

Detailed Appraisal		E13 - New Light Rapid Transit Line to Southeast Edinburgh						
Estimated total Public Sector Funding Requirement:		<i>Capital Costs/grant</i> <i>Annual Revenue Support Present</i> <i>Value of Cost to Gvt</i> <i>BCR/PVB</i>				£100m - £250m - £50 - £100m 1.25 - 1.75 / £100m - £250m		
Summary Impact on STAG Criteria	Environment Safety Economy Integration Accessibility and Social Inclusion	---	--	-	0	+	++	+++
(Judgement based on available information against a 7pt. scale.)								
Intervention Description:								
This intervention supports the objective to maintain the 60 minute commutable labour market within Edinburgh at the current level, with a particular focus on linking areas of economic activity by extending the Edinburgh Light Rapid Transit network to the south east of the city. The proposed scheme would follow the previously identified "Line 3" route from Edinburgh City Centre to the New Royal Infirmary of Edinburgh, and then east to Newcraighall Station. The scheme would require construction of the tram route, as well as new rolling stock, stations and car parking. The scheme could be extended to serve Queen Margaret University and Musselburgh.								
Summary: Rationale for Not Recommending								
Although this intervention performs well against some of the planning objectives, the benefits would be largely at local and regional level.								
There are potential moderate adverse environmental impacts associated with cultural heritage and landscape.								
The other interventions considered, particularly D23 (Rail Enhancements in the East of Scotland) and D11 ((Strategic) Park-&-Ride/Park-&-Choose Strategy) would provide a greater benefit to the communities to the east of Edinburgh.								

Table E13.1.1 STPR Objectives

STPR Objectives	
<p><u>STPR Objective 1:</u> To maintain the 60-minute commutable labour market area at the current level, with a particular focus on linking areas of economic activity.</p> <p><u>STPR Objective 2:</u> To enhance public transport interchange opportunities, where feasible to do so.</p> <p><u>STPR Objective 3:</u> To increase public transport capacity and frequency between Fife and Edinburgh.</p> <p><u>STPR Objective 4:</u> To promote continuing reduction in accident rates and severity rates across the strategic transport network.</p> <p><u>STPR Objective 5:</u> To promote journey time reductions, particularly by public transport, between the Central Belt and Aberdeen/Inverness primarily to allow business to achieve an effective working day when travelling between these centres.</p>	<p><b>1: Slightly Positive</b> – This intervention would help maintain the 60-minute commutable labour market area through the increase in public transport capacity and new links. It would specifically link the area of economic activity in the south east of Edinburgh to the city centre, with subsequent benefits for those travelling to, from and between these parts of the city. However, the impacts would largely be felt within the city, rather than on the strategic transport network serving it.</p> <p><b>2: Positive</b> – This intervention would connect with Edinburgh Tram, which is currently under construction and would offer interchange opportunities with both Waverley and Haymarket Rail Stations. There would also be opportunities to connect with Edinburgh Tram and express bus services to Edinburgh Airport.</p> <p><b>3: Neutral</b> – This intervention would have no effect on increasing public transport capacity between Fife and Edinburgh.</p> <p><b>4: Neutral</b> – This intervention would not have any significant direct effect on promoting continuing reduction in accident rates and severity rates across the strategic transport network; however by encouraging modal shift from car to Light Rapid Transit and thereby reducing the number of vehicles on the road, road accidents should be reduced.</p> <p><b>5: Neutral</b> – This intervention would have no impact on the reduction in journey times between the Central Belt and Aberdeen/Inverness.</p>

