

Executive Summary

Introduction

SWestrans are considering options for improved transport links between Dumfries and the A74(M). To assist this, an appraisal consistent with the Scottish Transport Appraisal Guidance (STAG) has been undertaken.

Proposals for enhanced links between Dumfries and the motorway network have been under consideration for a number of years and have enabled a detailed assessment of the benefits and disbenefits to be carried out.

This study focused purely on road-based interventions carried forward from the initial STAG Part 1 appraisal, and highlighted in the SWestrans Regional Transport Strategy (RTS). Other projects may complement road-based schemes to provide a multi-modal package, however these are the subject of separate projects and analysis.

The study area is bounded to the east by the A74(M) motorway, to the south by the A75(T) and to the north by the A701(T). Dumfries itself marks the western extent of the area. Between the A701 and the A75 lies the A709 multi purpose road between Dumfries and Lockerbie, which is also a key consideration in the Study. Figure 1 below shows the study area routes.



Figure 1 Study Area Routes

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The sifting of options identified a preference for two corridor options:

- **Option 1 - A75(T) Gretna to Dumfries** - involves online dualling (widening) of the existing A75 road between Dumfries and Gretna; and
- **Option 3 - Lockerbie to Dumfries (South) Corridor** - involves construction of a new offline road between Dumfries and Lockerbie.

Taking the original STAG Part 1 appraisal into consideration, both options were subjected to the more detailed STAG Part 2 appraisal. The findings from this work are outlined below.

Environment

Both options have been assessed for their potential impacts against the environmental sub-criteria in order to ensure that environmental implications are considered during the decision making process. The main points from the assessment are outlined below.

The A709 (southern option) is offline and therefore has greater overall potential for environmental impacts than the proposed dualling of the existing A75(T).

The A709 corridor is environmentally more sensitive and will require significant survey and assessment. The major issues have been identified as being:

- ecology and nature conservation;
- landscape and visual quality; and
- water quality

Both schemes would likely require Statutory EIA under the Environmental Impact Assessment (Scotland) Regulations 1999, as amended.

Both schemes would likely require Appropriate Assessment under the Conservation (Natural Habitats &c) Regulations 2004.

The results of the environmental appraisal are summarised in Table 1.

Table 1 Summary of Environmental Appraisal for Both A74 (M) Fastlink Options

Environmental Criteria	Potential Environmental Impact Significance	
	Lockerbie to Dumfries (South) A709	A75 (T) Dualling
Noise & Vibration	Moderate/ Substantial Adverse	Negligible
Air Quality	Slight Positive	Negligible/ Neutral
Water Quality, Drainage and Flood Defence	Moderate/ Major Adverse	Minor/ Negligible Adverse
Geology	Moderate Adverse	Minor Adverse
Ecology, Biodiversity and Nature Conservation	Major Adverse	Minor/ Moderate Adverse
Landscape and Visual Amenity	Major Adverse	Minor Adverse
Land Use, Agriculture and Soils	Major Adverse	Minor/ Moderate Adverse
Cultural Heritage	Moderate Adverse	Minor Adverse

Safety

Analysis has shown that the accident severity ratio for the A75 (T) exceeds the “benchmark” figure for similar roads in the whole of Scotland. However, the severity ration for the A709 is well below the average figure for similar roads in Scotland.

The following table summarises the overall appraisal for safety.

Option	Accidents	Security	Overall Appraisal for Safety
Option 1: A75(T) Gretna to Dumfries	✓✓	0	✓✓
Option 3: Lockerbie to Dumfries (South)	✓	0	✓

Both options will impact positively on future accident rates; however, the poor record of the A75(T) between Gretna and Dumfries gives the greatest scope for improvement. There are no direct implications in terms of security.

Economy

Both options have positive Present Value of Benefits (ie total economic benefits outweigh any possible economic disbenefits). However potential travel time savings are much greater through proposed improvements on the A75(T) than those achievable through the Dumfries – Lockerbie option, and when the necessary investment costs are also taken into account only the A75(T) option has a positive Benefit:Cost Ratio (2.75).

