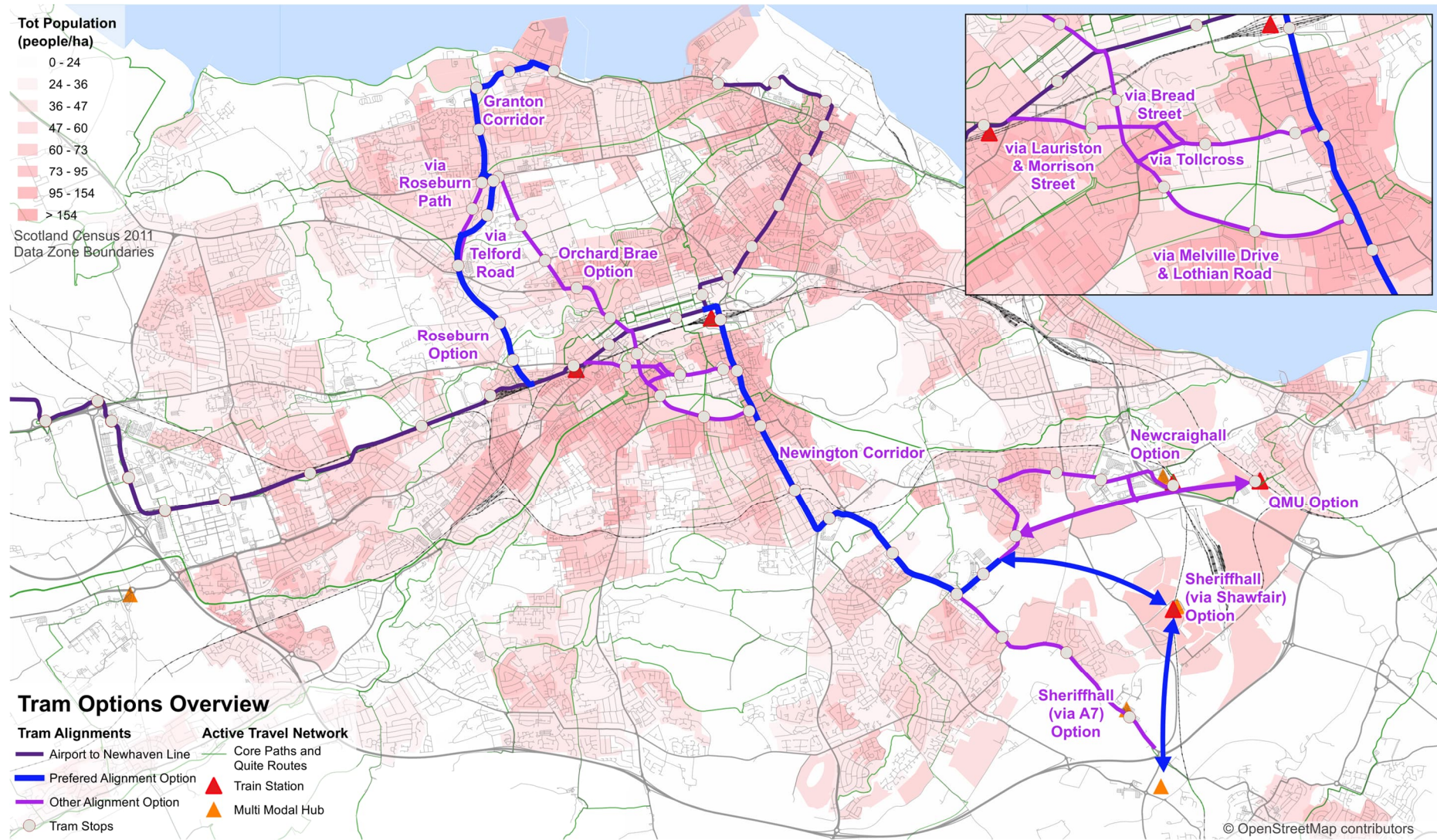
3. Route Options

3.1 Introduction

An overview of tram route options is given in Figure 3.1

Tram: Granton Waterfront to BioQuarter and Beyond
 Modal and Routing Summary

Figure 3.1: Granton Waterfront to BioQuarter and Beyond



3.2 Granton Waterfront to City Centre

The Granton Waterfront to city centre corridor connects Granton in the north of Edinburgh to the existing tram network in the city centre. It is characterised by established residential areas such as Pilton, Muirhouse and Ravelston. In addition, major residential development is proposed on former industrial land around Granton Waterfront. The areas around Pilton and Muirhouse are some of the most deprived in Edinburgh. Conversely, further south, in the vicinity of Orchard Brae and Ravelston, communities are some of the most affluent in the city.

Two Options have been considered between Crewe Toll and the city centre. These are the Roseburn Corridor and Orchard Brae Corridor, as shown in Figure 3.2.

Between Granton and Crewe Toll, based on work to date, it is proposed that the Roseburn Corridor is presented as the recommended option at public consultation.

3.2.1 Roseburn Option

Previous work on the Roseburn tram alignment assumed a route from Russell Road / A8 to Ferry Road, west of Crewe Toll. The alignment is fully segregated, following an old railway track bed; it is currently an active travel corridor. From Crewe Toll, the route follows West Granton Access and Waterfront Avenue to Granton Square. This alignment is the safeguarded route for tram within the existing Local Development Plan.

The emerging preferred tram alignment option is similar to the above but the route would divert to follow Telford Road to Crewe Toll, re-joining the original alignment at West Granton Access. The key advantage of this revised route is that it directly serves the Western General Hospital, improving connectivity for staff, patients and visitors.

To minimise the required cross section on the Roseburn corridor, and the resulting environmental impact, it is proposed that a 3-metre-wide footpath will be provided adjacent to the tram alignment. This will be suitable for walking and wheeling, but cycling will be discouraged. Instead, segregated cycling facilities will be provided on Queensferry Road and Orchard Brae, providing a direct link to the city centre and improved connectivity to the Western General Hospital via Crewe Road South.

Ecological impacts are currently being assessed but it is likely that significant tree loss will result from tram construction with necessary replanting following completion. New structural and geotechnical technologies may enable improved planting strategies, compared with previous proposals from the mid 2000s. Planting options will consider whether a natural approach to replanting or a more structured landscape / park solution is most appropriate. Replanting will consider the impact on habitats and the need to reintroduce and enhance wildlife and pollinating corridors.

