Highlands and Islands Enterprise

Highlands and Islands Rail Traffic Growth Projections

Phase 1: Highlands and Islands Rail Demand Projections

March 2006

Halcrow Group Limited

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Contents Amendment Record

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1 Study Objectives and Report Structure

1.1 *General*

This study has been conducted by Halcrow on behalf of Highlands and Islands Enterprise (HIE) in order to give advice on future rail traffic growth and demand in the Highlands and Islands.

This report presents findings from stage one (of two) of this study, which has the following objective:

- To develop a rail demand model for the Highlands and Islands capable of accurately measuring existing patronage and forecasting future patronage for the five generic rail corridors within the study area.

These findings are intended to be used to support the HIE and industry steering group in the process of developing their strategic objectives and policies for rail. It is also envisaged that work conducted in this study will be used to assist continued development of the Scottish Planning Assessment – a project commissioned by the Scottish Executive to help inform the process of devolution of rail powers from the UK Government to the Scottish Executive.

The report is presented in six chapters. The background and context of this study is discussed in chapter two. Chapter three documents the five-stage methodology used in the development of the rail demand model. Chapter four presents a high level summary of the demand forecast which can be read as a standalone section, similar to an executive summary. Chapter five provides a significantly more detailed analysis of the demand forecast split by the five lines in the study area and Chapter six concludes the paper by examining the main sensitivities of the forecast and identifying the likely impact of future investment. An extensive set of rail traffic tables which correspond to this chapter are presented at the end of the document in Appendix A.

2 Study Background and Context

2.1 *The Changing Nature of Scottish Railways*

In October 2005 the Scottish Executive took over direct management of the First ScotRail franchise. By the 1st of April 2006, the Executive will have responsibility for the vast majority of rail functions within Scotland, as well as assuming the new role of funder of rail infrastructure across the country. At this time the Executive will also be responsible for specifying the network outputs which Network Rail will be tasked with delivering in Scotland.

This transfer of ownership and responsibility from the UK Government to the Scottish Executive via the devolution of rail powers under the 2005 Railway Act presents challenges to everyone involved in the Scottish rail industry.

In order that the potential benefits arising from service and infrastructure improvements to the Scottish railway network can be maximised, it is essential that those with responsibilities in the Scottish public transport sector are as fully informed as possible with regard to local and national rail issues. This takes on extra significance when considering that it is these individuals who will be approaching the Scottish Executive and Network rail to seek funding which will be used for the development of rail services in Scotland.

This study is therefore designed to assist HIE as they prepare to work within the new rail organisational structure in Scotland and seek to develop rail services to benefit their region.

2.2 *Preparing for Rail Devolution*

As the Scottish Executive prepares to take up its new responsibilities, it has commissioned three separate, but interrelated, consultations relating to rail transport in Scotland. These three projects are discussed in further detail here.

Towards a Transport Strategy for Scotland: Consultation on Rail Priorities

The aim of this consultation was to seek views on the future rail priorities for Scotland. Opinion was sought on a number of key issues, including:

- How railways contribute to the Executive's main aim of growing the economy
- The most efficient mix of freight and passenger services
- How rail services can make the most effective contribution to encouraging modal shift from the private car and reduce congestion/pollution
- Where the investment priorities should be for Scotland's rail network

In addition to these points, the consultation also sought views on a number of regional priorities. One major question to which an answer was sought is whether or not priorities on parts of the Scottish rail network should focus on social priorities as opposed to economic ones. This will be of particular importance to the Highlands and Islands, since rail operations in this area make a strong contribution to maintaining the social fabric of the area by promoting integration, accessibility and social inclusion. The closing date for consultation in this project was 28 December 2005.

Scottish Planning Assessment

The Scottish Planning Assessment is earmarked to play a key role in the planning of Scotland's railways. A multi stage process - the first report in relation to the study was published in October 2005 – the assessment is to be used to ensure alignment of the planning of Scottish rail services with wider regional and national social, economic and environmental priorities.

Route Utilisation Strategy

The Office of Rail Regulation define the Route Utilisation Strategy as "a strategy which will promote the route utilisation objective"[1] where the route utilisation objective is "the effective and efficient use and development of the capacity

[1, 2] ORR guidelines on route utilisation strategies – available at www.rail-reg.gov.uk/upload/pdf/rus_guidelines-jun05.pdf

available, consistent with funding that is, or is reasonably likely to become, available during the period of the route utilisation strategy"[2].

The findings of the Scottish Route Utilisation Strategy are to be used to assist in the planning and development of rail services with regard to factors such as network capacity and timetable outputs, as well as providing indicators as to the funding requirements of these plans.

2.3 The Role of the Railways in the Highlands and Islands

The importance of rail provision in the Highlands and Islands cannot be overstated. The Highlands and Islands face a number of geographical, social and economic issues almost exclusively unique to the area.

Regional population density is 0.08 people per hectare and large parts of the Highlands and Islands are more than two hours drive from a major town or city. Add to this the 96 inhabited islands lying off the mainland, and the need for a high quality and far—reaching network of transport infrastructure – of which rail must form a key part – becomes clear.

Transport provides people with essential access to employment and services – including health and education – and allows people the freedom of opportunity. As well as benefiting local people in the Highlands and Islands, proficient transport links also encourage visits to the area from outside the region, thus boosting the local economy.

An effective and efficient transport system is also central to achieving the targets set out in the HIE's '*A Smart Successful Highlands and Islands*' strategy, which include the creation of 20,000 new jobs and raising real incomes by between 10% and 15% over the next twenty years. A rail network which serves the needs of both people and business is essential in meeting these demanding targets.

Railways play an increasingly important role in encouraging social inclusion and preventing migration out of the region. This particularly applies with regard to residents who travel from the islands and most remote parts of the region and who have no access to private transport. Rail also has the potential to contribute to the

achievement of many of the national transport objectives, particularly with regard to achieving a modal shift from private cars to public transport.

2.4 The Highland and Islands Rail Network

There are five main rail corridors serving the Highlands and Islands. These are:

- The Highland Main Line – Inverness to Perth, and beyond to Glasgow and Edinburgh;
- The Far North Line – Inverness to Wick/Thurso;
- The West Highland Lines to Oban, Fort William and Mallaig;
- The Kyle Line – Dingwall to Kyle; and
- The Inverness to Aberdeen Line.

A 2004 report, '*The Case for Rail in the Highlands and Islands*' suggested that overall demand for rail in the region had increased over the previous five years. The Far North Line in particular showed considerable growth in patronage of over 50%.

