

Detailed Appraisal		Intervention E11: Inverclyde Road Improvements						
Estimated total Public Sector Funding Requirement:		<i>Capital Costs/grant</i>		£100m - £250m				
		<i>Annual Revenue Support Present</i>		-				
		<i>Value of Cost to Gvt</i>		£50m - £100m				
		<i>BCR/PVB</i>		< 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.)								
<b>Intervention Description:</b>								
<p>This intervention supports the objectives to improve the operation of the A8/M8, improve road safety and improve access to Greenock Port.</p> <p>The intervention would include measures such as:</p> <ul style="list-style-type: none"> <li>Average speed enforcement cameras on the A8/M8; and</li> <li>Grade separation of junctions at Langbank, Woodhall and Port Glasgow.</li> </ul>								
<b>Summary: Rationale for Not Recommending</b>								
<p>The proposed intervention would contribute to the objectives to improve the operational efficiency of the A8/M8, improve safety on the A8 and enhance access to Greenock Port. However, the ability of the intervention to resolve these objectives fully is limited by the number of junctions that can feasibly be grade separated, given the constraints of the current road alignment and the urban areas through which it passes.</p> <p>Due to the constrained nature of the junction locations, the proximity of the Inverclyde railway line and the need to maintain traffic flow during construction, this intervention has a high cost relative to the level of benefits that would be achieved. The intervention would provide poor value for money.</p> <p>There is a potential major adverse impact on cultural heritage, namely the Grade A listed Ropeworks in the vicinity of Port Glasgow Roundabout.</p> <p>Improvements to the operation of the trunk road through Intervention D6 (Using Intelligent Transport System to Enhance Capacity and Operations) could more effectively contribute to the relevant objectives for this corridor.</p>								

Table E11.1.1 STPR Objectives

STPR Objectives	
<p><u>STPR Objective 17.1:</u></p> <p>To increase capacity and reduce journey times by public transport between Glasgow and Inverclyde.</p>	<p><b>17.1: Slightly Positive</b> – This intervention is unlikely to have a major effect on increasing capacity and reducing journey times by public transport between Glasgow and Inverclyde. Journey time variability on the corridor for general traffic is expected to reduce, but without specific measures in place for public transport, the intervention's contribution to achieving this objective would be limited.</p> <p><b>17.2: Positive</b> – Grade separated junctions would reduce the conflict between motorists making strategic trips and those making local trips so that congestion would be reduced providing better access to Greenock port.</p> <p><b>17.3: Slightly Positive</b> – The construction of grade separated junctions on the A8 through Inverclyde, if combined with ramp metering (as described in Intervention D6) would improve the efficiency of the A8/M8 by reducing the impact of local traffic joining the A8 at the existing at-grade junctions and roundabouts. This would reduce congestion between local and longer distance travel during periods of peak demand. The proposed intervention would have a minimal effect on strategic traffic.</p> <p><b>17.4: Slightly Positive</b> – Speed enforcement measures have proven successful in reducing accident rates in various locations around the UK. The provision of such measures on the A8/M8 would result in greater speed compliance, with potential benefits for road safety and accident rates on this route. In addition, the construction of grade separated junctions on the A8 through Inverclyde would remove the conflict between local and long distance traffic, thereby reducing accident rates. However, upgrading may also result in a displacement rather than resolution of safety issues as the difference between a near-motorway-standard route and its adjacent urban and suburban section would be significant.</p> <p><b>17.5: Slightly Positive</b> – This intervention would help to reduce congestion and conflict on the A8/M8 thus providing a more efficient and effective transport link to Glasgow Airport from the Inverclyde region, supporting the development and implementation of the proposed national development at Glasgow Airport identified in the NPF2.</p>
<p><u>STPR Objective 17.2:</u></p> <p>To facilitate freight access to Greenock port.</p>	
<p><u>STPR Objective 17.3:</u></p> <p>To improve the efficiency of the A8/M8 during periods of peak demand with a focus on reducing the conflict between longer distance and local traffic.</p>	
<p><u>STPR Objective 17.4:</u></p> <p>To reduce the accident rate to the national road type average on the M8 and A8.</p>	
<p><u>STPR Objective 17.5:</u></p> <p>To promote efficient and effective transport links to support the development and implementation of the proposed national development at Glasgow Airport identified in the NPF2.</p>	

