



Aberdeen Western Peripheral Route

Development of Preferred Route Initial Assessment Stage Report

Autumn 2006

**Aberdeen Western Peripheral Route
Development of Preferred Route – Initial Assessment Stage Report
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1 Introduction

During the second half of 2005 the Minister for Transport considered a range of evidence to inform a decision on the optimum corridor for the Aberdeen Western Peripheral Route including:

- Feedback from Public Consultations
- STAG Assessments of Alternative Routes
- Further traffic, economic and environmental studies

On 1 December 2005 the Minister announced that the route would be a combination of the Milltimber Brae and Peterculter / Stonehaven routes presented at the public exhibitions. This provides a peripheral route around the city and a fast-link from the A90 at Stonehaven to take orbital traffic to the North and West of Aberdeen.

Following the ministerial announcement, a number of options were identified within the broad route corridor following a desk and field based constraints study exercise. These options were then subjected to environmental, engineering and economic assessment to permit selection of a preferred route for the Southern Leg and the Stonehaven Link of the Aberdeen Western Peripheral Route (AWPR).

The selection process adopted to determine the preferred route followed a two-stage process, as described below:

- **Initial Assessment Stage:** This is a 'negative' assessment, where particular options or parts of options are suspended from consideration due to them being significantly less advantageous than other options that remain available.
- **Final Assessment Stage:** This is a 'positive' assessment, where all options that remain available following the Initial Assessment stage, including minor variants, are assessed comparatively by means of a cascading series of decisions, designed to lead to identification of the preferred route and the narrowing of route corridor.

This report presents the findings of the Initial Assessment Stage.

The assessment was undertaken by the Project Team, which comprised of the following:

Transport Scotland – Project Team
AWPR Managing Agent Team
Jacobs

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Thereafter, the results of the assessment were presented on 13 April 2006 to a Partner's Panel comprising representatives of the three funding partnership bodies:

Transport Scotland
Aberdeen City Council
Aberdeenshire Council

2 Route Corridor Options

2.1 Overview

Route options within the corridor were prepared by implementing the Design Manual for Roads and Bridges (DMRB) design standards while taking consideration of existing properties, the environmental constraints, the local topography and the existing road, rail and services infrastructure.

The strategic decisions resulting from the ministerial announcement which were also considered in the route options development are as follows:

- The decision to connect the Fastlink to the existing A90 junction north of Stonehaven where the existing A90 alignment and proximity of existing properties allows a fully grade separated junction to be included.
- The decision to provide a minimum of single carriageway road with climbing lanes on the Fastlink section.

For ease of analysis the route corridor for the Southern Leg and the Stonehaven Link has been subdivided into three geographic areas. These areas, together with the options within these areas, are illustrated in Figures 1, 2 and 3 and are summarised below.

2.2 Southern Section (Stonehaven to Berry Top: Figure 1)

- Green: On-line of B979.
- Blue: Off-line from B979, west of Red Moss.
- Red: Off-line from B979, east of Red Moss, west of Cookney, west of Berry Top.
- Orange: Off-line of B979, east of Red Moss, east of Cookney, east of Berry Top.
- Purple: Off-line of B979, east of Red Moss, east of Cookney, west of Berry Top.

2.3 Central Section (Berry Top to River Dee, and east to A90: Figure 2)

- Green: From Westside, junction at Burnside, west of Kirkton of Maryculter, crosses River Dee west of Maryculter Bridge, connects to A90 via Burnhead. The link to the A90 can connect to Charleston either north or south of Hare Moss, or to Schoolhill.

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- Blue: From Westside, west of Kirkton of Maryculter, junction at Kingcausie, crosses River Dee east of Maryculter Bridge, connects to A90 via Craingles Wood. The link to the A90 can connect to Charleston either north or south of Hare Moss, or to Schoolhill.
- Red: From Westside, junction at Burnhead, east of Kirkton of Maryculter, crosses River Dee east of Maryculter Bridge, connects to A90 via Burnhead. The link to the A90 can connect to Charleston either north or south of Hare Moss, or to Schoolhill.
- Orange: From Crossley, junction at Burnhead, east of Kirkton of Maryculter, crosses River Dee east of Maryculter Bridge, connects to A90 via Burnhead. The link to the A90 can connect to Charleston either north or south of Hare Moss, or to Schoolhill.
- Purple: From Westside, junction at Craigend, crosses River Dee east of Maryculter Bridge, connects to A90 via Craingles Wood. The link to the A90 can connect to Charleston either north or south of Hare Moss, or to Schoolhill.

