

## EAST AYRSHIRE COUNCIL

CABINET – 26 JANUARY 2011

### A70 & A71 RURAL ROUTE IMPROVEMENT FEASIBILITY STUDY

#### Report by Depute Chief Executive/ Executive Director of Neighbourhood Services

## 1. PURPOSE OF REPORT

1.1 The purpose of the report is to: -

- (a) Advise the Cabinet of the A70 & A71 Rural Route Improvement Feasibility Study carried out by WSP Consultants and the recommendations contained in the final report;
- (b) Seek agreement for the Head of Roads and Transportation to apply for funding from Strathclyde Partnership for Transport (SPT), on behalf of East Ayrshire Council, South Lanarkshire Council and South Ayrshire Council, to extend the study to cover the full length of the rural single carriageway sections of both routes to the M74 motorway;
- (c) Seek agreement that the projects identified in the Feasibility Study will:-
  - (i) Form the basis of future bids to Strathclyde Partnership for Transport for grant allocations;
  - (ii) Be considered for developer contributions, where appropriate: and
  - (iii) Be the subject of future reports to Cabinet with regard to programming of the projects, once detailed designs and cost estimates have been prepared.
- (d) Seek agreement for the Head of Roads and Transportation to initiate negotiations for the land acquisition needed to implement the second phase of the Glenbuck realignment.

## 2. BACKGROUND

2.1 This report has been prepared to inform Cabinet of the A70 & A71 Rural Route Improvement Feasibility Study carried out by WSP Consultants. Submission of the report to Cabinet was delayed due to a review of the appraisal scoring matrix.

2.2 The A70 and A71 are regionally significant routes and provide east-west connections from Ayrshire to the M74. Past studies have shown that road transport accounts for 92%, by volume, of the movement of goods and materials to and from Ayrshire. The A70 and A71 are particularly important in providing access for economic activity in Ayrshire and carry significant volumes of goods traffic. The existing characteristics of the A70 and A71, the traffic flows and accident statistics are outlined in Appendix 1.

**2.3** The main issues affecting both routes include:-

- (a) Poor safety record;
- (b) Delays due to road works, incidents, seasonal variations in traffic flows, difficulty passing slow moving lorries and agricultural vehicles;
- (c) Unreliable journey times for essential traffic movements because of limited safe overtaking opportunities and poor road alignments; and
- (d) The need to close the road during road maintenance works where carriageway widths are restricted.

**2.4** Accidents on the A71 are divided almost equally between the rural and built-up areas. However, on the A70, more than 70% of injury accidents occur on the rural sections. Extensive programmes of traffic calming, pedestrian crossings and other road safety measures have been carried out in recent years in Hurlford, Newmilns and Darvel resulting in reductions in injury accidents of 65%, 43% and 31% respectively in these communities.

### **3. EARLIER STUDIES**

**3.1** The Scottish Office commissioned a comprehensive study in the mid 1990's which considered the feasibility of forming a new or upgraded road link between Ayrshire and the M74. At the time of the Study, 51% of Ayrshire companies indicated that their business activities were constrained by the road network in Ayrshire. When the business community was consulted, both the A70 and A71 featured consistently as the preferred routes to be upgraded. The Study concluded that upgrading the A70 and A71 or providing a new route would enhance access to the area and improve the potential for economic regeneration.

**3.2** Poor accessibility to jobs, educational opportunities and for economic regeneration is a significant issue in the former Coalfield area, to the south of Mauchline. The Scottish Executive commissioned a report in 2006 to consider the role that investment in new transport infrastructure and services can play in the economic regeneration of Ayrshire as a whole. The 2006 report noted that:-

- (a) The three Ayrshire local authority areas have relatively poor accessibility to job opportunities by both car and public transport;
- (b) Access to jobs by car and public transport in East Ayrshire is worse than in Glasgow City and South Lanarkshire. This may place Ayrshire at a disadvantage when implementing policies for population stabilisation and inward investment; and
- (c) Upgrades to the A70 and A71 would improve links primarily between Ayrshire and UK markets via the M74.

**3.3** The study concluded that reducing the transport constraints would contribute towards promoting economic development and regeneration in the region by:-

- (a) Improving the reliability of journey times;
- (b) Supporting the key Structure Plan aims to implement a housing led population stabilisation strategy;
- (c) Assisting local and developing industries; and
- (d) Helping to reduce the perception of peripherality which can be a barrier to new investment in Ayrshire.