We considered any potential Wider Economic Benefits which either option could deliver, but concluded that in this case all likely economic benefits were already captured through the cost/benefit analysis undertaken.

We also looked closely at potential economic activity and location impacts (EALIs) to identify any ways in which the options would support or develop the regional economy. Many of the industrial sectors in the region depend on good connectivity to their wider markets, and hence would clearly benefit from both the options under consideration. The A75 option is predicted to realise more benefits than the A709 due to the greater journey time savings that it offers. There may also be some redistribution of economic activity from England into Dumfries and Galloway as a result of the improved connectivity.

Table 1 TEE Appraisal Summary

	£k, in 2002 Prices	
	A75	A709
Consumer Benefits/Disbenefits		
Travel Time	205717	19427
Vehicle Operating Costs	-7874	-6516
Net Consumer Benefits	197843	12911
Business Benefits/Disbenefits		
Travel Time	231161	23362
Vehicle Operating Costs	3706	-1501
Private Sector Provider Impacts	Nil	Nil
Other Business Impacts	Nil	Nil
Net Business Impacts	234867	21861
Carbon Benefits	-1393	-210
Present Value of TEE Benefits (PVB)	431317	34562

The economic appraisal can be summarised as follows.

Option	Transport Economic Efficiency (TEE)	Wider Economic Benefits (WEBs)	Economic Activity and Location Impacts (EALIs)	Overall Appraisal for Economy
A75(T) Gretna to Dumfries	✓✓	No impacts	✓	✓✓
Lockerbie to Dumfries (South)	xx	No impacts	✓	x

Integration

We considered in some detail the relationship between such documents as the Structure Plan, Local Plan and Scottish Planning Policy statements/National Planning Policy Guidelines on the one hand, and the intervention being appraised.

Both options have elements which fit with policies in the Dumfries and Galloway Structure Plan. However, while the A75(T) option has at worst a neutral affect on policies, the Lockerbie to Dumfries (South) option is contrary to the Structure Plan's environmental policies.

According to the Structure Plan it would only be appropriate to develop the Lockerbie to Dumfries (South) option if there is no other suitable location for the development, and the development does not compromise the reason for which the area is protected.

Both of the options presented here support local and national access and economic growth objectives.

Overall, it can be seen that the policy context is mixed for the options for an improved link between Dumfries and the A74(M). While the A75(T) option generally complements national and regional transport polices, whilst the Lockerbie to Dumfries (South) option clearly conflicts with environmental policies.

The table below summarises the overall assessment against Government objectives for integration.

Option	Transport Integration	Transport Land-Use Integration	Policy Integration	Overall Appraisal for Integration
Option 1: A75(T) Gretna to Dumfries	No impacts	Mixture of compliance/non-compliance. Overall ✓	Mixture of compliance/non-compliance. Overall x	0
Option 3:	No impacts	Some compliance,	Some compliance,	xx

Lockerbie to Dumfries (South)	but very significant areas of non- compliance. Overall xx	but very significant areas of non- compliance. Overall xx
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Accessibility and Social Inclusion

An accessibility assessment of proposed improvements to the Lockerbie to Dumfries Corridor was carried out using the Dumfries and Galloway ACCESSION model.

Access to public transport is unlikely to be improved by implementation of either of the proposals however reliability and efficiency of existing public transport services using either option would be significantly improved as a result of the appraised schemes.

The new route to the south of the A709 has been designed to avoid severance along its route whilst the proposed improvements to the A75 should have no impact on this at all.

The proposals will have a beneficial effect for car users as accessibility to the motorway network from Dumfries will be significantly improved through greater reliability. This will in turn allow for better access on local routes, with particular benefits for the east of Dumfries which will exhibit reduced traffic levels.

The table below summarises the overall assessment against Government objectives for accessibility and social inclusion.

	Community Accessibility		Comparative Accessibility		Overall Appraisal for Accessibility/Social Inclusion
	PT Network Coverage	Local Accessibility	People Groups	Locations	
A709	0	0	✓	✓✓	✓
A75(T)	0	0	tba	tba	tba

Cost to Government

- **Option 1 (Dualling A75)** - significant Net Present Value, exceeding £432 million over 60 years, and a Benefit:Cost Ratio of 2.753; and
- **Option 3 (Dumfries – Lockerbie)** - there are Net Present Value benefits exceeding £34 million over 60 years, but a Benefit:Cost Ratio of 0.64.