Table E11.1.2 STAG Criteria

STAG Criteria		
Criteria:	Assessment Summary:	Supporting Information:
Environment:	Major Negative Impact	There could be slight adverse effects to air quality or the water environment, although the scale of these is uncertain. The key consideration for these works should be the potential major adverse effects upon nationally important cultural heritage sites; particularly the Grade A listed Ropeworks in the vicinity of Port Glasgow roundabout. This building immediately abuts the roundabout and proposed work could affect its setting and integrity. Other potential adverse impacts exist at Langbank where grade separation may affect neighbouring designated areas, however, this should be addressed through detailed design.
Safety:	Moderate Benefit	This intervention would provide improvements in safety. The accident rate on the corridor is 22.8 P.I.A./100MVkm compared to the national rate of 15.5P.I.A./100MVkm; therefore improvements would reduce this towards the national rate. The fatal accident rate is in line with the national average for this type of road. The provision of speed enforcement measures would result in greater speed compliance, with potential benefits for road safety and accident rates on this route. In addition, the

		<p>construction of grade separated junctions would remove the conflict between local and long distance traffic, thereby reducing accident rates. However, upgrading may also result in a displacement rather than resolution of safety issues as the difference between a near-motorway-standard route and its adjacent urban and suburban section would be significant. The dense urban nature of much of this route limits the ability to deliver an effective solution.</p>
<b>Economy:</b>	<b>Minor Benefit</b>	<p><b><u>Transport Economic Efficiency (TEE):</u></b> The benefit to cost ratio for this intervention is less than 0.75. Therefore this intervention would not provide value for money.</p> <p><b><u>Wider Economic Benefits (WEBs):</u></b> The provision of grade-separated junctions would provide the capacity for increased and more reliable movement of goods and people between Greenock and Langbank, and provide more efficient access to Greenock port particularly for HGVs. The time taken to move people and freight would be reduced, resulting in increased productivity.</p> <p><b><u>Economic and Location Impacts (EALI):</u></b> The grade separated junctions would assist in the progression of development areas in Inverclyde, including the 77 hectares of land associated with the Riverside Inverclyde development and regeneration area, together with the Areas of Economic Activity identified within Glasgow City Centre and the Glasgow Airport Corridor. This would assist in developing the economy of Inverclyde and the surrounding area.</p>
<b>Integration:</b>	<b>Minor Benefit</b>	<p><b><u>Transport Integration:</u></b> This intervention would have no significant effect on Transport Integration.</p> <p><b><u>Transport and Land-Use Integration:</u></b> Development of the Riverside Inverclyde area is seen as important for growth of the local and regional economy and this intervention would help facilitate this development. In addition, this intervention would improve access to Greenock port. However, it may facilitate car based commuting to and from Glasgow.</p> <p><b><u>Policy Integration:</u></b> This intervention would not affect wider policies on disability, health services, rural affairs or social inclusion, as it does not include measures to encourage modal shift and assist in achieving a healthy and inclusive society. It would have a negative effect on road traffic reduction aspirations.</p>
<b>Accessibility and Social Inclusion:</b>	<b>Minor Negative Impact</b>	<p><b><u>Community Accessibility:</u></b> This intervention would not have any effect on community accessibility as it does not improve public transport network coverage nor does it promote non-motorised trips to access local services.</p> <p><b><u>Comparative Accessibility:</u></b> This intervention would not affect any individual group of people. It would improve access to Langbank and Greenock, including Greenock port and development areas such as Riverside Inverclyde, but would not provide greater accessibility for more deprived and socially excluded regeneration areas.</p>