Research put the total socio-economic loss of losing rail services within the Highlands and Islands at approximately £493 million (present value, discounted over 30 years).

Network Rail (2005) report that routes in the Highlands represent significant track mileage, the majority of which is single track – the exceptions being a short stretch of the Inverness–Aberdeen Line and three stretches of the Inverness–Perth route. Line speeds are typically between 40-75mph and consist of long, single line sections with passing loops. This set-up seriously constrains available capacity on the routes and reduces the possibility that rising demand for rail services can be accommodated by increasing services.

In terms of rail freight, Network Rail's business plan indicates that the Inverness-Perth route is well used for freight transportation and increases in the volume of rail freight along this route seem likely. However, running both passenger and freight services may lead to potential capacity restrictions for passenger services due to the varied performances (in terms of acceleration and average running speeds) of the two types of traffic.

3 Study Methodology

3.1 *Overview*

The first stage (of two) of the study, was undertaken using the 5-stage methodology detailed below.

3.2 *Project Brief*

Halcrow was required to develop a rail demand model - applicable to the Highlands and Islands – capable of accurately measuring existing patronage and forecasting future demand for the five rail corridors in the study area.

Specific feature requirements for this model were the ability to accurately project rail passenger between conurbation centres and rail catchment areas, and to forecast the demand impact of localised spatial and economic changes.

3.3 *The Five Work Stages*

Work Stage 1 – Data Collection

The first stage of the work was to collect the data required to produce and populate the rail demand model for the Highlands and Islands.

Existing and historical rail demand data

Existing journey numbers split by origin and destination from Lennon[3] were supplied by the Scottish Executive for the last complete rail year (April 2004 – March 2005).

The 2004 '*The Case for Rail in the Highlands and Islands*' study was used as a backup source of information on existing rail trip patterns.

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[3] The Lennon software suite is the tool which the rail industry uses to collate and report ticket data for the UK network. The information it contains includes the passenger journeys, passenger kilometres travelled and ticket revenue. The data is split by origin and destination station and also includes journeys using season tickets.

Future high level traffic growth projections

Data was drawn from the following information sources:

- The Scottish Planning Assessment;
- The Scottish Route Utilisation Strategy;
- Local Authority traffic growth projections; and
- TEMPRO[4].

This information was first used to inform the future demand forecasting methodology and later to validate the developed model.

Local Population and Housing Projections, National and Local Economic Growth Projections and Future Transport Improvements

The principal use of this information was to help forecast the future rail traffic growth and was drawn from the following sources:

- '*A Smart, Successful Highlands and Islands*' (HIE);
- Regional Planning Guidance;
- HITRANS Strategy;
- Local Authority Development Plans;
- Local Area Structure Plans;
- Scottish Executive Economic Reports; and
- HM Treasury Economic Forecasts.

[4] TEMPRO is an industry standard piece of planning software, which is driven by the National Trip End Model produced by the DfT.

Work Stage 2 – Building the Base Demand Matrix

The second stage of work was the construction and population of the spreadsheet demand model for the base year with the Lennon data collected during work stage 1. Upon completion of this stage, 5 separate rail passenger origin-destination matrices were prepared (one for each railway line included in the study). These show the number of passenger trips on an origin-destination basis for each rail line.

Work Stage 3 – Identification of Current Demand Drivers

Stage three of the work programme was a review of the existing traffic growth projections in order that the main drivers of demand growth in the Highlands and Islands were identified. From this analysis, it was determined that the main demand drivers to be applied in the model were:

- The catchment population – this driver also included local land usage (residential, commercial, brown-field, greenbelt);
- Economic activity – including national and regional GDP and employment figures; and
- Complementary and competing transport expeditions (including rail).

Work Stage 4 – Identification of Future Trends in Traffic Growth Drivers and Application to the Model

The next stage was to apply the review from the previous stage to the local data collected in stage two. This is to identify the future trends and drivers of growth at a local as well as national level. The precise demand impacts of these trends and projections were then modelled using the principles highlighted in the *Passenger Demand Forecasting Handbook 4.1 (PDFH).*

Once all the required data and demand drivers had been built into the model, it was possible to produce 15 year rail traffic demand forecasts for each of the lines incorporated into the study.

Two forecasts for each line were produced – an optimistic scenario and a pessimistic scenario. This was done in order to give a range for the number of rail passengers expected in the Highland and Islands over the next 15 years.

Work Stage 5 – Validating the Model

The final stage of work in phase 1 of the project was to validate the finished demand model. This was achieved by comparing the forecasts generated by the demand model with the high level traffic forecasts in both the Scottish Planning Assessment and the Route Utilisation Strategy.

4 Summary of the Rail Demand Projections

4.1 *Forecast Range: Optimistic and Pessimistic Scenario*

As stated in the previous chapter, in order to produce a range of the expected number of rail passengers in the Highlands and Islands over the next 15 years, two forecasts have been produced using optimistic and pessimistic scenarios.

The optimistic and pessimistic forecasts represent the extremes of the future likely level of demand for rail in the study area. Both forecasts have been constructed using the same set of variables (i.e. population growth, highway improvements and national and local economic factors) and differ only in the specific figures that have been applied - for example there are several different official population projections in existence. The optimistic forecast uses the figures that generate the largest demand for rail such as the highest future population projections and smallest improvements to competing modes. Conversely the pessimistic forecast uses figures that generate the lowest level of rail demand.

It is felt the provision of an upper and lower bound is of greater value than a single central forecast.

4.2 *Main Drivers of Demand*

Three specific groups of demand drivers were used to produce the rail traffic forecasts. These are detailed below:

- **Population and Housing Projections**

  The first component of demand growth was estimated on the basis of future population and housing projections for each of the local areas on the Highlands and Islands network as well as those areas which directly feed into it such as Edinburgh, Glasgow and Perthshire. Demand was estimated by applying the percentage population increase to the base year trip matrix using

the elasticity advocated by Passenger Demand Forecasting Handbook (PDFH)[5].

