

Transport for Development

Caithness Transport Infrastructure Study

Report for Caithness Partnership

Summary Report

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Summary Report

Introduction

In December 2007, MVA Consultancy was commissioned by the Caithness Partnership to undertake an analysis and prioritisation of the transport investments most likely to have a positive impact on the economic re-positioning of Caithness and North Sutherland. This document is the Summary Report from this study, and a full Report is available separately.

Transport Priorities for 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.

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

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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 areas (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 investments are required to facilitate the *Vision*, and hence the economic transformation of Caithness and North Sutherland. The main inter-regional transport issues affecting the area can be summarised as:

- 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;
- the topography on the A9, along with unsuitable road alignment in places for HGVs, leads to high fuel consumption;
- lack of overtaking opportunities on the A9 leading to platooning, driver frustration, with resulting safety issues;
- 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 station;
- 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 the 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.

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

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

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 between 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.

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*' 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*.

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

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etc, ie an incremental improvement. Although a contributory factor, this, in itself is not likely to trigger an economic decision. However, the lack of eg harbour facilities / capacity could in itself be a barrier to an economic decision or investment, ie 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 be thought of in this context as a **soft constraint** on economic development.

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.

Appraisal and Prioritisation

For this study, 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);

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- 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 the way ahead in terms of the transport investments necessary to facilitate the economic transformation of Caithness and North Sutherland.

Recommendations

The recommendations are perhaps best thought of in two parts.

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.

The other schemes assessed relate to road, rail and air passenger and 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 horizontal and vertical 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.

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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.

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.

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.

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, but it 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.

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, and associated freight facilities, would require significant investment, with resulting knock-on benefits for passenger services.

STAG – Economic Activity and Location Impacts Analysis (EALI)

The case for investment in the Inverness to Caithness corridor is unlikely to be made on conventional traffic-related savings (ie time and accidents) 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.

Scapa Flow

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. 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.

Summary

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

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