



**A96 Options
Implementation
Report
September 2006**

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Rev	Originator	Approved	Date
1.0	Garry Murphy	Mark Herrington	21 st September 2006



1 Introduction

1.1 Background

A Masterplanning Team led by Halcrow Group have been commissioned by The Highland Council to progress masterplanning for the long term development of the A96 Corridor between Inverness and Nairn. To this end, Halcrow prepared an Interim Report which explored options for development and green frameworks dated July 2006.

1.2 Scope of Report

This scope of this report is to assess the various development framework options available for the proposed A96 Corridor Masterplan. We understand that this document will be used by The Highland Council to consider which of the options presented for Inverness East and Nairn South will be taken forward for further consideration and consultation.

Although an options appraisal has been produced as part of the Interim Report, this report will focus largely on the actual implementation issues of the various options.



2 Summary of Options

2.1 Background to Options

Two development framework plans for Inverness East and Nairn South have been developed to Option Stage. Five options for each of these areas have emerged from stakeholder workshops and these are listed and summarised below.

2.2 Options Summarised

Inverness East:

Option A: This option shows development being spread across Inverness East. The key outputs of this option is the creation of 3650 new residential units, a population of 7600, a new College Campus, Business Park with 5000 new jobs being created.

Option B: This option focuses on development towards the western fringe of Inverness East. The key outputs of this option is the creation of 2600 new residential units, a population of 5500, a new College Campus, Business Park with 6000 new jobs being created.

Option C: This option focuses on development towards the western parts of Inverness East, with low density development proposals in the east. The key outputs of this option is the creation of 2350 new residential units, a population of 5000 people, a new College Campus, Business Park with 6200 new jobs being created.

Option D: This option indicates development being spread across Inverness East. The key outputs of this option is the creation of 2700 new residential units, a population of 5700, a new College Campus, Business Park with 2803 new jobs being created.

Option E: This option is the most involved in terms of infrastructure as it involves the realignment of the Aberdeen – Inverness Railway line, therefore facilitating growth towards the Moray Firth. The key outputs of this option is the creation of 2550 new residential units, a population of 5400, a new College Campus, Business Park with 1750 new jobs being created.



Nairn South:

Option A: This option focuses on the linear expansion of Nairn along the Moray coast. The key outputs of this option is the creation of 3750 new residential units, a population of 7850, a new Business Park and 3000 new jobs.

Option B: This option proposes development on the land south of the Inverness – Nairn railway line. Key outputs are the creation of 2650 new residential units, a population of 5550, a new Business Park and 4000 new jobs.

Option C: This option details the proposed expansion of Nairn to the south and includes a string green framework. Key outputs are the creation of 1600 new residential units, a population of 3400, a new Business Park and 2500 new jobs.

Option D: This option includes for development to the north and south of the A96 Corridor. Key outputs are the creation of 3600 new residential units, a population of 7550, a new Business Park and 2500 new jobs.

Option E: This option proposes two development clusters to the south of Nairn. Key outputs are the creation of 5000 new residential units, a population of 10,500, a new Business Park and 4350 new jobs.

Ultimately a balance will need to be struck between the constraints and development proposals.



3 Issues for Consideration

It is intended that the various options for the A96 Masterplan will be assessed against the '*Smart Growth Sustainability Model*' indicated by Halcrow in their Interim Report so that a suitable option may be selected. This model evaluates proposals in relation to a range of criteria relating to Accessibility, Economy, Community and Environment.

Accessibility:

- Are the proposals accessible to local transport/public transport?
- Is there an easily distinguishable road hierarchy proposed?
- Is a Park and Ride system proposed as part of the scheme?
- Are the proposals supported by good transport links?
- Are the proposals supported by adequate rail connections with suitable halts?

Environment:

- Will there be a significant loss of agricultural land?
- What is the nature of existing ground conditions?
- What is the Greenfield/brownfield mix proposed?
- What are the proposals for dealing with existing flood plains?
- Do the proposals protect the natural environment/features/cultural features?
- Do the proposals protect the natural ecology?
- Are the proposals affected by Tree Preservation Orders (TPO's)?
- Do the proposals include for sufficient green space in accordance with the Green Framework?

Community:

- Do the proposals have the correct residential and density mixes?



- Are new and existing neighbourhoods integrated?
- Do proposals strengthen existing communities through services provision and opportunities for the wider community?

Economic

- Maximum development advantage should be gained without compromising the lay principles of development such as the Green Framework.
- Developer contributions to the dualling of the A96.

Although the Accessibility, Environment, Community and Economic proposals have been assessed to a degree within the Interim Report, there is a significant overlap between these and the Implementation Issues that this report will focus on. Naturally, given the level of detail currently developed in the Interim Report, the implementation issues associated with each of the selected options are indicative. However, we have considered the implementation issue on our knowledge of developments of this nature.