3.2.2 Orchard Brae Option

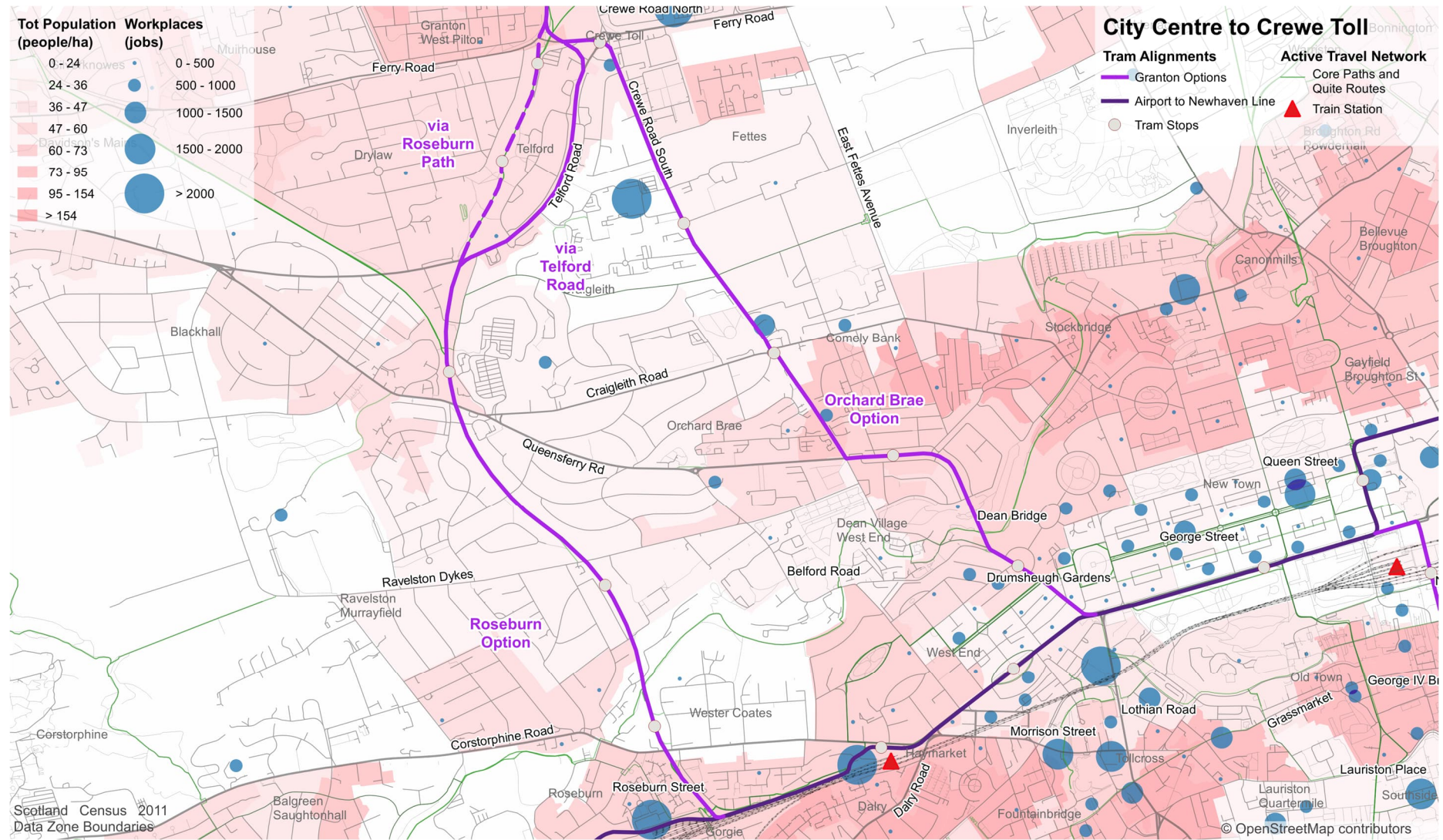
An alternative on-street option has also been considered utilising Queensferry Street, Dean Bridge, Orchard Brae and Crewe Road South towards Crewe Toll. This option would provide access to the Western General Hospital from the existing entrance on Crewe Road South and serve Comely Bank and the western end of Stockbridge. Nevertheless, constraints at Crewe Toll, Orchard Brae, Dean Bridge and Queensferry Street, require further consideration during future design development.

An on-street option allows the retention of the Roseburn Path/ NCN1 as a dedicated active travel corridor. Possible environmental impacts along the Roseburn Path are also avoided. However, bus and tram would share the same corridor, and both would be impacted by traffic congestion. There are limited options to reroute traffic and so the benefits of tram, in terms of journey time and reliability, are reduced in comparison with the Roseburn option.

With an Orchard Brae route, it would not be possible to provide segregated cycling facilities on Crewe Road South, limiting options to improve connectivity to the Western General Hospital. Dean Bridge is also a constraint, and segregated cycling provision would require a new structure across the Water of Leith.

Tram: Granton Waterfront to BioQuarter and Beyond
 Modal and Routing Summary

Figure 3.2: City Centre to Crewe Toll



Constraints along the route may necessitate land purchase. In addition, options for accommodating a tram stop on Queensferry Street have not been resolved and provision would have a direct impact on current and future bus capacity, at an already critical location on the network. Regional growth could be especially impacted, with capacity constraints limiting the growth of bus services on Queensferry Road and from Fife.

The connection to the existing tram route would be at Princes Street / Queensferry Street. This would be eastbound only; westbound travel between the Orchard Brae corridor and Haymarket, and all stops to the airport, would require interchange at Princes Street. A junction design would be complex, potentially impacting on existing bus and tram capacity and reliability, and limiting options to improve pedestrian and cycling safety.

While the Orchard Brae option is primarily on-street, tram would have local ecological impacts. Specifically, a number of trees, which are subject to a tree protection order (TPO), may require to be removed. These are primarily on Crewe Road South in the vicinity of Comely Bank Roundabout.

3.3 City Centre

A single tram route has been taken forward, following North and South Bridge towards the southside, consistent with the previously safeguarded alignment. Alternative route options have been considered but these were not considered to be viable. Routes via The Mound and The Pleasance are unsuitable due to their gradient and / or other geometric constraints meaning North and South Bridge is the only suitable option at the east end of the city centre.

A cross city route via Morrison Street was identified in part to provide additional capacity across the city centre and in part as an alternative should structures or utilities constraints on North and South Bridge prove impossible to resolve. The route extends from Haymarket along Morrison Street, Bread Street, Lauriston Street, Lauriston Place and Potterrow to Nicholson Square. It follows what is loosely termed the Innovation Mile. It picks up major sites of demand including The Exchange District, the proposed Exchange 2 and University of Edinburgh Lauriston and Central Campuses and the Edinburgh Futures Institute in between. Further design development has highlighted a number of pinch points which make this scheme difficult to deliver in the short to medium term. These are West Port/ Lauriston Street, Bristo Square/ Potterrow/ Marshall Street and at Nicholson Square. Nevertheless, the route serves a key and expanding city centre corridor and so remains an important longer-term opportunity.

A route via Lothian Road and Melville Drive has also been reviewed but not taken forward. While the Lothian Road cross section is wider than the Bridges corridor, providing greater flexibility, the route through the Meadows would have a significant environmental impact while serving a limited catchment.

3.3.1 Connection to Newhaven

In order to maximise service options and connectivity, provision of a three-way connection through the city centre, linking all tram corridors, is critical. The Leith Walk / Newhaven and Southside areas are some of the highest density areas of the city. Providing a link between them generates additional passengers and revenue. It also provides a direct link between the north of the city and the Royal Infirmary, and the BioQuarter. In reverse the tram provides access to Leith and Newhaven as well as Granton and the Airport.

As part of the assessment, several options for providing a three-way connection have been considered. These include:

- providing a new short section of tram route via Leith Street, or
- providing for movements between Princes Street (east) and St Andrew Square via a delta junction at Princes Street / South St Andrew Street

Analysis suggests that the provision of a delta junction would be the more cost effective, feasible and acceptable solution, and this has been assumed for the purposes of the route analysis.

3.4 Southside to Cameron Toll to BioQuarter

Through the Southside, tram would follow the Local Development Plan (LDP) safeguarded alignment via Clerk Street, Minto Street and Craigmillar Park. Tram would then cross the Craigmillar Park/ Lady Road junction at an acute angle, requiring a major reconfiguration of this busy junction.