## **4. A70 AND A71 EARLIER IMPROVEMENTS AND PROPOSALS**

- 4.1** Since the mid nineties, the Council has implemented a number of schemes on both routes to address safety issues and improve traffic flows. These improvements include: traffic calming in each of the communities along the routes; route action plan measures comprising consistent signing, lining and other treatments over the whole length of the rural sections of the routes to help drivers reduce their speed to an appropriate level on the approaches to bends, junctions and communities; and a major realignment scheme at Welltrees Bridge to the east of Cumnock, which was completed in 2007.
- 4.2** Just before local government reorganisation in 1996, the former Strathclyde Regional Council prepared designs for the Newmilns and Darvel by-passes. However, East Ayrshire Council was unable to proceed with these projects because of the high capital cost of implementation. An initial appraisal and preliminary design was carried out in 2008 to assess the feasibility of constructing an Ochiltree by-pass. The detailed appraisal and design of the project are included in SPT's programme, however, competing demands for funding currently have a higher priority.
- 4.3** Detailed designs have been prepared for three improvement schemes on the A70: Mote Toll Junction Improvement; Wee Torhill Realignment; and Glenbuck Realignment comprising two phases; Appendix 2. A review of the Glenbuck realignment is being carried out prior to finalising the proposals
- 4.4** The Mote Toll Junction Improvement was completed in Spring 2010. The Council, in Partnership with SPT, has put in place funding to implement the Wee Torhill Realignment and work will commence shortly. At its meeting on 23<sup>rd</sup> June 2010, Cabinet agreed a capital programme which included the first phase of the Glenbuck realignment, commencing in 2011/12, subject to land acquisition and the ratification of budgets by SPT and EAC. The first phase is wholly within East Ayrshire. The second phase would extend into South Lanarkshire. It is proposed that, subject to consultations with South Lanarkshire Council, negotiations will commence with landowners for the acquisition of the land needed to provide the whole length of the scheme, to allow the scheme to proceed as and when funding is available.

## **5. ROUTE IMPROVEMENT FEASIBILITY STUDY**

- 5.1** WSP Consultants were commissioned, at the end of 2008, to carry out a study of the **rural** single carriageway sections of the A70 and A71 in East Ayrshire. The consultant was required to identify new improvement schemes for both the A70 and A71 to address the issues set out in 2.3, above, and to improve connectivity for economic regeneration.
- 5.2** The A70 study area extended from the East Ayrshire boundary with South Ayrshire to 4km west of the boundary with South Lanarkshire, a distance of some 32 km. The sections of the A70 for which improvements were previously identified i.e. Mote Toll; Wee Torhill; and the Glenbuck Realignment were not included in the study. The A71 study area was from the Bellfield Interchange through to the boundary with South Lanarkshire Council, a distance of some 19km. The study specifically

considered the need for improving the **rural** sections of the routes to meet the stated objectives.

**5.3** The study required the Consultant to develop new proposals, initial design concepts, and cost estimates for upgrading the two routes. The study objectives were to identify and prioritise road improvements to:-

- Improve safety
- Accommodate the movement of large volumes of heavy goods vehicles
- Improve accessibility to the former Coalfield area
- Enhance the reliability of journey times and connectivity to the M74 corridor for business and freight traffic for economic regeneration and tourism.

**5.4** The Consultant was also required to carry out an initial appraisal and ranking of the schemes on the basis the Scottish Government Strategic Objectives; the Regional Objectives as set out in the Regional Transport Strategy and the Ayrshire Joint Structure Plan; the EAC Community Planning Themes; Implementability and the Project Objectives, set out above.

## **6. FEASIBILITY STUDY PROPOSALS**

**6.1** The improvement measures were assessed using a methodology based on the Scottish Transport Appraisal Guidance (STAG) which shows the benefits that can be obtained over do-nothing scenarios. The appraisal methodology scores each improvement scheme taking account of a significant number of factors including safety, health, modal shift, accessibility, and environment. The improvement schemes are contained in Appendix 3 and are listed and ranked for each route separately.

**6.2** It is proposed that the appraisal will be used as a basis for making bids to the Regional Transport Partnership for future grant applications for the design and implementation of the highest ranking schemes on both routes. Developer contributions will also be sought, when appropriate. The ranking of the projects for implementation will be reviewed when detailed designs and cost estimates have been prepared, and programming will be the subject of future reports to the Cabinet. Funding packages will be sought, where possible, to coordinate route improvements with future structural maintenance works.

