# The Highland Council

Beauly to Inverness Rural Cycle Route
Route Options Study
November 2007

## Halcrow Group Limited

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## Route Options Study

Final Report

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## Route Options Study
## Draft Report

## Contents Amendment Record

This report has been issued and amended as follows:

| Issue | Revision | Description | Date | Signed |
|---|---|---|---|---|
| 1 | - | Draft | 24/11/07 | JP |
| 2 | - | Final | 11/2/08 | JP |

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**Appendix I:** **Route options – Clachnaharry to Beauly**

**Appendix J:** **Route Options - Clachnaharry**

**Appendix K:** **NCN Route 5 North Wales**

# 1 Introduction

## 1.1 Background

1.1.1 On 17th August 2006 The Highland Council's (THC) TEC Committee agreed to progress a detailed feasibility study for a cycle route between Beauly and Inverness. The route would cover a distance of approximately 10km, and cater for local cycle trips. The study also has the backing of The Highland Cycle Campaign.

1.1.2 As part of the Transport Planning Framework Agreement with THC, Halcrow Group Ltd were requested to provide a proposal to undertake this Study following receipt of a brief from THC in March 2007.

## 1.2 Study Brief

1.2.1 In particular, the Study Brief contained the following aims:

- To undertake a 'feasibility study' for a cycle route that caters for local journeys. The route should, when possible, use the existing public road network and consider any requirements for new segregated cycle facilities.
- The Report should include a schedule of route signs, route alignment plans, typical cross-sections for any proposed new construction and a Bill of Quantities for the overall route. Estimated work costs will be based on the latest available information.

1.2.2 The overall aim of the feasibility study is to investigate and evaluate the design and funding applications for a possible cycle route between Beauly and Inverness, a route which could use the existing roads infrastructure and potentially new segregated facilities.

1.2.3 The brief required an assessment of the level of service of the existing public roads, including current design standards, a review of accident/crash history over the past 5 years, and identification of any particular current safety issues for cyclists. The brief also stated that an assessment of current and future cycle demand levels should be quantified.

1.2.4 Following a review of the study brief, Halcrow recommended that the most cost-effective approach in satisfying the brief was to propose that the study should be undertaken in two distinct stages. Hence, Halcrow proposed that Stage 1 of the study should constitute a **Route Options Study** and that following review by THC, any preferred options would progress to Stage 2, a detailed feasibility study that should also include consultation with landowners. This methodology has been found to provide a robust assessment for internal decision making and funding. However, it should be noted that this process does not constitute a full STAG appraisal, nor are alternative options to the provision of a cycle route between Beauly to Inverness assessed in this report.

1.2.5 Halcrow submitted a proposal to THC to undertake Stage 1 of the study, which was agreed by THC in March 2007. Following review of this Stage 1 Route Options report by THC and if requested by THC, Halcrow will submit a proposal and associated fees to undertake Stage 2 of the Study.

## 1.3 Document Structure

1.3.1 The remainder of this report is structured as follows:

- **Chapter 2: Background**. Provides a review of Scottish Executive, The Highland Council and cycling organisation policy documents relating to cycling and best practice for the provision of cycle routes. Traffic counts and an examination of five years accident history has been examined along the route.
- **Chapter 3: Determination of Potential Demand**. Census data and data from sources such as the Scottish Household Survey have been examined to develop an understanding of the pattern of travel along the Inverness to Beauly corridor.
- **Chapter 4: Public Consultation**. Reviews the comments made by local people as well as the Kirkhill and Bunchrew Community Council and Trust.
- **Chapter 5: Community Involvement**. Summarises the current projects that have been carried out by the local community to encourage walking and cycling in the area.
- **Chapter 6: Existing Route Review**. Provides a review of the general nature of the route and existing facilities for pedestrians and cyclists.
- **Chapter 7: Route Options**. This chapter examines all of the possible options for cycling infrastructure within the study area.
- **Chapter 8: Emerging Views**. Summarises the findings of the report and provides suggestions as to the most appropriate way forward.

# 2 Background

## 2.1 Introduction

2.1.1 This chapter sets out details of the background policy documents identified by THC in the Study Brief, and also considers other relevant local, regional and national cycle policy and review documents. It continues with a baseline description of the existing route between Beauly and Inverness.

## 2.2 Document Review

2.2.1 The first three documents that are reviewed in this section are the key design documents identified by THC in the Study Brief.

### *Cycling By Design, Consultation Document – The Scottish Executive 1999*

2.2.2 The prime objective of this document is to draw together previous cycle guidelines into a single publication, which can be used as a source of sound technical advice, and provides a Cycle Audit System for future Trunk Road cycle proposals.