At Cameron Toll, the reserved tram alignment runs to the south of Lady Road, in front of the shopping centre, as agreed with the site owners. This is a change to an earlier mid-2000s proposal which routed trams to the rear of the centre. While the current alignment is more direct, there is limited space between Lady Road and the north east shopping centre entrance. Level differences will require a complex engineering solution to resolve, taking cognisance of the operational needs of the site.

Early discussions have been held with the Cameron Toll site owners and it is their intention to deliver a new hotel and residential development, while retaining the retail core. Further design work is required to determine the tram limit of deviation to avoid unnecessary delay to the approval of future planning applications.

Between Cameron Toll and the BioQuarter, the tram route would follow the A7, primarily on street, consistent with the LDP. An active travel scheme for the route is currently in development. Going forward, the intention is to integrate both projects together with wider proposals for Inch Park.

3.5 BioQuarter to South East

Four alternative alignment options have been considered south east of the BioQuarter:

- Newcraighall option: BioQuarter to Newcraighall via Craigmillar
- Queen Margaret University option: BioQuarter to QMU via Hunter's Hall
- Sheriffhall (via A7) option: BioQuarter to Sheriffhall following route of the A7
- Sheriffhall (via Shawfair) option: BioQuarter to Sheriffhall via Shawfair

These options are described further below and summarised in Figure 3.3. Routes cross either the East Lothian or Midlothian Council boundary, creating improved regional connectivity. Engagement with individual local authorities continues in order to develop the detail of each alignment.

3.5.1 Newcraighall Option

This alignment of the Newcraighall option runs between BioQuarter and Newcraighall on a largely segregated route serving Niddrie and Craigmillar, both areas of relative deprivation, and Fort Kinnaird Retail Park. Significant sections of the corridor are segregated, although local traffic is required to cross the route. Elsewhere, traffic signals would be coordinated to prioritise tram.

This route is safeguarded in the LDP; it serves a number of strategic development sites and supports social inclusion and local economic regeneration. Nevertheless, while the route links multiple areas of high density and demand, the circuitous alignment results in an extended tram journey time. East of the BioQuarter, this is unlikely to be competitive with bus, undermining the potential business case for the scheme.

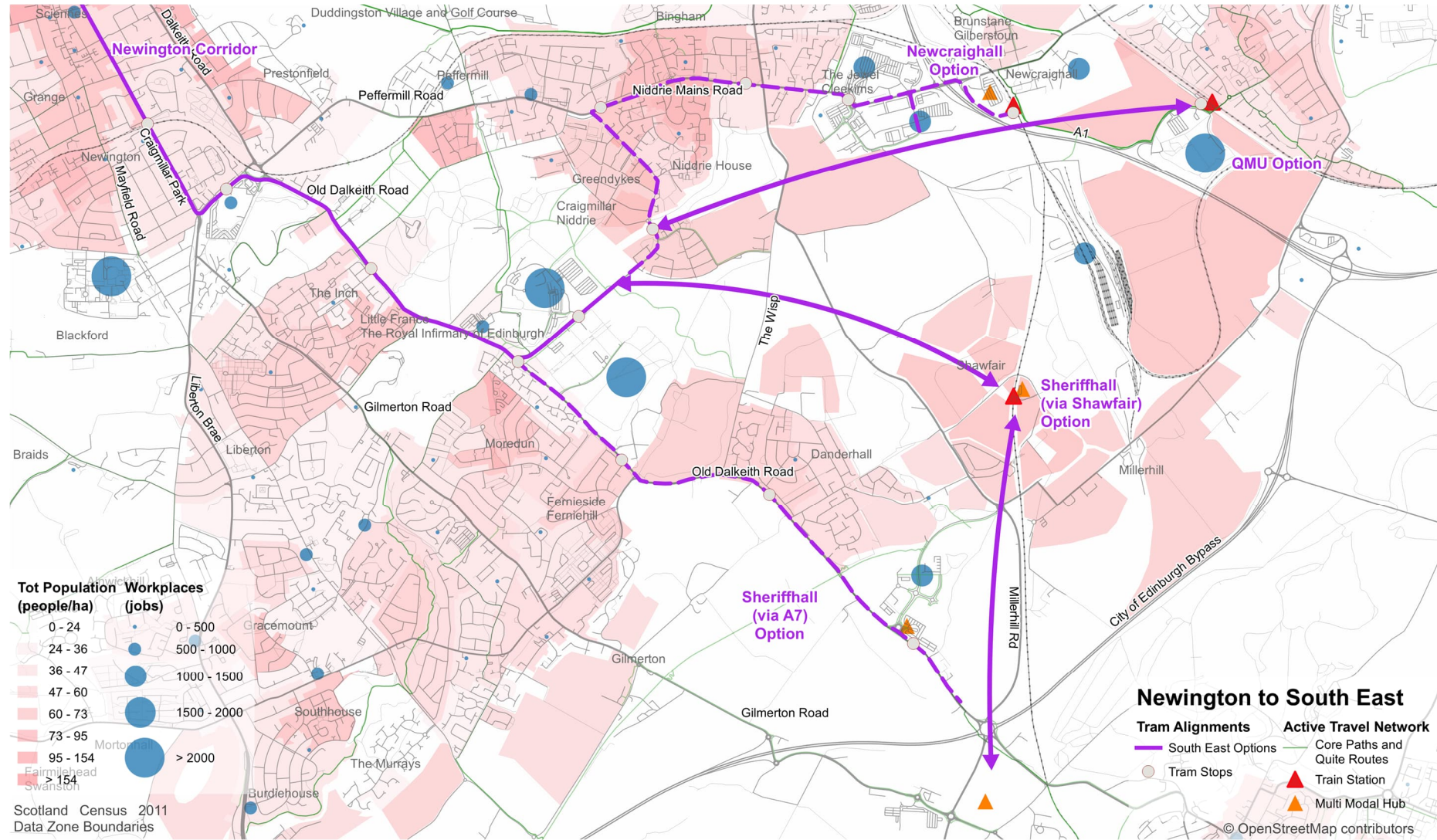
As an alternative to a terminus at Newcraighall, there is an opportunity to extend the route to serve Queen Margaret University and connect with Musselburgh Rail Station.

3.5.2 Queen Margaret University (via Hunter's Hall) Option

This route option is similar to above but omits Craigmillar Town Centre to provide a direct routing between the BioQuarter and Queen Margaret University. Journey times would be significantly reduced, making tram more effective against bus for journeys to and from the campus.

Tram: Granton Waterfront to BioQuarter and Beyond
 Modal and Routing Summary

Figure 3.3: BioQuarter Newcraighall, Queen Margaret University, Sheriffhall



3.5.3 Sheriffhall (via A7) Option

The Sheriffhall (via A7) option provides a direct link between the BioQuarter and a new Sheriffhall Park & Ride / multi-modal journey hub, on a mixed on-street and segregated alignment parallel to the A7. It is assumed that adjacent active travel facilities would be provided. The Edinburgh section of the alignment is safeguarded for tram within the LDP. A key benefit is that it serves Sheriffhall P&R and provides a direct link towards Midlothian.

Issues with the route include:

- the lack of connectivity to the national rail network
- the environmental impact and associated acceptability in delivering segregated sections of the route
- the longer walking distance to the Royal Infirmary and BioQuarter compared with Newcraighall and Sheriffhall (via Shawfair) options
- that it replicates existing bus routes whereas an alignment via Sheriffhall provides new travel options

There is an opportunity to extend this option to Dalkeith, either through a future extension of tram or supporting feeder bus/ BRT services.