2.4 Northern Section (River Dee to North Kingswells: Figure 3)

- Green: Crosses River Dee west of Maryculter Bridge, west of B979, west of Countesswells Wood, connects to Northern Leg at North Kingswells junction.
- Blue: Crosses River Dee east of Maryculter Bridge, east of B979, west of Countesswells Wood, connects to Northern Leg at North Kingswells junction.
- Red: Crosses River Dee east of Maryculter Bridge, east of B979, east of Countesswells Wood, connects to Northern Leg at North Kingswells junction.

2.5 General

It should be noted that the Initial Assessment Stage is focused on consideration of options that represent significant differences from each other, rather than minor differences. These minor differences will be considered at the Final Assessment Stage for variants of those options that remain available following the Initial Assessment Stage.

3 Option Assessment

3.1 General

The assessment tables included in Appendix B identify the significant environmental, engineering and economic factors assessed at this time in relation to each of the options considered. These tables form the basis of the decisions made at the Initial Assessment Stage, which are discussed below.

3.2 Southern Section (Refer to Figure 1)

3.2.1 Decision 1 - Southern Section, Green Option

The reasons why the Green Option is significantly less advantageous than other options are as follows:

- It entails an on-line up-grade of the B979 resulting in significantly more properties demolished and remaining in close proximity;
- It will not provide local access and as such a parallel all-purpose road would be required with resulting cost and further impacts on properties;
- The current B979 is below the required alignment, pavement and drainage standards, requiring extensive improvement works and significantly reducing the length which could be incorporated into the proposed scheme; and
- It runs close to the BP and Shell pipelines over a length of approximately 1.5km, crossing each pipeline twice and requiring containment measures to address the risk of errant vehicles impacting with the pipelines.

As a consequence of the above, it is recommended by the Project Team that the Green Option within the Southern Section should not be taken forward for further consideration.

3.2.2 Decision 2 - Southern Section, Blue Option

The reasons why the Blue Option is significantly less advantageous than other options are as follows:

- It passes through an area of peat associated with the Red Moss Special Area of Conservation (SAC) and may impact on groundwater movement; and
- It runs close to the BP and Shell pipelines over a length of approximately 5.5km, crossing each pipeline twice and requiring a significant length of containment measures to address the risk of errant vehicles impacting with the pipelines.

As a consequence of the above, it is considered that the Blue Option within the Southern Section could only be taken forward with a modification to the west in the vicinity of Red Moss SAC.

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3.2.3 Decision 3 - Southern Section, Red Option

The reasons why the Red Option, between Cookney and Westside, is significantly less advantageous than other options are as follows:

- It passes within the catchment area of the Red Moss SAC and could affect the integrity of the SAC by cutting off surface and sub-surface flow; and
- It passes to the west of Cookney in deep cutting requiring property demolition and considerable landscape and severance impacts.

As a consequence of the above, it is recommended by the Project Team that the Red Option, between Cookney and Westside, within the Southern Section should not be taken forward for further consideration.

3.2.4 Decision 4 - Southern Section, Purple Option

The reason why the Purple Option, between Cookney and Westside, is significantly less advantageous than other options is as follows:

- It passes within the catchment area of the Red Moss SAC and could affect the integrity of the SAC by cutting off surface and sub-surface flow.

As a consequence of the above, it is recommended by the Project Team that the Purple Option, between Cookney and Westside, within the Southern Section should not be taken forward for further consideration.

