

Transport for Development

Caithness Transport Infrastructure Study

Report for Caithness Partnership

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Summary

Caithness and North Sutherland in the north of Scotland is an area facing a perhaps unique set of economic circumstances, both now and in the coming years. For many years, the Dounreay nuclear plant west of Thurso has been a mainstay of the regional economy, responsible for around one third of all jobs in the Caithness and Sutherland area (directly and indirectly). The decommissioning of this plant is now underway and employment at the site is on a downward trend from around 2,000 at present (full time equivalent) to an eventual end date of around 2030, when only a very small number of staff will remain. The strategic influence of Dounreay is also seen in terms of its travel to work catchment area, which is geographically extensive, covering the north eastern corner of north Scotland from Tongue to Brora.

The potential impact of the loss of these jobs on the area cannot be over-estimated. The loss of these, relatively high income jobs, would affect the viability of local services and businesses, and there would be a significant out-migration, particularly of professional and skilled staff, leaving an ageing and less skilled population base. Both of these factors would have a severe impact on sustaining communities in Caithness and North Sutherland. There would also be a significant loss of business confidence and indeed individuals' confidence in their own prospects in the area.

However, the unique nature of the local labour force is demonstrated in that Caithness has a significantly higher proportion of workers in 'skilled trades' than the Highlands, Scotland and Great Britain. Indeed, there are proportionally twice as many skilled trade workers in 'Thurso' than the British average, and wage levels are significantly higher than typical rural areas of this nature. This skill base presents clear opportunities for the future and the key is to ensure its continuing presence in Caithness.

Responding to these issues, local stakeholders have formed the Caithness Regeneration Partnership, which is setting out to promote the area and encourage investment to take advantage of (i) the highly skilled local labour pool before it is potentially lost to out-migration and (ii) the opportunities provided by the area's natural and other assets. The Partnership has produced a 'Vision for Caithness' which seeks to set out a framework for the types of economic initiative that should be undertaken, promoted or sought in future, building on the area's key strengths, over the next 20 years. If successful, the initiatives contained in the *Vision* would supersede Dounreay as the mainstay of the regional economy. The *Vision* looks to focus on five key sectors: Energy, Tourism, Engineering, Service Industries and Food & Drink. These aims and aspirations are also reflected in Highland and Islands Enterprise's 'North Highland Marketing Plan' (November 2007) and 'Action Plan for Caithness and North Sutherland, 2007-10' (December 2007). A particular area of interest is tidal energy - the Pentland Firth is thought to generate 75% of the UK's tidal energy potential and there would seem to be a natural synergy with Dounreay-related skills, which is being developed.

One aspect of Caithness and North Sutherland which is seen as a major barrier to new investment in the area, and hence the realisation of the *Vision*, is its **transport infrastructure** and the range of **transport services** available. The aims of this Report are to examine the role which improved transport infrastructure and services have to play in helping to realise the *Vision*, and to prepare an initial prioritisation as to which transport

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investments are required to facilitate the *Vision*, and hence the economic transformation of Caithness and North Sutherland.

These are the range of issues which are required to be addressed if the economy of Caithness and North Sutherland is to be transformed, and hence local communities sustained. They contribute to the relative economic disadvantage experienced in Caithness when competing with businesses in other locations. Taken together, they also contribute to a perception of remoteness amongst those unfamiliar with the area, including potential investors and tourists. In addition to solving logistical problems, reducing journey times, improving safety etc, investment in improved transport infrastructure and services will play a key role in challenging this perception of remoteness and creating a climate where businesses have the confidence to invest in a forward-looking area, with the local population sustained.

Caithness itself has a population of around 25,000 (2001 Census) and the towns of Thurso (7,500¹) and Wick (7,000) are the fifth and sixth largest settlements in the Highland Council area respectively (actually the 2nd largest if taken together). The A9 corridor between the Dornoch Firth and Caithness also includes the Sutherland settlements of Dornoch, Golspie, Brora and Helmsdale - these communities could also benefit from improved transport links. The A9 corridor is also the mainland-based access for the Orkney Islands, which have a population of around 20,000. The ferry crossings between Gills Bay (near John O'Groats) and St Margaret's Hope, and Scrabster (near Thurso) and Stromness, account for at least 90% of goods vehicles travelling between Orkney and the mainland, the remainder taking the longer, less frequent ferry to Aberdeen. When considering the case for investment between Inverness and Caithness, the implications and benefits for Orkney should therefore not be forgotten. The transport links between Inverness and Caithness therefore play a strategic role in the Scottish context. There is a strong case that investment in these routes has not kept pace with modern standards and this strategic role.

The Vision for Caithness and North Sutherland

The economic Vision for Caithness and North Sutherland contains a wide range of initiatives and is perhaps best thought of in terms of the five key sectors of Energy, Tourism, Engineering, Service Industries and Food & Drink. In **Energy**, initiatives include: centres of excellence in nuclear industry; tidal energy generation and spin-off energy intensive businesses / tidal expertise; development of harbours as possible supply bases for west of Shetland and North Sea oil / gas activities; increased oil extraction from east of Caithness, and hydrogen technology projects. In **Tourism**, there are a number of initiatives to raise the profile of Caithness as a visitor destination, through increased marketing and promotion, the development of hotel facilities, the development of John O'Groats, promotion of natural history, heritage, sport and the arts. In **Engineering**, the aim is to build on the skills of the local labour market, and many of the energy initiatives touched on above would require significant engineering skills. **Service Industries** are now the mainstay of the national economy and modern broadband and telecommunications technology mean that distance is not necessarily a barrier to hosting service industries, including the potential relocation of public sector jobs. Finally, Caithness has an existing quality **Food and Drink** sector which can be further developed, particularly at the high end of the market.

¹ GROS Mid Year 2004 Estimates, see <http://www.gro-scotland.gov.uk/files1/stats/04mid-year-estimates-settlements-table1.xls>

Summary

The overall strategy is therefore to grow and attract a diverse range of small and medium sized enterprises, rather than rely on a single major investment to replace Dounreay. The role of the public sector is clearly important in providing the necessary infrastructure (transport, premises, etc) to allow these aims to be met.

Transport Schemes

The Caithness Partnership, in their 'Caithness Transport Vision'² has outlined the type of improved transport infrastructure and services potentially required across all modes to meet the aspirations of Caithness. This list was supplemented with some new schemes and used as the basis for a qualitative appraisal and indicative prioritisation of how each of the (22) potential transport schemes could contribute to the successful realisation of the basket of initiatives contained in the *Vision*.

Scottish Transport Appraisal Guidance (STAG)

Any proposal seeking funding or 'approval' from Transport Scotland must go through a STAG process. This study is essentially at the pre-STAG sifting stage where a set of 'planning objectives' has been used to assess schemes in the specific context of their potential role in the economic transformation of Caithness. A key principle of STAG is that the process is 'objective led' rather than 'scheme led', ie the process should (i) set out a series of 'problems and issues', (ii) develop objectives to address these problems and issues, and (iii) assess a range of transport interventions or schemes as to how well they meet these objectives. A set of 'transport objectives' was developed here which essentially lays out how any given scheme would meet the 'planning objectives' (ie the transformation of Caithness). These are:

- reducing inter-regional travel times;
- improving 'lifeline' dependability on strategic routes;
- improving travel time reliability;
- increasing transport connectivity;
- tackling perceptions of remoteness;
- improving travel safety;
- increasing the range of freight handling capabilities;
- improving the 'quality' of inter-regional travel, including en-route facilities; and
- improving strategic links to ports and airports.

Note that in this analysis, we have focussed on 'Economy' related Objectives. In taking individual schemes forward, each would be subject to appraisal under all five Government Objectives, which, in addition to Economy, are Environment, Safety, Integration & Accessibility and Social Inclusion.

² see http://www.caithness-partnership.org.uk/documents/caithness_transport.pdf

Appraisal and Prioritisation

The qualitative appraisal then:

- assessed to what extent each of the 'transport objectives' are significant in the context of each individual element of the economic Vision;
- rated the potential economic significance of each element of the economic Vision;
- created a 'weighting' for each 'transport objective' which reflected its importance in facilitating the basket of initiatives contained in the economic Vision (taking account of the potential significance of each initiative);
- assessed to what extent each of the proposed 'transport schemes' met the 'transport objectives', and hence the realisation of the *Vision*; and
- ranked the transport schemes, based on their success in contributing to the *Vision*, together with a broad indicator of value for money.

This appraisal and ranking provided an indication of the relationship between the transport schemes and the economic Vision taken in its entirety, but must be seen in the context of schemes which address 'hard' and 'soft' constraints as discussed above. It was used to inform a way ahead in terms of the transport investments necessary to facilitate the economic transformation of Caithness and North Sutherland.

In broad order of priority, the following measures are required to facilitate the economic transformation of Caithness and North Sutherland:

- upgraded and expanded harbour facilities at Scrabster and in the future at Wick – the area's existing harbour facilities are potentially a key constraint in facilitating the development of key marine energy, oil and other offshore industries, as well as general freight handling;
- Wick Airport suffers from a significant number of weather-related flight cancellations / diversions due to the lack of adequate technical landing aids (eg ILS, GPS) – such systems are required to improve reliability and confidence in the ability to travel, although they will not in themselves fully resolve this issue;
- the A9 between Inverness and Caithness is of a poor standard, particularly north of the Dornoch Firth. This impacts on travel times, safety, operation of HGVs, and as a 'lifeline' link, closure due to weather or incidents leads to very lengthy delays and diversions. In the short term, a targeted programme of safety improvements and '2 plus 1' / climbing lane sections are required to bring the route up to the standard expected of this trunk, strategic route, which also provides links to Orkney. In the longer term, local bypasses on the route should be considered. These improvements should be developed and implemented via a Route Action Plan;
- 'high class' express coach services would provide a short-term 'quick win' by significantly reducing travel times by public transport between Inverness and Caithness at low cost - important for the tourism sector in particular. The potential market and benefits of such a service should be assessed in the context of a public transport 'corridor' study, which would include detailed (ie STAG Part 2) assessment of significant medium-term developments which would reduce journey times on the Far North Line, including the Dornoch Rail Link; and

- in the longer term, a package of measures to dramatically improve freight handling, could allow the area to capitalise on the proposed Scapa Flow freight transshipment facility in Orkney. These could include significant harbour upgrades, a new inter-modal road / rail facility at Georgemas, improved links between Georgemas and the harbour(s), and improvements to the Far North Line to cut journey times and increase capacity. Such Far North Line improvements would also clearly provide opportunities for significantly improved passenger services.

1 Introduction

1.1 Overview

1.1.1 MVA Consultancy was appointed by the Caithness Partnership in 2007 to undertake a study to prioritise the future transport requirements of Caithness. The aim of the study is to identify which transport improvements best support the 20-year '*Vision for Caithness and North Sutherland*', and to deliver recommendations as to how these can be progressed. The report will also feed into Transport Scotland's on-going Strategic Transport Projects Review (STPR).

1.1.2 In terms of context, this study rests primarily within the issues associated with the decommissioning of Dounreay nuclear power station. While the decommissioning process is not projected to be complete until 2033, there will be a scaling down of jobs at the plant over the coming years.³ Current estimates suggest that one in three jobs in Caithness and North Sutherland is dependent directly or indirectly on Dounreay, and, as such, all stakeholders must be involved in planning for the future diversification of the local economy in the post-Dounreay era. Such a succession plan is embodied in the *Vision for Caithness and North Sutherland*, which contains a programme of potential economic initiatives which would bring new investment and diversity to the area.

1.1.3 The *Vision* recognises that 'a good quality interconnected road, rail, sea and air network will improve the potential for local development and help realise the *Vision*'. The delivery of such a transport system requires a clear understanding of how different transport schemes affect different aspects of the *Vision*. Such an objective was inherent in the scope for this project, which seeks to answer the following questions:

- what transport infrastructure improvements are required to make the *Vision for Caithness and North Sutherland* happen?
- what new/improved infrastructure is needed for each item in the *Vision*?
- the priority of the Transport Forum is to stimulate inward investment in Caithness. As such, there is a need to prioritise the improvements needed through time in order to support the developments listed in the *Vision*; and
- what other additional improvements are required to make the *Vision* happen that are not included in the infrastructure list?

1.1.4 As part of the *Vision*, a list of potential transport improvements has been identified and MVA were commissioned to identify how such schemes support the delivery of the *Vision* and how they should be prioritised.

1.2 Structure

1.2.1 The approach adopted involved a number of different strands, incorporating a mixture of desk-based research, consultation and assessment of options using STAG-based planning objectives.

³ UKAEA, *Dounreay Socio-Economic Update*, (Caithness, October 2006), P. 2.

1.2.2 The remainder of this report consists of five additional chapters, as follows:

- **Chapter 2** provides a brief overview of the Caithness economy, including analysis of the main issues that the *Vision* is designed to tackle. This involves profiling the Caithness economy and research into existing evidence on how location/transport links act as a constraint on local economic development;
- **Chapter 3** analyses the transport related problems and issues affecting Caithness. This involves an analysis of car/HGV journey times to key destinations, flight schedules and destinations, rail services, ferry links and port and harbour facilities. Having done this, the main transport related issues associated with each element of the *Vision* and the possible impact of infrastructure improvements are identified;
- **Chapter 4** reports on our face-to-face and e-mail based consultation with a range of key stakeholders. The consultation was designed to identify what the consultees see as the transport issues affecting Caithness and how they relate to the delivery of the *Vision*;
- **Chapter 5** contains the results of the appraisal work undertaken, looking at a list of transport schemes and how these could contribute to the economic transformation of Caithness and North Sutherland;
- **Chapter 6** then provides some conclusion and recommendations as to the promotion and taking forward of the key transport schemes affecting Caithness.

By way of background and context, Appendix A reflects on the literature analysing the relationship between transport, economic development and regeneration, and the implications of this evidence from the literature for transport investment affecting Caithness.

2 A Profile of Caithness

2.1 Overview

2.1.1 In assessing the potential transport improvements required to progress the 'Vision for Caithness and North Sutherland', it is necessary to discuss the economic profile and characteristics of the Caithness area. By exploring the historical and current profile of the area, it is possible to develop an understanding of the issues Caithness faces and its future development needs.

2.1.2 This chapter is divided into the following main sections:

- landscape, history and attractions of Caithness;
- 'The National Planning Framework for Scotland';
- the importance of Dounreay to the Caithness economy;
- population trends;
- labour market analysis;
- local economic indicators;
- education; and
- 'What can improved transport do for Caithness?'

2.2 Landscape, History and Attractions

Landscape

2.2.1 Caithness is situated to the east of the far north of Scotland and falls under the jurisdiction of the Highland Council. The area is bounded by Sutherland to the south and west, the Pentland Firth to the north and the North Sea to the east. Caithness extends around 40 miles north to south and 30 miles east to west, with a surface area of approximately 712 square miles.⁴

2.2.2 Caithness is dominated by two key settlements, Wick and Thurso (with populations of approximately 7,000 people and 7,500 people.⁵). These towns are supplemented by a number of smaller towns and villages, such as Lybster, Castletown, Keiss and Halkirk.⁶

2.2.3 Unlike much of the Highlands, Caithness is relatively flat, consisting mainly of areas of open farmland, moorland, bogs, rivers, lochs and small areas of forest. Caithness also benefits from an extensive and picturesque coastline that takes in the famous John O' Groats and the most northerly point in the UK, Dunnet Head.

⁴ <http://en.wikipedia.org/wiki/Caithness>

⁵ Mid 2004 population estimates, <http://www.gro-scotland.gov.uk/statistics/publications-and-data/settlements-and-localities/mid-2004-population-estimates-for-settlements-in-scotland.html#list%20of%20tables>

⁶ <http://www.caithness.org/geography/>

History

- 2.2.4 Like many areas of rural Scotland, employment in Caithness was heavily concentrated in the primary sector for long periods. Of particular note was the extensive herring fishing industry concentrated in Wick.⁷ The primary sector was supplemented by other industries such as flagstone quarrying at Castletown.⁸ While traditional industries such as the primary sector are still prominent today, the economy of Caithness has evolved in recent decades.
- 2.2.5 The most important development in the Caithness area in the last 60 years was, however, the iconic Dounreay nuclear power station, situated slightly to the west of Thurso. Dounreay was established in 1955 principally to pursue the government's policy of developing fast breeder reactor technology.⁹ The facility supplied power to the UK national grid but has since been disconnected and is now undergoing the process of decommissioning, which is expected to be complete by around 2033, although this process may be accelerated. The legacy of Dounreay is that it has provided Caithness with a highly skilled workforce not found in most other rural areas. Such a workforce is clearly an asset upon which the future of the area can be built.
- 2.2.6 Caithness also benefits from a notable endowment of natural resources. The Pentland Firth is thought to contain around 75% of the UK's tidal energy potential, while the area could also host wind energy. In addition, the extensive coast and harbours of Caithness allow access to good fishing grounds, while the area can also potentially tap into North Sea and west of Shetland oil.