The pessimistic scenario uses the lowest of the population forecasts available for each local area. The optimistic scenario used the highest population forecasts, which were usually the housing projection for rail local rail catchment areas multiplied by the average housing occupancy.[6]

- **National and Local Economic Growth Projections.**

The second component of future demand growth was estimated using local projections for economic growth pegged to the overall trend for GDP growth in Scotland over the next 15 years. Local projections are largely based upon the number of sector driven new jobs expected over the study period. The pessimistic scenario is driven by the lowest available economic projection for each area and conversely the optimistic scenario is driven by the highest projections. Similarly to the population growth, economic changes were converted into the number of rail trips using a suggested elasticity from PDFH.[7]

- **Other Modes of Transport (Competing, Complementary and Rail).**

The third component of future demand growth was estimated using the likely changes to modes of transport over the next 15 years. This includes the impact of improvements to rail services, improvements to complementary modes such as ferries, and improvements to the highway network.

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[5] PDFH advocates an elasticity of demand with respect to population growth of 1. This means that a percentage change in the population will produce a like for like percentage change in demand.

[6] The housing increase itself does not represent the population increase as the average housing occupancy is falling, Applying the lower housing occupancy avoids over estimating the true figure.

[7] PDFH advocates a range of demand elasticities with respect to population growth, depending on the characteristics of the rail market. The mid point of values that relate to the Highlands and Islands Market was selected, which is a value of 1.1. This means that a 1% percentage increase in the population will produce a 1.1% increase in demand.

The pessimistic scenario uses the combination of future transport initiatives that produce the lowest level of demand for rail, such as the implementation of a wide programme of strategic improvements to the competing highway network, slow implementation of improvements to ferries and low passenger take up for new rail services. Conversely the optimistic scenario takes the combination of changes to future transport provision which maximise the generation of rail trips.

In accordance with the latest DfT guidance, network – wide fares are assumed to grow annually at RPI + 1% over the 15 year appraisal period.

Similarly to the other demand drivers PDFH was used to convert the changes to competing modes into rail passenger trips.[8]

4.3 Summary and Explanation of Demand Projections

A summary of the optimistic and pessimistic demand projections for the whole Highland and Island rail network is detailed below in table 4.1. On the basis of the Lennon data it is estimated that there were around 1.47 million passenger trips on the Highland rail network in the base year (2004/05). This includes all trips made exclusively on the Highland network, all trips from the Highlands and Islands to elsewhere in the UK and all trips from elsewhere in the UK to the Highlands and Islands. With the exception of stations in Perthshire to the north of Perth, trips on the Highland Mainline which do not enter the study area are not included, i.e. Glasgow to Stirling.

The Inverness – Aberdeen Line and Highland Mainline account for the majority of passenger trips on the Highlands network with a share of around 35% and 33% respectively. The West Highland Line accounts for the next largest share of the total number of trips with around 18% of all passenger trips and the Far North Line and Kyle Line make up the smallest part of the network with 10% and 4% of passenger trips respectively.

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[8] PDFH advocates a range of demand elasticities with respect to competing modes, depending on the characteristics of the rail market. The mid point of values that relate to the Highlands and Islands Market was selected, which is a value of 0.3 (since car is the main competing mode considered). This means that a 1% percentage decrease in the car journey time will produce a 0.3% decrease in demand.

On the basis of the optimistic and pessimistic scenarios the number of passenger trips on the Highland and Islands rail network is forecast to grow by between 67% and 43% over the next 15 years. The highest level of growth is expected to occur over the forthcoming 5 years up to 2011, when economic and population growth are expected to be at their highest levels, when the full impact of recent new rail services are felt, and before many of the targeted highway improvement schemes come on stream. Part of the slowing in demand growth beyond 2011 is a result of an element of conservatism being taken in longer term economic and population projections. In reality the current high levels of population and economic growth that have already been experienced in many of the conurbations on the rail network may continue over a number of years, however projecting this beyond the short term future is problematic and taking a more prudent approach represents forecasting best practice.

Table 4.1. Summary of Rail Demand Projections.

Year	Optimistic Scenario		Pessimistic Scenario		Central Population Forecast	
	Passenger Trips	Percentage Growth	Passenger Trips	Percentage Growth	Population	Percentage Growth
Base Year	1,465,206		1,465,206		213,256	
2005/06	1,532,427	4.6%	1,510,373	3.1%	214,645	0.91%
2006/07	1,567,857	2.3%	1,521,050	0.7%	215,440	0.65%
2007/08	1,638,945	4.5%	1,564,499	2.9%	215,844	0.37%
2008/09	1,721,646	5.0%	1,614,191	3.2%	216,221	0.19%
2009/10	1,799,764	4.5%	1,661,174	2.9%	216,575	0.17%
2010/11	1,899,301	5.5%	1,718,203	3.4%	216,901	0.16%
2011/12	1,959,114	3.1%	1,756,636	2.2%	217,209	0.15%
2012/13	2,018,131	3.0%	1,797,598	2.3%	217,490	0.14%
2013/14	2,079,060	3.0%	1,838,125	2.3%	217,750	0.13%
2014/15	2,141,942	3.0%	1,879,665	2.3%	217,987	0.12%
2015/16	2,201,270	2.8%	1,916,178	1.9%	218,200	0.11%
2016/17	2,262,236	2.8%	1,956,393	2.1%	218,397	0.10%
2017/18	2,323,878	2.7%	1,999,525	2.2%	218,562	0.09%
2018/19	2,387,326	2.7%	2,044,288	2.2%	218,699	0.08%
2019/20	2,452,634	2.7%	2,090,174	2.2%	218,819	0.06%
15 yr Total		67.4%		42.7%		3.6% (20 years)

Tables 4.2 and 4.3 below present the breakdown of the network wide demand projection by the five lines on the network, for the optimistic and pessimistic scenarios respectively.

A large part of the demand growth is driven by the high levels of economic and population growth in some of the main conurbations on the network, in particular Inverness which is already experiencing high levels of growth and is widely acknowledged as the fastest growing city in Scotland. This is evident in the breakdown of demand by line as the Far North Line, which has an existing market

dominated by trips to and from Inverness, and is forecast to have the largest levels of growth ranging between 57% and 97% over the next 15 years.

Another major driver of the demand increase is economic and population growth in major conurbations from other parts of Scotland which feed into the Highlands and Islands network. Edinburgh and its wider catchments in particular are forecast to experience substantial growth in the short to medium term. This is particularly evident on the Highland mainline, which has a relatively large number of trips to and from the wider Edinburgh area compared to other lines, and is forecast to have the second highest level of demand growth ranging between 51% and 67%.

Most of the conurbations on the West Highland Line and Kyle Line are geographically separated from the areas of high economic and population growth discussed above. Despite this, both lines are forecast to generate moderate levels of passenger growth over the next fifteen years, caused partially by economic growth from more distant population centres and partially by local sector driven improvements to the economy, improvements to rail services and some localised population increases in the rail corridors. The total increase in passenger trips is forecast to increase by between 40% and 60%, and 35% and 61% respectively.