Implementation Issues

The main constraints that have been identified from the Development Options include:

- Flood Plains – increasing road/development build-up to agreed Local Authority through the Environment Agency.
- Rail/Road crossovers – Network Rail approval required.
- Creation of new rail halts – Network Rail approval required
- Closure of existing railway lines - Network Rail approval required
- New Railway Lines – A Parliamentary Bill (approved by the Scottish Parliament) is required to enable new Railway Lines to be constructed. A Parliamentary Agent will need to be engaged to draft and manage the Bill through Parliament. As part of this exercise, a full appraisal will need to be produced on the proposed scheme.
- Pipeline Safeguarding Zone – Approval will be required from the owner and this may be difficult to obtain depending upon the owner and usage of the pipeline.



- Scheduled Monuments – consent required from Historic Scotland on behalf of the Scottish Ministers.
- Overhead Power Lines – approval will be required from the National Grid to alter these.
- Archaeological factors – as the proposed A96 Corridor runs close to the Culloden Battlefield we would recommend that a desk-top archaeological study is undertaken to identify potential areas of significant historical importance.



4 Options Assessment

4.1 Inverness East

4.1.1 Option A Implementation Issues:

- Approval will be required from Network Rail for the proposed Rail Halt. As part of this, Network Rail will require a feasibility report to assess potential usage and passenger numbers.
- The dualling of A96 will involve the possible relocation of a Scheduled Monument at Upper Cullernie and therefore consent will be required from Historic Scotland.
- A rail crossing is required where the proposed Raigmore Interchange by-pass crosses the main Aberdeen – Inverness railway line. Approval for this will be required from Network Rail.
- The proposed Stratton Interchange is directly above the Pipeline Safeguarding Zone. Approval will be required from the owner and this may be difficult to obtain depending upon the owner and usage of the pipeline.
- This option, like all of the options, proposes Community Use Development around Culloden Battlefield. Representations would need to be made to Historic Scotland in respect of this.
- There is minimal landscape proposed as part of this option and we would question whether this meets the Green Framework Principles.
- Although the majority of the development for this option takes place on Greenfield sites, there is a minimal proposal for development on brownfield sites. We would expect a level of land remediation dependent upon the outcome of any site investigations which may have cost implications.

4.1.2 Option B Implementation Issues:

- A rail crossing is required where the proposed Raigmore Interchange by-pass crosses the main Aberdeen – Inverness railway line. Network Rail approval will be required.



- The proposed Stratton Interchange is directly above the Pipeline Safeguarding Zone. Approval will be required from the owner and this may be difficult to obtain depending upon the owner and usage of the pipeline.
- The dualling of A96 will involve the possible relocation of a Scheduled Monument at Upper Cullernie and therefore consent will be required from Historic Scotland.
- This option proposes Community Use Development around Culloden Battlefield. Representations would need to be made to Historic Scotland in respect of this.
- There is a likelihood that an additional interchange will be required to serve the Medium/High density housing adjacent the A96 at Balloch.
- This option does not propose any rail halts therefore having a limitation on public transport.
- There is a likelihood that an additional interchange will need to be created to serve the Medium/High density housing adjacent the A96 at Balloch.
- The proposed route of the by-pass cuts through identified flood plains. The roadway will need to be built-up sufficiently to the satisfaction of the Environment Agency.

4.1.3 Option C Implementation Issues:

- A rail crossing is required where the proposed Raigmore Interchange by-pass crosses the main Aberdeen – Inverness railway line. Network Rail approval will be required.
- The dualling of A96 will involve the possible relocation of a Scheduled Monument at Upper Cullernie and therefore consent will be required from Historic Scotland.
- Approval will be required from Network Rail for the proposed Rail Halt. As part of this, Network Rail will require a feasibility report to assess potential usage and passenger numbers.



- This option includes for a significant amount of medium density housing adjacent to the A96. There may be a requirement to construct sound barriers to minimise the noise impact on local residents.
- The proposed location for the Business Parks is quite scattered and this may lead to a greater proportion of roads and possibly an additional roundabout, in particular, the Business Park proposed at Culloden.
- There is minimal landscape proposed as part of this option and we would question whether this meets the Green Framework Principles.
- This option proposes Community Use Development around Culloden Battlefield. Representations would need to be made to Historic Scotland in respect of this.
- The dualling of A96 will involve the possible relocation of a Scheduled Monument at Upper Cullernie and therefore consent will be required from Historic Scotland.
- The proposed route of the by-pass crosses the Pipeline Safeguarding Zone. Approval will be required from the owner and this may be difficult to obtain depending upon the owner and usage of the pipeline.