Table E13.1.2 STAG Criteria

STAG Criteria		
Criteria:	Assessment Summary:	Supporting Information:
Environment:	Moderate Benefit/Moderate Negative Impact	There is potential for modal shift from car to light rail, which is likely to result in improved local air quality, potentially within the Air Quality Management Area. There is considered to be limited potential for effects upon the natural environment, as the vast majority of the works would be constructed within the boundary of the existing road network. In addition, reduced levels of road traffic have the potential to improve the setting of cultural heritage sites. However, there are potential moderate adverse environmental impacts associated with cultural heritage and landscape.
Safety:	Neutral	<p>The safety implications of this intervention would be dependant on the nature of the Light Rapid Transit line and the relationship with other modes. Running Light Rapid Transit on shared use roads and pedestrian footpaths could result in a negative perception on safety for these sections of the route.</p> <p>It is anticipated that this intervention would result in a slight reduction in the number of vehicles on the road. However, the impact on the number of accidents is considered to be negligible.</p> <p>There would be little impact on security as a result of this intervention. The facility would be designed in line with best practice standards. It is anticipated that CCTV, lighting and surveillance would be in place on vehicles and platforms to maintain a high level of personal safety and perceived safety for all travellers.</p>
Economy:	Moderate Benefit	<p><b>Transport Economic Efficiency (TEE):</b> This intervention would have positive economic benefits, through reducing travel times for public transport between South East Edinburgh, Musselburgh and the city centre. However, benefits for existing road users would be minimal as a significant proportion of the users of the Light Rapid Transit would transfer from existing bus and rail services.</p> <p><b>Wider Economic Benefits (WEBs):</b> Improvements to the capacity of the public transport network would result in improvements to journey times, reliability and service quality for commuters and business travellers. As such, Light Rapid Transit would help maximise labour catchment areas for businesses based in Edinburgh and East Lothian and help maintain good links between businesses in Edinburgh and surrounding areas. By encouraging a degree of modal shift from car, and reducing road congestion, the Light Rapid Transit may help improve the efficiency of the road network in Edinburgh. The project is likely to have a minor positive impact on the efficiency and productivity of business users travelling by road.</p> <p><b>Economic Activity and Location Impacts (EALIs):</b> Improvements to journey times, reliability, service quality and accessibility for business travel and commuters would have a positive impact on the development of key employment sectors and key sites including developments in south east Edinburgh such as the Centre for Biomedical Research and other developments at the Edinburgh Royal Infirmary.</p>
Integration:	Moderate Benefit	<p><b>Transport Integration:</b> This intervention would result in an expansion of the Edinburgh Tram network and therefore, by its nature, would integrate with public transport in Edinburgh. Furthermore, integration with the first phases of Edinburgh Tram would allow direct integration with Edinburgh Airport.</p> <p><b>Transport and Land Use Integration:</b> Improving transport links between the city centre and the area of economic activity on the south east of the city would have a positive impact on transport land use integration, by benefiting the south east Edinburgh Economic Development Zone around Edinburgh Royal Infirmary and the Centre for Biomedical Research.</p>

		<p><b>Policy Integration:</b> It is anticipated that fully accessible vehicles would be used as part of the measure integrating with the government objective on disability. Health services would be promoted through the development of a more attractive sustainable transport option progressed through this intervention. The areas affected are primarily urban in nature or within commutable distance to Edinburgh. It is anticipated that through the use of fully accessible vehicles the intervention is likely to be socially inclusive.</p>
<b>Accessibility and Social Inclusion:</b>	<b>Moderate Benefit</b>	<p><b>Community Accessibility:</b> It is considered that the public transport network coverage would improve access to jobs, training, health services, shopping and other locally significant trips by providing a fast, efficient and direct link between the residential areas in Edinburgh, and parts of East Lothian, to the city centre and the south east area of economic activity. This intervention is therefore expected to improve public transport network coverage, and provide an additional alternative mode to the car. Local accessibility is therefore likely to increase.</p> <p>Local severance issues would be dependent on the final alignment of the route but designs should be cognisant of such potential issues.</p> <p><b>Comparative Accessibility:</b> It is unlikely that the distribution of impacts would differ by people group in terms of age, gender, car ownership or income group. The new infrastructure would have to comply to design standards and would therefore be fully DDA compliant.</p>