The Inverness – Aberdeen Line is also forecast to experience moderate levels of passenger growth over the next 15 years of between 33% and 63%. The main reason for this is a sizeable loss of jobs from the offshore industry that is projected to occur within the next 10-15 years. Some of this impact on rail demand will be offset by a shift in the economy of Aberdeen into other areas, as well as economic growth in Inverness, which explains why a small increase in demand is forecast rather than a decrease.

Table 4.2. Rail Demand Projections Split by Line: Optimistic Scenario.

Line	Far North Line		Kyle Line		Highland Mainline		Inverness - Aberdeen Line		West Highland Line	
	Trips	Growth	Trips	Growth	Trips	Growth	Trips	Growth	Trips	Growth
Base Year	156,478		53,699		478,833		512,429		263,768	
2005/06	169,560	8.4%	55,960	4.2%	501,179	4.7%	532,890	4.0%	272,838	3.4%
2006/07	179,917	6.1%	56,969	1.8%	511,458	2.1%	544,253	2.1%	275,261	0.9%
2007/08	195,169	8.5%	59,256	4.0%	533,241	4.3%	567,513	4.3%	283,767	3.1%
2008/09	212,619	8.9%	61,820	4.3%	560,222	5.1%	593,569	4.6%	293,417	3.4%
2009/10	223,381	5.1%	64,564	4.4%	586,460	4.7%	621,731	4.7%	303,628	3.5%
2010/11	234,716	5.1%	67,437	4.5%	613,974	4.7%	649,513	4.5%	333,661	9.9%
2011/12	242,779	3.4%	69,517	3.1%	633,716	3.2%	670,843	3.3%	342,258	2.6%
2012/13	251,126	3.4%	71,662	3.1%	654,110	3.2%	690,083	2.9%	351,150	2.6%
2013/14	259,767	3.4%	73,875	3.1%	675,178	3.2%	709,981	2.9%	360,259	2.6%
2014/15	268,713	3.4%	76,157	3.1%	696,942	3.2%	730,562	2.9%	369,567	2.6%
2015/16	277,975	3.4%	77,490	1.7%	718,445	3.1%	748,415	2.4%	378,947	2.5%
2016/17	286,093	2.9%	79,670	2.8%	738,259	2.8%	769,177	2.8%	389,037	2.7%
2017/18	293,384	2.5%	81,844	2.7%	758,634	2.8%	790,618	2.8%	399,398	2.7%
2018/19	300,863	2.5%	84,078	2.7%	779,587	2.8%	812,761	2.8%	410,037	2.7%
2019/20	308,533	2.5%	86,374	2.7%	801,135	2.8%	835,630	2.8%	420,962	2.7%
15 yr Total		97.2%		60.8%		67.3%		63.1%		59.6%

Table 4.3. Rail Demand Projections Split by Line: Pessimistic Scenario.

Line	Far North Line		Kyle Line		Highland Mainline		Inverness - Aberdeen Line		West Highland Line	
Year	Trips	Growth	Trips	Growth	Trips	Growth	Trips	Growth	Trips	Growth
Base Year	156,478		53,699		478,833		512,429		263,768	
2005/06	165,245	5.6%	55,008	2.4%	495,949	3.6%	524,192	2.3%	269,980	2.4%
2006/07	171,180	3.6%	55,326	0.6%	500,869	1.0%	524,100	0.0%	269,575	-0.2%
2007/08	180,826	5.6%	56,591	2.3%	516,870	3.2%	535,100	2.1%	275,113	2.1%
2008/09	191,701	6.0%	58,021	2.5%	534,946	3.5%	547,895	2.4%	281,627	2.4%
2009/10	197,201	2.9%	59,541	2.6%	554,203	3.6%	561,702	2.5%	288,526	2.4%
2010/11	202,886	2.9%	60,316	1.3%	574,168	3.6%	575,961	2.5%	304,871	5.7%
2011/12	206,998	2.0%	61,532	2.0%	589,891	2.7%	587,408	2.0%	310,807	1.9%
2012/13	211,209	2.0%	62,775	2.0%	606,051	2.7%	600,637	2.3%	316,926	2.0%
2013/14	215,520	2.0%	64,046	2.0%	622,660	2.7%	612,744	2.0%	323,156	2.0%
2014/15	219,935	2.0%	65,344	2.0%	639,730	2.7%	625,181	2.0%	329,476	2.0%
2015/16	224,456	2.1%	66,672	2.0%	651,091	1.8%	637,958	2.0%	336,001	2.0%
2016/17	229,085	2.1%	68,029	2.0%	668,527	2.7%	647,656	1.5%	343,096	2.1%
2017/18	234,878	2.5%	69,783	2.6%	685,926	2.6%	657,417	1.5%	351,521	2.5%
2018/19	240,243	2.3%	71,225	2.1%	703,781	2.6%	668,886	1.7%	360,154	2.5%
2019/20	245,736	2.3%	72,698	2.1%	722,104	2.6%	680,637	1.8%	368,999	2.5%
15 yr Total		57.0%		35.4%		50.8%		32.8%		39.9%

4.4 *Benchmarking the Rail Projections.*

To put the range of 15 year growth projections for the Highlands into context it is useful to compare them with the historical medium/long term trend regional railways in the UK, as historical economic performance in Scotland has been less buoyant in the medium-long term than the official projections for the Highlands and Islands. By contrast the UK regions have experienced a varied level of economic growth and consequently offer a better comparison of the levels of passenger growth that could be expected over the next 15 years.

The most recent *National Rail Trends Yearbook (2004-05)*, published by the Strategic Rail Authority (now DfT Rail), report a 7 year growth trend of around 2.8% per annum for regional railways. If this compound trend is applied over 15 years it produces a total growth rate of around 51%. This falls almost exactly in the middle of the range identified in this study, which indicates that the total levels of growth forecast of right order of magnitude.

The 15 year demand forecast presented in the *Scotland Planning Assessment Part 1 Volume 2 (SPA)* implies a total growth rate of around 25%. Although this is lower than the pessimistic forecast for the Highlands and Islands, it is approximately of the right order of magnitude when some mitigating circumstances are taken into account:

- Official population projections have recently been updated by Highlands Council, as well as by other groups such as the Highlands Monitoring Group. These include the impact of in-migration and predict a small population expansion; the Highlands Council predict an increase of around 3.6% between 2004 and 2024. Conversely the previous set of official projections do not include the impact of in-migration, and forecast a small but significant decline in the overall population of the Highlands and Islands. The SPA used the older projections whereas this study is underpinned by the newer more optimistic figures, thereby resulting in a higher passenger demand forecast.