2.2.3 The document notes the existence and development of Sustrans National Cycle Network (NCN), and notes the NCN requirements of routes using rural roads should carry no more than 1,000 vehicles per day, or where appropriate measures can be put in place.

2.2.4 The document sets out the main requirements of cycle infrastructure, namely coherence, directness, attractiveness, safety and comfort, and discusses a hierarchy of measures to make existing roads safe and convenient for cyclists in preference to segregated facilities. The document then goes on to set out a comprehensive and coherent approach to the assessment of existing cycle facilities and conditions, and makes recommendations about how to address and design features and routes that will satisfy the requirements of cyclists.

### *Design Manual for Roads and Bridges – The Highways Agency (HA) updated Feb 2007*

2.2.5 This document is the standard guidance for all matters surrounding the assessment, design and construction of Trunk Roads in the UK, and is backed by The Scottish Government. The details contained can also be applied to other local roads at the discretion of the local Highways Authority (in this case, The Highland Council).

### *Guidelines for Cycle Audit and Cycle Review – Institution of Highways and Transportation (IHT) 1998*

2.2.6 This document recommends and provides procedures to improve the design process to ensure the needs of cyclists are addressed. The Cycle Audit part of the document is to ensure that all available options are considered in new transport schemes that aim to avoid making conditions worse for cycling. A generic assessment form for this is included.

2.2.7 The Cycle Review process is more systematic, applicable to existing routes or networks, and sets out a three-stage procedure to identify positive and negative attributes for cycling and to assess ways in which changes could be made to encourage cycling. A set of 'Review of Conditions' assessment sheets are included with the document.

2.2.8 In addition to these national guidance documents, there is a hierarchy of documents setting out National, Regional and Local transport policy. These provide advice and guidance regarding cycling.

### *National Transport Strategy – The Scottish Executive 2006*

2.2.9 This document sets out the Scottish Executive's mechanism for delivery of the provisions contained in "Scotland's Transport Future, (White Paper 2004) and sets out a vision for transport in Scotland to 2025.

2.2.10 The five high level objectives contained in the National Strategy are to,

- Promote economic growth;
- Promote social inclusion;
- Protect our environment;
- Improve safety of journeys; and to,
- Improve integration.

2.2.11 The document promotes a hierarchical approach, from national policy and delivery through Transport Scotland, regional issues being handled and co-ordinated by a series of Regional Transport Partnerships, and at a local level by Local Authorities through the Local Transport Strategy process.

2.2.12 Demand management at a high level is recommended, along with the provision of alternative modes of travel and recognises the important role that promoting cycling and walking can have both in reducing emissions, improving air quality and contributing to improved health by increasing physical activity levels.

### *Regional Transport Strategy for the Highlands and Islands – HITRANS, June 2007*

2.2.13 HITRANS is the Regional Transport Partnership covering most of north and west highland Scotland, and has produced a draft regional transport strategy setting out its plans for implementing transport policy at regional level within Scotland. The Partnership comprises the constituent local authorities, regional development agencies and The Highlands and Islands Public Transport Forum.

2.2.14 HITRANS has a vision for a regional transport system which:

- Provides cost effective access to all regional transport services in pursuit of social inclusion
- Enables the optimum growth of the regional economy through a network which secures the efficient import and export of products: facilitates internal and external business travel; and encourages growth in tourism
- Is safe to use and operate
- Is sustainable and has the minimum practical impact on the environment

2.2.15 The RTS examines various options and scenarios, and considers the fit between national and local policy objectives. It also examines the hierarchy of settlements within the area, and notes low and dispersed populations, with several key centres which experience 'urban' type commuting patterns. A long list of potential measures was developed, and this was sifted in keeping with the Scottish Transport Appraisal Guidance (STAG), to provide a framework of projects over short, medium and long term to be pursued. Most of these are large scale infrastructure projects, but the contribution that measures such as cycle enhancements can make towards reducing congestion, improving health and reducing emissions is considered.

2.2.16 During the recent March 2007 consultation for the Regional Transport Strategy, 181 responses were received and 21 were directly related to cycling and Active Travel. Of the 21 responses about Active Travel, 11 specifically identified the need for a cycle route between Inverness and Beauly.

### *Local Transport Strategy for the Highlands – The Highland Council (THC) 2000*

2.2.17 This document sets out THC's vision for transport within its own boundaries, and when updated will provide the local element of The Scottish Executives hierarchical approach to transport policy delivery in Scotland.