3.5.4 Sheriffhall (via Shawfair) Option

The Sheriffhall (via Shawfair) option provides a link between the BioQuarter and Sheriffhall P&R, via Shawfair, on a segregated alignment serving new development. Though the longest of the Section E options, segregation could enable a run time similar to the direct A7 route above. As with Sheriffhall (via A7) option, adjacent active travel facilities would be provided.

A key driver for this alignment is the ability to provide interchange with the Borders Railway at Shawfair Station, providing connectivity between Midlothian and the Borders and south Edinburgh. It also enables strategic development around Shawfair and directly serves the Royal Infirmary and BioQuarter.

As above, there is an opportunity to extend the Sheriffhall (via Shawfair) option to Dalkeith, either through a future extension of tram or supporting feeder bus/ BRT services.

4. Route Option Assessment

4.1 Option Assessment

This section presents an assessment of the route options outlined above. The assessment has been undertaken using a Multi-Criteria Assessment Framework (MCAF), which is based on:

- the strategic/policy objectives set out in Chapter 2, in particular:
 - Impact of each option on transport performance
 - Better connectivity and accessibility (through faster journey times and better public transport provision to the scheme in-scope areas)
 - Impact on other transport modes, including current bus and active travel provision, and impacts on road traffic/tram operations
 - Impact of each option on non-transport related elements, such as ecology, environment, heritage, or townscape/place
- a comparative economic performance assessment/Value for Money, including cost/financial impacts and socioeconomic benefits

The purpose of using a MCAF is to provide evidence on performance of route options to support informed stakeholder engagement, decision-making by the Council, and to inform public consultation.

The assessment of each route option against the criteria described above is presented in the following sections:

4.2 Granton to City Centre Options

This section provides the assessment of the Granton to City Centre options:

- Roseburn corridor; and
- Orchard Brae corridor

4.2.1 Transport Performance of Route Options – Tram Performance

The key drivers of the transport performance are: (1) impact on journey times and journey time reliability, (2) impact on demand, and (3) impact on other modes. These are summarised below for each of the options under consideration.

The table below summarises the transport performance of the Granton to City Centre route options:

Table 4.1: Transport performance – Granton to City Centre Options

Criteria	Roseburn Option	Orchard Brae Option
Journey time (Granton to Princes St)	Roseburn options are c. 2 mins faster than Orchard Brae to City Centre (Princes St)	Roseburn options are c. 2 mins faster than Orchard Brae to City Centre (Princes St)
Journey time (Granton to West Edinburgh / Airport)	Roseburn options are c. 15 mins faster than Orchard Brae option	Roseburn options are c. 15 mins faster than Orchard Brae option
Journey time (Granton to East Edinburgh / Newhaven)	Roseburn options are c. 2 mins faster than Orchard Brae option	Roseburn options are c. 2 mins faster than Orchard Brae option
Journey reliability	Roseburn provides greater journey time reliability, given it operates on a segregated route for part of the journey, unlike Orchard Brae, with less impact from on-road traffic	Reliability is impacted by on-street congestion at Crewe Toll, Comely Bank and Queensferry Street. Traffic reductions and redistribution would be required to deliver this option
Catchment	Similar in-scope population catchment. Similar in jobs catchment (serves WGH from west)	Similar in-scope population catchment. Similar in jobs catchment (serves WGH from east)
Tram demand	Initial modelling suggests network demand and benefits would be higher for Roseburn option	Initial modelling suggests network demand and benefits would be higher for Roseburn option

Across all the above criteria, the Roseburn option performs better than the Orchard Brae option²:

- Roseburn provides faster and more reliable journey times between Granton and the city centre (Princes St)
- Roseburn serves better the wider city centre, specifically through providing direct connectivity with Haymarket
- Roseburn provides better cross-city connectivity (due to faster journey times) to the South East and Newhaven. Connectivity to West Edinburgh and the airport via Roseburn is significantly better due to routing via Haymarket; and
- Faster journey times to the city centre and better connectivity for all cross-city movements contribute to Roseburn generating more demand than Orchard Brae.

² It should be noted that both sub-options for the Roseburn option are anticipated to outperform the Orchard Brae option. Further work on determining the preferred sub-option is expected in the following stages of the SBC, including the trade-offs between journey times and better accessibility (e.g. to the Western General Hospital).

4.2.2 Impacts on Other Transport Modes

In addition to the transport performance of each option, impacts on other transport modes are considered in the table below:

Table 4.2: Impact on Other Transport Modes – Granton to City Centre Options

Criteria	Roseburn Option	Orchard Brae Option
Impact on road traffic/tram operation	<ul style="list-style-type: none"> ▪ Segregated alignment reduces tram interaction with general traffic ▪ Encourages modal shift from car to tram ▪ Positive impact 	<ul style="list-style-type: none"> ▪ Orchard Brae would run on a key strategic route between Fife and Edinburgh ▪ Tram reduces the effective capacity for traffic, with limited opportunity for rerouting ▪ Impacts on access and servicing, and potentially on emergency service access to Western General Hospital, would need to be considered ▪ Negative impact
Interaction with walking and wheeling	<ul style="list-style-type: none"> ▪ Journey ambience impacted in the short term until landscaping matures ▪ Walking and wheeling would be alongside an operational tram ▪ Potential for significant accessibility and safety improvements, including lighting and CCTV ▪ Neutral impact 	<ul style="list-style-type: none"> ▪ No significant impact on walking and wheeling, local footway impacts offset by improved junction facilities ▪ Neutral impact
Interaction with cycling	<ul style="list-style-type: none"> ▪ Cycle provision cannot be provided along Roseburn corridor. Cycling would need to be provided on an alternative corridor ▪ Alternative provision via Queensferry Road has the potential to improve provision for movements between the corridor and city centre (e.g. Princes Street), though provision would be worse towards Haymarket. ▪ Journey ambience for cyclists worse than existing provision ▪ Slight negative impact 	<ul style="list-style-type: none"> ▪ Limited opportunity to enhance segregated cycling in conjunction with tram. At some locations (e.g. Crewe Road South) existing cycle provision may need to be removed ▪ Very difficult to provide segregated cycling across Dean Bridge ▪ Negative impact
Interaction with bus	<ul style="list-style-type: none"> ▪ Option would serve corridor (south of Crewe Toll) not currently directly served by bus, which would result in better overall public transport accessibility ▪ As part of further option development better network integration between tram and bus would be examined ▪ Positive impact 	<ul style="list-style-type: none"> ▪ Tram would service existing bus corridor with higher route catchment demand south of Crewe Toll ▪ As part of further option development better network integration between tram and bus would be examined ▪ Neutral impact

Across all the above criteria, the Roseburn option provides advantages over the Orchard Brae option:

- The segregated alignment along Roseburn corridor is anticipated to have a positive impact on traffic and congestion, given the expected modal shift from car to tram. In the case of Orchard Brae, negative impacts on traffic/congestion are anticipated given tram would run in a non-segregated corridor. Access and servicing, including to the hospital, could also be negatively affected.
- Tram has a neutral impact on walking and wheeling. On the Roseburn corridor, ambience is impacted in the short term, but this is offset by accessibility and safety improvements. An Orchard Brae option would have local footway impacts but most junctions would be upgraded with improved facilities.
- There is insufficient width on the Roseburn corridor to provide both tram and cycling and so alternative cycling provision would need to be provided on Queensferry Road. Improved cycling facilities could also be provided on Orchard Brae and Crewe Road South, improving accessibility to the Western General Hospital. Nevertheless, the Roseburn corridor is considered to have a slight negative impact. There is limited opportunity

to provide parallel segregated cycling with an Orchard Brae option. The difficulty in providing safe cycling across Dean Bridge results in this option having a negative impact.