**6.3** The Study has identified more improvements on the A70 than the A71 because: -

- (i) The rural sections of the A70 are significantly longer than the A71. The A71 comprises relatively short lengths of rural single carriageway road in East Ayrshire and few of these are suitable for upgrading to provide overtaking opportunities.
- (ii) The A71, to the west of the A77 corridor, has already been upgraded to dual carriageway and a significant length of the route has been upgraded to provide a by-pass to Galston.

**6.4** It is proposed that funding will also be sought from SPT to extend the study of the rural single carriageway sections of the A70 and the A71 to cover the full length of both routes between the M74 Corridor and the main Ayrshire towns. South Ayrshire

Council and South Lanarkshire Council support East Ayrshire Council making a bid to SPT for funding to carry out such a cross boundary study.

## **7. LEGAL IMPLICATIONS**

7.1 None

## **8. PERSONNEL IMPLICATIONS**

8.1 None

## **9. FINANCIAL IMPLICATIONS**

9.1 £100k per year over 10 years has been allocated to Strategic Route Improvements from the Roads & Transportation 10-year capital programme to 2018/19. The construction of the Wee Torhill realignment is committed in 2010-11 with an allocation from SPT. It is proposed that the Glenbuck realignment, the necessary land, and the design of the A70/A71 schemes identified in the Feasibility Study will be funded from the Strategic Route Improvements budget and future allocations from SPT. Developer contributions will also be sought, where appropriate.

## **10. COMMUNITY PLAN / POLICY IMPLICATIONS**

10.1 The measures which are proposed will contribute towards Improving Community Safety and Delivering Community Regeneration.

## **11. RISK MANAGEMENT IMPLICATIONS**

11.1 Community safety and accessibility benefits will not be realised in the area if a programme of rural route improvements is not carried out.

## **12. RECOMMENDATIONS**

12.1 It is recommended that the Cabinet:

- (i) Notes that a study of Rural Route Improvements has been carried out which recommends improvement projects for the A70 and A71;
- (ii) Authorises the Head of Roads & Transportation to seek funding from SPT on behalf of East Ayrshire Council, South Lanarkshire Council and South Ayrshire Council to extend the study to cover the entire length of the rural single carriageway sections of the A70 and A71 between the M74 Corridor and the main Ayrshire Towns;
- (iii) Agrees that the projects in Appendix 3 will:-
  - (a) Form the basis of future bids to Strathclyde Partnership for Transport for grant allocations;
  - (b) Be considered for developer contributions, where appropriate: and
  - (c) Be the subject of future reports to Cabinet with regard to programming implementation of the projects, when detailed designs and cost estimates have been prepared.

- (iv) Agrees that the Head of Roads will initiate land negotiations for the future implementation of phase 2 of the Glenbuck realignment, subject to consultations with South Lanarkshire Council.

**Elizabeth Morton**  
**Depute Chief Executive/Executive Director of Neighbourhood Services**  
**20 January 2011**  
**JB/KO**

#### **APPENDICES**

Appendix 1: Existing Conditions  
Appendix 2: A70 Location Plan of 3 Designed Schemes  
Appendix 3: A70 and A71 Improvement Scheme Appraisal Sheets

#### **BACKGROUND PAPERS**

**A70 & A71 Rural Route Improvements Study Final Report**

**Traffic, Transportation and Road Safety Programmes 2010-11,  
Cabinet Report, 23 June 2010**

For further information on the contents of this report please contact Keith Orton on 01563 555714

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## **APPENDIX 1: EXISTING CONDITIONS**

### **A71 Route**

The traffic flow on the A71 single carriageway in East Ayrshire, between Bellfield Interchange and the boundary with South Lanarkshire Council, varies from 12,000 vehicles per day on the Galston bypass to approximately 5,000 vehicles per day east of Darvel.

In the 3-year period to October 2010, there were 44 injury accidents: 1 fatal; 13 serious; and 30 slight injury accidents on the 19km single carriageway rural sections between Bellfield Interchange and the SLC boundary.

The distance from Kilmarnock to the M74 is approximately 38 kilometres. The A71 passes through Hurlford, Newmilns, Darvel and Priestland in East Ayrshire and Strathaven and part of Stonehouse in South Lanarkshire.

### **A70 Route**

The traffic volume at Coalhall, near the boundary with South Ayrshire is 11,000 approx. vehicles per day and the volume at Muirkirk near to the South Lanarkshire boundary is approximately 4,000 vehicles per day. The route carries a significant proportion of coal and timber traffic in East Ayrshire.

