



NORTH EAST STRATEGIC PLANNING COMMITTEE: 21 March 2003

Western Peripheral Route Northern Section

1. Introduction

This report summarises the Design Manual for Roads and Bridges (DMRB) Stage 2 and Scottish Transport Appraisal Guidance (STAG) Assessment process carried out to determine a preferred route corridor for the Northern Leg of the proposed Western Peripheral Route. It provides a conclusion of the assessment process and makes a recommendation on a preferred corridor.

The report needs to be read in conjunction with the Western Peripheral Route STAG Analysis document, copies of which have been placed in the Members libraries of both Councils. In particular the Stage 2 Public Consultation Report, Appraisal Summary Table (AST) of the STAG analysis and the Summary Table Spreadsheet provide important background information essential to making an informed route choice. Copies of these documents are attached as Appendices A, B & C respectively. Appendix D provides summary traffic information and Appendix E shows the three scheme options that the Committee previously approved for public consultation at its meeting on 9 December 2002.

2. Background

Grampian Regional Council carried out a detailed assessment of options for a Western Leg of an Aberdeen Western Peripheral Route in the early 1990's. This was between the A90 (S) Stonehaven Road and the A96 Inverurie Road. A recommendation to adopt a preferred corridor (route 14) was made to the two successor authorities, Aberdeen City Council and Aberdeenshire Council. Both authorities have since endorsed this corridor.

The North East Scotland Transport Partnership, NESTRANS has been co-ordinating the two Councils' approach to strategic transport planning over the last few years. It has been developing a Modern Transport System (MTS) STAG analysis. This is a strategy analysis, which has considered options for transport in the North East. That STAG analysis has shown that the balanced integrated transport strategy (MTS) developed through the two Councils Local Transport Strategies and

strategic land use documents provides the best option for transport development in the North East. The MTS includes a Western Peripheral Route between the A90(S) and the A90(N) Ellon Road. This document is included as an Appendix to the WPR (Northern Leg) STAG documentation which has been placed in the members libraries.

Through NESTRANS the two Councils have been developing a Western Peripheral Route Northern Leg STAG analysis for the section between the A96 and A90(N). This STAG analysis had incorporated a DMRB stage 1 assessment, a stage 1 public consultation, identified constraints and reduced over 100 possible routes to 18 to be carried forward to a Stage 2 comparative assessment. An interim Stage 2 assessment reduced these 18 possible routes to 3 for the purposes of a Stage 2 public consultation. The results of that extensive consultation have been summarised and have been included in the STAG assessment and can be seen in the Summary Table Spreadsheet at Appendix A.

3. Consideration

The first task in a STAG analysis is to determine the objectives of the project and the problems that the project is intended to resolve. For the WPR (Northern Leg) this had already been partially done, as this project is one of a number of projects that sit under the “umbrella” of the MTS STAG. That STAG had previously set a series of objectives and problems to be resolved. The WPR (Northern Leg) STAG therefore used these as a basis and established additional scheme specific objectives and problems to be resolved, reflecting the purpose of the WPR within the MTS.

These problems and objectives were grouped into the government’s five key criteria of environment, economy, safety, integration and accessibility. A Stage 2 assessment of each of the 18 possible route options was carried out to find out how well each of them met the objectives or resolved the problems.

To assist in this assessment reports were commissioned from consultants covering the following:-

- Engineering
- Environment
- Traffic
- Transport Economic Efficiency
- Economic Activity and Locational Impacts

These reports and the subsequent assessment were used to create an interim summary table spreadsheet. This spreadsheet highlights the conclusions of the assessments and reports and was used to reduce the options from 18 to 3 and formed the basis of the public consultation on these route options. That consultation has now been summarised in

Appendix C, the Summary Table Spreadsheet, which summarises the key route choice information, which contributes to the selection of a preferred route option.

Localised re-alignments

Kirkhill re-alignment

During the engineering assessment a problem was identified with a Shell Gas pipeline where the route would pass underneath the current position of the pipeline. It is estimated that the cost of diverting the pipeline is in the range £7-10m. A local re-alignment of the route avoids the need for this diversion. The Environmental consultants have indicated that the re-aligned route improves the environmental assessment of the Kirkhill section.

The re-alignment has no traffic impact but the economic assessment above has been made assuming the gas pipeline diversion costs are not necessary.

This local re-alignment, providing benefits in engineering and environmental terms is recommended for incorporation in either the South or Central routes and is assumed in the recommendation below.

Potterton variation

During the environmental assessment the Environmental Consultant identified that a small re-alignment southwards in the Potterton area would remove the Central route from the view of Potterton village residents. The Engineering Team assessed this and a route variation was identified. This removes the route from the view of a considerable number of village properties and is considered to be advantageous by the Environmental Consultant.