Attractions

- 2.2.7 Caithness has a number of attractions which draw tourists to the area and it is the intention to continue developing such attractions. Perhaps the most unique tourist attraction of Caithness (at least in a Scottish context), is the ability to surf in the Pentland Firth, widely regarded as one of the best surfing locations in the world. Caithness is also a good location for sailing and other water sports.
- 2.2.8 Caithness also offers a wealth of other activities. The open countryside is conducive to walking, cycling, camping and other such activities, while it also offers good access to the rugged north-west of Scotland. The rich history of the area also offers many archaeological experiences including brochs and castles.
- 2.2.9 Perhaps the most visited area of Caithness is John O'Groats, famous for being generally regarded as the most northerly point on the UK mainland (even though this is actually Dunnet Head). In recent years, John O'Groats has attracted much negative press¹⁰, and new plans for improving the visitor experience have recently been announced.
- 2.2.10 Other attractions include museums and the Far North Rail Line, which is popular amongst those wishing to take a scenic trip from Inverness to Wick and Thurso and for chartered rail tours.

⁷ <http://www.undiscoveredscotland.co.uk/wick/wick/index.html>

⁸ <http://www.undiscoveredscotland.co.uk/castletown/castletown/index.html>

⁹ <http://en.wikipedia.org/wiki/Dounreay>

¹⁰ <http://news.bbc.co.uk/1/hi/scotland/4573511.stm>

- 2.2.11 Caithness also serves as a staging post to the Orkney Islands, which themselves offer beautiful scenery and a number of archaeological treasures such as Skara Brae.

2.3 The National Planning Framework For Scotland

- 2.3.1 The National Planning Framework (NPF) is:

■ 'a framework to guide the spatial development of Scotland to 2025. It sets out a *Vision* of Scotland in which other plans and programmes can share and to which they can contribute. It is not an economic development strategy but complements the Executive's [Scottish Government's] 'Framework for Economic Development in Scotland', highlighting the importance of place and identifying priorities for investment in strategic infrastructure to enable each part of the country to play to its strengths in building a Scotland which is competitive, fair and sustainable.'

- 2.3.2 The NPF was published in April 2004 and set out a strategy for Scotland's development to 2025. However, in early 2008, the Scottish Government released a discussion draft of the National Planning Framework 2 (NPF2). The analysis presented in this section is drawn from the discussion draft of NPF2.

- 2.3.3 As well as addressing national issues in Scotland, the NPF also focuses on 'Spatial Perspectives' (ie geographical areas). The NPF groups Caithness under the 'Rural Scotland' heading.

- 2.3.4 The NPF identifies a number of direct and indirect opportunities for Caithness, including:

■ renewable energy, such as wind power (East Sutherland and Easter Ross) and tidal power (through the European Marine Energy Centre on the Orkney Islands) from the Pentland Firth;

■ nuclear expertise, including skills in nuclear decommissioning and environmental restoration; and

■ access to the deep water port at Scapa Flow and the provision of a potential container transshipment terminal at Lyness on Hoy (Orkney Islands).

2.4 The Importance of Dounreay to the Local Economy

- 2.4.1 Following the commissioning of Dounreay in 1955, there was a marked change in the profile of Caithness. There was a notable increase in population with the plant bringing an influx of skilled labour to undertake well-paid jobs. In addition, Dounreay revolutionised the economic profile of the area, becoming the largest employer in Caithness.

- 2.4.2 The University of Aberdeen recently undertook a study assessing the socio-economic impact of Dounreay in Caithness and Sutherland. The study found that Dounreay supports around a third of all jobs in the area, of which:

■ 2,740 are direct jobs;

■ 600 are indirect jobs related to the plant (eg specialist engineering); and

■ 1,000 induced jobs (eg the provision of services and amenities).¹¹

- 2.4.3 In terms of wages, 35% of the UK Atomic Energy Agency (UKAEA, which runs Dounreay) staff have an income of between £25,000-£39,000, 27% have an income of between £40,000-£54,999 and 22% have an income greater than £55,000. Clearly, Dounreay offers very good wages, particularly for a rural economy where wages are typically lower than average.¹²
- 2.4.4 In addition, Dounreay represents 10% of the total economic output in the North Highlands (Caithness, Sutherland, Ross and Cromarty).¹³
- 2.4.5 However, as the decommissioning of the plant gathers pace, the number of jobs will decline gradually between now and 2033. The University of Aberdeen estimates that the Caithness and Sutherland economy must expand by 10% or the number of jobs must increase by 9% to avoid Caithness suffering from deprivation and outward migration.

2.5 Population

- 2.5.1 Following the opening of Dounreay, the population of Caithness increased as people migrated to the area to take advantage of the well-paid and highly skilled jobs on offer. The decommissioning of the plant will see a rundown in jobs and it is highly likely that the population itself will decline (particularly amongst the most productive tier), if the direct and indirect Dounreay jobs are not replaced by other jobs of a sufficiently high calibre.
- 2.5.2 The population of Caithness and Sutherland was 38,262 in 2005, which represented a 0.4% reduction on 2001 levels. This compares to a 1.6% growth across the Highlands and Islands, as well as 0.6% growth in Scotland.¹⁴
- 2.5.3 The UKAEA indicates that Caithness and Sutherland has seen a population decrease of 3.9% from 1991 to 2001, compared to 0.8% growth for the HIE area generally.¹⁵
- 2.5.4 The population of Caithness and Sutherland is also ageing, with a reduction of around 2.5% of the under 44 age group, between 2001 and 2005.¹⁶ This is a particular concern in rural areas where a high dependency ratio can lead to difficulties in delivering services. Anecdotal evidence also suggests that school roles are decreasing.
- 2.5.5 The worsening demographics of the area can also be attributed to the outward migration of people from the 20-44 age group. HIE indicates that the lack of higher education provision encourages outward migration, with many skilled residents not returning.¹⁷

¹¹ Bergmann, H., *The Socio-Economic Impact of Dounreay in Caithness and Sutherland – Presentation Slides* (University of Aberdeen Business School, 2007), p. 6.

¹² UKAEA, *Dounreay Socio-Economic Update* (October, 2006), p. 3.

¹³ *Ibid.*, p. 2.

¹⁴ HIE *Caithness and Sutherland Economic Report* (HIE, 2007), p. 2.

¹⁵ UKAEA, *Dounreay Socio-Economic Update* (October, 2006), p. 2.

¹⁶ HIE (Caithness and Sutherland) *Economic Report* (2007), p. 2.

¹⁷ *Ibid.*

2.6 Labour Market Analysis

2.6.1 This section provides a brief overview of the Caithness labour market and investigates how it compares to that of the entire Highland area, Scotland and the UK. The data are extracted from the official labour market statistics provided on the 'NOMIS' section of the National Statistics website.

2.6.2 NOMIS data are provided for the three Caithness areas, as follows:

- Wick, which consists of the wards of Wick and Wick West;
- Thurso, which consists of the wards of Thurso Central, Thurso East and Thurso West; and
- Caithness Other, which consists of the wards of Caithness Central, Caithness North East, Caithness North West and Caithness South East.

2.6.3 The analysis considers two main factors - the labour supply and employment by occupation. One should, however, be aware that the comparisons presented are relatively coarse, especially at the Scottish and British level. The Scottish and British averages have a considerably greater variance (due to the size of the population being averaged) than that of Caithness, thus meaning that the average can obscure every bit as much as it illuminates. While such comparisons provide an insight into the performance of Caithness, one must employ due caution when interpreting the results.

Labour Supply

2.6.4 Table 2.1 illustrates the population, level of economic activity and the percentage of economically active people who are in employment in Caithness. The calculations undertaken to group the relevant wards and obtain these figures can be found in Appendix B.

Table 2.1: Caithness Labour Supply 2001

	Wick	Thurso	Caithness Other	Highland	Scotland	Great Britain
Working Age Population	2,944	4,603	6,122	N/A	N/A	N/A
% Economically Active	78.1	80.1	79.1	78.8	80.0	76.0
% of Working Age Pop in Employment	72.1	75.4	74.1	73.5	75.7	71.6

2.6.5 It should be noted that the areas of Wick and Thurso are likely to fall under 'Caithness Other'. It also should be noted that the 'Scotland' figures are for 2006-2007.

2.6.6 It can be seen from Table 2.1 that the labour characteristics of Caithness in 2001 are relatively favourable in comparative terms. The economic activity rate of all three Caithness

areas is higher than that of the UK and largely in line with the Scottish and Highland averages.

- 2.6.7 Similarly, employment rates are higher than the UK average, while 'Thurso' and 'Caithness Other' show higher levels of employment than the Highland area generally. However, 'Wick' lags behind the Highland average, with all three areas trailing the Scottish average.
- 2.6.8 The unemployment rate in Caithness and Sutherland has exceeded the Highland average between 2004 and 2007, although has nonetheless declined over this period.¹⁸ Unemployment also displays seasonal peaks and troughs caused largely by the dominance of tourism and the primary sector in the local economy.¹⁹
- 2.6.9 In terms of employment by sector, 'Public Administration and Health' is the most dominant, employing 32.6% of the total workforce in 2005. 'Distribution, Hotels and Restaurants' is the next largest sector with 22% of the total workforce. Significantly, the third largest sector is 'Energy, Water and Manufacturing', where many of the jobs are indirectly related to both working in and the decommissioning of Dounreay.²⁰
- 2.6.10 Some 41.5% of employees in Caithness work for firms that have 40 or more employees, which reflects the prevalence of large firms in the area, such as UKAEA.²¹ Despite this, 58.5% of employees are located in firms with fewer than 40 employees. Small businesses are seen as important to the vibrancy of an area and Caithness appears to have a relatively good mix of large and small firms in the local economy.²²

Employment by Occupation

- 2.6.11 Table 2.2 provides an overview of the distribution of employment by occupation in the Caithness area, using the same grouping of wards as Table 2.1. The aim of this analysis is to identify the importance of Dounreay in providing skilled, high-value jobs for the Caithness economy. In the interests of brevity, the focus of this note is on four key occupational categories as defined by the 'Standard Occupation Classification (SOC) 2000', as follows:

- SOC 2000 Group 1 – Managers and Senior Officials;
- SOC 2000 Group 2 – Professional Occupations;
- SOC 2000 Group 3 – Associate Professional and Technical; and
- SOC 2000 Group 5 – Skilled Trade Occupations.

- 2.6.12 The calculations undertaken to group the relevant wards and obtain these figures can be found in Appendix C.

¹⁸ Ibid., p. 3.

¹⁹ Ibid..

²⁰ Ibid., p. 7.

²¹ Ibid., p. 9.

²² Ibid., p. 10.

Table 2.2: Employment by Occupation as a %age of the Economically Active in 2001

SOC Group	Wick	Thurso	Caithness Other	Highland	Scotland	Great Britain
G1 – Managers and Senior Officials	8.2%	10.9%	11.4%	12.2%	12.9%	14.9%
G2 – Professional Occupations	8.1%	11.5%	9.2%	9.2%	12.8%	11.2%
G3 – Associate Professional and Technical	12.3%	14.4%	12.0%	12.9%	13.8%	13.9%
G5 – Skilled Trade Occupations	17.6%	13.5%	23.6%	16.5%	11.2%	11.8%

2.6.13 As with Table 2.1, the figures for Scotland are for 2006-2007.

2.6.14 It can be seen from Table 2.2 that Caithness has a lower proportion of 'Managers and Senior Officials' than the Highlands, Scotland and Great Britain. This is likely to be due to the higher proportion of jobs in sectors such as Financial Services in the other areas when compared with Caithness.

2.6.15 Caithness has an approximately comparable proportion of its economically active residents contained within Professional Occupations, when compared to Scotland and Great Britain. In addition, 'Thurso' and 'Caithness Other' have a higher proportion of G2 occupants when compared to the Highlands. The picture is largely similar for 'Associate Professional and Technical Staff'. However, it is notable that 'Thurso', which is the closest of the ward groupings to Dounreay, has a higher average portion of G3 employees than the Highlands, Scotland and Great Britain.

2.6.16 The 'Dounreay effect' is most clearly manifested in the 'Skilled Trade Occupations' category. Caithness has a significantly higher proportion of workers concentrated in skilled trades than the Highlands, Scotland and Great Britain. Indeed, there are proportionally twice as many skilled trade workers in 'Thurso' than the British average. Such a high level of G5 workers can also partially be accredited to other sectors such energy.

2.6.17 In general, it can be argued that Table 2.2 shows that Caithness compares relatively well (in terms of national and regional averages) with regards to the proportion of economically active employed in the upper occupational tiers. This can largely be attributed to the 'Dounreay effect', as the plant requires a great number of highly skilled employees, ranging from management to skilled engineers, as well as a host of contractors. These results reinforce the view that the closure of Dounreay will cause significant damage to the Caithness economy if its closure is not pre-empted by investment and the provision of new jobs.

2.7 Local Economic Indicators

Gross Value Added

- 2.7.1 Gross Value Added (GVA) represents the productivity of an area. Total GVA is the market value of all final goods and services produced within an area. Therefore, increasing GVA per capita is associated with a rise in living standards. Intuitively, a greater concentration of employment in high value industries (such as banking and finance) will produce a higher GVA, while production in lower value industries, such as the primary sector, produces a lower GVA.
- 2.7.2 There are no specific GVA indicators for Caithness and Sutherland, but HIE indicate that the Highlands generally have a lower GVA than the Scottish average. This is largely because the Highlands is characterised by relatively low value seasonal industries (such as tourism) and small firms that are unable to take advantage of economies of scale.²³ However, Caithness and Sutherland has a number of high GVA industries concentrated around the nuclear industry and there is latent potential for diversification into higher value sectors as the Dounreay decommissioning gathers pace.

Income

- 2.7.3 The median gross weekly wage in the Highlands and Islands is £304.60, which represents 87.7% of the average Scottish level.²⁴ HIE notes that no direct evidence of wage levels for Caithness and Sutherland is available but infer that wage levels are likely to be lower than the Highlands and Islands and Scottish average due to the concentration of employment in low paying sectors, such as the primary sector and tourism.²⁵ HIE also notes that seasonal unemployment can exacerbate this problem.
- 2.7.4 Despite these issues, HIE does indicate that a number of local employers pay wages in excess of the H&I and Scottish average, such as UKAEA at Dounreay.
- 2.7.5 It should be noted that two wards in Wick are within the 15% most deprived areas of Scotland, as defined by the Scottish Index of Multiple Deprivation 2006. Such areas are eligible for Community Regeneration Funding (CRF). Under the STAG EALI framework, transport improvements that benefit these two localities at the expense on non-CRF areas are seen to be positive.

House Prices

- 2.7.6 House prices are often seen as a reflection of how attractive an area is to live in. That is, house prices reflect the demand for properties in that area given a relatively fixed supply in the short run. High house prices tend to suggest either a shortage of housing stock, or that the area is an attractive place in which to live (or both), while lower house prices suggest that the area either has spare housing stock/land, or is not as attractive as other places to live in (or both). It should, however, be noted that, while high house prices may suggest an area is a 'nice' place in which to live, uncompetitive house prices can have a negative impact in terms of people remaining in or moving to an area.

²³ Ibid., p. 6.

²⁴ Ibid.

²⁵ Ibid.

- 2.7.7 The average house price in Caithness and Sutherland in 2005 (£69,250) is lower than that of the Highlands and Islands (£88,000) and Scotland (£89,000) generally. However, house prices have increased more quickly in Caithness and Sutherland between 2002 and 2005 (61%), when compared with the Scottish average (56.1%), although the rise in prices has been slower than in the Highlands and Islands (70.9%).²⁶
- 2.7.8 It is important to note that the lower than average house prices in Caithness and Sutherland are not necessarily a negative factor. House prices tend to increase the most in and around cities, where demand often outstrips supply. As a result, it is plausible that the figures for the Highlands and Islands and Scotland are skewed by the inclusion of cities such as Edinburgh and Inverness. It is likely that average house prices outwith these conurbations are more in line with that of Caithness and Sutherland.