4.2.3 Non-Transport Impacts

The assessment of options also includes non-transport impacts of each of the options. The table below summarises these for the Granton to City Centre route options:

Table 4.3: Non-Transport Impacts – Granton to City Centre Options

Criteria	Roseburn Option	Orchard Brae Option
Ecology and environment	<ul style="list-style-type: none"> Loss of some existing ecology and habitats on corridor. Partial mitigation through new planting Negative impact overall 	<ul style="list-style-type: none"> Loss of a number of trees on the corridor. Negative impact overall (but less severe than Roseburn option)
Amenity	<ul style="list-style-type: none"> Reduced amenity in short term for walking and wheeling due to loss of green space Longer term wellbeing benefits as new planting matures, although walking and wheeling would be alongside an operational tram Positive safety improvements including improved lighting and CCTV 	<ul style="list-style-type: none"> No significant impacts
Heritage	<ul style="list-style-type: none"> No significant impacts 	<ul style="list-style-type: none"> Adverse impact on Dean Bridge
Townscape and placemaking	<ul style="list-style-type: none"> Limited impact given segregated route, not running through densely populated areas 	<ul style="list-style-type: none"> Slight negative impact through provision of tram through densely populated areas

The Roseburn corridor is a Corridor Local Nature Conservation Site. National and local policies aim to conserve biodiversity by 2030 and reverse losses by 2045 to address the nature crisis and tie in with global targets. The Edinburgh Biodiversity Action Plan identifies linear habitat corridors as a priority urban habitat. Understanding the available mitigations to minimise ecology and biodiversity impacts on the corridor, together with improved access for walking and wheeling, would be a key principle of the tram design.

4.2.4 Comparative Economic Performance of Options

Based on the transport and non-transport impacts of each of the route, and the likely high-level cost/financial impact of each of the options, a comparative economic performance of each option has been developed:

Table 4.4: Comparative Economic Performance – Granton to City Centre Options

Criteria	Roseburn Option	Orchard Brae Option
Net costs / financial impacts	<p>££ - £££</p> <ul style="list-style-type: none"> Tram capex anticipated lower, however potential offset by costs of providing alternative cycling corridor elsewhere, currently not costed Lower operating cost due to faster shorter journey times Higher tram revenues (related to higher demand) 	<p>£££</p> <ul style="list-style-type: none"> Higher tram capex, however, less need to build alternative cycling corridor Higher operating costs due to slightly longer journey times Lower tram revenues
Benefits: transport impacts	<p>£££</p> <ul style="list-style-type: none"> Higher journey time savings and demand Higher reliability due to route segregation 	<p>££</p> <ul style="list-style-type: none"> Lower journey time savings and demand Lower reliability due to route segregation
Benefits: impacts on other transport modes	<p>Positive impact</p> <ul style="list-style-type: none"> Positive impact on traffic/congestion given route segregation Neutral impact anticipated on bus and active travel (provided that alternative cycling provision is found elsewhere) 	<p>Negative impact</p> <ul style="list-style-type: none"> Negative impact on traffic/congestion given lack of route segregation Neutral impact anticipated on bus and active travel

Overall, Roseburn presents advantages over Orchard Brae from an economic perspective:

- It would require lower operating costs and lower tram construction capital costs (however some of the cost difference could potentially be offset by the cost of providing alternative cycling provision)
- It would generate higher demand and would lead to greater transport benefits, and revenues
- It would not lead to negative impacts traffic and congestion, given its route segregation, unlike Orchard Brae

4.2.5 Summary of Granton to City Centre Options Assessment

In summary, the route option via Roseburn corridor presents advantages over Orchard Brae.

Roseburn has the potential to deliver a greater quantum of transport benefits, driven by shorter and more reliable journey times, leading to more passenger demand compared to Orchard Brae.

The impacts of Roseburn on other transport modes would also be lower, with no knock-on impact on bus provision or on-road traffic/congestion given the use of a segregated route, however cycling provision would need to be delivered outside the Roseburn corridor should tram be built along this route.

Overall, Roseburn also provides a better economic performance than Orchard Brae. Coupled with greater transport benefits, Roseburn is expected to have lower capital costs (due to Orchard Brae’s potential deliverability constraints/issues) and lower operating costs (due to shorter journey times), leading to the potential for Roseburn to deliver better value for money.

4.3 City Centre Options

This section provides the assessment of the Granton to City Centre options:

- Bridges; and
- Lothian Road/ Melville Drive

A Cross-City option for Lauriston Place and Potterrow is not deliverable in the near term and so is not presented.

4.3.1 Transport Performance of Route Options – Tram Performance

The key drivers of the transport performance are: (1) impact on journey times, (2) impact on demand, and (3) impact on other modes. These are summarised below for each of the options under consideration:

The table below summarises the transport performance of the City Centre route options:

Table 4.5: Transport Performance – City Centre Options

Criteria	Bridges	Lothian Rd
Linking to Roseburn: Journey time (across city centre S of Melville Drive to Haymarket)	Bridges and Lothian Rd options would have similar journey times of c. 16 mins	Bridges and Lothian Rd options would have similar journey times of c. 16 mins
Linking to Orchard Brae: Journey time (across city centre S of Melville Drive to Shandwick Place)	Bridges and Lothian Rd options would have similar journey times of c. 13 mins	Bridges and Lothian Rd options would have similar journey times of c. 13 mins
Journey time (SE corridor to Newhaven)	Bridges option would be around 45 minutes	Lothian Road option would be over 60 minutes *
Journey reliability	Similar	Similar
Catchment	Large	Small
Tram demand	Significantly higher, due to serving major city centre destinations (employment, leisure, retail, transport interchange)	Significantly lower, as route does not access city centre as well as Bridges

*Less direct routing, plus Interchange at West End/Shandwick Place includes 4 min walk + 3 min wait time

Across all the above criteria, the Bridges option performs better than the Lothian Road option:

- The Bridges option would attract significantly higher demand
- The Bridges option provides much better connectivity and faster journey times between the south east and Newhaven
- There are no criteria where the Lothian option is better in terms of transport performance

4.3.2 Impacts on Other Transport Modes

In addition to the transport performance of each option, impacts on other transport modes are considered in the table below:

Table 4.6: Impact on Other Transport Modes – City Centre Options

Criteria	Bridges	Lothian Rd
Impact on road traffic/tram operation	<ul style="list-style-type: none"> ▪ Route consistent with emerging Circulation Plan ▪ Interaction with general traffic, although potential for through traffic to be removed ▪ Corridor prioritised for public transport and active modes ▪ Positive impact (with through traffic restrictions) 	<ul style="list-style-type: none"> ▪ Complex interaction with general traffic ▪ Number of large junctions makes delivering tram priority challenging ▪ Lothian Road remains a key general traffic route to enable pedestrian and wheeling improvements on the Bridges ▪ Potential conflict with emerging Circulation Plan ▪ Negative Impact
Interaction with walking and wheeling	<ul style="list-style-type: none"> ▪ Tram enables footway widening, supporting improved walking and wheeling ▪ Priority given to pedestrians where footfall greatest ▪ Positive impact 	<ul style="list-style-type: none"> ▪ Tram impacts on pedestrian and wheeling provision at Lothian Road / Princes Street junction. Potential need to relocate key crossings ▪ Complex junction solutions at West Approach Road, Morrison Street, Fountainbridge and Tollcross ▪ Potential footway narrowing, particularly if associated cycling facilities are introduced ▪ Negative Impact
Interaction with active travel	<ul style="list-style-type: none"> ▪ Segregated cycling infrastructure focused on parallel routes ▪ Cycling permitted on corridor, design enables safe cycling through tram stops ▪ Neutral impact 	<ul style="list-style-type: none"> ▪ Limited options for alternative cycling provision. ▪ Need to improve crossing opportunities for walking and wheeling ▪ Lothian Road is a busy cycling corridor ▪ Neutral impact
Interaction with bus	<ul style="list-style-type: none"> ▪ Most scope for of bus service integration, facilitating a reduction in the number of buses within the city centre ▪ Currently >60bph in each direction on the Bridges ▪ Slight positive impact 	<ul style="list-style-type: none"> ▪ Limited scope for bus rationalisation as tram would not serve Bruntsfield / Morningside ▪ Negative impact

Across all the above criteria, the Bridges option provides advantages over the Lothian Road option:

- Although wider, the number of complex junctions on Lothian Road makes delivering tram difficult
- The large volume of buses (>60bph) on The Bridges corridor presents increased scope for rationalisation of services accessing the city centre. This would have the additional benefit of allowing reallocation of vehicles to serve other corridors
- Tram would not serve the primary Lothian Road catchment, including Bruntsfield and Morningside, and so the opportunity for rationalisation of bus services is reduced
- Tram on North Bridge compliments proposals to widen footways to support improved walking and wheeling provision

4.3.3 Non-Transport Impacts

The assessment of options also includes non-transport impacts of each of the options. The table below summarises these of the City Centre route options:

Table 4.7: Non-Transport Impacts – City Centre Options

Criteria	Bridges	Lothian Rd
Ecology and environment	<ul style="list-style-type: none"> Local environmental impacts, but also opportunity for improvement 	<ul style="list-style-type: none"> Potential environmental impact through the Meadows
Amenity	<ul style="list-style-type: none"> Potential improvements associated with traffic reduction proposals 	<ul style="list-style-type: none"> Potential increased congestion, particularly between Princes Street and West Approach Road could impact on amenity
Heritage	<ul style="list-style-type: none"> Closer proximity to Old Town streets but most heritage impacts can be addressed 	<ul style="list-style-type: none"> Potentially less sensitive, local heritage impacts can be addressed
Townscape and placemaking	<ul style="list-style-type: none"> Opportunity for significant improvement, particularly if delivered in conjunction with restrictions to reduce through traffic 	<ul style="list-style-type: none"> Potential for localised improvements but potential for significant traffic reductions is lower

4.3.4 Comparative Economic Performance of Options

Based on the transport and non-transport impacts of each of the route, and the likely high-level cost/financial impact of each of the options, a comparative economic performance of each option has been developed:

Table 4.8: Comparative Economic Performance – City Centre Options

Criteria	Bridges	Lothian Rd
Net costs / financial impacts	<p>££</p> <ul style="list-style-type: none"> Tram capex anticipated lower as significantly shorter section of new route infrastructure required Operating cost lower 	<p>£££</p> <ul style="list-style-type: none"> Higher tram capex due to longer section of new route infrastructure required Higher operating costs due to slightly longer journey times
Benefits: transport impacts	<p>£££</p> <p>Higher tram demand</p>	<p>£</p> <p>Lower tram demand</p>
Benefits: impacts on other transport modes	<p>Positive impact</p> <ul style="list-style-type: none"> Negative impact on traffic/congestion Neutral impact anticipated on bus and active travel 	<p>Negative impact</p> <ul style="list-style-type: none"> Negative impact on traffic/congestion – worse than for Bridges Neutral impact anticipated on bus and active travel

Overall, Bridges presents advantages over Lothian Road from an economic perspective:

- It would require lower capital costs for tram construction. Shorter journey times would result in lower operational costs
- It would generate much higher demand and would lead to greater transport benefits
- Though there would be a negative impact on traffic congestion this would be less significant than for the Lothian Road option

4.3.5 Summary of City Centre Options Assessment

In summary, the route option via The Bridges corridor presents advantages over Lothian Road.

The Bridges option provides faster journey times between SE Edinburgh and Newhaven as well as across the city centre itself and does so independent of the routing option chosen to Granton (e.g. Roseburn or Orchard Brae). The Bridges also has a larger catchment and combined with better connectivity would result in higher demand.

The Bridges also performs well in comparative economic performance compared with Lothian Road. Capital and operating costs would be lower for The Bridges corridor, transport benefits higher (due to higher demand) and there would be a positive impact on other transport modes. Negative impacts in terms of traffic/congestion would be less significant than the Lothian Road corridor.

Appendix 3 – Trams from Granton to the Bioquarter and Beyond

Outline Communications Plan

Background

Following the successful completion of the first phase 1 of Trams (Airport – York Place) in 2014, the completion of the line to Newhaven occurred in June 2023 during the Trams to Newhaven project. The City of Edinburgh Council is now looking to further extend the tram network in Edinburgh and regionally and will be seeking approval at the Transport and Environment committee on 1 February 2024 to begin consultation on a north south line going from:

- Granton – City Centre
- City Centre (through)
- City Centre – Edinburgh Royal Infirmary
- Edinburgh Royal Infirmary – Midlothian / East Lothian

The purpose of the consultation is to present the preferred route for each of the four sections listed above, explain why that route is preferred, and seek feedback from residents, businesses and stakeholders. In addition, alternative routes that have been looked at but that are deemed not appropriate will also be presented.

Approach

The communications activities will raise awareness of the tram from Granton to Bioquarter and Beyond project and make clear why and how we need to invest in this, why we need their views and how to give them. It will drive audiences to the engagement events and online engagement tool.

A series of engagement events, drop ins, awareness raising events and key stakeholder sessions with invited audiences.

We will use a range of channels/tools (paid for and free) to drive traffic to events and the online consultation hub:

- paid and organic social media – Facebook, twitter, LinkedIn
- lamp post wraps
- printed materials (small supplies) – ‘calling cards’, flier, summary document
- display/exhibition material at events
- blogs/articles/features – Council external and internal platforms, and partners’ channels
- media briefings, opinion pieces/features.
- physical copies of questionnaires at libraries

The schedule of paid promotional activity will be developed.

Evaluation and measurement

Evaluation and measurement will be possible through:

- number of attendees at events
- number of comments received
- social media/digital reach, impressions and interactions eg shares, likes
- analytics from web page, blog and other online content
- reporting from media outlets on effectiveness of campaign eg estimates of listeners.

This information will be reported back to the Transport and Environment Committee in Summer / Autumn 2024 as part of the development of the Strategic Business Case.

Tram / Granton to Bioquarter and Beyond consultation narrative outline.

On-line consultation outline. In-person consultation events will follow a similar structure and use same narrative / materials.

Home Page

Overview

Across the world, progressive cities are embracing the global challenges of climate change and inequality with action and vision. The City of Edinburgh Council declared a Climate Emergency in 2019. To meet our ambition to be carbon neutral, we need to re-think the way we move people and goods in and around Edinburgh. We need clean, safe, efficient, accessible and affordable ways of doing this.

Our [City Mobility Plan 2021 – 2030](#) consultation in 2020/21 found strong support for the expansion to the tram network and for improving public transport.