The A70 is a single carriageway road between Ayr and M74 (J12) passing through South Ayrshire, East Ayrshire and South Lanarkshire. The distance from Ayr to the M74 is approximately 62 kilometres.

The route passes through a number of small towns and opencast mining areas in East Ayrshire (Coalhall, Ochiltree, Lugar, Muirkirk) and Coylton, Douglas and Glespin in adjacent local authority areas.

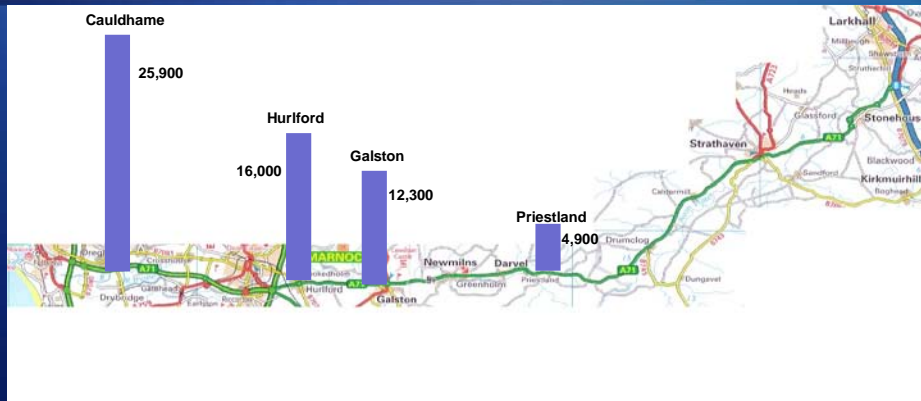
There were 38 injury accidents on the A70 in East Ayrshire in the 3-year period to October 2010: 1 fatal; 9 serious; and 28 slight injury. The whole length of the A70 route has previously been identified by the AA as having one of the poorest accident levels in Europe.