Business Start-Ups

- 2.7.9 Business start-ups are seen as an important factor in determining local economic performance. HIE notes that Caithness and Sutherland performs relatively poorly (3.4 business start-ups per 1,000 of the population in 2005), compared to the Highland (4.7 per 1,000) and Scottish (4.2 per 1,000) averages. HIE indicates that this may be a result of the prevalence of large firms in the Caithness and Sutherland area.²⁷
- 2.7.10 This assertion is supported by UKAEA, who attributes this phenomenon to the 'historic availability of secure, well paid employment'.²⁸
- 2.7.11 It should, however, be noted that the HIE statistics are incomplete. While business start-up rates are important, the 'survival rate' of these firms is equally important. An area that produces a smaller number of firms per 1,000 of the population but with a high survival rate can have an equally (if not more) vibrant small business environment than areas with a high start-up rate and poor survival rate. The net survival rate (start-ups minus closures) requires to be established for Caithness.

E-Business

- 2.7.12 The Scottish e-business survey of 2007 indicates that 78% of Caithness businesses are connected to the internet, with 86% of those firms having access to broadband.
- 2.7.13 It should be noted that Scottish Government has pledged to ensure that all areas of Scotland have access to broadband by the end of 2008.

Exports

- 2.7.14 Highlands and Islands Enterprise prepared a fact sheet of the export performance of Caithness and Sutherland from the Scottish Global Connections Survey of 2005. Export performance is a key indicator of economic performance and this section provides a brief overview of the export performance of Caithness.²⁹

²⁶ Ibid., p. 12

²⁷ Ibid., p. 9.

²⁸ UKAEA, *Dounreay Socio-Economic Update* (October, 2006), p. 2

²⁹ All facts and figures are obtained from the HIE *Caithness and Sutherland Exports Factsheet* (HIE, 2007).

- 2.7.15 The total value of exports from Caithness and Sutherland was estimated be £75 million in 2005, with the 'Metals, Metal Goods, Mechanical Engineering and Transport Equipment' sector being the top exporting sector by value. Service sector exports accounted for a larger percentage of total export value in Caithness and Sutherland (29%) compared to the Highlands and Islands generally (19%). Conversely, primary production and construction sector exports accounted for a lesser percentage of the total export value in Caithness and Sutherland (71%), when compared to the Highlands and Islands generally (81%) in 2005.
- 2.7.16 The European Union was the recipient of the majority of Caithness and Sutherland exports (£30 million), while the United States was the largest single of importer of goods from the area (£10 million).
- 2.7.17 The value of exports in Caithness and Sutherland rose by 114% between 2002 and 2005. This may be seen as a positive element of the Dounreay decommissioning. Many engineering businesses operating in the area have had to actively seek new overseas markets (particularly in the oil and gas sector), in light of the reduction of contract work from Dounreay. Such a trend bodes positively for aspects of the *Vision* related to exporting expertise and technical skills.
- 2.7.18 The export performance of Caithness and Sutherland is encouraging and is likely to continue to be pursued in light of the Dounreay decommissioning.

2.8 Education

- 2.8.1 The level of educational attainment is often seen as a benchmark of the strength of an area's economy. NOMIS divide educational attainment into three broad categories, as follows:
- No Qualifications or Level Unknown – people without any academic, professional or vocational qualifications;
 - Lower Level Qualifications – people with qualifications equivalent to levels 1 to 3 of the National Key Learning Targets (i.e. GCSE's O levels, A levels, NVQ levels 1-3); and
 - Higher Level Qualifications – people with qualifications of levels 4 and above (i.e. first degrees, higher degrees, NVQ levels 4 and 5, HND, HNC and certain professional qualifications).
- 2.8.2 Table 2.3 shows the proportional level of educational attainment of Caithness residents *vis a vis* that of the Highlands and Great Britain. The calculations undertaken to group the relevant wards and obtain these figures can be found in Appendix D.

Table 2.3: Qualification Levels as a Proportion of Those in Employment (2001)

	Wick	Thurso	Caithness Other	Highland	Great Britain
No Qualifications	29.9%	21.9%	28.1%	32.6%	35.8%
Lower Level Qualifications	46.4%	45.7%	42.2%	41.4%	43.9%
Higher Level Qualifications	23.7%	32.4%	29.7%	26.0%	20.4%

- 2.8.3 Table 2.3 shows that Caithness performs comparatively well in terms of educational attainment, consistently outperforming both the Highland and British averages. Although there are variations between the different areas of Caithness, Table 2.3 shows that Caithness tends to have a lower number of employees with 'No Qualifications' and a larger number of employers with 'Higher Level Qualifications' than the Highland and British averages.
- 2.8.4 The Scottish Qualifications Authority (SQA) statistics also show that the Highland area demonstrated higher levels of attainment at publicly funded secondary schools than the Scottish average in 2005/06.³⁰ In addition, a higher proportion of Caithness and Sutherland school leavers enter further education or employment than is the average for Scotland generally.³¹
- 2.8.5 The higher level of educational attainment of Caithness proportional to regional and national averages can, in part, be attributed to Dounreay, which provides a number of skilled jobs requiring high levels of educational attainment amongst many of its staff.
- 2.8.6 However, in light of the decommissioning of Dounreay, it is important that Caithness continues to build upon and indeed diversify its educational base. This in itself presents a number of opportunities with a potential Thurso 'spoke' of the University of the Highlands and Islands being proposed in the Vision, as well as the provision of vocational (re)training of residents in high value industries, such as in the energy sector.
- 2.8.7 One pressure on education within Caithness, however, is the issue of declining school roles due to changing demographics. Recently for example, a school in Bettyhill did not have a Primary One class for the first time, due to a lack of pupils. The declining number of children puts pressure on teachers and resources and must be addressed if Caithness is to continue producing skilled labour in future years.

2.9 What Can Transport Do For Caithness?

- 2.9.1 The above sections provide an overview of the socio-economic characteristics of the Caithness area. It is essential to have an understanding of the area's characteristics to tackle the key issue that this report seeks to identify – ie what can improved (inter-regional)

³⁰ HIE, *(Caithness and Sutherland) Economic Report* (HIE, 2007), p. 11.

³¹ Ibid.

transport can do for Caithness? That is, how can improved transport contribute towards realising the '*Vision for Caithness and North Sutherland*'?

2.9.2 It is important to note from the outset that transport improvements cannot in themselves be seen as a panacea for the issues faced by Caithness. Additional transport provision and investment in transport infrastructure must be accompanied by a package of other interventions such as investment in business properties, labour force skills, and promotion / marketing. This argument is borne out in the evidence on the relationship between transport and the economy presented in Appendix A.

2.9.3 Nonetheless, transport improvements could prove to be of significant value to Caithness in terms of attracting and retaining both businesses and people. In short, transport improvements can:

- improve business confidence in the future of Caithness and North Sutherland;
- support the delivery of the '*Vision for Caithness and North Sutherland*';
- encourage the skilled pool of workers currently resident in Caithness to remain there;
- facilitate and support the diversification of the Caithness economy away from Dounreay-related activities;
- assist in the development of indigenous industries, particularly in the tourism and energy sectors;
- create a better environment for business investment;
- assist in maintaining the social and economic fabric of Caithness; and
- reduce the perception of peripherality, particularly amongst tourists and businesses.

3 Transport in Caithness

3.1 Introduction

- 3.1.1 This chapter provides an inventory of transport infrastructure and services relevant to the Caithness area and identifies the main transport issues (in terms of links to the rest of Scotland and the UK generally) which need to be addressed. The analysis will consider all modes of transport relevant to the area, including: travel by private car/LGV/HGV, bus and coach, rail, ferry and air. The focus is on inter-regional, rather than local transport, given the economic development-related context³².
- 3.1.2 Caithness actually has access to a wide range of transport options including travel by car, bus, train, ferry and air. However, a number of issues exist with regards to travel by each of these modes in the Caithness area. The analysis here attempts to identify both the strengths and weaknesses associated with transport in the area.

3.2 Road Transport

- 3.2.1 Road transport in Caithness is highly unusual in that journeys to other areas of Scotland and the wider UK are dependent on a single trunk road link, the A9. The '*Caithness Transport Vision*' identifies that 70% of traffic entering or leaving the area travels on the A9.³³ The only other cross-border road entering Caithness is the A836, which links Wick and Thurso with Dounreay but does not connect to any other major centre of population.
- 3.2.2 The Caithness Transport Forum, a sub-group of the Caithness Partnership, has identified a number of required improvements to the road infrastructure, if Caithness is to be made more accessible and attractive to business and tourism. In the interests of brevity, this chapter will provide only a summary of the desired improvements to the Caithness road network, as these schemes are more fully elaborated on later in the report and also in the '*Caithness Transport Vision*'.

Improving the A9

- 3.2.3 The A9 stretches from the central belt to Scrabster Harbour, which provides ferry services to the Orkney Islands. The road is a dual carriageway trunk A-road between Stirling and Perth. The section of the road between Perth and Inverness has long been criticised (despite major investment in the 1970s), particularly for having a poor safety record, but is currently the subject of a high public profile to upgrade the route. There are also a number of safety improvements in progress, such as at the Ballinluig junction, and the implementation of '2 plus 1' sections. As such, it can be argued that the 109 mile stretch of the A9 between Inverness and Scrabster Harbour suffers from relatively poor standards of horizontal and vertical alignment, compared to the rest of the route³⁴. The '*Caithness Transport Vision*' points out that the economic benefit of improvements to the whole road must also take into account the dependence of Orkney bound traffic on the same route, an issue recognised in an earlier report on the A9 and in discussions for the HITRANS RTS.

³² It is recognised that local links to eg harbours could also be important, but the focus here is on inter-regional links.

³³ Caithness Transport Partnership, *Caithness Transport Vision* (CTF, 2007), p.2.

³⁴ Note that the current scheme under construction at Helmsdale is the last in the current programme of improvements.

3 Transport in Caithness

3.2.4 One of the biggest concerns with the A9 north of Inverness, is the effect of its potential closure due to a single accident or poor weather. As the road is the only major link from the south into Caithness and Orkney, its closure can lead to either long delays or very extensive detours along unsuitable roads (particularly for HGVs and buses). As such, the majority of the improvements to the A9 proposed by the Caithness Transport Forum involve improving safety and reliability. These include:

- re-engineering of Berriedale Braes where steep gradients and hairpin bends make for difficult driving conditions and the potential breakdown of HGVs, causing long delays;
- improvements between Berriedale and Dunbeath, preferably the provision of a new offline section between Windy House and Borgue;
- small-scale safety improvements (such as the reengineering of junctions) between Dunbeath and Scrabster;
- improvements (particularly with regards to safety) to the A99 (T), which adjoins the A9, between Latheron and Wick – this road was recently identified as amongst the ten most dangerous in Scotland by an AA survey; and
- the provision of a Thurso Bypass to alleviate Dounreay-generated congestion and HGVs bound for Scrabster passing through the town.³⁵

3.2.5 The problems associated with the closure of the A9 can be most clearly highlighted through the use of an example. Taking a journey from Helmsdale to Wick – the AA Routeplanner indicates that this journey will take 47 minutes using the A9 and latterly the A99. However, if an accident or breakdown blocks the A9 at Berriedale Braes, the only available diversion is along a narrow A-road (single track with passing places), the A897 which is not really suitable for goods vehicles or buses, to Golval and then along the A836 to Thurso before continuing on to Wick. The AA Routeplanner indicates that the journey time between Helmsdale and Wick using this route is 2 hrs and 24 mins and this is assuming that motorists are aware of the accident at Helmsdale. Clearly, the length of diversion is extremely detrimental to businesses (particularly those operating a 'Just-in-Time' system, as is the case with seafood exports from both Caithness and Orkney), buses and also to private motorists.

Improving Other Routes in Caithness

3.2.6 A number of other improvements are suggested in the '*Caithness Transport Vision*', including:

- improvements of the A99 between Wick and John O' Groats, most notably at Keiss;
- improvements to timber transport routes; and
- minor safety improvements across the Caithness area.³⁶

Journey Time Analysis

3.2.7 In order to place the road-based transport issues affecting Caithness in context, it is worthwhile analysing a selection of distances and journey times to key locations.

³⁵ Ibid., pp. 3-4.

³⁶ Ibid., pp. 3-4.

3.2.8 The analysis assumes that all journeys begin in Thurso and travel to six key destinations by road – Aberdeen, Edinburgh, Glasgow, Inverness, London and Dover. We have included Dover in this analysis to represent journey times to the European markets for businesses. This scoping research was undertaken using the AA Route Planner. Table 3.1 highlights the journey distances and the journey times between Thurso and the selected destinations. In order to place the journey distances and journey times of travelling from Caithness to key destinations in context, it is worthwhile analysing these characteristics for other towns / areas that are perceived to be ‘remote’. Two good examples of such towns are Stranraer and Fort William; the results for these two towns, for the same key destinations, can also be seen in Table 3.1.

Table 3.1 Journey Times and Distances to Key Destinations

	From / To	Aberdeen	Edinburgh	Glasgow	Inverness	London	Dover
Journey Distance (Miles)	Thurso	211	264	277	110	669	754
Journey Time (hh:mm)	Thurso	4:49	5:49	6:09	2:29	12:55	13:55
Journey Distance (Miles)	Stranraer	230	132	85.8	255.9	414.1	499.2
Journey Time (hh:mm)	Stranraer	5:00	2:47	1:53	5:32	7:49	8:49
Journey Distance (Miles)	Fort William	158.4	134.8	101.7	64.8	511.9	596.8
Journey Time (hh:mm)	Fort William	3:35	2:58	2:24	1:26	9:24	10:23

3.2.9 As can be seen from Table 3.1, distances and journey times between Thurso and key centres of population and commerce are long. The impact of the long journey times are only amplified by concerns over the reliability of the A9 at Berriedale Braes and other areas. It can also be seen that even other areas that are considered to be remote, such as Stranraer and Fort William, have better connectivity and are closer to key destinations. The implications for Caithness appear to be twofold: firstly, transport links to key destinations require substantial improvement and secondly, there is a need to focus business development on those aspects of Caithness that are unique/strongest, such as the energy and tourism industries, - ie those areas where competitive advantage is present.

3.2.10 In all, Caithness’ road links to the key conurbations are relatively poor, with long and potentially uncertain journey times. However, it can be strongly argued that improvements (even minor improvements) to the quality of the roads in Caithness and Sutherland (north of Golspie), particularly the A9, can provide more reliable and marginally shorter journey times.

3 Transport in Caithness

Such improvements, coupled with ongoing work on the A9 south of Inverness and the A96 between Inverness and Aberdeen, could make journeys between Caithness and other desirable locations shorter, as well considerably safer and more reliable.

3.3 Bus and Coach Transport

- 3.3.1 Scottish Citylink and its affiliates run a five times daily coach service between Inverness and Thurso / Scrabster Harbour, with a seven times daily service operating in the opposite direction (although the last bus departs Thurso at 13:15). These services provide onward connections to the Orkney Islands by ferry from Scrabster Harbour and a number of key cities to the south from Inverness.
- 3.3.2 Journey times to Wick are reasonable for a bus service. However, despite a reasonable service headway and good connections, bus journey times to and from Thurso are relatively long, as coaches take a circuitous route. For example, the majority of buses to / from Thurso will call at Wick first and then travel on the B876 via Castletown and Bowermadden, as opposed to directly along the A9 from Latheron. In this sense, coach journey times to Thurso are more akin to those of the long rail journey times, although this is not so much the case with Wick.
- 3.3.3 A further problem is that it is not possible to make a same-day return to Wick and Thurso from Inverness as the last bus leaves Thurso at 13:15. However, it is possible to make a same day return to Inverness from Wick and Thurso.
- 3.3.4 Coaches are also susceptible to the same problems on the A9 as private cars and commercial vehicles. Closures of the road can lead to significant delays and detours along roads that are not suitable for large vehicles.

3.4 Rail Transport

- 3.4.1 Wick and Thurso are connected to Inverness by the 'Far North Rail Line'. The line is amongst the most scenic in the UK, but journey times are very long, the service headway is poor and the rolling stock used is unsuitable for the route in question. The line meanders around a number of areas of difficult terrain and river firths, with two extensive inland detours – one between Tain and Golspie and another between Helmsdale and Georgemas Junction.³⁷ Patronage levels are also very low, with only Wick and Thurso as well as the Invernet (Local commuter services to Inverness) stations of Dingwall, Beauly and Muir of Ord having average daily single boardings in excess of 20 people.³⁸
- 3.4.2 The layout of the railway also leads to increased journey times. Currently, trains from Inverness must reverse at Georgemas Junction before continuing to Thurso, before a second reversal is required for the journey to Wick. This is a recent phenomenon – trains travelling to Caithness previously comprised of two sets, which split at Georgemas, with one service travelling north to Thurso and the other east to Wick.

³⁷Ibid., p.4.

³⁸ 2005 processed LENNON data.