- The SPA does not appear to take the more recently committed service frequency improvements into account, such as the early morning service between Arrochar & Tarbet and Glasgow, and the additional Wick-Inverness train (due to commence in Decemeber 2006). As these are early morning services they are more likely to increase.

As the largest levels of growth in the demand projection is forecast to occur in the short term it is useful to compare this with recent historical growth in Scotland as the economic performance underpinning the forecast for the next five years has been realised nationally over the previous few years. The *National Rail Trends Yearbook (2004-05),* and *(2003-04)* respectively report annual passenger growth of 10.6% and 8.6% over the previous two full years. These are higher than the short term growth levels forecast for the Highlands which average between 4.3% and 2.6% for the next five years. This provides indication that the forecast levels are achievable.

5 Detailed Projections Split by Line

5.1 *Introduction*

The following section expands on the previous chapter by presenting an analysis of the demand forecasts broken down into the five lines in the study area. The analysis for each line explains the figures and assumptions that have been used to produce the optimistic and pessimistic forecasts, and dissects the forecast by the stations on the line. The number of passenger trips for each station over the 15 year forecast period is detailed in a series of tables in Appendix A, as they are too large to include in the main report.

5.2 *Far North Line*

All passenger trips originating, and/or terminating on the line between Wick, Thurso and Inverness have been allocated to the Far North Line. This includes Dingwall, Muir of Ord and Beauly. As a consequence the figures presented in this report may be higher than previous publications which have allocated the southern trips to the Kyle Line.

A high proportion of passenger trips currently made on the Far North Line are either long distance between Inverness and either Thurso, Wick or Lairg, or short distance south of Tain, and particularly between Dingwall, Beauly and Inverness. The long distance trips are predominantly leisure-based such as people visiting friends and relatives, as well as a number of tourists. The short distance trips are mixed with, some business and commuting trips in the peak, a number students attending further education in Inverness, and off peak leisure trips.

Optimistic Scenario

Population:

- Future population of Alness, Dingwall, Invergordon, Muir of Ord, and Tain is based on housing projections from the Ross and Cromarty Deposit Draft. This is that an additional 630, 590, 555, 360 and 370 houses respectively are completed by 2017. It is assumed that these developments are built within the catchment area of the railway stations, and the average housing occupancy is

2.1 people per dwelling[9]. (This occupancy figure has been applied elsewhere in the forecasts unless stated otherwise).

- The population of Inverness is based on housing projections from the Inverness Structure Plan, for an additional 3700 houses to be constructed by 2016. It is assumed that these will be located within the catchment of the railway and is equivalent to around a 1% compound increase in demand per year.

- The population of Wick and Thurso is based on an estimate of 750 new houses in Caithness by 2017. It is assumed that these are distributed evenly between the two locations and fall within the rail catchment.

- There are no local population projections currently available for the rest of the rail corridor so the Highland Council's projection of a 3.6% population increase between 2004 and 2024 has been assumed.

National and Local Economy:

- In the optimistic scenario all economic growth projections have been validated by economic growth forecasts supplied by Highlands and Islands Enterprise.

- The GDP growth that is projected by the Treasury is productivity and investment driven rather than employment driven as the proportional level of unemployment is predicted to remain largely unchanged. Therefore the optimistic economic scenario has been put together by adding local employment growth projections to the GDP growth forecast for Scotland. It is assumed the there is a one-for-one relationship between GDP and employment as they are treated the same in PDFH.

- Future economic growth in Inverness is based on the projection from the Inverness Deposit Draft of 4000 new jobs by 2011. This is equivalent to around 1% compound annual growth in addition to the level of GDP growth forecast for Scotland.

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[9] This figure is has been estimated on the basis of the known current housing stock and population figures in the study area.

- There are no current employment forecasts available for the remainder of the line. Traditionally the far north of Scotland has not had many of the high value economic sectors that are incumbent in the main centres of conurbation. It is envisaged that a filtering of economic wealth from Inverness and initiatives from the HIE and other groups to promote economic growth will ensure that GDP growth remains at the national average plus an additional 0.45% per annum after validation using HIE figures.

Other Modes of Transport (Rail, Complementary and Competing):

- First Scotrail have recently commenced a daily early morning service between Lairg and Inverness, meaning that Inverness is now accessible by rail from the North before 9 am. An additional daily service from Wick is also scheduled from December 2006. The demand impact of the new services between Lairg and Inverness has been estimated using a PDFH forecasting approach. The maximum elasticity cited in PDFH for this type of service (-1.1) has been selected. Demand is forecast to increase by around 0.5%-7% compound per annum over 4 years, depending on the station.

- Upgrading the A9 north of Dornoch is a short term strategic priority for HITRANS. The optimistic scenario assumes that a 25% highway journey time reduction will be achieved over the length of the upgrade, however it is not implemented until 2016.

- It is acknowledged that there are aspirations to greatly improve the level of ferry service provision between Orkney and the mainland. If the improvements were carried out there would be an increase in rail demand - however as there are no current arrangements to carry out the improvements the impact has not been considered in the forecasts.

Pessimistic Scenario
Population:

- With the exception of North Caithness and Inverness, the population is assumed to increase by 3.6% between 2004 and 2024, in line with the Highland Council's projections.

- The population of Inverness is based on the moderate projection of a 3% increase by 2017 from the Highland Monitoring Group.

- The catchment population of Wick, Thurso and Georgemas Junction is based on the Highland Council's projection of a 3.6% increase by 2017.

National and Local Economy:

- The pessimistic economic scenario for Inverness and Edinburgh assumes that local growth in addition to the national GDP trend is 50% lower than in the optimistic scenario.

- In the pessimistic scenario it is assumed that local economic initiatives and the impact of economic growth in Inverness only produce a level of growth in the rest of the rail corridor equivalent to half the average rate for Scotland.

Other Modes of Transport (Rail, Complementary and Competing):

- Similarly to the optimistic scenario the demand impact of the new Scotrail services between Wick, Lairg and Inverness has been estimated using the same PDFH forecasting approach, with a lower demand elasticity of -0.9. Demand is forecast to increase by around 0.5-5% compound per annum over 4 years, depending on the station.