3.3 Central Section (Refer to Figure 2)

3.3.1 Decision 5 - Central Section, Blue Option

The reasons why the Blue Option is significantly less advantageous than other options are as follows:

- The proposed junction location at Kingcausie would be close to the River Dee and as a consequence, the north facing slips for a grade separated junction would entail additional structures across the river to carry slip roads;
- The distance between this junction and the proposed A93 junction would not provide the desirable weaving distance separation and would represent a safety hazard; and
- Should the junction at Kingcausie be at-grade, the length of the Blue Option (including the southern section) would be approximately 0.75km longer than the alternative options and variants thereof, to an at-grade junction at Burnhead. This increased length would lead to a less operationally efficient and more costly route.

As a consequence of the above, it is recommended by the Project Team that the Blue Option within the Central Section should not be taken forward for further consideration.

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3.3.2 Decision 6 - Central Section, Schoolhill Option

The reason why the Schoolhill Option is significantly less advantageous than other options is as follows:

- It is not as successful at achieving the strategic objective of providing a link between the main residential/commercial areas of Aberdeen and the North East; and
- It would exacerbate the problems in relation to weaving traffic volumes on the A90 between Schoolhill and Charleston.

As a consequence of the above, it is recommended by the Project Team that the Schoolhill Option within the Central Section should not be taken forward for further consideration.

3.3.3 Decision 7 - Central/Northern Section, Green Option

The reason why the Green Option is significantly less advantageous than other options is as follows:

- It entails an on-line up-grade of some 3km of the B979 resulting in significantly more properties demolished and remaining in close proximity;
- Over this length it will not provide local access and as such a parallel all-purpose road would be required with resulting cost and further impacts on properties;
- The current B979 over this length is below the required alignment, pavement and drainage standards, requiring extensive improvement works and significantly reducing the length which could be incorporated into the proposed scheme; and
- It would involve demolition of either Kippie Lodge or the International School and within the Camphill (Milltimber) Campus, with areas not demolished remaining in close proximity to the route requiring likely relocation of the facility. This demolition and relocation is likely to lead significantly greater costs than those relating to the other options.

As a consequence of the above, it is recommended by the Project Team that the Green Option within the Central/Northern Sections should not be taken forward for further consideration.

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3.4 Northern Section (Refer to Figure 3)

3.4.1 Decision 8 – Northern Section, Red Option

The reasons why the Red Option is significantly less advantageous than other options are as follows:

- It is some 1.3km longer between the A93 and Kingswells than the alternative option and variants thereof. This increased length would lead to a less operationally efficient and more costly route; and
- It passes in close proximity of the Kingswells Consumption Dyke, Scheduled Ancient Monument (SAM).

As a consequence of the above, it is recommended by the Project Team that the Red Option within the Northern Section should not be taken forward for further consideration.

3.5 Further Implications of the above Decisions

The decisions described above result in the following additional implication:

- Based on Decision 5, the modified Blue Option within the Southern Section discussed in Decision 2 will not be taken forward for further consideration as the length of that option to a junction in the Burnhead area would be approximately 1km longer than the alternative options and variants thereof. This increased length would lead to a less operationally efficient and more costly route.

4.1 Overview

The decisions described above and the resultant recommendations were presented to the Partner's Panel at a meeting on 13 April 2006 during which the Panel adopted all of the Project Team recommendations.

Following this Initial Assessment Stage the options noted below remain available for further consideration at the Final Assessment Stage.

4.2 Southern Section

- Red Option, south of Cookney
- Orange Option
- Purple Option, south of Cookney

4.3 Central Section

- Orange Option
- Purple Option (including north and south of Hare Moss)

4.4 Northern Section

- Blue Option

4.5 Further Work

The reduced corridor associated with the major options and variants thereof that remain available for further consideration is shown on Figure 4.