3 Transport in Caithness

- 3.4.3 The Caithness Transport Forum has identified a number of rail infrastructure improvements aimed at reducing rail journey times to Inverness. As with road improvements, these schemes will be discussed only briefly in the interests of brevity. The most notable of these is the proposed Dornoch Rail Link, which would see the construction of a 20 kilometre link across the Dornoch Firth, reducing end-to-end journey times by around 45 mins.³⁹ The provision of this link is strongly supported by those in Caithness, although the Caithness Transport Forum has acknowledged that the design of any such link must minimise environmental damage. In addition, it is considered important that the communities in the Lairg area do not lose their rail service or current levels of rail provision.⁴⁰
- 3.4.4 The other proposed significant major infrastructure scheme is the construction of a new chord south of Georgemas Junction, to prevent trains having to reverse en-route to Thurso. This scheme would be supplemented by a new station at Halkirk (with the closure of Georgemas Junction Station). However, the track in the Georgemas Junction area would be maintained for freight purposes with the possible provision of an inter-modal freight facility.
- 3.4.5 The Caithness Transport Forum also proposes moving more freight to rail. The current timetable allows for three two-way freight paths per day: an early morning path to Georgemas, a midday Lairg to Inverness path and an evening path to Kinbrace. There is currently only one return freight service on the Far North Line per week, although there is a path available for a daily service. This is a loaded oil train from Inverness to Lairg in the morning, which returns to Inverness in the afternoon. Other freight paths are incorporated into the timetable, but are not as yet being utilised.⁴¹
- 3.4.6 There is also scope for a number of minor infrastructure improvements along the line – eg more passing loops, higher running speeds into loops (currently 15 miles per hour) and at level crossings etc. For example, Scott Wilson estimates that a total of five minutes could be cut from the Wick / Thurso – Inverness journey time if speeds over points on passing loops were raised from 15 mph to 25 mph at ten different locations.⁴² Similarly, Scott Wilson estimates that a £3.6 million spend on improving level crossing speeds could reduce the route journey time by 6.5 minutes.
- 3.4.7 Other improvements include the replacement of the outdated Radio Electronic Token Block (RETB) signalling equipment and better interchange with bus services at key rail stations.
- 3.4.8 There is also a strong argument for upgrading or replacing the rolling stock on the Far North Line, so as to make it more suitable, reliable and attractive to tourists. The current Class 158 stock is not suitable for long journeys in terms of comfort, toilet facilities etc, while there is a lack of cycle and luggage space and the train does not offer the most panoramic view of the surrounding countryside.
- 3.4.9 A STAG Stage 1 appraisal of options to improve journey times on the Far North Rail Line, with particular focus on the Dornoch Rail Link, has recently been published. While this study is concerned with high-level prioritisation of transport schemes, we recommend that the findings of the study are considered in concert with those of this report.

³⁹ Dornoch Rail Link Study, Corus Railway Infrastructure Services, May 2007.

⁴⁰ *Ibid.*, p.4.

⁴¹ Scott Wilson, *Highland Rail Room for Growth Study* (Highlands and Islands Enterprise, 2006), p.97.

⁴² *Ibid.*

3.5 Rail Services

3.5.1 The current constraints, in terms of rail infrastructure in the Caithness area, allow for the provision of only a very limited passenger service. There are only three northbound services from Inverness per day (one on a Sunday), with over a seven hour gap between the 10:39 departure and 17:52 departure. There are four southbound services (one on a Sunday) with a headway of approximately 3-4 hours.⁴³

3.5.2 As with the road-based analysis, Tables 3.2 and 3.3 present a list of journey times for travel from and to Wick (as it represents the start/end of the line) to Aberdeen, Edinburgh, Glasgow, Inverness and London. Dover is excluded, as this was only assessed in the road-based table for haulage/freight purposes. The service with the shortest connection time(s) is chosen to give the best indication of on-train time. Journey times are extracted from www.thetrainline.com.

Table 3.2 Rail Journey Times From Wick to Key Destinations

From Wick to...	Aberdeen	Edinburgh Waverley	Glasgow Queen St	Inverness	London Kings X
Journey Time (hh:mm)	6:12	7:22	7:10	4:00	12:08
Total Connection Wait Times (mins)	6	27	51	0	83

⁴³ www.firstscotrail.com/timetables

Table 3.3 Rail Journey Times to Wick From Key Destinations

From...to Wick	Journey Time (hh:mm)	Total Connection Wait Times (mins)
Aberdeen	6:34	55
Edinburgh Waverley	7:45	45
Glasgow Queen St	7:38	13
Inverness	4:20	0
London Kings X	12:33	63

- 3.5.3 It can be seen from Tables 3.2 and 3.3 above that rail journey times between Wick and key destinations are long, particularly on the Wick to Inverness leg. Connection times are also relatively high due to poor service headways.
- 3.5.4 Travellers also need to build more time into a journey to alleviate the risks that arise from the low service headway. The low headways also mean potentially long transfer times at Inverness, eg the connection time at Inverness for the first Glasgow Queen Street to Wick journey is 13 mins. However, were the Glasgow to Inverness train to be delayed, the next train to Wick is not for over seven hours.
- 3.5.5 In all, the long journey times and low service headway on the Far North Line suggest that marked improvements are needed to the quality of this route for it to be seen as a viable railway line for business and other travellers.

3.6 Air Transport

- 3.6.1 An important transport feature in Caithness is the presence of Wick Airport, which provides scheduled and other flights to other areas of Scotland and further afield. The airport supports vital business and leisure travel for the Caithness economy. It regularly attracts oil-related helicopter operations and a large number of ferry-based flights that use Wick as a stopover en-route to, and from Europe, via Iceland.⁴⁴
- 3.6.2 The key infrastructure need of Wick airport is a new poor-weather technical landing aid, either ground or aircraft-based, such as Instrument Landing System (ILS) or Global Positioning System (GPS). The airport benefits from a long runway and good facilities relative to its size. However, the absence of such systems means that aircraft can only land when they can visually identify the runway. As a result, a significant number of flights are lost to coastal fog (haar) each year. Figures obtained from Wick Airport show that in both 2006 and 2007, around 90 flights were cancelled or diverted, the vast majority of which were weather and visibility-related. ILS and / or GPS would reduce (but not completely

⁴⁴ www.hial.co.uk/wick-airport.html

eliminate) visibility / weather-related flight cancellations. Looking ahead, the feeling is that this number may increase due to climate change affecting weather systems.

3.7 Air Services

3.7.1 Two scheduled routes currently operate out of Wick Airport (inbound flights follow the same pattern), as can be seen in Table 3.4.

Table 3.4 Services From Wick Airport

Destination	Operator	Frequency	Comment
Edinburgh International	Loganair	One Service Daily	Connections to all UK domestic and international flights.
Aberdeen	Eastern Airways	Three Services Daily	Flights continue to Norwich, Teeside, East Midlands, Humberside, Leeds Bradford, Bristol, Southampton, Stornoway and Cardiff. Connections to all UK domestic and international flights.

3.7.2 While Wick Airport has good connections to Aberdeen and the east of England, a number of improvements could be made to flight routes and scheduling. A key improvement would be a flight to Inverness for connections with flights to the rest of the UK (most notably London) and Europe.

3.7.3 In addition, the one Edinburgh flight per day is not particularly well-timed, arriving and departing in the middle of the day. As a result, it is not possible to undertake a one day business trip travelling by air. Coupled with the low rail headway and long journey times, as well as the early departure of the last coach, this means that most business trips to/from Central Scotland or further afield incur an overnight stay, adding to costs and causing general inconvenience for many businesspeople.

3.7.4 The Wick to Kirkwall service was withdrawn at the start of the 2007 summer season, despite support from the Caithness Partnership for its continuation. The reasons cited for the withdrawal of this service were low usage and demand for a direct Kirkwall to Edinburgh service. Such a withdrawal emphasises the sometimes tenuous nature of air services in Caithness and other such areas.

3.7.5 A further concern for Caithness is that the area’s air connections will further deteriorate with the forthcoming withdrawal of the British Midland Inverness to London Heathrow service. Following the withdrawal of this service, the only available flights from Inverness to London will be to London Gatwick and London Luton. Conversely, this may help the throughput of Wick Airport, with passengers bound for London flying from Wick to Aberdeen / Edinburgh and connecting to another flight. Nonetheless, the loss of the Inverness – London Heathrow service represents a loss of accessibility for Caithness.

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- 3.7.6 In terms of opportunities, the Loganair contract will soon be transferred from British Airways to FlyBe and it is hoped that the low-cost model can be brought to Loganair operations. In addition, the networks of both operators are relatively complimentary, allowing for a greater choice of UK and European connections.⁴⁵
- 3.7.7 In all, while Wick Airport is a key asset to Caithness, continued investment in the airport, most notably the provision of an aircraft landing aid, more appropriate flight timetabling, more secure services and good marketing of its potential for tourism, are essential.

3.8 Public Transport Fare Comparisons – Air, Coach and Rail

- 3.8.1 While journey times, comfort and convenience are an important part of any journey decision, the cost of travelling is also a vital factor in deciding whether to travel, where to travel and which mode of transport to use. As such, it is important to undertake fare comparisons of each public transport mode travelling to the previously identified key destinations – that is Aberdeen, Edinburgh, Glasgow, Inverness and London.
- 3.8.2 A number of discounts on different modes of transport are available for residents of the Caithness area. For example, the Air Discount Scheme (ADS) provides a 40% discount on air fares (exclusive of taxes) from Caithness and the Islands. While air travel remains expensive even with the discount, the Caithness Transport Forum is keen to see the continuation of the ADS. In addition, the Highland Railcard offers 50% off all rail fares in the Highland area, even for non-residents, and only costs £7.50. Such schemes are also supplemented by the sale of season tickets, other discount schemes (ie Young Person's Railcard, concessionary travel scheme etc) and special offers such as 'Rail and Sail'.
- 3.8.3 For the purpose of this analysis, the cheapest single fare (excluding discount schemes) to each destination is presented. This is shown in Tables 3.5-3.7 respectively where we assume booking one day before travel (Table 3.5), one week before travel (Table 3.6) and one month before travel (Table 3.7). This exercise considers only services from Wick, assuming that the return fare will be the same.
- 3.8.4 Note, Wick to Aberdeen coach fares are a combination of Citylink and Stagecoach fares (changing at Inverness), while Wick to London coach fares are a combination of Citylink and National Express fares (changing at Glasgow).
- 3.8.5 Please also note that ScotRail fares are higher in Table 3.7 as a result of a planned fare increase on 1 January 2008.

⁴⁵ <http://news.bbc.co.uk/1/hi/scotland/7186202.stm>

Table 3.5 Fares from Wick One Day Before Travel – 20 December 2007

Mode of Transport						
From Wick to....	Coach		Rail		Air	
	Fare Type	Fare (£)	Fare Type	Fare (£)	Fare Type	Fare (£)
Aberdeen	2 tickets	24.50	Standard	35.50	N/A	141.50
Edinburgh	Standard	26.00	Standard	47.30	N/A	45.00
Glasgow	Standard	26.00	Standard	47.30	N/A	No Flight
Inverness	Standard	15.00	Standard	14.60	N/A	No Flight
London	2 tickets	46.00	Saver Single	124.30	N/A	241.60

Table 3.6 Fares from Wick One Week Before Travel – 20 December 2007

Mode of Transport						
From Wick To...	Coach		Rail		Air	
	Fare Type	Fare (£)	Fare Type	Fare (£)	Fare Type	Fare (£)
Aberdeen	2 tickets	14.50	Standard	35.50	N/A	141.50
Edinburgh	Standard	26.00	Standard	47.30	N/A	155.00
Glasgow	Standard	26.00	Standard	47.30	N/A	No Flight
Inverness	Super Single	5.00	Standard	14.60	N/A	No Flight
London	2 tickets	46.00	Saver Single	124.30	N/A	257.60

Table 3.7 Fares from Wick One Month Before Travel – 20 December 2007

Mode of Transport						
From Wick to...	Coach		Rail		Air	
	Fare Type	Fare (£)	Fare Type	Fare (£)	Fare Type	Fare (£)
Aberdeen	2 tickets	15.50	Standard	37.20	N/A	74.50
Edinburgh	Standard	26.00	Standard	49.60	N/A	60.00
Glasgow	Standard	26.00	Standard	49.60	N/A	No Flight
Inverness	Super Single 1	6.00	Standard	15.30	N/A	No Flight
London	2 tickets	27.00	NXEC STD Advance 2	35.50	N/A	80.60

- 3.8.6 It can be seen above that travel from Caithness to a selection of key destinations is expensive without the use of any discounts. Flying is clearly the quickest way to travel, but it is very expensive and prices are also unpredictable. For example, it can be seen from the above, that in this instance, it is cheaper to fly from Wick to Edinburgh if booked a day in advance as opposed to a week in advance. However, this is not a set relationship and will vary by flight due to the yield management system used by the airlines.
- 3.8.7 Coach is the cheapest method of travel and competes well with rail in serving destinations closer to Caithness, most notably Inverness. This is largely a result of the circuitous alignment of the Far North Rail Line. However, over the longer distances, rail may be preferable as it is quicker and perhaps more comfortable, even though it is marginally more expensive. Rail, coach and, to a certain extent, flights are cheaper if booked in advance, which is beneficial to tourists, although perhaps less so to businesses, which often rely on 'turn up and go' fares.
- 3.8.8 While improving the physical transport infrastructure in the Caithness area would be highly beneficial, encouraging more tourists and businesses to move into or trade with the area would be easier if travelling costs were lower.

3.9 Sea Transport

- 3.9.1 Caithness has an extensive coastline and benefits from two strategically placed harbours at Scrabster and Wick, as well as ferry services operating from Gills Bay and John O'Groats. Northlink Ferries (which is a state owned company), operates three services daily between Scrabster and Stromness on the Orkney Islands, as well as a twice daily service on a Saturday and Sunday. These vehicle ferries offer lifeline links to the Orkney Islands for both passengers and freight.

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- 3.9.2 Pentland Ferries also runs a commercial service between Gills Bay and St Margaret's Hope on the Orkney Islands. There are currently two services per day and this is expected to increase to four services per day with the introduction of a catamaran service in the near future. A foot passenger ferry also operates from John O' Groats to Burwick in the Orkney Islands between May and September. Two ferries per day are run between 1 May and 31 May and also between 3 September and 30 September. Four ferries per day are run between 1 June and 2 September. While the ferry appears to be largely aimed at tourists, it does provide another important link to the Orkney Islands during the summer, taking the pressure off the main ferry routes.
- 3.9.3 Inclement weather is a threat to service reliability and the Caithness Transport Forum is keen to encourage a ferry 'linkspan' at Wick so as to provide an alternative port to Gills Bay when required.

3.10 Current Transport Demand

- 3.10.1 Definitive data on travel volumes by mode in and out of Caithness are not readily available. However it is worth considering the balance between road and rail transport using the data available. Scottish Transport Statistics 2007, reports the average daily traffic flow on the A9 at Berriedale (a good proxy for traffic entering and leaving Caithness) as being around 2,000 vehicles per day, 16% of which are HGVs⁴⁶. Assuming an average car occupancy, this means around 2,300 people and 320 HGVs use this route on an average day, excluding coach passengers. Using publicly available data, generous assumptions on the rail side would give an equivalent figure of less than 200 persons per day, coupled with a negligible amount of rail freight.
- 3.10.2 This scale of difference must be borne in mind when allocating spending on transport.

3.11 Summary

Although Caithness has road, rail, air and sea links, journey times, service provision and reliability would all benefit from further investment. Indeed, even compared to other rural areas, Caithness fares unfavourably in terms of the speed and reliability of its transport connections. In summary, the main inter-regional transport issues affecting the area can be summarised as follows:

- long journey times by car (approx 2hrs:10mins between Inverness and Thurso, 110 miles) and poor road standards on the A9 between Caithness and Inverness; related safety issues – indeed north of the Dornoch Firth, the standard of this trunk road is particularly poor and often akin to the 'old A9' alignment south of Inverness;
- unsuitable road alignment in places for HGVs on the A9, and the topography leads to high fuel consumption;
- lack of overtaking opportunities on the A9 leading to platooning, driver frustration, with resulting safety issues;

⁴⁶ By way of context, A9 flows at Dornoch are around 5,500 and further south at Tomatin, flows are around 9,000.