4.1.4 Option D Implementation Issues:

- A rail crossing is required where the proposed Raigmore Interchange by-pass crosses the main Aberdeen – Inverness railway line. Network Rail approval required.
- No buffer/physical separation of development using landscaped areas. We would question whether this meets the Green Framework Principles.
- The dualling of A96 will involve the possible relocation of a Scheduled Monument at Upper Cullernie and therefore consent will be required from Historic Scotland.
- This option proposes Community Use Development around Culloden Battlefield. Representations would need to be made to Historic Scotland in respect of this.
- The proposed Business Parks are not concentrated and this may lead to an increased network of infrastructure to serve each of these.



- The proposed route of the by-pass cuts through identified flood plains. The roadway will need to be built-up sufficiently to the satisfaction of the Environment Agency.
- The proposed route of the by-pass crosses the Pipeline Safeguarding Zone. Approval will be required from the owner and this may be difficult to obtain depending upon the owner and usage of the pipeline.

4.1.5 Option E Implementation Issues:

- This option involves significant alterations/diversions to the existing Aberdeen – Inverness railway line to create approximately 4km of additional track. A Parliamentary Bill (approved by the Scottish Parliament) is required to enable this to be constructed.
- Significant legal representations will be required for the transfer of ownership of the existing railway line from Network Rail.
- Network Rail approval will be required for the two railway crossings proposed.
- The proposed route of the by-pass and the realignment of the railway line crosses the Pipeline Safeguarding Zone. Approval will be required from the owner of this line, which may be difficult to obtain.
- The proposed route of the by-pass cuts through identified flood plains. The roadway will need to be built-up sufficiently to the satisfaction of the Environment Agency.
- This option proposes Community Use Development around Culloden Battlefield. Representations would need to be made to Historic Scotland in respect of this.



4.2 Nairn South

4.2.1 Option A Implementation Issues:

- The proposed route of the by-pass and a significant part of the development works lie across the pipeline safeguarding zone. Approximately 4km of pipeline is affected by the proposals. Approval will be required from the owner of this line.
- A significant part of the development, especially the Retail Park at Balnaspirach, is within a flood plain therefore the ground level may need to be built up to the satisfaction of SEPA.
- At least five crossovers/bridges will be required on the proposed route of the by-pass to deal with watercourses, rail (1no.) and road crossings. Any bridges across railway lines will require Network Rail approval.
- Compulsory Purchase Orders maybe required for land purchase. A significant amount of agricultural land will be lost due to the proposals especially at Wester Delnies.
- A section (approximately 1.5km) of the overhead powerline will need to be installed underground. Approval will be required from the National Grid.
- The proposed by-pass is approximately 7km in length but this minimises the extent of the A96 to be dualled.

4.2.2 Option B Implementation Issues:

- The proposed route of the by-pass will possibly require the relocation of a Scheduled Monument at Drumdivan. Consent for this will be required from Historic Scotland which may provide difficult to obtain.
- The proposed route of the by-pass plus a significant part of the development works lie across the pipeline safeguarding zone. Approximately 4.5km of pipeline is affected by the proposals. Approval will be required from the owner of this line.
- This option includes for a significant amount of low and medium density housing adjacent to the by-pass at Newford. There may be a requirement to construct sound barriers to minimise the noise impact on local residents.



- A significant part of the development is within a flood plain therefore the ground level will need to be built up to the satisfaction of the SEPA.
- A section (approximately 1.8km) of the overhead powerline will need to be diverted underground. Approval will be required from the National Grid.
- Compulsory Purchase Orders will be required for land purchase. A significant amount of agricultural land will be lost due to the proposals, especially at Balnaspirach and Bow.
- The proposed Industrial Development close to Balnaspirach is closely bounded by the railway line and the proposed by-pass. Creation of 'dead' space that may create a long term maintenance responsibility
- The proposed by-pass is approximately 9.5km in length but this minimises the amount of dualling of the A96 to a significant extent.
- When compared against the other proposals, there is minimal green space being provided.
- At least five crossovers/bridges will be required on the proposed route of the by-pass to deal with watercourses, rail (1 no.) and road crossings. Any bridges across railway lines will require Network Rail approval.

4.2.3 Option C Implementation Issues

- The proposed route of the by-pass plus a significant part of the development works lie across the pipeline safeguarding zone. Approximately 4km of pipeline is affected by the proposals. Approval will be required from the owner of this line.
- The proposed by-pass is approximately 7km in length.
- A significant section (approximately 3km) of the overhead powerline will need to be diverted underground. Approval will be required from the National Grid.
- At least four crossovers/bridges will be required on the proposed route of the by-pass to deal with watercourses, rail (1 no.) and road crossings. Any bridges across railway lines will require Network Rail approval.
- Compulsory Purchase Orders maybe required for land purchase.