This local re-alignment has little traffic, nor cost impact although it takes the A90 junction at the start/end of the WPR a little closer to Bridge of Don.

This local re-alignment, providing benefits in environmental terms is recommended for incorporation in the Central route and is assumed in the recommendation below.

4. Summary of route choice considerations.

The following is a summary of the impacts that will have a bearing on route choice. Details of these impacts are provided in the Summary Table Spreadsheet and the STAG documentation.

STAG documentation recommends that assessors should grade their assessments for the benefit of clarity of decision making. It

recommends that a seven point scale be used and this is listed as a grading between –3/+3. It should be noted that this is intended to help in considering the relative merits within any given assessment category. It should not be used to compare between assessment categories. For example +3 in “environment” does not imply that the environment argument is as strong as the “economic” argument should it also have +3. It simply shows the relative merits of schemes within the environment assessment. It is up to the decision makers judgement to decide on the relevant strength of each assessment statement.

4.1 Costs and Deliverability

All route options are estimated to cost £120m. Due to the nature of the structural element of the Bucksburn route this route carries the highest risk of cost increases.

The grading for this category was as follows:

	Bucksburn	South	Central
Costs and Deliverability	✓✓✓	✓✓✓	✓✓✓

4.2 Traffic and Accessibility

All routes provide a significant overall benefit to the road network. The Bucksburn route provides a slightly greater overall benefit however it has a lesser benefit to the A96 and Haudagain roundabout. This can be seen in Appendix D. There are concerns about the Bucksburn routes impact on the A947 and operation of the A947 and A96 junctions. Upgrading of the Dyce Drive/ A947 junction will need to be included in the Central or South routes.

The grading for this category was as follows:

	Bucksburn	South	Central
Traffic and Accessibility	✓✓✓	✓✓✓	✓✓✓

4.3 Environment

A full Stage 2 Environmental Assessment has been undertaken and the issues highlighted for the 3 route options can be summarised as follows :-

Ecology

- a) loss of part of the Greenburn (Bucksburn)
- b) impact on Kirkhill (South & Central)
- c) impact on Parkhill wood/ River Don (South)
- d) impact on mosses, SSSI's (the loch's) and district wildlife sites.
(All)

Visual Impact

- e) A947 junction (South)
- f) impact on Kirkhill (South & Central)
- g) impact of each route between River Don and A90 (All)

Local

- h) the tunnel – during and after construction (Bucksburn)
- i) impact on the Rowett Research Institute (Bucksburn)
- j) river crossing point – lower or upper Don (All)

The assessment of the environmental impact has been made on the basis of the mitigations suggested in the environmental report being adopted, therefore some of the above impacts will be reduced from that assessed in the consultants environmental report. This has been discussed and agreed with the environmental consultant

The grading for this category was as follows:

	Bucksburn	South	Central
Environment	✘✘	✘✘	✘

4.4 Economics

All routes provide very strong economic benefits for the North East. Benefit to cost ratio's (BCR's) for the routes are 5.3, 4.7 & 4.7 for Bucksburn, South and Central respectively. These compare to figures quoted in the Central Scotland Transport Corridor Studies of between 2 and 3 for schemes being taken forward in that part of Scotland.

The grading for this category was as follows:

	Bucksburn	South	Central
Economics	✓✓✓	✓✓✓	✓✓✓

4.5 Engineering/ Safety

All routes provide similar benefits for traffic safety by reducing traffic in the city centre and unsuitable peripheral routes. The proposed road type with grade separated junctions is the safest possible road type outwith motorway.

Bucksburn requires complicated engineering solutions for the tunnel, rail underbridge and the A947 junction. South has construction in the flood plain. Central has the best engineering soils for re-use on the job.

The grading for this category was as follows:

	Bucksburn	South	Central
Engineering/ Safety	×××	✓	✓✓

4.6 Integration

South and Central provide better links to the proposed Park and Ride car parks on the A96 & A947 and to the proposed Raiths Farm Rail Freight interchange. Both provide better access to the airport.

South and Central provide better accessibility to existing and planned employment locations and possibilities for future land release.

The Bucksburn route could lead to long term future development on the outside of the route.

The grading for this category was as follows:

	Bucksburn	South	Central
Integration	×	✓✓✓	✓✓✓

4.7 Objectives and Problems

Generally all routes perform well in assessment against most of the objectives and problems. The main differences are in the areas of integration and accessibility as described elsewhere.