2.2.18 The document reported a background of increasing car ownership, where over 55% of journeys to work are by car, with cycling accounting for 4%. This average of 4% is twice the UK national average for journeys to work by cycle. It also notes the role of conventional and community public transport provision, with varying levels of service often due to the dispersed nature of the population. The need and benefits of an integrated transport policy are clearly stated.

2.2.19 A series of Strategic Objectives are set out in the Strategy, the most relevant as follows:

- S2 – to improve safety for all transport users;
- S3 – to make the best use of the existing roads network;
- S4 – demand restraint for commuting trips, and provision of alternatives;
- S5 – encourage responsible car use and promote public transport, cycling and walking; and,
- S8 – maintain the general fabric of roads, footpaths and cycle routes in a safe and sustainable manner.

2.2.20 Two funding scenarios are examined, each of which contain strands and themes relating to the enhancement and development of cycle facilities to meet the Strategic Objectives set out above.

### *Cycling in Scotland – The Scottish Executive 2005*

2.2.21 This statistical review of cycling habits and attitudes was undertaken in 2005, and comparisons made against data previously gathered in 1997 and 2001. It notes a growing level of adult cyclists, but no growth in children cycling. The average duration of cycle trips had increased, but actual trip lengths remained steady at around 5.5 miles. An increase in 'off-road' cycle trips was reported. Leisure trips made up the majority of recorded trips.

2.2.22 When respondents were questioned about what might encourage them to cycle more often, dedicated cycle paths or cycle lanes continued to be the most popular choice, with 'information on cycle routes' also a common response.

*2.2.23* Further statistical records of cycle usage and trends can be found in the annually published *Scottish Transport Statistics – The Scottish Executive.*

### *Evaluation of the Scottish Cycle Challenge Initiative, The Scottish Executive 2001*

2.2.24 This research project identified how the Scottish Executive and other organisations could maximise their effectiveness in supporting cycling in Scotland, based on the experiences of the Cycle Challenge Initiative. A selection process identified 35 completed projects for inclusion in the study, covering a variety of different aspects of cycle related schemes, and assessed the specification, management, impacts and development of each project. A total of 16 projects were examined in detail as case studies.

2.2.25 A total of 60% of projects were considered to have had some impact on cycling levels in the areas where they were developed, with path construction, Safer Routes to Schools and workplace initiatives having the greatest impacts. Good value for money appeared to have been achieved in most of the projects. A number of criteria were identified which relate to the success (or failure) of cycling schemes, including;

- Local community support;
- Piecemeal schemes were less likely to be successful;
- Construction of more cycle routes could significantly increase the attractiveness of cycling;
- Input by volunteers can add to the value of a project;
- Initiatives can be vulnerable if overly reliant on volunteers; and
- Leisure cycling appeals to a wider population than cycling purely as a means of transport.

2.2.26 Three of the schemes considered in this report were located within the boundaries of THC, these being:

- Highland Cycle Campaign – an awareness and promotion project with a community based officer;
- Raigmore NHS Trust - the provision of cycle paths, parking and other facilities to allow staff and visitors to participate in cycling; and
- Nairn Academy Safer Route to School – new cycle sheds and routes linking the school to the local area cycle network.

### *Road Guidelines for New Developments – The Highland Council*

2.2.27 This document contains guidelines for design and construction of new development associated roads and footways within the Highland Council area, with particular regard to standards for safety and the provision of accesses, servicing arrangements, and parking facilities.

2.2.28 It also gives guidance on the procedures to be followed to reach the Council's adoptive standards. While the guidelines have been specifically aimed at new housing development on green field sites, the principles will also apply to smaller scale redevelopment of existing sites and for infill development in both rural and urban areas.

2.2.29 In the interests of pedestrian and traffic safety it is desirable that the geometric standards outlined in this document should apply to all new public roads constructed within the Highland Council area.

### *Highland Cycling Strategy*

2.2.30 The Highland Cycling Strategy was launched in June 2001 and was co-ordinated and prepared by the Highland Cycle Forum which is now defunct. The Highland Cycle Campaign was a partnership organisation which aimed to encourage and develop cycling with the Highlands. The vision of the strategy was 'To fulfil the potential of the Highlands as a place where cycling is a safe, attractive and accessible mode of transport and recreation for all' with an aim to 'Promote and encourage an increase in the proportion of journeys taken by cycle to the economic, health, social and environmental benefit of the Highlands.' The strategy is an action plan based on three themes:

- Infrastructure
- Encouragement and Education
- Research and Evaluation

2.2.31 The document lists fourteen organisations including THC, Highlands and Islands Enterprise Network, the Northern Constabulary, British Waterways and Sustrans who are able to contribute to the delivery of the action plan.