- This option includes for a significant amount of low density housing adjacent to the by-pass at Newford. There may be a requirement to construct sound barriers to minimise the noise impact on local residents.
- The proposed housing areas may be isolated due to the fact that there is no nearby intersection of the bypass to serve this area.

4.2.4 Option D Implementation Issues:

- At least four crossovers/bridges will be required on the proposed route of the by-pass to deal with watercourse and road crossings. This proposal does not require a railway line crossing.
- A significant section (approximately 4km) of the overhead powerline will need to be diverted underground. Approval will be required from the National Grid.
- A small proportion of the proposed development is within a flood plain, therefore the ground level will need to be built up to the satisfaction of the Local Authority.
- The proposed route of the by-pass plus a significant part of the development works lie across the pipeline safeguarding zone. Approximately 4.5km of pipeline is affected by the proposals. Approval will be required from the owner of this line.
- The proposed route of the by-pass will require the possible relocation of a Scheduled Monument at Drumdivan. Consent for this will be required from Historic Scotland.
- The proposed by-pass is approximately 10km in length but this minimises the extent of dualling to the A96 significantly in comparison with Options A, C and E.

4.2.5 Option E Implementation Issues:

- The proposed by-pass is approximately 7km in length plus also involves a significant amount of dualling of the A96.
- At least three crossovers/bridges will be required on the proposed route of the by-pass to deal with watercourse, rail (1no.) and road crossings. The crossing



of the watercourse and railway line at Moss Side may be dealt with by one bridge. Any bridges across railway lines will require Network Rail approval.

- A significant section (approximately 4km) of the overhead powerline will need to be diverted underground. Approval will be required from the National Grid.
- This option includes for a significant amount of low and medium density housing adjacent to the by-pass at Newford. There may be a requirement to construct sound barriers to minimise the noise impact on local residents.
- Access to the proposed District Centre and its nearby housing is polarised due to a lack of intersections from the by-pass close-by.
- The proposed route of the by-pass plus a significant part of the development works lie across the pipeline safeguarding zone. Approximately 4km of pipeline is affected by the proposals. Approval will be required from the owner of this line.



5 Conclusion

5.1 Inverness East

We have assessed the various Masterplan options based upon the Halcrow Interim Report- Phase 1. Therefore our recommendations for options are based upon implementation issues only.

In terms of implementational issues, the proposed options are quite similar as the majority of the works involve the dualling of the existing A96; the only variant being the route of the by-pass plus any rail halts etc. Having assessed the various options in terms of implementation we believe the following should be discounted for the following reasons:

Option B: The proposed route of the by-pass crosses an identified flood plain and possibly two bridges would be required to facilitate this.

Option D: Again, the proposed route of the by-pass crosses identified flood plain and it is likely that two bridges would be required to facilitate this. Another reason why this option may not be suitable is the fact that there is a lack of centralisation of the Business Parks which may result in an increased infrastructure provision to serve these.

Option E: This option involves the complexity of having to alter the existing Aberdeen to Inverness railway line which involves significant cost and programme constraints. Although benefits will be gained in opening up development on the Moray Coast, this is limited by the RAMSAR site and the Special Protection Area.

Options A and C are similar in terms of implementation issues as they both avoid the flood plains and also include the provision of a new rail halt. We would suggest that Option C is taken forward largely for the reasons that the proposed by-pass follows a slightly more direct route to the A96. Also, the proposed rail halt for Option A is located centrally to the housing and business district. The proposed location of the Business Park for Cradlehall is isolated from the rail halt by the proposed route of the by-pass.



5.2 Nairn South

Unlike the proposed options for Inverness South, the proposals for Nairn South are wholly different in terms of implementation. Having assessed the various options we believe the following should be discounted for the following reasons:

Option A: A significant amount of the proposed development is within a flood plain and this will need to be discussed with the Environment Agency.

Option B: This option involves a significant length of by-pass plus a significant amount of the development is within a flood plain.

Option D: This option involves the longest proposed by-pass out of all the options plus some of the proposed development is located on a flood plain.

The implementation implications for Options C and E are very similar. The length of the by-pass for both is approximately the same although the Option C proposal has a much gentler curve and involves about 1.5km less duallisation of the A96. The development proposals for both options avoid both the flood plains and Scheduled Monuments. On analysis, our recommendation is that Option C is taken forward on the basis that less overhead powerlines require altering and that there is less duallisation of the A96 resulting in economies.