## A70 Traffic Flows



A70 24 Hour 5 Day Traffic Flows

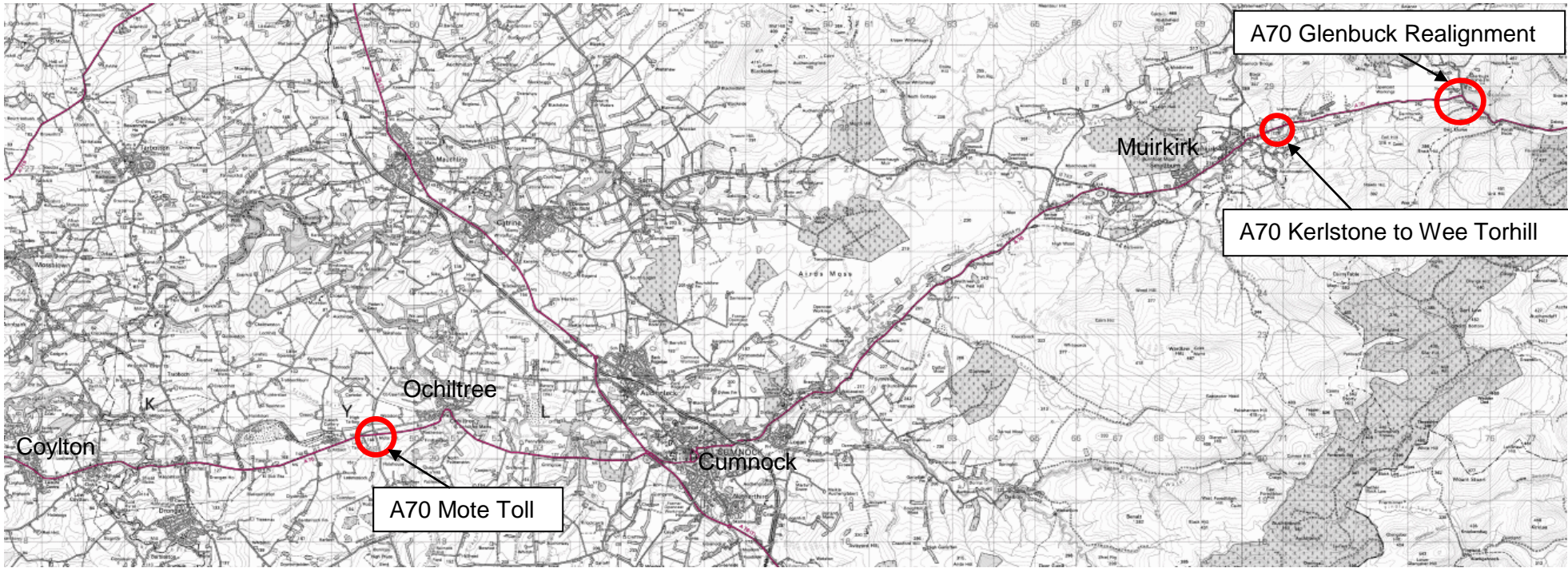
## A71 Traffic Flows



A71 24 Hour 5 Day Traffic Flows

## **APPENDIX 2**

**A70 Schemes – Location Plan**



## **APPENDIX 3**

# A70 Appraisal Form

Scheme	Description	Original Cost	SCOTTISH GOVERNMENT STRATEGIC OBJECTIVES					REGIONAL LEVEL STRATEGIC OBJECTIVES										SHIRE LOCAL PLANNING OBJECTIVES					IMPLEMENTABILITY				Overall Project Objectives			SCHEME APPRAISAL															
			Weather and Fairer	Healthier	Safer & Stronger	Smarter	Greener	Safety & Security	Modal Shift	Excellent transport System	Effectiveness & Efficiency	Access for All	Environment & Health	Economy, Transport & Land-use Planning	Stabilise the population in 2025 at 2005 levels	Encourage Economic Development	Improved Accessibility	Develop strong and vibrant communities including appropriate development in rural areas	Safeguard and enhance the quality of the environment	Promoting Community Learning	Improving Opportunities	Improving Community Health	Eliminating Poverty	Improving the Environment	Technical	Operational	Financial	Public	Improve reliability of journey times	Improve the safety record and reduce accidents	Encourage economic development through improved accessibility and perception of good accessibility	Stabilise the population through retaining existing residents and attracting new residents	Total Unweighted Planning Objective Score	Planning Objective Rank	Implementability Score	Overall Projects Objectives Score	Total Appraisal Score	Appraisal Rank							
			Cost Indicator	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2
Option A12	westbound climbing lane for 1160m between Mott Toll and Netherthorn	950K	9	1	1	1	0	-1	1	0	0	0	1	0	1	2	2	3	3	2	-1	0	1	1	1	0	-1	-1	2	1	2	3	2	3	2	17	4	4	10	31.0	1				
Option A4/A5	600m overtaking section between East Tareign and Provost Mount access junction	600K	1	0	0	1	0	-1	1	0	0	0	1	0	1	2	1	2	2	1	1	0	1	1	1	0	1	2	2	3	2	3	1	2	1	15	6	9	7	31.0	1				
Option A11	900m eastbound downhill overtaking section comprising verge widening to provide full overtaking sight distance from east of Mott Toll to west of Netherthorn property	50K	2	1	0	1	0	0	1	0	0	0	1	0	1	2	1	3	3	2		0	1	1	0	-1	-1	2	2	1	3	2	3	1	17	4	4	9	30.0	3					
Option C1	Speed reduction from 40mph to 30 mph with associated signing, lining and possibly ghost/traffic islands	25K	1	0	1	2	0	2	2	0	0	0	1	1	2	0	1	0	1	1	2	0	0	1	0	1	2	2	3	2	1	2	0	0	18	2	9	3	30.0	3					
Option A2	Reduce speed limit from 40mph to 30 mph	10K	1	0	1	2	0	2	2	0	0	0	1	1	2	0	1	0	1	1	2	0	0	1	0	1	2	1	3	2	1	2	0	0	18	2	8	3	29.0	5					
Option A8	Widen road on north side to achieve 7.3m with 2m verge between works accesses at farm access	56K	2	0	0	1	0	-1	1	0	0	0	0	0	1	2	1	2	2	1	1	0	1	1	0	1	2	2	2	2	3	1	2	1	14	9	8	7	29.0	5					
Option B1	Widen road on both sides to achieve 7.3m and 2m verge east of Ochiltree including Brentwood and Burnfoot	150K	4	0	0	1	0	-1	1	0	0	0	1	0	1	2	1	2	2	1	1	0	1	1	0	1	1	2	1	2	3	1	2	1	15	6	6	7	28.0	7					
Option C5	Widen road on south side to provide 7.3m at Bellowbank - Cabellow	25K	1	0	0	1	0	-1	1	0	0	0	0	0	1	2	1	2	2	1	1	0	1	1	0	1	1	2	2	2	3	1	2	1	14	9	7	7	28.0	7					
Option A6	Widen road on north side to achieve 7.3m with 2m verge west of Provost Mount junction	42K	2	0	0	1	0	-1	1	0	0	0	0	0	1	2	1	2	2	1	1	0	1	1	0	1	1	1	2	2	3	1	2	1	14	9	6	7	27.0	9					
Option B3	Widen road on north side to achieve 7.3m and 2m verge west of Gremgrew cottages	180K	4	0	0	1	0	-1	1	0	0	0	0	0	1	2	1	2	2	1	1	0	1	1	0	1	1	2	1	2	3	1	2	1	14	9	6	7	27.0	9					