- dependence on the A9 as the only significant road link into and out of Caithness – lengthy diversions on unsuitable roads, or no travel, if the A9 is closed due to weather or a road traffic accident;
- long journey times by coach between Caithness and Inverness – due to frequent stops en route (approx 3hrs:30mins to Thurso, 3hrs to Wick), and poor headways, five buses per day northbound, four southbound;
- no opportunities for day trip between Inverness and Caithness by coach;
- long journey times on poor quality / unreliable trains (eg rolling stock is uncomfortable and not well suited to longer journeys, and there are frequent train failures) on the Far North Line between Caithness and Inverness (approx 3hrs:45mins to Thurso, 147 miles; approx 4hrs:15mins to Wick, 175 miles), and poor headways, three trains per day northbound, four southbound;
- short connection times to some ongoing rail services at Inverness stations;
- Wick Airport's flights to / from Edinburgh and Aberdeen are prone to cancellation or diversion in poor weather (notably haar), due to lack of an adequate poor weather landing aid (eg ILS or GPS) or similar at the airport;
- flight times from Edinburgh do not allow a day trip to Caithness;
- limited scope for growth / development at ports of Scrabster and Wick at present due to infrastructure, facilities and capacity constraints; and
- limited scope for growth in rail freight, due to the lack of rail and inter-modal interchange facilities.

4 Consultation

4.1 Overview

- 4.1.1 As part of the Caithness Infrastructure Study, MVA Consultancy conducted a face-to-face and email-based consultation exercise with key stakeholders in the Caithness area. This note will discuss the findings of the consultation programme and will assist in informing the overall conclusions of the study.

4.2 Face-to-Face Consultations

- 4.2.1 Face-to-face consultations were held with the following groups and organisations:

- Dounreay Stakeholder Group's Socio Economic Sub-Group;
- Caithness Transport Forum; and
- Caithness Partnership.

- 4.2.2 The Nuclear Decommissioning Agency (NDA) is also a key stakeholder who was present at a number of meetings and whose views were sought throughout the consultation exercise.
- 4.2.3 The remainder of this section will explore the views of each of these groups and present their thoughts on the required transport improvements in Caithness and the surrounding areas.

Dounreay Stakeholder Group's Socio Economic Sub-Group (DSG)

- 4.2.4 The DSG noted its concern with the standard of the A9 north of Inverness, most notably at Berriedale Braes. The 'one road in, one road out' nature of the A9 has caused a number of problems in journeys to and from Caithness. Accidents and poor weather can lead to closure of the road, resulting in long delays or extensive detours along unsuitable roads. The DSG believes that this poor journey time reliability is a deterrent in attracting business to Caithness.
- 4.2.5 The DSG also stressed the social benefits of improving transport links between the Caithness area and the rest of Scotland. Caithness has a highly skilled workforce (largely, although not wholly, as a result of Dounreay), along with a rich natural and built environment. The DSG believes it is important that these assets are not only preserved, but built upon.
- 4.2.6 The DSG also stressed the need to include the benefits to the Orkney Islands that would accrue from improving transport infrastructure in the Caithness area. It is expected that transport improvements in Caithness would lead to further tourism in Orkney and further afield.
- 4.2.7 Wick Airport and the strategic port facilities at Wick and Scrabster are seen as key assets by the DSG. A general consensus existed that the development of these facilities, as well as the road and rail infrastructure, is important in the overall development of the Caithness economy.

Caithness Transport Forum (CTF)

4.2.8 The meeting with the Caithness Transport Forum was attended by a number of key transport stakeholders for the Caithness area, including:

- the Caithness Transport Forum;
- Scrabster Harbour;
- Wick Harbour;
- Friends of the Far North Line; and
- the Dornoch Rail Link Action Group.

4.2.9 As with the DSG, there was a general consensus amongst the CTF that rail journey times were long and that the nature of the A9 as the single major road link into Caithness both represented significant transport constraints.

4.2.10 The CTF supports reductions in rail journey times through both the provision of the Dornoch Rail Link and a number of small improvements, such as increasing speeds at level crossing approaches and in passing loops. Rail fares are seen as reasonable by the CTF, particularly with the provision of the Highland Railcard.

4.2.11 The CTF also supports road safety improvements and the reduction of journey times, mainly through improvements to the A9 at Berriedale Braes, the A99 from Latheron to Wick and the A99 through Keiss. The CTF also acknowledges the potential benefits of road improvements outside the Caithness area and supports bypasses of Golspie and Brora, as well as the provision of climber lanes on the Black Isle. It is argued that such improvements may attract more tourists, although the CTF acknowledges the danger that better road links may turn 'overnight tourists' into day-trippers.

4.2.12 The current difficulties on the A9 may be exacerbated should the development of permanent shore-based oil drilling go ahead at Lybster. The CTF indicated that drilling will commence in February 2008 and will last for at least six months. During this period, there will be approximately 10 to 12 additional fuel tankers travelling down the A9 each day.

4.2.13 In terms of more specific issues, the representative of Scrabster Harbour noted that there is a need for infrastructure improvements at the port (including facilities for lifting, launching and the maintenance of hardware), while limits also exist in terms of water depth.

4.2.14 The cargo which is moved from Scrabster is mainly fish from Scotland and the Faroe Islands and the bulk of it is moved by road, mainly to continental markets. There is a concern that the Scottish Government does not fully appreciate the landward transport issues (ie the A9 and rail freight links) associated with moving goods from Scrabster to the relevant markets. This is an issue which was more fully explored during the consultation with the Scrabster Harbour Trust.

4.2.15 The representative of Wick Harbour echoed the issues raised by Scrabster, in terms of the onward movement of goods by land. Wick Harbour handles a mix of domestic and foreign shipping, including timber, coal, fuel, salt and turbines. The harbour is also used for leisure purposes and currently houses a marina.

- 4.2.16 It was also noted that Wick harbour would benefit from the provision of an additional breakwater to increase its capacity. Such additional capacity would fit well with the economic goals of Caithness, in terms of exploiting the opportunities presented by Shetland oil and gas. The harbour currently has a business plan that extends to 2012, which calls for investigation of development opportunities and the expansion of the marina.
- 4.2.17 The Wick Harbour Authority is also investigating the potential installation of a ferry link span, aimed at providing an alternative to Gills Bay, when poor weather prevents vessels landing there. Such a scheme would make ferry crossings to the Orkney Islands more reliable, by reducing the number of sailings lost to the weather.
- 4.2.18 The CTF also indicated that it is important to consider the extension of the 'Far North Line' to both Scrabster and Wick Harbours. While it was acknowledged that this would be both technically difficult and costly, the rationale rests with the prospective capitalisation of a potential Scapa Flow container hub. While permission for such a facility remains outstanding (although it is an aspiration of NPF2), the provision of a container base would encourage (lucrative) trans-shipment of containers from Caithness and the Orkney Islands to ports such as Rotterdam in the Netherlands and Archangelsk in northern Russia. The CTF also supports a bypass of Thurso as a long-term aim, should the Scapa Flow container base scheme go ahead.
- 4.2.19 In terms of air transport, the most notable concern is that air services to and from Wick can easily be withdrawn, depending on demand and the availability of aircraft. In addition, in the absence of a technical landing aid (such as ILS or GPS), aircraft cannot land in coastal fog (haar) at Wick Airport. Such uncertainty is not conducive to attracting (and retaining) business to Caithness.
- 4.2.20 The CTF is also concerned about the unsuitable flight timetable for services from Wick Airport. Services tend to operate in the middle of the day, meaning that they are not particularly suitable for business needs. In addition, it can be difficult to meet the necessary connections in Aberdeen and Edinburgh. As a result, the CTF noted that a number of air travellers now drive to Inverness to benefit from cheaper flight times and more suitable flight schedules.

Scrabster Harbour Trust and Scrabster Seafoods

- 4.2.21 As part of the consultation exercise, MVA Consultancy met with Mr William Calder, who is Chairman of the Scrabster Harbour Trust and who also runs the extensive Scrabster Seafoods fishing business from the Harbour. Mr Calder is a prominent local businessman who spends significant sums of money moving fish to various markets.
- 4.2.22 Caithness' transport connections have a significant impact on Scrabster Seafoods, particularly given the perishable nature of fish. Much of the fish is moved to France using a 'Just-in-Time' system, which means that even minor delays (eg 30 minutes) can have a significant impact for customers, such as French firm *Intermarche*. Such evidence clearly shows the potential impact of even marginal improvements in journey time reliability. Indeed, Scrabster Seafoods noted that this can mean the difference between winning and losing a customer.
- 4.2.23 As a result of the poor transport links, fish are also more expensive to move to market from Scrabster, compared with other ports such as Peterhead or Arbroath. Scrabster Seafoods

indicated that it costs five pence more per kilogram to move fish from Scrabster, compared to other comparable ports on the east coast of Scotland. The greater cost can be attributed to three factors:

- the greater distance of Scrabster from its markets;
- the need for driver changes; and
- the need to transport materials, such as polystyrene boxes to Caithness.

- 4.2.24 While fishing from Scrabster allows quicker access to fishing grounds, the business must pay a premium on costs, putting their operations at an immediate disadvantage. Road transport improvements, particularly on the A9, would lessen the perceived journey time to market thus reducing the need for driver changes.
- 4.2.25 Scrabster Seafoods chooses not move freight by rail as it is expensive, while Mr Calder also feels that the rail industry lacks a 'business focus'. The need to properly market Caithness to potential employers was also stressed, noting that the area has a highly skilled workforce, although more urgent action is needed to retain and develop the labour force.
- 4.2.26 Scrabster Seafoods also noted that enhancements to the road network would make Caithness more attractive for additional ferry linkages and as a calling point for the growing cruise ship industry.

Caithness Partnership

- 4.2.27 The consultation with the Caithness Partnership was largely used to attain a better understanding of the Caithness area in general. For example, the consultation covered areas such as demographics and school roles. These areas are covered in more detail in Chapter 2. However, for the purpose of this consultation, the analysis will focus mainly on transport issues.
- 4.2.28 The Partnership indicated that there are significant issues, in terms of moving freight by rail. Timber freight movement by rail was abandoned due to a lack of sidings and issues over driver hours.
- 4.2.29 Should the Scapa Flow container base go ahead, the Partnership argues that enhancements to road and rail links are necessary if a proportion of containers are to be moved over land.
- 4.2.30 The Partnership stressed the need for airport improvements, most notably the ability for aircraft to land in foggy conditions. The Partnership estimates that installing the necessary equipment would cost no more than £6 million but would bring benefits in terms of reliability, thus making Caithness more attractive to business investment.

4.3 E-mail Consultation

Overview

- 4.3.1 As part of the consultation exercise, a questionnaire was circulated to a range of key stakeholders seeking their views on the transport issues within the Caithness area. A copy of the questionnaire can be found in Appendix E.

4.3.2 In short, the questionnaire sought to identify:

- transport problems and issues by mode (private car, goods vehicle, bus and coach, rail (passenger), rail (freight), air, ferry and port and harbour facilities;
- evidence of negative impacts of transport;
- impediments to the '*Vision for Caithness and North Sutherland*'; and
- any other useful information.

4.3.3 This section examines the views of each respondent in turn. The order in which the responses are presented reflects the order in which the questionnaires were returned and does not imply that any one stakeholder is more important than another.

Response 1 – Scottish Natural Heritage

4.3.4 Scottish Natural Heritage is a member of the Caithness Partnership.

4.3.5 In terms of road travel, SNH does not see any immediate impediments to the Caithness economy and encourages the use of existing local roads for tourists to enjoy the environment. SNH does however point out that heavy goods vehicles impede traffic and can detract from the enjoyment of the surrounding environment. As a result, SNH is keen to see enhancements to the Far North Line that would encourage the movement of freight from road to rail, thus reducing carbon emissions and improving the enjoyment of tourists visiting the Caithness area.

4.3.6 In terms of public transport, SNH is keen to encourage better passenger rail access to Caithness as this would allow those families without a car improved access to the countryside. SNH noted that such improvements should be supplemented by better integration between rail, bus/coach and ferry services.

4.3.7 SNH does not believe that there should be any further investment in air services, due to the environmental impacts associated with internal flights. Their preferred option is rail.

4.3.8 SNH has no specific evidence that poor transport links impede the Caithness economy but does argue that poor public transport provision is likely to deter a portion of the tourism market.

4.3.9 SNH has provided text related to environmental preservation for the '*Vision for Caithness and North Sutherland*'. SNH notes that:

- 'The environment (wildlife and landscapes) is a strength which contributes significantly to the area's [Caithness and North Sutherland] economy – not an impediment. Improvements to the road network therefore need to be designed with this in mind. This applies both to the protection of designated sites and to the wider countryside.'

4.3.10 While SNH strongly supports the upgrading of the 'Far North Line', it does note (with regards to the proposed Dornoch Rail Link) that 'the environment around the Dornoch Firth is particularly sensitive and that a number of European and other environmental and landscape designations cover the area that a new rail link would cross.'

Response 2 – Friends of the Far North Line (FoFNL)

- 4.3.11 FoFNL indicates that rail is not an attractive option, compared to travel by private car, given that the journey to Inverness is almost an hour and a half longer by train. While this may be less problematic for those with a lower value of time, travellers on business are not likely to find rail an attractive option. Indeed, even the fastest bus can get to Inverness quicker than the train, largely due to the two large inland detours the train takes. FoFNL is aware that there is no easy solution to this but does contend that a number of small improvements (at a modest cost) along the route can deliver reasonable improvements in journey times.
- 4.3.12 The key problem with travel by private car is the poor quality of the A9 north of Inverness, most notably at Berriedale Braes. Jack-knifed lorries are common on this section of the route and can cause significant delays and lengthy detours. Such journey time reliability can be particularly problematic for motorists attempting to meet a rail or air connection in Inverness. Evidently, such problems also extend to travel by bus and coach.
- 4.3.13 FoFNL indicated that, even with the Air Discount Scheme (ADS), travel by air is prohibitively expensive and likely to be used only by those on business.
- 4.3.14 Anecdotal evidence suggests that senior business executives see the poor reliability of air services at Wick Airport as a reason for not locating in Caithness. Flight cancellations, as a result of haar, do little to enhance the image of Caithness.
- 4.3.15 In terms of the '*Vision for Caithness and North Sutherland*', FoFNL believes that cost and political willingness to spend money 'at the end of the road' are the biggest impediments to realising the *Vision*. FoFNL noted that with only one parliamentary constituency covering Caithness (Caithness, Sutherland and Easter Ross), there is little for politicians to gain by investing money in the area, when compared with the Central Belt, where a number of constituencies can benefit from transport investment.

Response 3 – Highlands and Islands Airports Limited – HIAL (Wick Airport)

- 4.3.16 Wick Airport offers a limited range of scheduled air services - three per day to/from Aberdeen and one return service to Edinburgh. Both services operate Monday to Friday, but are relatively well subscribed.
- 4.3.17 One of the key problems with air travel in Caithness is that it is too expensive. The 40% ADS discount for residents applies only to the fare exclusive of taxes and, even after this has been deducted, flights remain expensive. While the ADS scheme has led to markedly increased usage in other areas, particularly island locations, it does not seem to have had the same impact in Caithness, although over 12,000 card holders are eligible to use the scheme locally.
- 4.3.18 As previously mentioned, Wick Airport suffers from haar in the summer months. HIAL has indicated that the haar season has been longer in recent years, perhaps as a result of global warming. HIAL, as the Airport Authority, is investigating ways in which reliability could be improved, including having an ILS feasibility study carried out. This will establish whether there are any technical reasons which would prevent the installation of such a navigation aid. ILS is an expensive option however, and there is no funding source as yet identified, should local stakeholders support such a venture. HIAL has stated that because of the relatively small numbers of cancelled flights (and therefore income lost), it would be difficult to make a

business case to justify the cost of an ILS. Stakeholders would be sought to provide partnership funding and a socio-economic case would have to be constructed if the project were to proceed.