The grading for this category was as follows:

	Bucksburn	South	Central
Objectives and Problems	✓✓	✓✓✓	✓✓✓

4.8 Public consultation and acceptability

Appendix A provides a detailed analysis of the public consultation. In summary, views expressed on the relative merits of the key assessment criteria indicate that relieving congestion is the highest priority, followed by impact on people, economic benefit, impact on the natural environment and, lastly, cost. Whilst the Bucksburn option provides the greatest overall congestion benefit the public did not indicate a preference for this route, with only 13% in favour of this option. The explanation for this may lie in the fact that the other routes also provide good traffic relief and that the impact of the Bucksburn route on people is considered to outweigh the additional congestion relief generated by this option.

Of those expressing a view, a significant majority (66%) preferred the Central corridor.

There was a view, as expressed to Council Officials at the roadshows, that impact on the natural environment, whilst important, should be considered within the context that there is, in this area, a very large natural environment. Any route should attempt to minimise damage but there was an acceptance that, within that context, damage was inevitable to achieve a wanted and necessary project.

The grading for this category was as follows:

	Bucksburn	South	Central
Public consultation and acceptability	××	✓	✓✓✓

4.9 Summary

The summary of the assessment gradings is as follows:

	Bucksburn	South	Central
Costs and Deliverability	✓✓✓	✓✓✓	✓✓✓
Traffic and Accessibility	✓✓	✓✓✓	✓✓
Environment	××	××	×
Economics	✓✓✓	✓✓✓	✓✓✓
Engineering/Safety	×××	✓	✓✓
Integration	×	✓✓✓	✓✓✓
Objectives and Problems	✓✓	✓✓✓	✓✓✓
Public consultation and acceptability	××	✓	✓✓✓

Note: This table provides an overall resume of the assessment process. Each criteria is important within the overall assessment, but the extent of impacts in each of the criteria are different and have differing levels of importance. Consequently the gradings should only be used to assess differences between corridors within assessment criterion and should not be “added up” or used to compare between criteria.

5. Conclusions

Bucksburn Option

The Bucksburn route carries the most traffic and provides the best overall relief to the road network. This in turn leads to a better benefit to cost ratio. However, as outlined in Appendix D the traffic benefits, when compared with the Central and South options, are not considered to be significant.

The dis-benefits of this option include the more difficult engineering problems, and the significant impact on operations at the Rowett Research Institute. This option also performs less well in terms of integration and does little to improve access to Kirkhill Industrial Estate, the airport and the Dyce area generally. Bucksburn also has the greatest risk of cost increases, which could have an effect on the overall benefit/cost ratio.

Public consultation has shown this to be the least popular scheme option.

On balance it is considered that the engineering issues and local impacts in the Bankhead/ Stoneywood area, coupled with the lack of public support for this option, outweigh the benefits in terms of traffic.

It is therefore concluded that the Bucksburn option should not be progressed.

Central and South

The Central and South estimated scheme costs are similar. Both options have similar benefit/cost ratios and provide good value for money.

Although South and Central carry less traffic than Bucksburn, both provide good overall relief to the road network.

Environmental impacts identified at Kirkhill, common to both options are generally mitigable through design and landscaping. Land will be required for this purpose. The ecological impact that the South has at the Parkhill Woods/ River Don area is greater than the impact the Central route has on the SSSI's at the Lochs (Corby, Lily and Bishops). South has greater visual impact than Central

In terms of engineering, both options require improvement to the A947/Dyce Drive junction, which would be included as part of the scheme. Central has the better engineering soils, whilst South has greater flood plain problems.

Public consultation identified greater support for the Central option (66% compared with 21% for South).

In terms of the assessment process the Central and South options perform comparably, in terms of economy, deliverability and achieving overall objectives. Central performs better in terms of environment and engineering/safety, whilst South performs better in terms of traffic and integration. However, having considered all aspects it is our view that the environmental and engineering advantages of the Central option, coupled with the strong public preference for this option, outweigh the traffic and integration advantages of the South option. It is, therefore, recommended that the Central route be adopted as the preferred scheme option.

6. Report consultation

The Western Peripheral Route (Northern Leg) options were the subject of consultation with all departments and services of both Councils during the consultation stage.

This report has been prepared in consultation with the Planning Departments and Services of both Councils, who have confirmed that the proposals conform with Planning Policy requirements, as set out in the approved joint Structure Plan, North East Scotland together (NESt), and the relevant local plans for Aberdeenshire Council and Aberdeen City Council.

The report has also been prepared in consultation with NESTRANS partners, who support the recommendations.

7. Recommendations

The North East Strategic Planning Committee is recommended to approve and recommend to Aberdeen City Council and Aberdeenshire Council that:

- 1) The Central Route be adopted as the preferred scheme option for the Western Peripheral Route (Northern Leg)**
- 2) This decision be incorporated in the Local Plans for both Aberdeen City Council and Aberdeenshire Council.**

Signed

Iain Gabriel
Director of Transportation and Infrastructure
Aberdeenshire Council

Donald Murdoch
Corporate Director
City Development Services
Aberdeen City Council