Option C4	New bus layby on the eastbound side south of the Sharif House property	70K	3	0	1	1	0	1	0	2	2	0	2	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	-1	1	1	1	20	1	4	2	26.0	11				
Option A3	New 600m climbing lane on westbound carriageway between Shield cottages and the mineral railway bridge	462K	6	0	0	1	0	-1	1	0	0	0	1	0	1	2	1	2	2	1	1	0	1	1	0	1	-1	2	-1	2	3	1	2	1	15	6	2	7	24.0	12					
Option C2	620m overtaking section with road re-alignment	906K	9	1	0	2	0	0	2	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1	-1	3	-2	3	2	2	2	1	10	13	3	7	20.0	13				
Option C7	770m climbing lane on eastbound carriageway to the east of Boghead Bridge	675K	8	1	0	2	0	0	2	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1	1	2	-2	2	2	2	2	1	10	13	3	7	20.0	13				
Option C8	climbing lane of 670m on westbound carriageway south of Nether Wellwood property	586K	7	1	0	2	0	0	2	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1	1	2	-2	2	2	2	2	1	10	13	3	7	20.0	13				
Option A1	Widen road on south side to achieve 7.3m with 2m verge east of Coalhill	38K	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0	2	2	2	1	1	1	1	8	19	7	4	19.0	16					
Option C6	realign carriageway to provide 660m overtaking opportunity	964K	9	1	0	2	0	0	2	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	2	-2	2	2	2	2	1	10	13	2	7	19.0	16				
Option End 1	New layby on eastbound carriageway to the east of Torrhill property	70K	3	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	2	2	0	2	0	0	0	0	0	1	2	2	1	1	2	1	9	18	5	5	19.0	16					
Option B6	Overtaking section of 580m with vertical geometry improvements east of Dumfries House	584K	7	1	0	2	0	0	2	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1	-2	2	-1	1	2	2	2	1	10	13	0	7	17.0	19				
Option C10	Ghost island hatching for westbound traffic at A70 / B743 junction	61K	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	3	1	2	1	3	1	0	3	25	8	5	16.0	20				
Option A9	Ghost island at junction with FOD grid on junction bellmouth at the works access east of Provost Mount access junction	75K	3	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2	1	2	0	2	0	0	7	20	6	2	15.0	21				
Option C3	New bus layby on westbound side of the carriageway at Sunnyside private access	35K	2	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	1	2	1	1	1	1	0	4	22	6	3	13.0	22					
Option A7	Provide a FOD grid on junction bell mouth at the works access junction to the east of the Provost Mount access junction	25K	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	-1	1	0	2	0	0	7	20	1	2	10.0	23				
Option B2	New E/B carriageway layby to the west of Coalhill Bridge	70K	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	4	22	4	2	10.0	23					
Option B4	Alter kerb lines to improve A70/ Station Avenue junction	25K	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	2	0	0	2	26	6	2	10.0	23					
Option C9	closure of the Laigh Wellwood Bridge junction	10K	1	0	0	1	0	-1	2	0	0	0	1	-1	0	0	0	0	0	-2	0	0	0	0	0	0	0	1	2	3	2	0	2	-1	0	0	27	8	1	9.0	26				
Option B5	Improve visibility through setting back the property boundary wall at A70/Dumfries House junction	40K	2	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	2	1	1	1	0	0	4	22	2	2	8.0	27					
Option A10	EAC Mott Toll improvement	3M	1																							1	3	0	3					0	27	7	0	7.0	28						
Option A13	Ochiltree Bypass - EAC	3M	10																							0	3	-2	3					0	27	4	0	4.0	29						