- 4.3.19 HIAL also noted that, while patronage has increased in recent years, particularly since the introduction of the three daily services to Aberdeen, the scheduled routes remain relatively fragile and susceptible to withdrawal altogether if higher demand in the airlines' networks create a need for higher capacity on routes elsewhere.
- 4.3.20 HIAL also indicated that they may face future funding issues in line with Scottish Government spending. In infrastructure terms, Wick is one of 11 Airports in the HIAL Group and, like other non-departmental government bodies, is subject to restrictions in funding imposed by the Scottish Government. During the most recent spending review, the funding allocation for HIAL was pegged at the current level for the next three years, which will create significant challenges for the Company in a heavily regulated industry which is subject to changing demands.
- 4.3.21 While HIAL's principal comments are related to air travel, it has also provided other feedback on transport in the Caithness area. In terms of travel by road (car, bus/coach and HGV), travel from Wick to Inverness along the A9/A99 is susceptible to bad weather, accidents, roadworks and slow speeds as a result of HGVs. HIAL has identified the same problem areas as other stakeholders (such as Berriedale Braes) and also noted that the accident rate on the A9 north of Inverness is very high.
- 4.3.22 HIAL also noted that the long journey times to Inverness by bus/coach and the frequent stops en route, make this mode an unattractive option for business travellers. However, such services are useful for more local journeys and for those whose value of time is lower.
- 4.3.23 HIAL noted that the length of the rail trip to Inverness is particularly prohibitive for business users. It does however indicate that it would be worth attempting to move freight from road to rail, to lessen environmental damage and extend the lifespan of the Caithness road network.
- 4.3.24 HIAL noted that ferry services are prone to disruption from the weather, but have improved markedly since Northlink Ferries started running the service.
- 4.3.25 HIAL is keen to see the development of Wick Harbour for leisure purposes, with the aim of encouraging 'fly and sail' holidays.
- 4.3.26 As with other consultees, HIAL is unable to provide direct evidence of the impact of flight cancellations on the Caithness economy. However, it agrees with the general argument that a number of potential investors in the Caithness economy may have been deterred as a result of flight cancellations. Indeed, HIAL echoes the views of others when noting that it is the perception of air service unreliability that is the most damaging.
- 4.3.27 As with FoFNL, HIAL identified funding as a key issue in developing Wick Airport and transport in Caithness generally. With the focus of funding on the Inverness area, there is a perception that the more peripheral areas of the Highlands take a lower priority in funding than the Inverness area.

Response 4 – Wick and Thurso Trades Council

- 4.3.28 Wick and Thurso Trades Council supports the enhancement of the A9 and the moving of road-based freight to rail. However, it recognises that significant improvements to rail infrastructure (most notably the Dornoch Rail Link), are required before this is feasible.
- 4.3.29 The Trades Council also argues that air services are expensive, while noting that connections are poor and do not run at weekends.
- 4.3.30 In terms of the *Vision*, the Trades Council points out the reluctance of HITRANS to consider schemes north of Inverness.

Response 5 – Dornoch Rail Link Action Group

- 4.3.31 The Dornoch Rail Link Action Group (DORLAG) is campaigning for the provision of a rail link across the Dornoch Firth, in order to cut rail journey times between Inverness and Wick/Thurso by around 45 minutes.
- 4.3.32 The DORLAG pointed out a number of positives with the Far North Line, including good access to Wick, Thurso and Inverness town centres, refurbished rolling stock and discounted rail fares. However, as with other stakeholders, the DORLAG was particularly concerned about the ‘appalling and uncompetitive’ rail journey time between Caithness and Inverness, as well as the low service headway. The DORLAG pointed out that this issue is only exacerbated by the fact that the road-based journey times are approximately half of the rail equivalent.
- 4.3.33 The DORLAG elaborated on a number of disadvantages that arise as a result of the limited rail service, including:
- low usage by those from Caithness, Sutherland and the Orkney Islands;
 - limited time for activities in Inverness, without an expensive overnight stay;
 - tourists are discouraged to visit the area;
 - the notion of Caithness being peripheral is reinforced;
 - economic development and regeneration to counter the Dounreay rundown is hindered; and
 - an increase in CO2 emissions from people choosing to use their car instead of rail.
- 4.3.34 The key message from the DORLAG is that ‘major journey time reductions’ are required ‘to substantially reduce the differential between road and rail journey times’. Such reductions are necessary to ‘maximise the usability of the Line, [encourage] its ability to develop the Far North economy and also secure its long-term viability’. Key to this aim would be the provision of the Dornoch Rail Link, which would reduce journey times between Wick/Thurso and Inverness by around 45 minutes. Other improvements suggested by the DORLAG include:
- reintroduction of sections of double track, such as between Clachnaharry and Clunes (near Inverness), so as to increase the capacity of the line;
 - signalling upgrades; and

- journey time improvements through the introduction of higher running speeds into loops and level crossings.

- 4.3.35 While rail freight priorities differ, the DORLAG believes that low freight usage is the product of the same problems that characterise passenger services. The long journey times, associated with rail travel, mean that this mode is uncompetitive when compared against moving cargo by road. Indeed, despite freight facility grants being provided to a number of local firms, they still do not choose to use rail. In short, the DORLAG indicated that the viability of rail freight can be enhanced through shortening journey times, thereby improving the efficiency and effectiveness of rail vehicle and crew deployment, thus reducing costs and increasing the attractiveness of railfreight for potential customers.
- 4.3.36 The DORLAG has provided specific evidence as to the impact of poor rail connections on the Caithness economy. It noted that the movement of timber and other goods by rail has collapsed as a result of the rail line timings and capacity. In addition, the DORLAG indicated that the tourist information leaflet for Caithness advises **against** the use of the train due to the long journey times. Furthermore, the DORLAG noted that poor transport links impede 'efforts to recruit the right personnel, attract sufficient inward investment and generate local business to both expedite the safe and cost-effective decommissioning of Dounreay and meet the challenges and develop opportunities arising from the Dounreay rundown and developments related to oil/gas, deep sea container transshipment, timber and tourism.' Such evidence supports the DORLAG's belief that poor rail services impede the '*Vision for Caithness and North Sutherland*'.
- 4.3.37 In terms of road transport, the DORLAG noted that a number of improvements are required, particularly with regards to road safety. Safety on the A9 is poor, with a number of fatal accidents occurring in the last few years. This can, in part, be attributed to both breaching the speed limit and the lack of suitable overtaking opportunities. The DORLAG also noted that congestion is getting worse on the southern section of the A9 on the approach to Inverness and believed that there is a need to more fully investigate moving traffic off of the road.
- 4.3.38 The DORLAG are concerned that the increasing number of goods vehicles using the roads (most notably the A9) are worsening congestion, journey times and road wear and tear (ie causing ruts and potholes), while also causing driver frustration. The DORLAG support the movement of goods onto rail where possible.
- 4.3.39 The issues associated with bus and coach travel are broadly similar to those arising with regards to goods vehicles. There is also a concern that buses and tourist coaches occasionally have to divert along unsuitable roads, which increases journey times and compromises safety. The DORLAG indicated that one of the most typical accidents with coaches is that they slide into roadside ditches due to the absence of kerbstones or because of the narrow carriageways.
- 4.3.40 The DORLAG pointed out the potential of the port and harbour facilities at Wick and Scrabster but noted that poor landward transport links are compromising the expansion of freight handling facilities. The DORLAG supports the extension of the Far North Line to Wick and Scrabster Harbours, so as to increase the commercial viability of these ports *vis a vis* other ports such as Aberdeen and Hunterston.

- 4.3.41 In terms of ferry travel, the DORLAG support the development of the Gills Bay to St Margaret's Hope ferry service, as it is an hour faster than the equivalent Scrabster to Stromness service.
- 4.3.42 With regards to air travel, the DORLAG acknowledged the benefit of the ADS but were concerned about the vulnerability of service provision due to inclement weather, particularly haar.
- 4.3.43 The DORLAG acknowledged that the required upgrades in infrastructure are expensive but feel that the STAG methodology is too restrictive to fully reflect the potential benefits of a major scheme, such as the Dornoch Rail Link, to rural areas. They requested that due consideration is given to the recent report on the Dornoch Rail Link undertaken by MVA Consultancy in conjunction with Corus Railway Infrastructure Services⁴⁷.

Response 6 – Ormlie Renewables

- 4.3.44 Ormlie Renewables was formed by the Ormlie Community Association with the aim of creating a community Renewable Energy Park. The company aims to enhance community life while also providing a source of jobs, income, food and a sense of community. Ormlie Renewables will be a showcase for renewable energy technologies, energy efficiency and energy saving measures.⁴⁸
- 4.3.45 As with other consultees, Ormlie Renewables noted that journey times of the A9 are both long and unreliable, with HGV platooning being a particular issue. Despite this, the car remains the only real option for a one day return business trip.
- 4.3.46 Another potential issue is the lack of petrol stations along the route, with there being no such facilities between Spittal and Brora. While this may not be an issue for locals, it has the potential to catch tourists out and signs should perhaps be erected to note the distance between petrol stations, particularly given the impact that a breakdown can have on the A9.
- 4.3.47 Ormlie Renewables also pointed out that bus journeys to Inverness are long and follow a circuitous route, with numerous stops.
- 4.3.48 Services to Aberdeen from Wick Airport are seen as essential and are preferable to the long car journey. While Ormlie Renewables see the cost as reasonable in light of the ADS, they expressed their frustration at the inability to undertake a one day return trip to Edinburgh. In addition, the lack of permanence of services is seen as an issue that can affect business confidence. For example, the respondent noted that, since the withdrawal of the Wick-Lerwick service, trips to Lerwick involve undertaking a two and a half hour drive to Inverness, before being able to catch a flight which flies past Caithness!
- 4.3.49 Ormlie Renewables indicated that the ports and ferry services in Caithness are good but do raise two concerns:
- the potential of landslips onto the A9 at Scrabster Harbour; and
 - the cost of the Scrabster to Stromness crossing, particularly when taking a car.

⁴⁷ Dornoch Rail Link and the Far North of Scotland, MVA Consultancy, January 2008

⁴⁸ Caithness Business Index, 'Ormlie Renewables' - <http://www.caithness-business.co.uk/business.php?id=1508>

Response 7 – Highlands and Islands Enterprise

- 4.3.50 Highlands and Islands Enterprise (HIE) expressed its concern over the poor reliability of journey times on the A9, particularly between Cambusavie and Berriedale Braes and also between Berriedale and Latheron. HIE advocates the provision of road straightening, clear overtaking opportunities and crawler lanes at key locations.
- 4.3.51 In addition, HIE noted that it would be beneficial to make it easier for port bound traffic to negotiate the relatively narrow streets of Wick and Thurso.
- 4.3.52 HIE also noted that there is a need for quality bus and coach services, with a particular need to improve local service provision.
- 4.3.53 In terms of rail travel, HIE noted that journey times need to be shortened, although it is aware that such improvements must be cost effective. HIE also supports the provision of enhanced rolling stock more suitable to the needs of tourists, and also raised the need for better accessibility and availability of paths for freight services
- 4.3.54 As with other consultees, HIE is keen to point out the poor timing of the Edinburgh flight and indicated that air fares are often prohibitively high.
- 4.3.55 HIE indicated the need to improve the quality of both leisure and commercial facilities at both Scrabster and Wick Harbours.
- 4.3.56 HIE noted that travel to Caithness by all modes may be threatened by increasing fuel prices.

Despite concerns over the transport infrastructure and services, HIE is keen to point out that that poor transport is not the only detractor to inward investment and noted that the perception of travelling to Caithness is often worse than the reality.

4.4 Summary

- 4.4.1 As has been demonstrated above, the consultation exercise produced a wide range of feedback and comment regarding the transport issues affecting Caithness. These views provided a valuable background and context for the study.

5 Appraisal Framework

5.1 Introduction

- 5.1.1 The previous chapters have set the scene in terms of the economic profile of Caithness, its current level of transport provision and associated issues, and the views of local stakeholders obtained through local consultation.
- 5.1.2 This Chapter goes on to discuss directly the *Vision* for Caithness and how investment in new transport infrastructure and services can contribute to meeting that *Vision*.

5.2 STAG

- 5.2.1 Scottish Transport Appraisal Guidance (STAG) is Transport Scotland's official guidance on the appraisal of transport proposals⁴⁹. It is required to be applied to any proposal which is requesting funding (or 'permission / approval') from the Scottish Government. STAG is a multi-stage approach, ranging from pre-appraisal to a STAG Part 1 (overview) and more detailed STAG Part 2 appraisal. It is flexible in its application, but a main principle is that it is objective-led, ie not scheme-led. A STAG approach should identify 'problems and issues' before working up and appraising alternative transport proposals in terms of how well they meet these objectives. There are five over-arching Government objectives in STAG: Environment, Safety, Economy, Integration, and Accessibility / Social Inclusion. These objectives are supplemented with application-specific Planning Objectives.
- 5.2.2 The work undertaken in this study should be regarded as pre-STAG Option Sifting. Nevertheless an objective-led approach has been taken to comply with the spirit of STAG. Clearly, the emphasis in this study is on economic development, regeneration and sustaining communities and we have developed planning objectives reflecting this. At a later stage, the STAG process would assess the full range of government objectives.
- 5.2.3 A further key element of STAG relevant here is Economic Activity Location Impacts (EALI). This branch of STAG seeks to identify aspects of economic impact which are perhaps 'missed' in conventional cost-benefit analysis. It is also concerned with the impact of transport schemes on the distribution of economic activity. EALI analysis would therefore be a key factor in making the case for transport investment affecting Caithness and North Sutherland.

5.3 Overview of Approach

There are a number of key elements in the appraisal undertaken:

- STAG-like Planning Objectives emerging from Caithness 'problems & issues';
- related 'transport objectives', based on how transport needs to be improved to meet the Planning Objectives;
- the '*Vision for Caithness and North Sutherland*' – an economic strategy to diversify the regional economy; and

⁴⁹ <http://www.transportscotland.gov.uk/reports/scottish-transport-analysis-guidance/scottish-transport-appraisal-guidance/j7666-00.htm>

- a list of proposed improvements to transport infrastructure and services relevant to Caithness and North Sutherland.

5.3.1 Each of these is now discussed below.

5.4 Objectives

5.4.1 At the end of Chapter 2 we suggested the following range of ways in which improved transport could benefit Caithness, and hence progress the *Vision*:

- improve business confidence in the future of Caithness and North Sutherland;
- encourage the skilled pool of workers currently resident in Caithness to remain there;
- assist in the development of indigenous industries, particularly in the tourism and energy sectors;
- facilitate and support the diversification of the Caithness economy away from Dounreay related activities;
- create a better environment for business investment;
- assist in maintaining the social and economic fabric of Caithness;
- reduce the perception of peripherality, particularly amongst tourists and businesses; all of which
- supports the delivery of the '*Vision for Caithness and North Sutherland*'.

5.4.2 These can be regarded as '**Planning Objectives**' in this context. In order to meet this basket of Planning Objectives, we have defined the following list of specific '**transport objectives**':

- reducing inter-regional travel times;
- improving 'lifeline' dependability on strategic routes;
- improving travel time reliability;
- increasing transport connectivity;
- tackling perceptions of remoteness;
- improving travel safety;
- increasing the range of freight handling capabilities;
- improving the 'quality' of inter-regional travel, including en-route facilities; and
- improving strategic links to ports and airports.

5.5 The Vision for Caithness

5.5.1 The '*Vision for Caithness and North Sutherland*' has been prepared by the Caithness Partnership and is based on the 'Socio-Economic Strategy for North Sutherland' and the Caithness Conference 2007 'Beyond Dounreay' Report. The *Vision* is designed to act as a response to the diminishing influence of Dounreay on the local economy.

- 5.5.2 The longer term development and prospects for the area are seen within the following key sectors: **Energy, Tourism, Engineering, Service Industries and Food & Drink**. Within these five broad sectors, the Partnership has developed the following initial list of potential initiatives or activities for Caithness over the next 20 years. These initiatives range widely in size and scope, with some clearly more speculative than others.

Up to Five Years

- Nuclear Decommissioning Agency (NDA) – up to 400 new jobs, Thurso;
- National Nuclear Archive – 20 new jobs, Wick;
- Scrabster harbour – new supply base for oil and gas activities west of Shetland, 400 jobs;
- tidal energy-related developments – up to 50 new jobs;
- creation of slipway / dry dock facilities at Scrabster for the marine engineering market and launch, retrieval and maintenance of marine renewable energy devices;
- development of seaborne and inter-modal connections between Scapa Flow Container Terminal (SFCT) and Scrabster;
- Nuclear Skills Academy in Thurso – 20 new jobs;
- centre for distributed engineering for nuclear decommissioning;
- tourism – growth due to better marketing of beaches, archaeology and local history;
- new pensions administration office in Thurso – 30 new jobs;
- analytical labs business on Thurso business park – 20 new jobs;
- new campus of modern purpose built offices on the outskirts of Thurso;
- university status granted to the UHI Millennium Institute, and the North Highland College campus at Thurso further developed;
- regeneration of Wick and Thurso town centres complete;
- new five-star hotel and spa at John O’Groats;
- luxury yacht marina at Wick harbour;
- North Highland Initiative – further growth in the ‘Mey Selections’ brand of high quality food products;
- development of freight handling capacity in Caithness - rail (at Georgemas) and road;
- Horizons, Halkirk Sports Centre, Thurso surf centre, Viewfirth Arts centre, small bore rifle range, ice rink for curling/skating will attract more tourists to Caithness; and
- Viking tourism centre.

