

Detailed Appraisal		D30 - Light Rapid Transit connections between Fife and 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>				£10m - £50m - £10m - £50m < 0.75 / £10m - £50m		
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 objectives to increase public transport capacity between Fife and Edinburgh and supports the proposed national developments at Rosyth, the Forth Replacement Crossing and Edinburgh Airport identified in the NPF2.								
It would consist of a bus based rapid transit service over the replacement Forth Crossing, providing improved connections across the Forth Estuary.								
In particular, it would connect the communities in Fife with the business and commercial opportunities in Edinburgh and West Lothian.								
Summary: Rationale for Selection								
This intervention would ease congestion by offsetting the forecast decrease in capacity for road users and would result in a slight increase in the 60-minute commutable market area for Edinburgh.								
This intervention could provide an efficient means to access West Edinburgh, including Edinburgh Airport, from Fife complementing the heavy rail connections via the new committed interchange at Gogar (as part of D22 – Edinburgh to Glasgow Rail Improvements Programme).								
Overall the proposed intervention performs strongly against the stated objectives and could be implemented in conjunction with strategic Park-&-Ride and the provision of priority vehicle lanes.								

Table D30.1.1 STPR Criteria

STPR Objectives	
<p><u>STPR Objective 1:</u></p> <p>To reduce public transport journey time between Edinburgh and Dundee.</p> <p><u>STPR Objective 2:</u></p> <p>To increase public transport capacity and frequency between Fife and Edinburgh.</p> <p><u>STPR Objective 3:</u></p> <p>To promote journey time reductions between the Central Belt and Aberdeen/Inverness primarily to allow business to achieve an effective working day when travelling between these centres.</p> <p><u>STPR Objective 4:</u></p> <p>To promote efficient and effective transport links to support the development and implementation of the proposed national developments at Rosyth, Forth Crossing and Edinburgh Airport identified in the NPF2.</p> <p><u>STPR Objective 5:</u></p> <p>To promote continuing reduction in accident rates and severity rates across the strategic transport network.</p> <p><u>STPR Objective 6:</u></p> <p>To improve the efficiency of the M90/A90 during periods of peak demand with a focus on reducing the conflict between longer distance and local traffic.</p>	<p>1: Slightly Positive – M90/A90 is currently suffering from capacity issues and provision of new Light Rapid Transit line would provide public transport which is competitive with the car and would reduce journey time between Fife and Edinburgh.</p> <p>2: Positive – This intervention would enhance connections between Fife and Edinburgh. It would provide an attractive alternative public transport mode, which would improve capacity and accessibility for local communities.</p> <p>3: Slightly Positive -The provision of a new Light Rapid Transit link from Edinburgh to Fife would release capacity for heavy rail between Edinburgh and Aberdeen / Inverness, resulting in some journey time reductions and improved reliability for other heavy rail services.</p> <p>4: Positive - This new Light Rapid Transit line would help to improve transport links to and across the Forth Crossing and would support the developments at Rosyth and Edinburgh Airport by providing direct public transport access.</p> <p>5: Neutral - Although this intervention would attract more modal shift from car to public transport it is unlikely to have any significant effect on accident rates and severity rates across the strategic transport network.</p> <p>6: Neutral - Although this intervention would increase the number of public transport options over the Forth it is unlikely to have any significant effect on improving the efficiency of the M90/A90 during periods of peak demand.</p>

Table D30.1.2 STAG Criteria

STAG Criteria		
Criteria:	Assessment Summary:	Supporting Information:
Environment:	Minor Benefit	There is the potential for the Light Rapid Transit to encourage some modal shift away from car use, which could contribute to a reduction in road vehicle emissions thereby resulting in minor positive effects to local air quality and a contribution to the reduction in CO ₂ e emissions.
Safety:	Neutral	<p>Although this intervention would attract a degree of modal shift from car to public transport it is not considered to have any significant effect on accident rates and severity rates across the strategic transport network.</p> <p>The safety implications of the intervention would be dependant on the nature of the Light Rapid Transit and the relationship with other modes. Running Light Rapid Transit on shared use roads / pedestrian footpaths could have a negative impact on safety for these sections of the route.</p>
Economy:	Moderate Benefit	<p>Transport Economic Efficiency (TEE): This intervention is considered to have a positive economic impact through reducing travel times and increasing capacity between Fife and Edinburgh for public transport and all other road users by providing an efficient public transport network. This increase in efficiency and capacity would increase the 60-minute commutable market area for Edinburgh by approximately one per cent, by offsetting the impacts due to increased road congestion. Mode shift would result in reduced vehicle operating costs for existing drivers either as a result of changing mode to public transport or more efficient use of the road network due to released capacity.</p> <p>Wider Economic Benefits (WEBs): It is anticipated that the implementation of a Light Rapid Transit between Fife and Edinburgh would improve the attractiveness of public transport as an option for travel for both business and recreational travellers. This would have economic benefits for Fife, Edinburgh and the West Lothian locations in between. The direct link to the airport which would be afforded by this intervention would significantly enhance the modal share of public transport users between Fife and Edinburgh Airport, greatly contributing to the accessibility of Edinburgh Airport. Economic benefits would include improved efficiency and productivity for business travellers moving between Edinburgh City Centre, Edinburgh Airport and other key sites of economic activity across West Edinburgh. These benefits could arise through improved journey times and reliability resulting in better access to customers and suppliers. Public transport improvements would also help maintain labour catchment areas for employers in the region, assisting businesses in the recruitment of skilled staff.</p> <p>Economic Activity and Location Impacts (EALIs): Improved public transport provision between Fife and Edinburgh City and Airport would make the locations on route within Fife and West Lothian more economically attractive and improve economic performance on this section of the corridor. It would go some way to assisting in the progression of development areas in Fife and West Lothian through enhanced transport provision. By improving connectivity to key sites across the region (including Edinburgh airport and other developing areas in West Edinburgh), it would also have a positive impact on the continued competitiveness of the corridor as a strategic investment location.</p>
Integration:	Moderate Benefit	Transport integration: This measure would build on the extensive public transport system in Edinburgh and therefore by its nature would integrate with the bus network in Edinburgh. The integration with the pedestrian, cycling, bus, rail and air public transport networks is also likely to be positive. This would be dependent on detailed route and station interchange designs of the intervention and achievable integration with other public transport timetables.