The current award-winning tram system carries millions of passengers each year and the recently opened section to Newhaven resulted in Edinburgh Trams enjoying their busiest month ever in August 2023, with over 1.2 million customer journeys.

A new north-south tram corridor would improve connectivity between major development sites, and busy locations like hospitals, key employment centres, retail hubs and major education facilities. This consultation presents a recommended route for a north – south tram line between Granton and the Royal Infirmary and beyond, linking up to the existing tram route in the city centre. To deliver the best outcome, we have based these recommendations on a number of policies listed below in the related section.

FACTBANK (collapse and expandable info): Why we need to improve public transport in Edinburgh and the city region

Edinburgh is one of the fastest growing cities in the UK with a population of over half a million. From 2001 to 2021, Edinburgh's population has grown by 10.2% or an estimated 48,530 people. The wider Edinburgh City Region has also grown by a further 42,470. According to the Edinburgh's City Plan there will be by 2030, 37,000 new homes which could add over 75,000 people to Edinburgh's population. As a main economic hub for the region and country, the city also welcomes many visitors for learning, employment and leisure opportunities.

This future growth puts pressure on our transport network, causing congestion. The cost of congestion impacts on journey times for residents and businesses and the associated impacts on our health from poor air quality.

These impacts will only continue to grow as more vehicles compete for limited road space. Studies have linked small particles from road traffic to the cause of a variety of health effects including heart and lung disease, links to premature death, diabetes, dementia, mental health and birth outcomes.

For businesses the cost of congestion impacts business by extending journey times, later deliveries, and increasing worker time on the road rather than in productive work. Estimates on the cost of congestion from [INRIX](#) for Edinburgh in 2019 was reported as being worth £177 million.

Why your views matter

By completing our survey you will help us to understand your views on expanding the tram network by introducing a north – south tram line, connecting with neighbouring local authorities in the south-east.

As well as this online survey, there is a series of drop-in events planned across the city that you are invited to attend to find out more about the proposals.

Next stages

The findings from this consultation will help inform a Strategic Business Case (SBC) which will be presented to the Council's Transport & Environment Committee in Autumn 2024.

The SBC gives a top line overview of the recommended route the new tram line would take, the major challenges and opportunities it presents, and an overview of what residents, businesses and key stakeholders thought of the plan.

Our next step would be to develop an Outline Business Case (OBC) that looks in more detail at construction and reflects the responses received from this consultation.

We will hold another round of consultation in 2025/26 which would give residents, businesses and stakeholders another opportunity to comment on the plans before we move on to developing a Final Business Case (FBC). The FBC stage would then seek approval from the City of Edinburgh Council to go ahead with the project.

Related section

- a) [City Vision 2050](#)
Residents want Edinburgh to be *Thriving, Welcoming, Pioneering* and *Fair*.
- b) The [City of Edinburgh Council Business Plan](#)
Three strategic priorities around liveability, end poverty, and being net-carbon zero by 2030.
- c) [City Mobility Plan 2021 – 2030](#)
Supports the net zero target and plans to reduce car journey kilometres by 30% by 2030 using actions across three key themes: *People, Place, Movement*.
- d) [Circulation Plan](#)
The principles we adopt when designing our streets.
- e) [City Plan 2030](#)
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.
- f) [Edinburgh Biodiversity Plan 2022 - 2027](#)
Protecting Edinburgh's natural heritage.
- g) [One million tree city](#)
Enhancing Edinburgh's environment.
- h) [The Scottish Government National Transport Strategy 2](#)
Scotland's transport vision for the next 20 years.
- i) [Transport Scotland's Strategic Transport Projects Review 2 \(STPR2\)](#)
Identifying key projects to deliver the aspirations of the National Transport Strategy 2 and has highlighted Edinburgh and South-East Scotland Mass Transit as an investment priority.
- j) [Edinburgh Economic Strategy](#)
How to deliver sustainable growth in Edinburgh.
- k) [2030 Climate Strategy](#)
How the city plans to deliver a net zero, climate ready Edinburgh by 2030.

Introduction page of survey:

Please provide us with the following information: (include link to explanation on how we will use this data)

First Name

Second Name

Email address

Postcode

Do you consent to being contacted about this consultation YES / NO

Recommended route.

This consultation shows the recommended route for a north – south tram line in Edinburgh and on to neighbouring local authorities. It will also give suggested locations for tram stops.

We have set out the route in four sections:

1. Granton – City Centre
2. Through the City Centre
3. City Centre – Edinburgh Royal Infirmary
4. Edinburgh Royal Infirmary – Lothians

Midlothian and East Lothian Councils will consult on the Lothian section separately. Details on how to take part in that consultation can be found at the end of this consultation.

We will also show other routes that have been considered and explain why these are not being recommended.

To deliver the best outcome, the project has based these recommendations on a number of policies. These include the City Vision 2050, The City of Edinburgh Council Business Plan, City Mobility Plan, National Transport Strategy, Strategic Transport Projects Review 2, and Climate Strategy 2030.

The following considerations have also informed our recommendations:

- a) Lessons learned.
From the first Tram project (Airport – York Place), Trams to Newhaven project, and Hardie Report.
- b) Existing powers to build tram in Edinburgh.
The City of Edinburgh Council has existing powers under the Tram Act 2006 to build the line on a specific route from Granton to City Centre.
- c) Tram patronage forecasts.
Passenger number modelling has been undertaken to identify which routes will service the most people and move people from cars to public transport.
- d) Tram running time.
Research shows tram running times are key to the success of a network.
- e) Buildability
Ease of construction, disruption, public transport and traffic displacement, forecast costs, utility diversions, impact on ecology and biodiversity, etc.

- f) Integration / connectivity
With other transport providers and key destinations
- g) Planning policies
Including World Heritage Sites, Conservation Areas, etc.

Section 1: Granton – City Centre

The recommended route is as follows:

IMAGE WILL BE INSERTED

The first part would be on-street to Ferry Road, along Ferry Road, and left onto Telford Road. The tram line would connect with the old railway line (Roseburn Corridor) near the Telford Road Primary Sub-station.

Please note, the City of Edinburgh Council has power to build on the Roseburn Corridor but not on Telford Road. Further powers would need to be secured via the Scottish Government to allow this to happen.

Another option using the Roseburn Corridor from Crewe Toll is detailed below.

IMAGE WILL BE INSERTED

Under the Tram Act 2006, the City of Edinburgh Council has powers to construct the tram line from Granton to the city centre. The first part would be on-street up to Ferry Road and would then go off road using the old railway line, commonly referred to as the Roseburn Corridor.

Given the spatial constraints and the need to protect the biodiversity along the Roseburn Corridor, it would not be possible to accommodate walking/wheel, cycling and public transport.

The above options would accommodate public transport (tram) and every effort would be made to provide a welcoming walking / wheeling route that followed the tram route, was sufficiently sheltered, and minimised any impact on the ecology and biodiversity. High quality cycling provision, linking into existing and planned cycling corridors would be provided on-street. We are planning to build this ahead of tram construction.

Both options allow us to deliver the placemaking, transport, social economic and environmental aspirations of the city. The reasons for this are outlined below:

1. Running times are significantly quicker overall on both Roseburn Corridor options compared to other routes that were explored.
2. Greater patronage figures are forecast on this route.
3. Both Roseburn options deliver better public transport accessibility overall with buses maintained on existing routes from Crewe Toll to city centre and scope for creating key transport interchanges
4. While space restrictions on the Roseburn options would mean cycling is not possible to accommodate due to the impact on ecology and biodiversity, the project would be able to deliver high quality cycling infrastructure that services a greater population and job catchment that ties into existing and planned cycling infrastructure.
5. Both Roseburn options have off-street sections which would minimise tram interaction with general traffic.