## 2.3 Accident History Review

2.3.1 Historical accident data along the A862 Inverness to Beauly corridor was provided by The Highland Council for the period January 2002 to December 2006 in the form of a STATS-19 location plot and a spreadsheet of corresponding descriptive factors. The data provided contained information about the location, day/date of incident and data regarding injured parties. A 'plain language' description of each incident was provided, but no classification of the actual causes of accidents was provided.

2.3.2 A total of 105 separate incidents were contained in the data supplied, and a breakdown by year is shown in table 2-1 below.

| Classification | 2002 | 2003 | 2004 | 2005 | 2006 | Total |
|---|---|---|---|---|---|---|
| Fatal | 0 | 0 | 0 | 0 | 0 | 0 |
| Serious | 0 | 0 | 1 | 2 | 0 | 3 |
| Slight | 1 | 9 | 4 | 8 | 5 | 27 |
| Damage Only | 18 | 17 | 10 | 12 | 18 | 75 |
| Total | 19 | 26 | 15 | 22 | 23 | 105 |

***Table 2.1 Recorded Accidents by Year and Severity***

2.3.3 The locations of the Severe and Slight injury accidents are shown in Appendix A. The main locations of serious injury accidents are at side arm junctions along the A862. The Slight injury accidents reveal two distinct clusters, at the junctions of the A862 with the A833 and the A831. Other Slight injury accidents occur at minor junctions and on linear stretches of the A862.

2.3.4 Damage only accidents, where no injury was recorded occur along the length of the A862, but there are a number of distinct clusters, as shown in Appendix B:

- A862 / A831 junction at Balblair (8 incidents);
- A862 / B9164 (west) junction (5 incidents);
- A862 / A833 junction (4 incidents);
- A862 / B9164 (east) near Drumchardine (6 incidents);
- A862 east of bridge underneath railway (3 incidents):
- A862 around side arm junction to level crossing (8 incidents); and,
- A862 Inverness/South Kessock area (9 incidents).

2.3.5 The remaining 32 incidents were dispersed along the length of the A862 with no clear pattern. The damage only incidents included vehicles being hit while slowing or turning, loosing control on bends (with and without rain or ice contributing as a factor) and vehicles in opposing directions striking or clipping each other.

2.3.6 The Serious Injury accidents occurred in April (darkness hours), May and June (both daylight hours). Two of these involved motorcyclists (one involving vehicle impact, the other being a loss of control).

2.3.7 The Slight Injury accidents were distributed throughout the year and time of day and are shown in Appendix A. Of these 27 incidents, one quarter (7 records) occurred on a Wednesday and a further quarter (7 records) occurred on a Saturday. While a number of the Slight Injury accidents involved turning and overtaking manoeuvres, a number were single vehicle incidents where the driver/rider lost control and left the carriageway, indicative of inappropriate speed for the road type and conditions.

2.3.8 On examination of the data regarding severity, it was noted that there were no injuries to pedestrians or cyclists with all injuries being sustained by drivers or their passengers. Likewise, there were no records in the damage only classification containing any reference to pedestrians or cyclists. The absence of any pedestrians or cyclists in the accident history may be a reflection of the inhospitable nature of the A862 and the reluctance of vulnerable road users to consider it as a safe route. Otherwise the locations and types of accidents recorded are in keeping with a rural road used for commuting purposes.

## 2.4 Traffic Data

2.4.1 Volume and classification data for the following sites were provided by THC and are summarised below:

| Location | Volume (Average Daily Traffic Flow) | % of HGVs |
|---|---|---|
| A862 Inchmore to Clachnaharry | 5192 | 8.28% |
| A862 Lovat Bridge to Beauly | 4851 | *Not available* |

***Table 2.2 Volume and classification counts A862***

2.4.2 Based on the 60mph speed limit; the type of cycle facility for this particular road has been plotted on the link specification guide criteria from Cycling by Design below (Figure 2.1). An average of 5000 vehicles per day has been used.

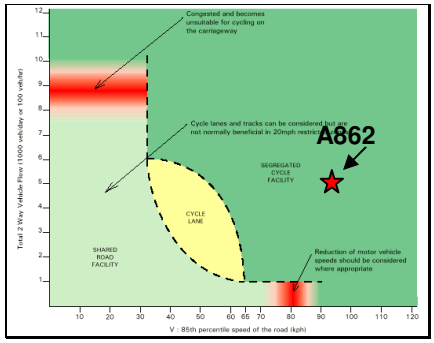


***Figure 2.1: Cycle link specification criteria, Cycling by Design***

2.4.3 The diagram shows that the type of facility recommended is an off road segregated cycle track. If the 85$^{th}$%ile speed is less than 60mph, it would be acceptable to recommend on road cycle lanes, however there is not enough width on the existing carriageway for the minimum recommended cycle lane of 1.5m whilst still allowing for two way traffic. The number of HGVs using the A862 is within acceptable standards for on road cycling (threshold of 15% or over.)