Implementability

In terms of technical issues, both options under consideration are based around improvements to the road network. Option 1 concentrates on improving the A75(T) and would feature some on-line enhancements and newly built roads in close proximity to the existing alignment. In contrast Option 3 involves a significant amount of newly constructed roads, including the by-passing of Torthorwald, and the existing A709 would be retained for local traffic.

In both cases the construction involved would be well within the bounds of standard civil engineering experience for similar road schemes, and it is not anticipated that major technical issues would be presented by either option.

There are no known operational disbenefits associated with proposals for improving the A75. An improved A75 will produce particular benefits, improving the existing reliability problems. Similarly, there are no operational problems associated with the construction of a new fast link to the motorway south of the A709.

From a financial perspective, the capital cost associated with either option will be high, and it is certain that central government funding would be required to secure either scheme. It should be noted that the A75 is classed as a trunk road on the national strategic network, therefore any improvements should be carried out/jointly funded by Transport Scotland.

We anticipate the public would generally be in favour of any improvements linking Dumfries to the motorway network. The current routes have a history of traffic congestion and accident problems which would in part be relieved by any improvements, while capacity would be significantly improved.

It seems likely that a robust and convincing case will need to be made, particularly for the Lockerbie to Dumfries (South) option, in order to overcome the current presumption by the Scottish Government against such a scheme.

Conclusions and Recommendations

The discussion and appraisal undertaken to date is summarised in the table below from which flows the set of recommendations for further action.

		Option 1: A75(T) Gretna to Dumfries	Option 3: Lockerbie to Dumfries (South)
Transport Planning Objectives	Env1: To safeguard the environment and heritage of the study area	x	xx
	Env2: To reduce the impacts of traffic on local communities	O	✓✓
	S1: To improve safety for all road users by reducing road traffic accidents on the routes linking Dumfries to the A74(M)	✓✓	✓
	Ec1: To increase the reliability of journey times for all vehicles travelling between Dumfries and the A74(M)	✓✓✓	✓✓
	Ec2: To aid economic prosperity and area regeneration by improving accessibility and reducing travel costs between Dumfries and the A74(M)	✓✓	✓
STAG Criteria	Environment	x	xx
	Safety	✓✓	✓
	Economy	✓✓	x
	Integration	O	xx
	Accessibility/Social Inclusion		✓
Implementability		xx	xxx
✓✓✓	Major Benefit	x	Minor Disbenefit/impact
✓✓	Moderate Benefit	xx	Moderate Disbenefit/impact
✓	Minor Benefit	xxx	Major Disbenefit/impact
O	No Benefit/Impact		

Recommendations

Although both options present environmental challenges – not unusual for road schemes of this type – those relating to the Lockerbie – Dumfries option are particularly challenging, will require considerable mitigation measures (the extent of which cannot yet be foreseen), will require more detailed environmental appraisal, and will be generally more difficult to deliver.

These challenges might be worth addressing if the benefits gained under other headings were more worthwhile than those obtainable through upgrading of the A75(T) between Dumfries and

Gretna. However, as has been shown the A75(T) option generally has greater benefits than the alternative considered, most notably a strongly positive BCR.

We would therefore recommend that improved accessibility between Dumfries and the national motorway network would be best delivered through dualling of the A75(T) between Dumfries and Gretna, drawing on the outline plans developed in the course of this Detailed Appraisal.

Next Steps and Challenges to be Overcome

Once this report has been considered, if our recommendations are adopted then the following next steps should be considered:

- undertake appropriate targeted **consultation** to enhance the evidence base set out in this report, and assist future engagement with central government and others;
- engage with **Transport Scotland** regarding how best to take forward improvements to the A75(T) as this is a Trunk Road;
- engage with **potential funders** (eg European Union) regarding sources of finance to deliver the programme for the A75(T); and
- undertake a **Design Development Appraisal** to optimise plans for the A75(T).