6. Operating costs on the Roseburn options would be cheaper due to shorter running times.
7. Roseburn options would be easier to build and less disruptive to general traffic as either whole or part of the route would be off-street.

Questions:

What do you think of the recommended option that uses Telford Road (Please tick one)

- Strongly support
- Support
- Neither support nor oppose
- Oppose
- Strongly oppose

Please tell us why you have given this answer (free text)

What do you think of the option that uses the 'Roseburn Corridor' from Crewe Toll (Please tick one)

- Strongly support
- Support
- Neither support nor oppose
- Oppose
- Strongly oppose

Please tell us why you have given this answer (free text)

The City Mobility Plan highlighted connectivity being important to residents. Which of the following are important to you to be able to easily access? (please tick as many as required):

- Hospitals
- Cultural venues
- Shopping
- Schools / universities / colleges / further education
- Other transport modes
- Other (please provide details):

What would you use the tram for in this section? (please tick as many as required):

- Work
- Leisure
- Onward travel (Airport, Waverley, Haymarket)
- Travel to school, university, college

Another option that was considered was via Ferry Road, Crewe Road South, Orchard Brae, Queenferry Road and into the West End.

IMAGE TO BE INSERTED

This option is not the recommended route for the following reasons:

1. Tram running times are significantly higher on the Orchard Brae option.
2. No option to introduce high-quality cycling infrastructure on Orchard Brae due to requirements for tram.
3. Additional congestion along the Orchard Brae route and surrounding streets.
4. Possible impact on emergency access to Western General Hospital.

5. Higher operating costs due to longer running times.
6. Complexity of utility diversions.
7. Complexity of Queensferry Street, Princes Street, Lothian Road junction.

Section 2: City Centre

The recommended route to take tram through the city centre and towards the south-east of the city is shown below:

IMAGE TO BE INSERTED

This route would be via Haymarket, along the existing tram route on Princes Street and via North and South bridge.

Given the space constraints along North and South bridge, it would not be possible to accommodate segregated walking/wheeling, cycling and public transport.

Therefore, the tram route would be prioritised for walking/wheeling and public transport only. High quality cycling provision, linking into existing and planned cycling corridors would be provided on-street. The intention would be to create this provision ahead of tram construction starting. Provision for loading would also be included.

This route helps to deliver the placemaking, transport, social economic and environmental aspirations of the city. The reasons for this are detailed below:

1. Makes use of existing infrastructure on Princes Street.
2. Good connectivity with the existing tram network.
3. Shorter journey times compared to other city centre options, leading to reduced operating costs.
4. Significantly higher catchment for patronage compared to other city centre options.
5. Scope for rationalisation of buses on this corridor to be deployed elsewhere to increase public transport coverage.
6. High quality cycling provision would be provided on alternate corridors that ties in with existing and planned cycling infrastructure.
7. Lower cost to build compared to other city centre options as makes use of existing tram infrastructure.

Questions:

To what extent do you support or oppose the recommended route for City Centre? (Please tick one)

- Strongly support
- Support
- Neither support nor oppose
- Oppose
- Strongly oppose

Please tell us why you have given this answer (free text)

The City Mobility Plan highlighted connectivity being important to residents. Which of the following are important to you to be able to easily access? (please rank them in order of importance):

- Hospitals
- Cultural venues
- Shopping
- Schools / universities / colleges / further education
- Other transport modes

What would you use the tram for in this section? (please tick as many as required):

- Work
- Leisure
- Onward travel (Airport, Waverley, Haymarket)
- Transport to school, college, university

Two other options have been considered:

Option 1

Via Lothian Road, Meadows, through Nicolson Square and then joining the A7 heading south.

Option 2

Via Haymarket, onto Morrison Street and via Lothian Road / Lauriston Place, round Potterrow, through Nicolson Square and then joining the A7 heading south.

IMAGE TO BE INSERTED

These options are not recommended for the following reasons:

1. Higher running costs compared to Princes Street options due to longer running times.
2. Significant additional construction costs.
3. Lower potential patronage / catchment.
4. Complexity of junctions and interaction with vehicles compared to Princes Street / Bridges route.
5. Complexity of Princes Street / Lothian Road junction
6. Protected trees along the Meadows corridor.

Section 3: City Centre – Edinburgh Royal Infirmary

The recommended route to take tram from the City Centre - Edinburgh Royal Infirmary is shown below:

IMAGE TO BE INSERTED

The route would continue along the A7, turn to the front of the Cameron Toll Shopping Centre, and continue up Old Dalkeith Road.

This route allows:

1. connectivity with Edinburgh Royal Infirmary and Edinburgh Bioquarter and,
2. facilitates connectivity with the wider city region.

What do you think of this route (Please tick one)

- Strongly support
- Support
- Neither support nor oppose
- Oppose
- Strongly oppose

Please tell us why you have given this answer (free text)

The City Mobility Plan highlighted connectivity being important to residents. Which of the following are important to you to be able to easily access? (please tick as many as required):

- Hospitals
- Cultural venues
- Shopping
- Schools / universities / colleges / further education
- Other transport modes

What would you use the tram for in this section? (please tick as many as required):

- Work
- Leisure
- Onward travel (Airport, Waverley, Haymarket)
- Travel to schools, university, college

Section 4: Edinburgh – Royal Infirmary – City Region

The City of Edinburgh Council is working closely with Mid-Lothian and East Lothian Council regarding the routing of a tram line beyond the Edinburgh Royal Infirmary and into the city region. Discussions are also ongoing around the possible location of another tram depot to support the network as there would not be sufficient capacity at the existing depot at Gogarburn to facilitate the expanded network.

Various options are outlined below. Mid-Lothian and East Lothian Council will be carrying out their own consultation on transport matters in 2024 which will include questions around a possible tram route.

IMAGE TO BE INSERTED

Links to the Mid-Lothian and East Lothian consultation can be found at the end of this consultation.

About you.

We'd like to know a little more about yourself to make sure we are consulting with as many sections of society as possible. [This information will be held in compliance with the City of Edinburgh Council's Data Protection requirements.](#)

Age

- Under 16
- 16-21
- 22-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 and over
- Prefer not to say

Sex:

- Male
- Female
- Prefer not to say

Ethnicity

- White (Scottish)
- White (other British)
- White (other)
- Mixed or multiple ethnic groups
- Asian, Asian Scottish, Asian British
- African
- Caribbean or Black
- Other ethnic groups

Do you currently use the tram?

- Yes
- No

If yes, how often a week

And what do you use it for?

- Work,
- Leisure
- Onward travel
- Other

Do you currently use buses?

- Yes
- No

If yes, how often a week

And what do you use it for?

- Work,

- Leisure
- Onward travel
- Other

Do you own a bike?

- Yes
- No

If yes, how often do you ride it per week

And what do you use it for?

- Work,
- Leisure
- Onward travel
- Other

33. To what extent do you agree or disagree with the following statements about this engagement exercise?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know
I was given all the information that I needed to have my say.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This engagement exercise was clear and easy to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was given the opportunity to have my say.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please provide any other comments or suggestions you may have about this engagement process.

You can take part in the Midlothian consultation here (insert link)

You can take part in the East Lothian consultation here (insert link)