## 2.5 Study Area Description

2.5.1 The study area is the A862 corridor between Beauly and Inverness. Until the Kessock Bridge was built 1982, the A862 was the main road to the north of Scotland from Inverness and is still an alternative route should the bridge be closed. There is a 60mph limit on the road except through a number of settlements (Lentran, Bunchrew and Inchmore) where the limit drops to 40mph. The road is a standard carriageway width for the most part (7.3m) and is unlit except through the settlement mentioned above. The road incorporates the Lovat Bridge built by Thomas Telford in 1814.

2.5.2 The A862 lies next to the Beauly Firth which is a Site of Special Scientific Interest (SSSI), a Special Area of Conservation (SAC) and a RAMSAR site which is an international treaty for the conservation and sustainable utilisation of wetlands. The Firth is recorded among the top 22 sites in the UK for the highest densities of breeding oyster catchers and is home to Teal, Mallards, Pintails, Redshank, Ringed Plovers, Dunlin, Curlew, Shelduck, Goosander, the Greylag Goose, Redbreasted Merganser as well an expansive saltmarsh with many vascular plants. Dolphins are also regular visitors to the Firth and there is a dolphin centre on the north shore, close to the Kessock Bridge, directly off Route 7 of the National Cycle Network.

2.5.3 The following is a brief description of the main settlements within the study area between Beauly and Inverness and are shown on the location plan in Appendix C:

### *Beauly*

2.5.4 Beauly is situated ten miles west of Inverness next to the river Beauly and has a population of around 1200. The town was originally laid out by Baron Lovat in the 1840s and has a spacious town square at its centre. The ruin of a 13th Century priory attracts regular visitors and there is a strong angling community. The following schemes are referred to in the Inverness Local Plan (March 1996).

*'A scheme to improve and extend the local footpath network notably the Cnoc an Rath and River Beauly paths could form the basis of a community project, including signposting and interpretation of important features en-route. This scheme could also include the creation of formal parkland on land within the river loop at Ferry Road. Consideration will be given to identifying a cycle route along the A862.'*

### *Clachnaharry*

2.5.5 Clachnaharry is the first settlement out of Inverness on the A862. It has a population of 560 with an award winning pub selling real ales. The following schemes are referred to in the Inverness Local Plan (March 1996).

*'Consideration will be given to the scope for traffic management, parking and cycling/pedestrian arrangements through Clachnaharry as part of regeneration proposals at Muirtown Basin. The Council will keep under review the scope to carry out improvements at the railway bridge/A862 junction at Clachnaharry.'*

### *Kirkhill*

2.5.6 Kirkhill is the largest settlement between Beauly and Inverness with a population of 657. Kirkhill houses the local school for the area and has the following settlements within its catchment: Inchmore, Drumchardine, Newton Hill, Lentran, Bunchrew, Wester Lovat, Knockbain, Cabrich, Kirkton and Clunes. The following schemes are referred to in the Inverness Local Plan (March 1996).

*'The Council will investigate the scope for "gateway" features as part of traffic calming measures for the village and upgrading the St Mary's/B9164 junction. Consideration should be given to opening-up a rail halt at Groam. Consideration should be given to developing a local footpath network around the village, possibly linked to Community Woodland and the promotion of local historical sites including access and parking at the Wardlaw Mausoleum.'*

### *Inchmore*

2.5.7 The Old North Inn (locally know as the Bogroy) and the Inchmore Art Gallery housed within a disused church are popular attractions at Inchmore and the majority of the village is linear in nature along the A862. The local community have been active in developing routes for walking and cycling and the majority of the routes start at the village. An interpretation board showing walking and cycling routes has been erected in the car park of the Old North Inn. The following schemes are referred to in the Inverness Local Plan (March 1996).

*'Consideration should be given to traffic calming including "gateways" at the entrance points to the village, extended footway provision and a pedestrian/cycle crossing and improved cycle route to Kirkhill'*

### *Bunchrew*

2.5.8 There is a campsite at Bunchrew which is popular with cycle tourists. The Bunchrew Hotel has accommodation as well as serving lunch, high tea and dinner. The following schemes are referred to in the Inverness Local Plan (March 1996).

*'The Council will investigate the feasibility of traffic/speed restriction measures on the A862 through the village.'*

### *Lentran*

2.5.9 Lentran is a small but growing village just to the west of Inchmore.