- The pessimistic scenario assumes that a 25% highway journey time reduction will be achieved over the length of the A9 upgrade north of Dornoch, and it is implemented by 2011.

Future Rail Growth.

The largest levels of rail passenger growth on the line are forecast to occur between Inverness and Invershin ranging from around 60% to 125% over 15

years. The main drivers of this growth are the expansion of the economy and population of Inverness, and the additional early morning rail service on the south section of the line. Rail demand on the rest of the route is forecast to grow at a lower level of between 20% and 75%. This is because the impact of the growth of Inverness and new rail service is significantly lower due to the large distance and rail journey time involved.

Future growth in rail demand by journey purpose is expected to mirror the existing profile, as without major infrastructure improvements the long journey times relative to road, and low service frequency mean the majority time-sensitive commuters will continue to use the car or bus. The exception to this is likely to be the short distance market south of Tain, which given the relatively short journey times to Inverness, is well placed to attract a larger share of the commuter market through new and future committed frequency increases.

5.3 Highland Mainline

All passenger trips originating, and/or terminating on the line between Inverness and Perth, have been allocated to the Highland Mainline. The stations at Blair Atholl, Pitlochry and Dunkeld and Birnam are in Perthshire and therefore outside the HIE study area. However, as the only trains that call at these stations are Highland Mainline services they have been included in the analysis. Inclusion of the Perthshire stations effectively adds around 71,000 passenger trips to the 2004/05 baseline. When the figures for the Highland Mainline presented in this report are compared with previous publications it should be ensured that trips from the stations in Perthshire have been treated consistently. In addition it is assumed here that all trips to Perthshire and Southwards from the Kyle Line and Far North Line, as well as trips from Keith and Eastwards are routed via the Highland Mainline. Conversely, some previous publications have allocated a proportion of these trips via the Inverness-Aberdeen Line. When comparing the baseline 2004/05 data with previous years it should be ensured that the effect of inter-line allocation is taken into account.

All projections relating to Inverness are as described in the Far North Line Section.

The majority of passenger journeys on the Highland Mainline are leisure-based, in particular people visiting friends and relatives as well as a number of tourists. A small but significant business market is served by the line, especially by the first departure from Inverness which, anecdotally, regularly has a full first class

compartment. There are also a small number of commuters that use the services in the peak between Kinguissie, Aviemore and Inverness.

Optimistic Scenario

Population:

- The future catchment population for stations in Badenoch is based on the Highland Council's projection of a 3.6% increase by 2017. This is the only population forecast for the area.

- Future population of Edinburgh is based on the high end of housing projections in the 2004 Edinburgh Structure Plan. This is that up to 5000 houses will be constructed annually until 2015 in the wider Edinburgh area, and is equivalent to around 0.75% compound growth per annum on the assumption that all these developments are within the rail catchment.

- The population of the rail catchment from Inverkeithing to Ladybank inclusive is based on population projections from Fife Council. This is equivalent to a 0.4% compound increase per annum over the next 15 years.

- Future population for Glasgow, Falkirk and Stirling are taken from the respective local plans and although there is currently a trend of decreasing population it is anticipated that level can be held constant.

- The catchment population for stations in Perthshire is taken from the Perthshire Structure Plan which projects 3% growth by 2020. This is equivalent to about 0.2% compound per annum.

National and Local Economy:

- In the optimistic scenario economic growth projections for the study area have been validated by economic growth forecasts supplied by Highlands and Islands Enterprise.

- There are no current employment forecasts available for Badenoch, however the optimistic scenario is built on the assumption that economic growth in Inverness, and initiatives from the HIE and other groups to promote economic growth, will ensure that GDP growth remains at the national average plus an additional 0.45% per annum after validation using HIE figures.

- Economic growth in Edinburgh is estimated on the basis of 43,000 new jobs predicted by 2015 in the Edinburgh Structure Plan. This is equivalent to around 0.5% annual growth per annum in addition to the GDP growth projection for Scotland.

- Economic growth in Glasgow is estimated on the basis of 30,000 new jobs by 2011 projected by the council. This is equivalent to around 1% annual growth per annum in addition to the average GDP growth trend for Scotland.

- Economic growth for Stirling and Falkirk is estimated to match the national average.

Other Modes of Transport (Rail, Complementary and Competing):

- First Scotrail have recently commenced a daily early morning service between Kinguissie and Inverness, meaning that Inverness is now accessible by rail from the South before 9 am. The demand impact of the new service between Kinguissie and Inverness has been estimated using a PDFH forecasting approach. The maximum elasticity cited in PDFH for this type of service (-1.1) has been selected. Demand is forecast to increase by around 2%-3%.

- The optimistic scenario assumes that aspirations to upgrade the A9 South of Inverness and South of Perth are realised and a 25% highway journey time reduction will be achieved over the length of the upgrade. It is assumed that implementation is not complete until 2016.

- The optimistic scenario also uses PDFH to estimate small (0.5%-1%) annual increase in rail demand over the study period to reflect the historical trend of increased road congestion on the A9 between Inverness and Perth in particular.

Pessimistic Scenario

Population:

- The future catchment population of stations in Badenoch is the same as for the optimistic scenario as there is only one projection available.

- Future population of Edinburgh is based on the low end of housing projections in the 2004 Edinburgh Structure Plan. This is that 4000 houses will be constructed annually until 2015 in the wider Edinburgh area, and is equivalent to around 0.6% compound growth per annum on the assumption that all these developments are within the rail catchment

- The catchment population for stations in Perthshire is taken from the Eastern Area Deposit Draft which projects 1% growth by 2017.

- The population of the rail catchment from Inverkeithing to Ladybank inclusive is the same as for the optimistic scenario as there is only one projection available.

- Future population for Glasgow, Falkirk and Stirling is estimated to fall 2% by 2015 based on "do-nothing" population projections from the respective local plans.

National and Local Economy:

- In the optimistic scenario all economic growth projections have been validated by economic growth forecasts supplied by Highlands and Islands Enterprise.

- With the exception of Glasgow and Edinburgh all other areas on the line are assumed to experience economic growth in line with the national average.

- The pessimistic scenario for Edinburgh assumes that the level of local GDP growth over national GDP growth is 50% lower than in the optimistic scenario.

Other Modes of Transport (Rail, Complementary and Competing):

- Similarly to the optimistic scenario the demand impact of the new Scotrail services between Kinguissie and Inverness has been estimated using the same PDFH forecasting approach, with a lower demand elasticity of -0.9. Demand is forecast to increase by around 2-2.5%.