		<p>Transport land-use integration: Improving transport links between Fife and Edinburgh has a positive impact on transport land use integration, by benefiting the South Fife Economic Development Zone around Dunfermline and Rosyth and Dunfermline as a strategic development area (<i>Fife Structure Plan 2006 – 2012, Fife Council</i>). This would also integrate and assist with the development of Winchburgh as a Core Development Area (<i>Finalised West Lothian Local Plan, West Lothian Council</i>). This intervention would also have a positive impact on the Area of Economic Activity identified in Edinburgh City Centre.</p> <p>Policy integration: It is anticipated that fully accessible vehicles would be used as part of the measure thereby integrating with policies on disability and compliance with DDA. Health services would be promoted through the development of a more attractive sustainable transport option progressed through this intervention. It is anticipated that through the use of fully accessible vehicles and improved public transport provision the intervention is likely to be socially inclusive.</p>
Accessibility and Social Inclusion:	Moderate Benefit	<p>Community Accessibility: It is believed 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 Dunfermline and Inverkeithing and the core employment centres of Rosyth and Edinburgh, and all other stops on the route(s). Therefore, this intervention is expected to improve public transport network coverage, and promote non-motorised trips. Local accessibility is likely to increase as this intervention would provide an additional public transport link between Dunfermline, Rosyth, Winchburgh, Edinburgh and employment areas such as Edinburgh Airport and Rosyth.</p> <p>Comparative Accessibility: It is unlikely that the distribution of impacts would differ by age, gender, car ownership or income group. The new infrastructure would comply to design standards and would therefore be fully DDA compliant. As noted in the Transport Land-Use integration section, the intervention would improve accessibility for the development area of west Fife, the Core Development Area of Winchburgh, and the Area of Economic Activity identified in Edinburgh City Centre.</p>

Table D30.1.3 Key Strategic Outcomes

Key Strategic Outcomes (KSO's)		
Objective:	Assessment Summary:	Supporting Information:
Improve Journey Times and Connections:	Major Benefit	This intervention would provide improved journey time reliability, and better connections both between Fife and Edinburgh, and within Fife between locations such as Dunfermline, Inverkeithing and Rosyth. This intervention would also run services directly into Edinburgh City Centre, removing the need for travel into the congested Waverley station.
Reduce Emissions:	Minor Benefit	The provision of a new Rapid Transit from Edinburgh to Fife is likely to promote modal shift car to public transport, thereby reducing the number of cars on the road, and so potentially reducing CO ₂ e emissions. However, environmental modelling outputs indicate that if this intervention was to be implemented, there would be an increase from the 2005 baseline, but a very slight improvement on the forecasted 2022 baseline CO ₂ e emissions.
Improve Quality, Accessibility and Affordability:	Major Benefit	This intervention would improve the quality of journeys into Edinburgh, and improve accessibility between Fife and Edinburgh and in particular West Edinburgh and Edinburgh Airport. This intervention does not impact on affordability.

Table D30.1.4 Scottish Government's Strategic Objectives

Scottish Government's Strategic Objectives		
Objective:	Assessment Summary:	Supporting Information:
Safer and Stronger:	Minor Benefit	The quality and accessibility of public transport between Fife and Edinburgh would be improved. However, although this intervention would attract some modal shift from car to public transport, it is unlikely to have any significant effect on accident rates and severity rates across the strategic transport network. The infrastructure involved in this intervention would be designed in accordance with current good practice and standards to ensure that all aspects of passenger safety are allowed for wherever possible.
Smarter:	Minor Benefit	This intervention would result in improved access to schools, colleges and universities in Edinburgh and the surrounding area.
Wealthier and Fairer:	Moderate Benefit	The new Light Rapid Transit link between Edinburgh and Fife is likely to contribute to a Wealthier and Fairer Scotland by improving transport connections between Fife and Edinburgh, which would support sustainable economic growth, providing travel opportunities for employment, business, leisure and tourism and linking towns, cities and the rural communities in Fife and West Lothian through interchange. This intervention would also slightly increase the 60 minute commutable labour market area for Edinburgh by offsetting the forecast decrease in capacity for road users due to increasing congestion.
Greener:	Minor Benefit	This intervention promotes a modal shift to rail with improvements to air quality and reduced CO ₂ e emissions. It also promotes the use of sustainable transport.
Healthier:	Minor Benefit	It is anticipated that the Light Rapid Transit link between Edinburgh and Fife would encourage a shift to public transport and the use of cycling and walking as part of journeys on the corridor therefore promoting healthier and physically active forms of transport. Transport access (public and private) to health services and community services such as Queen Margaret Hospital (Dunfermline) would also be improved contributing to a Healthier Scotland.

Table D30.1.5 Implementability Appraisal

Implementability Appraisal	
Technical:	There are no significant technical issues related to the implementation of this intervention. However as the design stages progress, localised issues could arise which require increased technical capabilities to overcome them.
Operational:	There are no envisaged operational issues related to this intervention during its projected life.
Public:	There has been no specific detailed consultation on this individual intervention. However, it is expected that any measure which promotes modal shift to more sustainable transport would achieve public support.