

| Detailed Appraisal | | | | | | | D3 (Part 4): Targeted Programme of Measures to Reduce Accident Severity on the A96 between Aberdeen and Inverness | | | | | | | | | |
|--|------------------------------------|--|--|----------------------------|----|--------------|---|---------------------------------------|----|-----|--|-----------------------------|--|-------------|--|--|
| Estimated total Public Sector Funding Requirement: | | | | <i>Capital Costs/grant</i> | | £50m - £100m | | <i>Annual Revenue Support Present</i> | | - | | <i>Value of Cost to Gvt</i> | | £10m - £50m | | |
| | | | | <i>BCR/PVB</i> | | N/A | | | | | | | | | | |
| Summary Impact on STAG Criteria | Environment | | | --- | -- | - | 0 | + | ++ | +++ | | | | | | |
| | Safety | | | | | | | | | | | | | | | |
| | Economy | | | | | | | | | | | | | | | |
| | Integration | | | | | | | | | | | | | | | |
| | Accessibility and Social Inclusion | | | | | | | | | | | | | | | |
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| (Judgement based on available information against a 7pt. scale.) | | | | | | | | | | | | | | | | |
| Intervention Description: | | | | | | | | | | | | | | | | |
| This intervention supports the objective to reduce the accident and severity rates on this route. This intervention would include measures such as: | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> Physical works aimed at providing safer overtaking opportunities such as: 2+1 sections; climbing lanes and overtaking lay-bys; hard strip provision for agricultural vehicles; local realignments and junction improvements. | | | | | | | | | | | | | | | | |
| It is envisaged that individual elements would be delivered in a targeted programme to address identified accident clusters and locations of accident severity. | | | | | | | | | | | | | | | | |
| In addition, speed enforcement measures could be considered at appropriate locations. | | | | | | | | | | | | | | | | |
| Summary: Rationale for Selection | | | | | | | | | | | | | | | | |
| The local realignment of the A96 and junction improvements are expected to improve safety. Evidence suggests that the introduction of climbing lanes can result in a significant reduction in accidents - of up to 50 per cent - on single carriageway routes. | | | | | | | | | | | | | | | | |
| The introduction of appropriate speed enforcement measures could also result in the safer operation of the road network, due to a greater compliance with speed limits. Evidence from trials elsewhere indicates that a reduction in average speed results in significant reductions in accidents and accident severity. | | | | | | | | | | | | | | | | |
| The introduction of these measures is likely to bring the proportion of serious and fatal accidents closer to the national rate. | | | | | | | | | | | | | | | | |

Table D3.4.1 STPR Objectives

| STPR Objectives | |
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| <p><u>STPR Objective 4.1:</u> To improve connectivity, particularly by public transport between Inverness City Centre and the growth area to the east, including Inverness Airport.</p> <p><u>STPR Objective 4.2:</u> To improve journey time and increase opportunities to travel, particularly by public transport, between Aberdeen and Inverness.</p> <p><u>STPR Objective 4.3:</u> Reduce the accident rate and severity rate to current national average.</p> | <p>4.1: Neutral – The A96 to the east of Inverness is currently single carriageway and suffers congestion in peak periods, especially on the approaches to Raigmore Interchange. This congestion is forecast to increase, extending back to Inverness Airport and beyond in the future, affecting all road users including public transport services. The improvements within this intervention are to the east of Nairn; therefore this intervention alone would not reduce the congestion to the east of Inverness. Provision of speed enforcement measures along the length of the A96 would not be anticipated to assist in the growth areas to the east of Inverness.</p> <p>4.2: Positive – The carriageway improvements would result in improved journey times between the two cities as the 2+1 sections would provide opportunities for overtaking slower moving vehicles. Delays and congestion currently experienced on approaches to Raigmore junction, Inverness, would not be alleviated; however, journey times along the remainder of the corridor would be reduced due to the proposals. Although it is not considered that any significant improvement in journey times would occur due to the introduction of speed enforcement measures, a recent study indicated that traffic smoothing, due to speed limit compliance, may result in improved journey times. The journey time improvements would affect all road users, including bus services. However, this may not result in any modal shift from car to bus. Along the length of the corridor (around 160km), rail and car journey times are comparable, but bus times are not competitive with car or rail. Comparison between bus and rail would improve; however, this intervention would not provide an increased opportunity to travel by public transport between Inverness and Aberdeen, as cars would benefit from the intervention.</p> <p>4.3: Positive - All the elements of this intervention would improve the safety of the road. The provision of speed enforcement measures along sections of the A96 is anticipated to improve safety and reduce accidents, particularly those involving speeding motorists. However, the measures would not directly influence accidents which occur on at-grade junctions or as a result of factors other than speed.</p> |