- The pessimistic scenario assumes the same highway journey time improvements as the optimistic scenario but an earlier implementation year of 2011.

- Similarly to the pessimistic scenario a PDFH approach is used to estimate a small (0.5%-1%) annual increase in rail demand over the study period to reflect the historical trend of increased road congestion on the A9 between Inverness and Perth in particular. It is assumed however that future highway improvement schemes will negate this effect by 2016.

Future Rail Growth.

The highest levels of growth are projected to occur in the areas that are closest to Inverness, particularly Inverness itself, Carrbridge, Aviemore and Kingussie, as well some stations in Perthshire, which are predicted to experience between around 50% and 100% additional passengers by 2020. Similarly to the Far North Line the main factors behind this growth are economic and population increases in Inverness and new early morning rail services connecting stations in the Inverness area with the city centre.

Edinburgh and Fife are forecast to have the next highest levels of passenger growth ranging from around 50% to 70% over the next fifteen years. Similarly to Inverness this is generated by economic and population expansion in Edinburgh and the surrounding areas.

The rest of the line is also forecast to experience sizeable increases in passenger numbers of between 30% and 60%, as the majority of catchment areas are forecast to have relatively stable population numbers and a robust economic performance.

Similarly to the Far North Line, in the absence of major infrastructure improvements, the profile of demand growth by journey purpose is likely to remain the same as at present, supported by new tourist developments in areas such as Aviemore. The exception to this is likely to be short distance flows into Inverness which will have an increase in the number of commuters resulting from a combination of an expanding population and economy, and additional early morning services. There may also be an increase in business demand as Inverness continues to grow and relocation of offices, such as Scottish Natural Heritage, will generate additional trips between the city and the central belt.

5.4 West Highland Line

All passenger trips originating, and or terminating on the line between Mallaig, Oban and Helensburgh Upper have been allocated to the West Highland Line.

Passenger trips that originate and terminate to the South of Helensburgh have not been counted because the line forms part of the SPT network.

Optimistic Scenario

The majority of trips on the West Highland line are for the purposes of leisure, with tourism accounting for a significant proportion of these. There is a small but significant and increasing commuter market between Arrochar & Tarbet and Glasgow, and smaller commuter flows into Oban and Fort William.

Population:

- The future catchment population for stations in Lochaber (Mallaig – Rannoch) is based on a projection of a 2% increase by 2011 from the Lochaber local plan. This equates to around a 0.3% annual compound increase.

- Argyll and Bute Council provided some extremely detailed population projections and it was possible to produce year-by-year forecasts for the local areas on the line. All areas show a small population decrease: Oban, Lorn and the Inner Isles (0 to 0.35% pa); Helensburgh and Loch Lomond (0.35% to 0.54% pa); and, Loch Lomond and Trossachs National Park (0.59% to 0.89% pa).

- The population of Glasgow is as detailed in the Highland Mainline section.

National and Local Economy:

- In the optimistic scenario economic growth projections for the study area have been validated by economic growth forecasts supplied by Highlands and Islands Enterprise.

- There are no specific GDP or employment populations that relate to the West Highland Line except for Glasgow which is as detailed in the Highland Mainline section. As a result the optimistic scenario is based on the premise that economic growth in Glasgow and the Highlands and local initiatives to develop the economy, particularly through tourism, will keep GDP growth in line with the national average plus an additional 0.45% per annum after validation using HIE figures. It is recognised that tourism is a major driver of

economic activity, however this is an absence of evidence to suggest that tourism will grow at a rate sufficient to increase economic activity relative to the rest of the Highlands.

Other Modes of Transport (Rail, Complementary and Competing):

- First Scotrail have recently commenced an early morning service per day between Arrochar & Tarbet and Glasgow, meaning that Glasgow is now accessible by rail from the West Highland Line before 9 am. The demand impact of the new service between Arrochar & Tarbet and Inverness has been estimated using a PDFH forecasting approach. The maximum elasticity cited in PDFH for this type of service (-1.1) has been selected. Demand is forecast to increase by around 16%-19%.

- Improvements to the ferry links between many of the Western Isles and the West Highland Line are a short term strategic priority for HITRANS and several local authorities. As there is a lack of information about the precise nature of these improvements the optimistic scenario assumes that a 10% increase in demand is generated from Oban and Mallaig by 2011.

- The potential impact of increased traffic congestion on the A82 has been considered however there is insufficient evidence to include this in the forecast, particularly given that there are some aspirations to upgrade parts of the route.

Pessimistic Scenario

Population:

- The future catchment population for stations in Lochaber (Mallaig – Rannoch) is the same as in the optimistic forecast as there is only one projection available.

- Similarly the population for Argyll and Bute is the same as in the optimistic scenario as there is only one set of forecasts available.

- The population of Glasgow is as detailed in the Highland Mainline section.

National and Local Economy:

- In the pessimistic scenario it is assumed that local economic initiatives and the impact of economic growth in Glasgow can only produce a level of growth in the rest of the rail corridor equivalent to half the average rate for Scotland.

- Growth for Glasgow itself is as detailed in the Highland Mainline section.

Other Modes of Transport (Rail, Complementary and Competing):

- Similarly to the previous lines the demand impact of the new Scotrail service between Arrochar & Tarbet and Glasgow has been estimated using the same PDFH forecasting approach, with a lower demand elasticity of -0.9. Demand is forecast to increase by around 13%-15%.

- Similarly to the previous scenario the pessimistic case assumes that improvements to ferries generate a 5% increase demand from Oban and Mallaig by 2011.

- The effect on rail demand of future reduction in air fares and improvements to air services between the Western Isles and the mainland has been considered. Previous studies have indicated that around 20,000 trips per annum could be abstracted from the total rail market, however this is not split by line and assumes no competitive response from the ferry and rail operators. In reality it is extremely difficult to disentangle these effects so the demand impact is assumed to be negligible.

Future Rail Growth.

Passenger growth on the West Highland Line is forecast to be relatively evenly spread across the route up to a maximum of around 70% over 15 years. The minimum forecast levels of growth in Glasgow and the surrounding areas of around 40% are slightly higher than on the rest of the line due to the impact of a buoyant economy and the new early morning rail services recently introduced between Glasgow and Arrocahar & Tarbet.

The majority of passenger growth is likely to be for the purpose of leisure travel, in particular tourism and to a lesser extent people visiting friends and relatives. The continued development of Oban as a major tourist hub and the attraction of Fort William as a major UK and European centre for outdoor activities will be important drivers of the growth in demand. Short distance commuter travel to and

from Glasgow is expected to increase as a result of additional peak services and economic expansion in Glasgow and the central belt.