Table E11.1.3 Key Strategic Outcomes

Key Strategic Outcomes (KSO's)		
Objective:	Assessment Summary:	Supporting Information:
<b>Improve Journey Times and Connections:</b>	<b>Moderate Benefit</b>	Grade separated junctions along the full length of the A8 between Langbank and Greenock would help to improve the efficiency of the A8 by reducing the impact of local traffic joining the A8 at the existing at-grade junctions and roundabouts, and is thus expected to improve journey times due to reduced congestion. The introduction of speed enforcement measures would reduce the delays due to accidents, and improve journey time reliability. Implementation of such measures elsewhere in the UK have demonstrated that journey time variability can be reduced by 27 per cent following implementation. The proposed intervention would have a limited impact on improving journey times for strategic traffic.
<b>Reduce Emissions:</b>	<b>Minor Negative Impact</b>	The relief of any congestion as a result of this intervention could reduce emissions at specific junctions due to vehicles travelling at more fuel efficient speeds. However, the overall impact on emission levels is expected to be negative due to the increased volume of vehicles using the route. The intervention would result in a small increase in CO <sub>2</sub> e emissions.
<b>Improve Quality, Accessibility and Affordability:</b>	<b>Minor Benefit</b>	Improved road standard on the A8 through Inverclyde would improve the quality of travel throughout the corridor and would improve general access along the corridor. The intervention would also improve access to Greenock port for HGVs. The intervention does not impact on affordability. The proposed intervention would have a minimal affect on strategic traffic.

Table E11.1.4 Scottish Government's Strategic Objectives

Scottish Government's Strategic Objectives		
Objective:	Assessment Summary:	Supporting Information:
<b>Safer and Stronger:</b>	<b>Minor Benefit</b>	This intervention would improve safety to some degree through the provision of speed enforcement measures, which would reduce traffic speeds and decrease the potential for accidents. In addition, the construction of grade-separated junctions would remove the conflict between local and longer distance traffic, which would reduce the number of accidents on this corridor. However, upgrading may also result in a displacement rather than resolution of safety issues as the difference between a near-motorway-standard route and its adjacent urban and suburban section would be significant. It would not improve the quality, accessibility and affordability of public transport.
<b>Smarter:</b>	<b>Minor Benefit</b>	This intervention would have no impact on access to schools, colleges and universities for those living along the corridor.
<b>Wealthier and Fairer:</b>	<b>Moderate Benefit</b>	The improved efficiency of the A8/M8, brought about by the provision of grade separated junctions, could increase productivity by reducing the time spent on the road by people and goods. The intervention would also assist in the proposed development areas within Inverclyde, and promote the urban regeneration at Riverside Inverclyde and at the Areas of Economic Activity at Glasgow City Centre and on the Glasgow Airport corridor.
<b>Greener:</b>	<b>Minor negative Impact</b>	This intervention would have a minor negative impact on air quality and CO <sub>2</sub> e emissions. The intervention would also not encourage modal shift from car to public transport.
<b>Healthier:</b>	<b>Neutral</b>	The improved efficiency of the A8/M8, brought about by the provision of grade-separated junctions, may have a small impact on access to health services, for example to Inverclyde Royal Hospital which is situated to the west of the A8.

**Table E11.1.5 Implementability Appraisal**

<b>Implementability Appraisal</b>	
<b>Technical:</b>	It is unlikely that any untried techniques would be required when implementing any aspects of this intervention, however as the design stages progress, localised issues may arise which require increased technical capabilities to be addressed. All three grade separations would be technically challenging due to A8 being constrained between the railway and the river, and with adjacent local roads. Particular difficulties at Parklea Road junction where the existing at-grade roundabout is constructed over the railway - this may require the A8 to be carried over the interchange on an elevated viaduct.
<b>Operational:</b>	<p>It is of note that Intervention D6 (Using Intelligent Transport Systems on Parts of the Road Network to Enhance Capacity and Operations) could improve network operations within the A8/M8 corridor.</p> <p>There are no envisaged operational issues related to this intervention during its projected life.</p>
<b>Public:</b>	There has been no detailed consultation on this intervention. Due to the recognised accident issues on the corridor it is expected that any interventions aimed at reducing this problem would be acceptable to the public. In addition, it is considered that there would be public acceptability of the intervention to implement grade-separated junctions due to the anticipated improvements on a busy section of the strategic road network. However, impacts on local roads or access restrictions could prompt some negative public response.