Up to Ten Years

- tidal energy – exporting via sub-sea cable to Peterhead and onto Norway – 200 new jobs;

- growth in industry using green power, either energy from the Pentland Firth or energy from municipal / industrial waste plant supplying a business / technology / industry park, eg;
 - data centres supported by fibre optic cable installed on pylons for data transfer to London/elsewhere;
 - greenhouses using electricity to power solar lamps to grow high value vegetables and flowers, etc. 200 new jobs;
- Wick Airport throughput of passenger doubled;
- development of Castletown Heritage Centre;
- new motor museum at Halkirk;
- Royal Scottish Academy of Music & Drama in Caithness;
- Lybster creative glass centre;
- development of Thurso as 'most northerly rail station in the UK' attraction;
- outdoor activity centre running Outward Bound Courses;
- sub-aqua diving centre established in Pentland Firth; and
- Wick - 21 riverside and harbour developments completed.

Up to 15 Years

- export of tidal energy know-how to the rest of world;
- increased production of oil from east coast of Caithness;
- climate change brings growth in tourism with a longer season;
- manufacture of photovoltaic cells using green power;
- mass production of high spec waste drums for Dounreay & Sellafield;
- production of biomass for biofuels;
- growth in food production, processing and packaging;
- re-location of other public sector jobs from London/elsewhere in UK; and
- Wick Harbour breakwater project.

Up to 20 Years

- hydrogen liquefaction terminal;
- de-commissioning of oil rigs / oil pipelines at Wick, Scrabster and at Wester;
- hydrogen fuel cell manufacturing plant;
- hydrogen car manufacturing plant; and
- energy intensive industries established.

5.5.3 The key for this study is the extent to which a range of improvements in transport can contribute to realising elements of the *Vision*.

5.6 Transport Schemes

5.6.1 The list of schemes originally provided by Caithness Partnership and discussed in Chapter 4 was reviewed, consolidated and supplemented for the purposes of the appraisal framework. The following list of schemes was taken forward into the appraisal framework:

- A99 Wick-Keiss–John O’Groats upgrade;
- Thurso Bypass – access to Scrabster harbour, Thurso town centre improvement;
- targeted programme of safety improvements on strategic road links – eg alignment, road surface and visibility improvements⁵⁰;
- A9 Inverness-Thurso targeted programme of ‘2 plus 1’ enhancements;
- A9 Inverness-Thurso targeted programme of local bypasses (eg Golspie, Brora);
- A9 Berriedale Braes bypass scheme;
- A9 Inverness-Thurso facilities upgrade - eg tourist services, better signing of attractions and information;
- Far North Line improvements (achieving a 30 min JT Reduction);
- Far North Line - Scott Wilson’s ‘Room For Growth’ identified journey time savings (points and level crossings) of 11minutes;
- Dornoch Rail Link⁵¹;
- inter-modal rail freight handling depot at Georgemas (associated with Georgemas Chord);
- Georgemas Chord;
- Halkirk Station - (associated with Georgemas Chord);
- fares support policies – further initiatives to support public transport fares, reducing economic disadvantage;
- replacement or further refurbishment of train rolling stock;
- Peak hour Thurso – Inverness high-quality express coach services (with connection to Wick);
- integrated rail / bus options - improving overall public transport public transport journey times;
- Wick Airport technical landing aids – reduced flight cancellations / diversions in poor weather – notably during periods of fog and haar;
- Wick Airport - wider range of destinations served;
- Wick Airport – greater ‘permanence’ or long-term security of services;
- development plans at Scrabster harbour - fishing and freight, oil and gas support; and
- development plans at Wick harbour - fishing and freight, oil and gas support.

⁵⁰ This could include previously identified sections such as Newport to Borgue (5 km), Loth to Helmsdale (5 km), Cambusavie bends (1 km), bends at Clyth (2 km) and bends at Bruan (1.5 km).

⁵¹ see <http://www.dorlag.co.uk/> for details

5.6.2 The above list of schemes covers all the main transport modes and picks up the most realistic and implementable schemes which have the potential address the transport objectives.

5.7 Approach to the Appraisal

5.7.1 Figure 5.1 below shows how the various elements described above have been brought together in the appraisal.

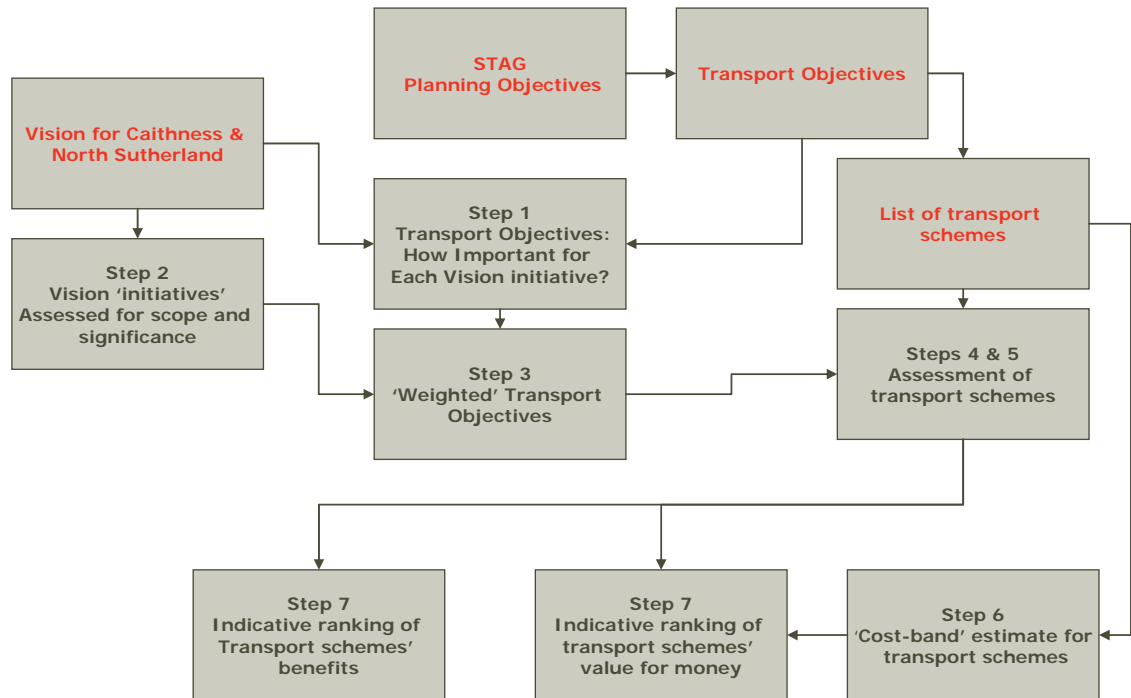


Figure 5.1 Overview of the Approach to the Appraisal and Scheme Ranking

5.7.2 The appraisal was undertaken in a two-stage process where the ‘transport objectives’ have been used as a ‘bridge’ between the *Vision* and the transport schemes as follows:

- to what extent are each of the **transport objectives** significant in realising each initiative which forms the *Vision*?; and
- to what extent do each of the proposed **transport schemes** contribute to the **transport objectives**?

5.7.3 This has been achieved as follows:

Step 1: A qualitative scoring system (0-5) has been used to represent the significance of each transport objective to each element of the *Vision* (eg ‘increase range of freight handling capabilities’ gets a high score for freight intensive elements of the *Vision*).

Step 2: Each element of the *Vision* has been qualitatively scored from 1-5 based on its scale / potential economic significance, so a large-scale initiative scores more than a small-scale initiative.

Step 3: A 'weighting' has been derived from the above for each transport objective – ie a transport objective which is significant in facilitating the larger elements of the *Vision* scores more highly than one which contributes only slightly to smaller elements of the *Vision*.

Step 4: Each transport scheme has been qualitatively scored on a 0-5 basis against each of the transport objectives, eg a scheme which greatly reduces inter-regional travel time will score more highly than one which has only a small impact.

Step 5: In each case, the score is weighted by the value derived in Step 3 to reflect its significance in the context of the *Vision* and a total 'score' is obtained for each transport proposal.

Step 6: A broad cost band (scored as 1-6) is allocated to each transport proposal.

Step 7: The transport proposals are ranked both in terms of their total 'score', ie Step 5, and their 'value for money', ie dividing the Step 5 score by the Step 6 'cost'.

5.7.4 This approach provides a clear, transparent initial ranking of the transport schemes in terms of their impact on contributing to the '*Vision for Caithness*'. The results of this process are shown in the following paragraphs.

Steps 1 and 2

Table 5.1 below shows each relevant element of the *Vision*, together with:

- the judgement taken on its potential scale and scope, ie differentiating more 'important' initiatives from less 'important' initiatives; and
- the qualitative analysis of how influential each of the transport 'objectives' are, in terms of facilitating or encouraging the element of the *Vision*.

Table 5.1 Steps 1 and 2 – 'Scale' of Initiative and Importance of Transport

Description	Proposal Significance - Likely Scale & Scope of Impact (1-5)	reducing inter-regional travel times	strategic route - improving 'lifecycle' dependability	improving travel time reliability	increasing transport connectivity	tackling perceptions of remoteness	improving travel safety	increase range of freight handling capabilities	improving 'quality' of inter-regional travel, including en-route facilities	Improves Strategic links to ports & airports
0-5 Years										
Nuclear Skills Academy	5	1	3	1	4	1			2	1
Thurso spoke of Univ. of H&I established	4	2	2	1	2	2			2	
Centre for Distrib. Eng. and Nuclear Decomm.	5	2	4	3	4	3		2	2	4
North Highland Initiative - high quality foods	3	5	5	5	3	1		3	1	1
Tourism - growth due to better marketing	4	4	1	1	5	4	2		3	4
Halkirk Sports Centre - Local Issues?	1						2			
Thurso Surf Centre	2	3	1	1	2	3	2		2	4
Viewfirth Arts Centre	1	2	1	1	2	2	2		2	4
5 star hotel and spa at John O' Groats	3	4	2	1	3	4	2		3	5
Luxury yacht marina at Wick Harbour / Wick 21	2	1		1			2			4
Regeneration of Wick and Thurso town centres	1	1	1	1	1	3	1		1	
Scrabster Harbour - supply base for oil / gas	4	2	2	2	3	2	1	5	1	
New campus of purpose built offices – Thurso	3	4	4	4	3	5	2		3	4
Shared Services	5	3	2	2	2	4	1		2	2
National Nuclear Archive	1	3	2	2	2	2	1		1	2

Description	Proposal Significance - Likely Scale & Scope of Impact (1-5)	reducing inter-regional travel times	strategic route - improving 'lifeline' dependability	improving travel time reliability	increasing transport connectivity	tackling perceptions of remoteness	improving travel safety	increase range of freight handling capabilities	improving 'quality' of inter-regional travel, including en-route facilities	Improves Strategic links to ports & airports
New Pensions Administration Office	3	3	2	2	2	4	1	1	2	
Tidal Energy	5	3	4	3	2	2		3	4	
Analytical labs business on Thurso Business Park	3	3	4	3	2	5		1	4	
5-10 Years										
RSA of Music/Drama in Caithness	1	1	2	1	2	2		2		
Dev. of Castletown heritage centre	1	1	1	1	1	2	2	2	2	
New motor museum at Halkirk	1	1	1	1	1	2	2	2	2	
Lybster creative glass centre	1	1	1	1	1	2	2	2	2	
Wick – Thurso steam trains running daily	2	2	1	1	2	3	2	2	3	
Outdoor activity centre running OB Courses	2	3	1	1	2	3	2	2	3	
Sub-aqua diving centre in the Pentland Firth	2	2	1	1	2	3	2	2	3	
Wick Harb. breakwater project & assoc. devs	5	2	2	2	3	2	1	5	1	
Container terminal in Scapa Flow	5	3	5	4	4	5		5	1	
Tidal energy - exporting via sub-sea cable	5	1	1					3	0	
Growth in data centres using green power	4					2		1	0	
Green elec. to grow high value products	3	4	3	5	2	2		3	1	

Description	Proposal Significance - Likely Scale & Scope of Impact (1-5)	reducing inter-regional travel times	strategic route - improving 'lifeline' dependability	improving travel time reliability	increasing transport connectivity	tackling perceptions of remoteness	improving travel safety	increase range of freight handling capabilities	improving 'quality' of inter-regional travel, including en-route facilities	Improves Strategic links to ports & airports
Energy from waste plant - Wick's heating scheme	2									
10-15 Years										
Growth in food prod., proc. and packaging	3	5	5	5	3	3		3	1	1
Climate change brings growth in tourism	3	4	1	1						
Prod. of waste drums for Dounreay and Sellafield	4	3	4	4	3	2	1	4	1	5
Re-location of public sector jobs from London	4	3	2	2	2	5	1		3	4
Biomass for biofuels	3	3	2	3	2		1	4	1	2
Export of tidal energy expertise	5	1	4	2	4	4				5
Increased production of oil from east coast	5	2	3	3	2			5	1	3
Manufacture of photovoltaic cells	3	3	4	4	2	4		4	1	2
15-20 Years										
Decommissioning of oil rigs	5	3	2	3	2		1	3		4
Energy intensive industries established	5	3	4	2	3	4		2	2	5
Hydrogen liquification terminal	4	3	4	4	2		2	4		4
Hydrogen fuel cell manufacturing plant	4	3	4	4	3	5	1	3	1	3
Hydrogen car manufacturing plant	5	3	4	4	3	5	1	4	1	4

Step 3

5.7.5 The above formulation was used to produce a ‘weighting’ to be attached to each of the Transport Objectives. This means that a Transport Objective which is highly significant in contributing to important elements of the *Vision* will be ‘weighted’ more strongly than a Transport Objective which is of less significance. The resulting weightings are shown in Figure 5.2 below.

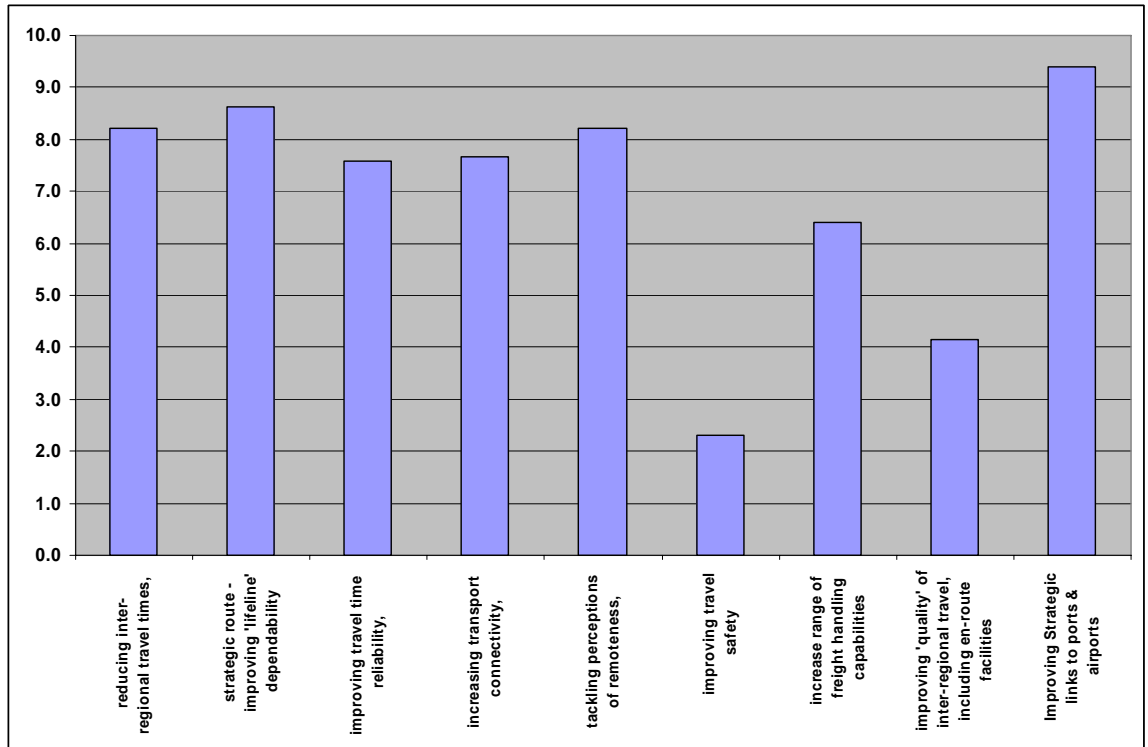


Figure 5.2 'Weighted' Transport Objectives

5.7.6 This shows that from the perspective of the whole *Vision*, improving strategic links to ports and airports, improving the ‘lifeline’ dependency on strategic routes, reducing inter-regional travel times, and tackling perceptions of remoteness are the most important transport-related issues to be tackled in realising the *Vision*.