Further engineering development will be undertaken on each of these options. This will include the following:

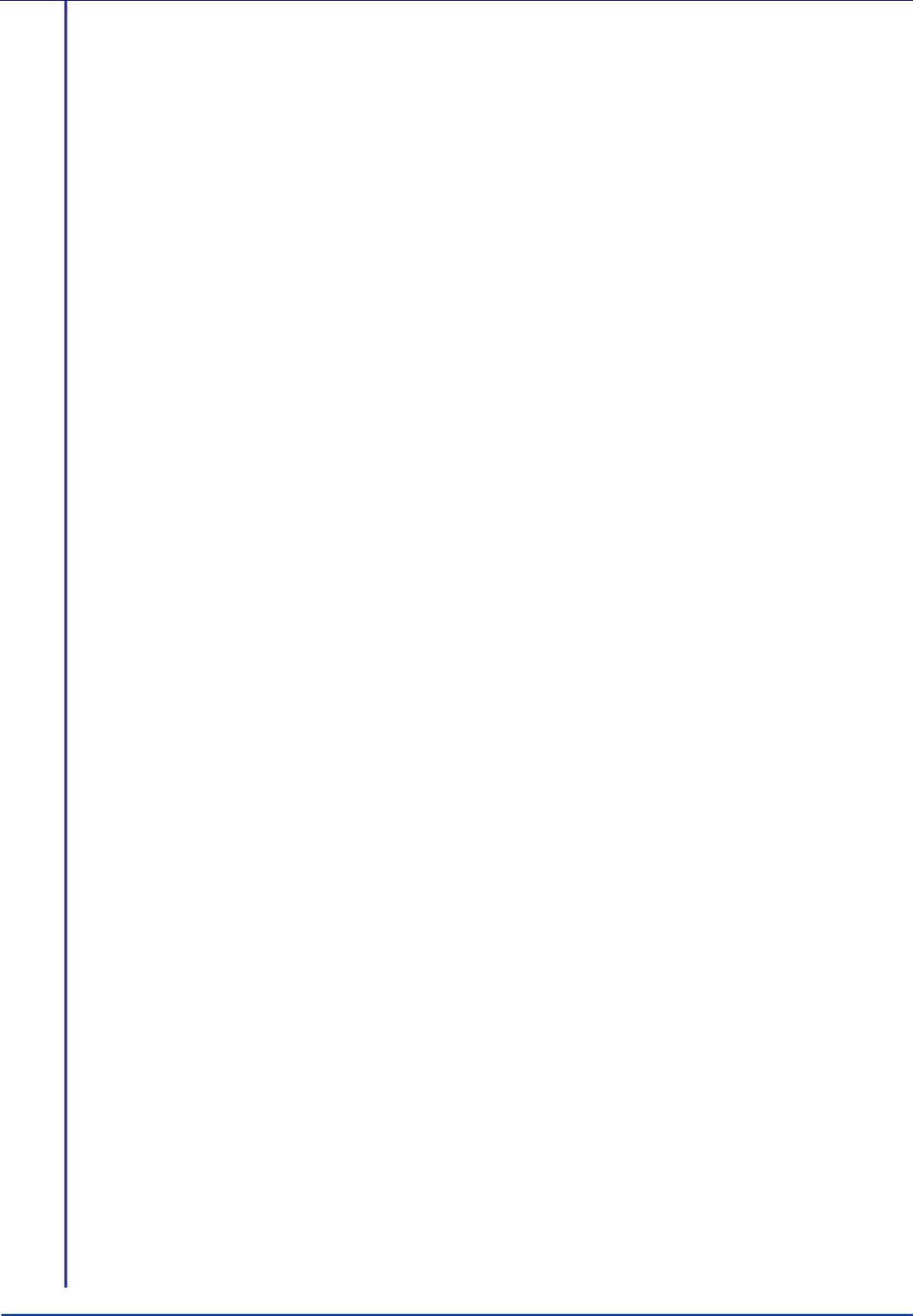
- Consideration of local variants within the options;
- Refinement of the horizontal and vertical alignments;
- Initial development of drainage strategy including attenuation/outfall requirements;
- Side road design; and
- Consideration of alternative junction proposals.

Further assessment work will also be undertaken, including the following:

- Environmental surveys to permit refined environmental assessment;
- Consultation and site visits with statutory bodies; and
- Additional analysis of scheme costs

This work will be evaluated at the Final Assessment Stage.

Appendix A: Figures



Appendix B: Assessment Tables