Table E13.1.3 Key Strategic Outcomes

Key Strategic Outcomes (KSO's)		
Objective:	Assessment Summary:	Supporting Information:
<b>Improve Journey Times and Connections:</b>	<b>Minor Benefit</b>	Providing a new Light Rapid Transit line would help to improve public transport journey times and efficiency as there would be reduced conflict with road vehicles. Also, connections between Edinburgh City Centre and Edinburgh Royal Infirmary, Shawfair and parts of East Lothian would be improved.
<b>Reduce Emissions:</b>	<b>Minor Benefit</b>	This intervention could relieve some city centre traffic, by providing a link from the South East of Edinburgh into the city centre. This would have some positive effects on local air quality however, the extent would depend on the degree of modal shift achieved. Central Edinburgh, just south of Waverley station where the tram would terminate, is an Air Quality Management Area; therefore even a minor benefit in local air quality could have moderate beneficial effects within the Air Quality Management Area.
<b>Improve Quality, Accessibility and Affordability:</b>	<b>Major Benefit</b>	Commuters would have access to a high quality alternative to car, bus or train journeys into Edinburgh from the outskirts of the city. The introduction of a new Light Rapid Transit line would improve the quality of travel along this route as well as improving accessibility between Edinburgh City Centre and Edinburgh Royal Infirmary, Shawfair and parts of East Lothian. This intervention would not impact on affordability.

Table E13.1.4 Scottish Government's Strategic Objectives

Scottish Government's Strategic Objectives		
Objective:	Assessment Summary:	Supporting Information:
<b>Safer and Stronger:</b>	<b>Minor Benefit</b>	The quality and accessibility of public transport between Edinburgh Royal Infirmary, Shawfair and potentially Musselburgh (as well as Edinburgh) and economic activity areas would improve. By removing traffic from city centre roads it is anticipated that this measure would also contribute to reducing road accidents in line with this objective. The intervention infrastructure would be designed in accordance with current good practice and standards to ensure that all aspects of passenger safety are allowed for wherever possible. Affordability of public transport would not be affected.
<b>Smarter:</b>	<b>Moderate Benefit</b>	This intervention would improve public transport access to the University of Edinburgh from across the city. This intervention could also improve access to Queen Margaret University at Musselburgh if the line is extended.
<b>Wealthier and Fairer:</b>	<b>Moderate Benefit</b>	The new Light Rapid Transit link between Edinburgh and Edinburgh Royal Infirmary, Shawfair and potentially Queen Margaret University at Musselburgh is likely to contribute to a Wealthier and Fairer Scotland by improving transport connections between these areas, which would support sustainable economic growth, and in turn providing travel opportunities for employment, education, business, leisure and tourism.
<b>Greener:</b>	<b>Minor Benefit</b>	This intervention encourages a modal shift to rail with the overall potential for improvements to air quality and reduced CO <sub>2</sub> e emissions. It also promotes the use of sustainable transport.
<b>Healthier:</b>	<b>Moderate Benefit</b>	This intervention would encourage modal shift to public transport and improve public transport access to the Edinburgh Royal Infirmary from across the city.

Table E13.1.5 Implementability Appraisal

Implementability Appraisal	
<b>Technical:</b>	There would be technical risks associated with the construction of this intervention. As much of the route is on-street, there are likely to be underground services that would have to be diverted. Protection against current leakage would also have to be designed for.  There would be considerable disruption to existing traffic during the construction of the Light Rapid Transit system as much of the route is on-street. This would necessitate the closure or partial closure of city streets to allow construction to safely take place.
<b>Operational:</b>	After opening, there may be disruption to existing road traffic. However, it is considered that much of this can be mitigated by the design of traffic signalling systems and the interface between road traffic and the Light Rapid Transit system.
<b>Public:</b>	There has been significant detailed public consultation regarding this intervention. It is expected that any measure which promotes modal shift to more sustainable transport would achieve public support the support for Tram Lines 1 and 2 within Edinburgh was mixed.