Steps 4-7

5.7.7 The weighted values for each transport objective are then used in the assessment of how significant each of the proposed transport schemes are, in terms of the Transport Objectives. Each of the transport schemes has been qualitatively scored against each of the transport objectives on a 0-5 basis ranging from no impact to highly significant impact.

5.7.8 In addition, each scheme has been allocated a broad cost band between 1 and 6, ranging from low-cost schemes to £100m+ schemes. Lack of precise cost information at this stage precludes a more detailed cost-based analysis. This cost banding has been used to provide an indicative measure of ‘value for money’. The transport schemes have then been ranked based on the resulting total ‘score’ in Table 5.2 which can be found at the end of this chapter. Also shown is the ranking, based on the indicative value for money indicator.

5.8 Results of the Appraisal

5.8.1 The output of this process is an indicative ranking of the transport schemes, based on their contribution to meeting the important transport objectives and hence facilitating the 'Vision for Caithness'. This allows a broad prioritisation to be obtained in terms of the types of transport investments which are required for Caithness, but this ranking should not be viewed as definitive, as other factors need to be taken into consideration in planning an investment strategy. Note also, that the scoring system used in Table 5.2 is, by necessity, qualitative. The ranking does however provide a consistent indication of how each transport scheme would contribute across the range of transport objectives.

5.8.2 In absolute terms, the top five schemes emerge as:

- A9 Inverness-Thurso, targeted programme of '2 plus 1' enhancements;
- Dornoch Rail Link;
- A9 Inverness-Thurso, targeted programme of local bypasses;
- Wick Airport new technical landing aids to improve poor weather landings; and
- new inter-modal freight handling depot at Georgemas.

5.8.3 In this ranking, the general theme is that the bigger schemes do more than the smaller ones and this is borne out in the top five schemes. The bigger road schemes would reduce inter-regional journey times, improve safety and hence reliability and improve the general 'feel' of driving between Inverness and Caithness. The Dornoch Rail Link would substantially reduce journey times on the Far North Line. Problems at Wick Airport, with weather-related cancellations, are seen as a potentially significant deterrent to new investors in the area and this is reflected in its high ranking. A new facility for handling inter-modal freight at Georgemas could be a significant development, if progressed as part of a wider package. This is discussed further in Chapter 6.

5.8.4 However, when broad indications of cost are taken into account, the top five schemes are as follows:

- new Inverness-Caithness Express coach services;
- long-term security (ie permanence) for flights from Wick Airport;
- Wick Airport new technical landing aids to improve poor weather landings;
- A9 Inverness-Thurso, targeted programme of '2 plus 1' enhancements; and
- wider range of destinations served directly from Wick Airport.

5.8.5 Improved coach services between Inverness and Caithness scores highly here as a low cost measure, which could significantly reduce travel times by public transport. This could be of particular importance for the tourism sector, where faster and more frequent journeys may encourage more tourists to make the trip to Caithness. Three of the five schemes here relate to the airport and the '2 plus 1' programme of improvements also fairs well on this basis. The schemes which finish low down in the ranking, tend to be more local schemes with a less significant impact on inter-regional travel.

5 Appraisal Framework

5.8.6 Chapter 6 now goes on to draw some conclusions from this analysis and make recommendations for the future.

Table 5.2 Assessment and Ranking of Transport Schemes

Scheme	Approximate Cost Band (1-6)	Reducing inter-regional travel times,	Strategic route - improving 'lifeline' dependability	Improving travel time reliability,	Increasing transport connectivity,	Tackling perceptions of remoteness,	Improving travel safety	Increase range of freight handling capabilities	Improving 'quality' of inter-regional travel, including en-route facilities	Improves Strategic links to ports & airports	Total	Weighted total score - adjusted for significance	Rank - absolute	rank – 'value for money'
<i>'Weighting' of objective</i>		8.2	8.6	7.6	7.7	8.2	2.3	6.4	4.1	9.4				
Targeted programme of 2 plus 1 enhancements	3	4	3	5	1	5	5	0	5	4	32	215	1	4
Dornoch Rail Link	6	5	1	2	4	4	1	3	3	2	25	181	2	15
Targeted programme of local bypasses (eg Golspie, Brora)	5	5	1	4	1	5	5	0	5	2	28	180	3	11
Wick Airport – improved aircraft landing in poor weather	2	0	5	0	5	5	3	1	3	3	25	176	4	3
Inter-modal Rail Freight Handling Depot at Georgemas	3	2	0	2	3	2	1	5	1	5	21	156	5	7
Scrabster plans - fishing & freight, oil & gas support, marine energy	3	3	1	2	2	0	1	5	1	5	20	149	6	8
Wick plans – fishing & freight, oil & gas support, marine energy	6	3	1	2	2	0	1	5	1	5	20	149	6	18
Air - wider range of destinations	2	0	2	0	5	3	0	0	2	5	17	135	8	5
Targeted programme of safety improvements	3	2	4	4	0	1	5	0	3	2	21	132	9	9
Far North Line Improvements (30 min JT Reduction)	4	4	0	1	3	4	1	2	2	1	18	129	10	14

Scheme	Approximate Cost Band (1-6)	Reducing inter-regional travel times,	Strategic route - improving 'lifeline' dependability	Improving travel time reliability,	Increasing transport connectivity,	Tackling perceptions of remoteness,	Improving travel safety	Increase range of freight handling capabilities	Improving 'quality' of inter-regional travel, including en-route facilities	Improves Strategic links to ports & airports	Total	Weighted total score - adjusted for significance	Rank - absolute	rank – 'value for money'
Coach: - peak hour express services Inverness-Caithness	1	4	0	1	4	3	0	0	3	2	17	127	11	1
Improved local links to harbours	4	2	0	2	2	1	1	4	1	4	16	119	12	13
A9 Berriedale Braes scheme - Inland Bypass	3	2	4	3	0	1	3	0	2	1	16	106	13	12
Air - 'permanence' of services	1	0	5	0	0	4	0	0	0	2	11	95	14	2
PT – integrated rail / bus options - improving overall PT journey times	1	2	0	1	2	1	0	0	1	1	8	61	15	6
Fares Support	2	0	0	0	3	3	0	0	2	0	8	56	16	16
Georgemas Chord	2	1	0	0	0	0	0	5	1	0	7	44	17	19
A9 facilities upgrade - eg services	1	0	0	0	0	1	2	1	3	1	8	41	18	10
Replacement of rail rolling stock	2	0	0	2	0	0	1	0	5	0	8	38	19	20
A99 through Keiss	1	0	0	1	0	0	2	0	1	1	5	26	20	17
SW Room For Growth JT savings (points & level crossings) - 11mins	2	2	0	0	1	0	0	0	0	0	3	24	21	21
Halkirk Station (associated with Georgemas Chord)	2	0	0	0	1	0	0	0	0	0	1	8	22	22

6 Study Recommendations

6.1 Introduction

6.1.1 The analysis undertaken in this study has focussed on:

- local and regional problems and issues – essentially the post Dounreay socio-economic context;
- transport issues associated with Caithness and North Sutherland;
- consultation with local stakeholders; and
- a consistent, objective and qualitative appraisal of potential new investments in transport infrastructure and services affecting the area.

6.1.2 Taken together, the analysis allows some conclusions and recommendations to be drawn as to the way forward for transport investment affecting Caithness.

6.2 Recommendations

6.2.1 When considering transport schemes, and their potential impact on facilitating the *'Vision for Caithness and North Sutherland'*, it is important to recognise that some schemes will bring about *incremental* improvement, whilst others will bring about a *step change*. For example, a road-based scheme may result in reduced journey times / improved safety and reliability etc, ie it brings an incremental improvement to the current level of provision. Although a contributory factor, this in itself is not likely to trigger a significant economic decision. However, the lack of eg certain harbour facilities / capacity could in itself be a barrier to an economic decision or investment. In other words, the lack of facilities / capacity is a **hard constraint** on economic development, and their improvement would facilitate a step change in economic activity. Long travel times etc can therefore be thought of in this context as a **soft constraint** on economic development.

6.2.2 This is significant in terms of the interpretation of the rankings presented in Chapter 5. The recommendations are therefore perhaps best thought of in two parts.

6.2.3 Firstly, there are some transport-related improvements which are clearly essential in terms of facilitating specific new economic activity. The most obvious examples here are the harbours of Scrabster and in the future Wick. Many of the energy (tidal/wave and oil/gas), engineering and freight-related initiatives in the Vision potentially rely on expanding the capacity and / or upgrading the facilities at either or both of these harbours, to meet the specific needs of these specific business sectors. It is however beyond the scope of this Study to determine the investment priorities at, and between, both harbours. The authorities at both harbours should therefore be looking to develop, in detail, the case for investment in specific facilities to meet the needs of these industries and economic sectors. Alternatively, there could be a strong case for an independent assessment to be undertaken of the economic potential and requirements of both harbours. The Scottish Government's Transport Directorate remains responsible for ferries, ports and harbours, and a business case for specific proposals should therefore be prepared and submitted through the appropriate channels, if public funds are sought. If it can be demonstrated that existing harbour infrastructure is indeed a hard constraint on the development of these key sectors,

which are arguably at the heart of the Vision, this must be regarded as the top priority for the area, and plans should be developed in the short term.

6.2.4 The other schemes assessed relate to road, rail and air passenger & freight travel, and these tend to bring about incremental rather than step changes. In volume terms, road-based transport accounts for the overwhelming majority of travel to and from Caithness and North Sutherland, both for passengers and freight. This must be reflected in the prioritisation of spending, although that is not to say that there is no role for rail, particularly in the freight context. Within this appraisal, A9 road-based schemes were divided into three parts:

- a targeted programme of safety improvements, ie improving sections with poor alignment, frequent accidents and hence road closures;
- a targeted programme of '2 plus 1' / climbing lane schemes, similar to those on the A9 south of Inverness at eg Newtonmore - provides overtaking opportunities, platoon dispersal etc; and
- a programme of local bypass schemes, at eg Golspie and Brora.

6.2.5 All of these provide safety / dependability and travel time savings to varying degrees, but in terms of prioritisation, key safety improvement and '2 plus 1' sections should be undertaken prior to bypass construction. Taken together, this programme would provide a significant improvement in inter-regional travel times, address known safety concerns, improve the 'quality' of the journey and, through investment, boost business confidence and tackle perceptions of remoteness.

6.2.6 Consideration of these issues would normally be undertaken by Transport Scotland in the form of a detailed Route Action Plan (which should also include the A99), such as that recently undertaken for the A82. Transport Scotland is currently considering their medium-term investment plans in the comprehensive Strategic Transport Projects Review (STPR). Caithness Partnership should ensure Transport Scotland is fully abreast of the key issues facing the area, in order to ensure progress on confirming and implementing the **Route Action Plan**.

6.2.7 In absolute terms, as a larger scheme, the Dornoch Rail Link scheme clearly provides major time savings on the Far North Line and scores highly here, as it did in the recent STAG Part 1 Study. However its high cost means that it scores less well in broad value for money terms, compared to other cheaper proposals. There are other proposals which would also reduce journey times on the Far North Line at significantly lower cost and these are seen as a higher short term priority. The scope for efficiently improving public transport services and infrastructure between Caithness and Inverness would be best examined in the context of a detailed, STAG Part 2, **Public Transport Corridor Study**, which would consider all aspects of the schemes, including accessibility and cost. This would build on this study and DorLAG's recent Dornoch Rail Link Study.

6.2.8 In broad 'value for money' terms, peak hour express coach services between Inverness and Caithness provide many benefits, in terms of considerable reductions in journey times, improved day trip options, etc at a low cost (and ease of implementation), and this proposal scores highly. It is recognised that levels of comfort are important, and high-quality vehicles, together with improvements to the road standard, would add to the 'quality' of the service and could provide 'quick win' journey time improvements (particularly for tourists) in

the short term, in advance of medium-term improvements on the Far North Line. Schemes which would improve the dependability of flights at Wick Airport (improved landing facilities), and increase the 'permanence' and range of services (perhaps through Air Route Development Funding or similar) also score well, as they are seen as relatively low-cost measures which improve lifeline dependability and connectivity, and challenge the perception of remoteness. Reliable air services are seen as a key factor in terms of encouraging investment and improvements should be regarded as a high priority.

- 6.2.9 There are a number of issues relating to the movement of **freight**. At present, virtually all freight going to / from and passing through Caithness is taken by road. Sections of the A9 are, at present, of a low standard for HGV traffic as discussed above and this would be addressed in the Route Action Plan. At present, there is very little freight moved on the Far North Line, due to quality and reliability issues. Perhaps the biggest scope for significant investment in this line lies with freight-related development at the Caithness harbours. In particular, if Caithness and Georgemas were to become the sea / rail interchange point for Scapa Flow (see below) the line, along with associated freight facilities, would require significant investment, with resulting knock-on benefits for passenger services.

6.3 STAG – Economic Activity and Location Impacts Analysis (EALI)

- 6.3.1 The case for investment in the Inverness to Caithness corridor is unlikely to be made on conventional traffic-related savings (ie time and accident) alone, due to the relatively low volumes of traffic involved. Instead, the case lies on the strategic nature of the route (connecting to Orkney), the 'standard' expected of a trunk road, the specific socio-economic issues connected to the rundown of Dounreay, the facilitation of new key industries (potentially of national significance) and perhaps the developments at Scapa Flow. A strong basis in EALI will therefore be required to accompany any economic assessment of transport schemes affecting Caithness.

6.4 Scapa Flow

- 6.4.1 A potential major opportunity for Caithness is the proposed deep-water container transshipment port in **Scapa Flow**, Orkney, as recognised in the National Planning Framework 2 (Discussion Draft). The role which this facility would primarily fulfil is the transshipment of containers from the very largest vessels to smaller vessels, which are able to access a wider range of ports, for onward travel. However, the potential to use rail as opposed to ship for onward movement will be explored. A new facility at Georgemas could provide access to the national rail network – however there will be competition from other locations on the east coast. There would also be spin-off benefits as other businesses seek to take advantage of improved rail access and proximity to Scapa Flow. This could clearly be a major development requiring significant investment in infrastructure and it is important that Caithness stakeholders build strong relationships with the scheme promoters and other interested parties. In addition to harbour infrastructure, connections between harbours and the potential railhead would clearly require investment. This would include consideration of railway line extension(s) or a Thurso Bypass. The development at Scapa Flow, even without a major facility at Georgemas, would however have a major economic impact on the area.

6.5 Summary

6.5.1 In order to transform the economy of Caithness and North Sutherland away from its dependency on Dounreay, it is clear that a programme of investment in transport infrastructure and services is required as part of a package of measures, in order to create a business-friendly environment for future investment in the area. The area has much to offer in terms of natural resources and skilled labour and existing transport infrastructure is seen as a key constraint in maximising the area's potential.

6.5.2 This Study has considered a number of possible transport interventions and provided an initial indication of those schemes likely to have the greatest impact on realising the '*Vision for Caithness*' as follows:

- upgraded / expanded harbour facilities at Scrabster and potentially in the longer term at Wick – the area's existing harbour facilities are a key constraint in facilitating the development of tidal energy, oil and other offshore industries, as well as general freight handling;
- Wick Airport suffers from a significant number of weather-related flight cancellations / diversions due to the lack of adequate technical landing aids (eg ILS, GPS) – such systems are required to improve reliability and confidence in the ability to travel, although they will not in themselves fully resolve this issue;
- the A9 between Inverness and Caithness is of a poor standard, particularly north of the Dornoch Firth. This impacts on travel times, safety, operation of HGVs, and as a 'lifeline' link, closure due to weather or incidents leads to very lengthy delays and diversions. In the short term, a targeted programme of safety improvements and '2 plus 1' / climbing lane sections are required to bring the route up to the standard expected of this trunk, strategic route, which also provides links to Orkney. In the longer term, local bypasses on the route should be considered. These improvements should be developed and implemented via a Route Action Plan.
- 'high class' express coach services would provide a short-term 'quick win', by significantly reducing travel times by public transport between Inverness and Caithness at low cost - important for the tourism sector in particular. The potential market and benefits of such a service should be assessed in the context of a public transport 'corridor' study, which would include detailed (ie STAG Part 2) assessment of significant medium-term developments which would reduce journey times on the Far North Line, including the Dornoch Rail Link; and
- in the longer term, a package of measures to dramatically improve freight handling could allow the area to capitalise on the proposed Scapa Flow freight transshipment facility in Orkney. These could include significant harbour upgrades, a new inter-modal road / rail facility at Georgemas, improved links between Georgemas and the harbour(s), and improvements to the Far North Line to cut journey times and increase capacity. Such Far North Line improvements would also clearly provide opportunities for significantly improved passenger services.

6.5.3 This should form the basis for more detailed work to progress these schemes for the benefit of Caithness.

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