Table D3.4.2 STAG Criteria

| STAG Criteria | | |
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| Critical: | Assessment Summary: | Supporting Information: |
| Environment: | Minor/Moderate Negative Impact | This intervention has the potential for impacts on biodiversity, water, landscape, soils / geology and cultural heritage (there are a number of Scheduled Monuments close to the route). However, the exact location of the road improvements are not known in detail at this stage and so impacts are uncertain. Any potential impacts would need to be considered at the project design stage. |
| Safety: | Major Benefit | Potential alignment improvements and widening, in addition to 2+1 sections, would provide safer overtaking opportunities, which would contribute to improved safety on the A96. Route improvements and speed enforcement measures could reduce the rate of accidents, which is currently higher than the national average (32.3 PIA/100MVKm compared to 15.5 PIA/100MVKm). DMRB indicates that the difference between the UK national rate for rural single carriageway roads and rural single carriageway roads with climbing lanes is a reduction of approximately 50 per cent. A number of accident clusters were identified on the route, containing fatal and serious accidents. Reducing vehicle speeds on these sections would reduce the number of accidents, and also the severity of them if they do occur. |
| Economy: | Moderate Benefit | <p>Transport Economic Efficiency (TEE): Around 60 per cent of trips are wholly within this corridor, highlighting the importance of routes within it. In addition, 9 per cent and 15 per cent of trips are between the corridor and Inverness and Aberdeen respectively and 16 per cent of trips are between Inverness and Aberdeen. This indicates the importance of maintaining and improving the connection between the two cities. Route improvements would result in a degree of travel time savings, which would benefit all road users including bus and freight vehicles. Introduction of speed enforcement measures, at targeted safety locations, would result in economic savings in terms of accident benefits.</p> <p>Wider Economic Benefits (WEBs): Improvements would result in more consistent and reliable journey times. This corridor links Inverness and Aberdeen, therefore any improvements would help development opportunities in each city.</p> <p>Economic Activity and Location Impacts (EALIs): This intervention would support the general drive to improve safety on the trunk road network and increase the attractiveness of this route.</p> |
| Integration: | Neutral | <p>Transport Integration: This intervention would have no effect on public transport integration or ticketing.</p> <p>Transport and Land Use Integration: This intervention would not affect the need to travel. A minor improvement in strategic journey times on the A96 is not considered to significantly impact on development opportunities in the area. It is felt that, to affect development, this intervention would need to include improvements between Nairn and Inverness and could coincide with Intervention D16 (Upgrading A96 to Dual Carriageway between Inverness and Nairn) which is targeted to aid the development of areas to the east of Inverness.</p> <p>Policy Integration: Improved connections between the rural communities along this corridor would support policies relating to rural affairs.</p> |
| Accessibility and Social Inclusion: | Minor Benefit | Community Accessibility: General upgrades along the route would improve access between rural communities and employment, education and health services. End to end trips between Inverness and Aberdeen, would also be improved due to journey time and reliability improvements on the route. |

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| | | Comparative Accessibility: This intervention would not impact on comparative accessibility. |
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Table D3.4.3 Key Strategic Outcomes

| Key Strategic Outcomes (KSO's) | | |
|---|---------------------|---|
| Objective: | Assessment Summary: | Supporting Information: |
| Improve Journey Times and Connections: | Minor Benefit | This intervention would improve carriage provision and create safer opportunities for overtaking slower moving vehicles on the A96. This could result in a reduction in journey times and help to improve connections with other modes of travel in the corridor. |
| Reduce Emissions: | Neutral | This intervention would have little significant impact on emissions. |
| Improve Quality, Accessibility and Affordability: | Minor Benefit | This intervention would increase the quality of road standard at a number of locations along the route. Proposed 2+1 sections would allow more opportunities for safe overtaking which would lead to a reduction in driver frustration. Accessibility would be improved as rural communities within the corridor would have improved access to the trunk road network. This intervention would not impact on affordability. |

Table D3.4.4 Scottish Government's Strategic Objectives

| Scottish Government's Strategic Objectives | | |
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| Objective: | Assessment Summary: | Supporting Information: |
| Safer and Stronger: | Moderate Benefit | The widened, realigned and 2+1 sections of road would lead to improvements in road safety as the default accident rates for these types of road are lower than for a rural single carriageway road. A reduction in speeding vehicles would also reduce the severity of accidents on the improved sections. The intervention would not affect the quality, accessibility and affordability of public transport. |
| Smarter: | Neutral | This intervention would have no impact on education and training opportunities for those living along the corridor. |
| Wealthier and Fairer: | Minor Benefit | A degree of journey time savings would occur due to improved road standards. Delays caused by accidents on the route may be reduced, thus leading to more efficient transfer of goods on the network. |
| Greener: | Neutral | This intervention would not have any impact on emissions or result in any modal shift from car to public transport. |
| Healthier: | Neutral | This intervention would not have any impact on promoting healthier forms of transport or access to health services. |

Table D3.4.5 Implementability Appraisal

| Implementability Appraisal | |
|-----------------------------------|--|
| Technical: | No major technical issues are anticipated to arise from this intervention; however design would have to account for conditions along the corridors including terrain and land issues. Ensuring speed enforcement measures do not affect the visual impact of the area would be an issue. |
| Operational: | The responsibility for operational issues on the proposed measures in this intervention would remain with Transport Scotland and its maintenance contractors. |
| Public: | The safety issues and the problems with overtaking on the route are well known. This is an important intervention to the economy of Inverness and the surrounding area, with significant public interest at both local and regional levels. |