5.5 Kyle Line

The Kyle line includes all passenger trips originating, and/or terminating on the line between Kyle of Lochalsh, with the exception of trips made between Dingwall, Muir of Ord, Beauly and Inverness, which have been allocated to the Far North Line. As a consequence the figures presented in this report may be lower than previous publications which have allocated the southern trips to the Far North Line.

Almost all trips that are made on the Kyle Line are leisure-based, and the majority of these are tourists.

All projections relating to Inverness are as described in the Far North Line section.

Optimistic Scenario

Population:

- The future population of Kyle of Lochalsh is based on a forecast of 615 new houses between 2006 and 2011 from the 1999 Skye and Lochalsh Structure Plan. As the conurbations within this area are widely spread it is assumed that only 50% of the new houses are within the catchment of the railway. This is equivalent to a 0.9% compound annual increase until 2011.

- The catchment population for the remainder of the Kyle Line is taken from housing projections detailed in the Western Ross Local Plan, which implies a 0.5% annual increase to 2011.

National and Local Economy:

- In the optimistic scenario all economic growth projections have been validated by economic growth forecasts supplied by Highlands and Islands Enterprise.

- There are no specific GDP or employment populations that relate to the Kyle Highland Line except for Inverness which is as detailed in the Far North Line section. As a result the optimistic scenario is based on the premise that economic growth in Inverness and the HIE area and local initiatives to develop the economy, particularly through tourism, will keep GDP growth in line with

the national average plus an additional 0.45% per annum after validation using HIE figures. It is recognised that tourism is a major driver of economic activity, however there is an absence of evidence to suggest that tourism will grow at a rate sufficient to increase economic activity relative to the rest of the Highlands.

Other Modes of Transport (Rail, Complementary and Competing):

- Improvement of the A890 is a short term strategic priority for HITRANS and Skye and Lochalsh council. The optimistic scenario assumes that these improvements (scheduled for 2006) result in a 25% highway journey time reduction, and take 10 years to fully translate into reduced rail demand.

Pessimistic Scenario
Population:

- The pessimistic scenario uses the Highland Council's projections of a 3.6% increase in the population between 2004 and 2024.

National and Local Economy:

- In the pessimistic scenario it is assumed that local economic initiatives and the impact of economic growth in Inverness can only produce a level of growth in the rest of the rail corridor equivalent to half the average rate for Scotland.

Other Modes of Transport (Rail, Complementary and Competing):

- Similarly to the previous scenario the pessimistic case assumes that improvements to the A890 produce a 25% journey time reduction but only takes five years for the full impact on rail demand to occur.

Future Rail Growth.

The largest increase in passenger trips is forecast to occur between Inverness and the rest of the line, ranging between 49% and 69% over the 15 year period. Similarly to other lines this is driven by the economic and population growth in Inverness.

Growth over the remainder of the line is projected to be evenly spread, ranging from 22% to 64% in total. The growth projections for Dingwall and Muir of Ord

look artificially small because trips to and from Inverness are attributed to the Far North Line.

The majority of passenger growth will be leisure-based, in particular tourism-driven by HIE initiatives in the area and increasing disposable incomes in Inverness and other parts of the Highlands.

5.6 Inverness to Aberdeen Line

All passenger trips originating, and/or terminating on the line between Inverness and Keith, have been allocated to the Inverness-Aberdeen Line. Passenger trips that originate and terminate on the line between Huntly and Aberdeen have not been counted as they are outside the study area. In addition it is assumed that all Southbound trips to Perth and beyond from Keith westwards are made using the Inverness-Aberdeen Line and the Highland Mainline, whereas trips to Perth and beyond from Huntly eastwards are made on the Eastcoast Mainline. All trips from the Kyle Line and Far North Line to Perthshire are allocated via the Highland Mainline. When comparing the 2004/05 figures with previous publications it should be ensured that the assumptions regarding the allocation of inter-line trips are understood and accounted for.

All projections relating to Inverness are as described in the Far North Line section.

Unlike the rest of the Highland rail network the characteristics of Inverness to Aberdeen Line resemble what would typically be expected from a suburban railway. There are large peak period commuter flows into Aberdeen from as far West as Elgin, and into Inverness from Elgin, Nairn and Forres. The line is used by business travellers and there is a significant amount of inter-line leisure traffic at all times of the day between the smaller conurbations, as well as larger leisure-based flows into Aberdeen and Inverness.

Optimistic Scenario

Population:

- The future population of Aberdeen is based on a forecast of 2100 new houses by 2010 from the Aberdeenshire Structure Plan. This is equivalent to around 0.4% compound annual growth.

- The catchment population for the remainder of stations in Aberdeenshire (Dyce – Huntly) is based on a projection in the Aberdeenshire structure plan of

2300 new homes in the county by 2011. This is equivalent to around 0.5% growth per annum.

- The population in Moray (Keith, Elgin and Forres) is based on the assumption that the 2320 homes forecast in the local plan to be built by 2012, are constructed within the rail catchment area. This is a high forecast equivalent to 1% growth per year until 2012.

- The population of Nairn is estimated using the housing projection of 650 new houses by 2010 from the Nairnshire Structure Plan.

National and Local Economy:

- In the optimistic scenario economic growth projections for the study area have been validated by economic growth forecasts supplied by Highlands and Islands Enterprise.

- The optimistic economic scenario for Aberdeen uses the local structure plans and Scotland Planning Assessment, and takes the smallest net combination of job losses from the offshore sector versus new jobs from emerging sectors. The number of job losses on this basis is approximately 4,850 by 2016 which is equivalent to an economic contraction of around 0.16% per annum.

Other Modes of Transport (Rail, Complementary and Competing):

- The Fochabers Bypass is a short term strategic priority for HITRANS. The optimistic scenario assumes that the improvement is carried out by 2016 and results in a 25% journey time improvement for the length of the upgraded route.

- The optimistic scenario also uses PDFH to estimate small (0.5%-1%) annual increase in rail demand over the study period to reflect the historical trend of increased road congestion on the A96 between Inverness and Aberdeen in particular.

Pessimistic Scenario
Population:

- The future population of Aberdeen and Aberdeenshire is based on a forecast of a 3% population reduction between 1998 and 2016 in the Aberdeenshire Structure Plan. This is equivalent to around a 0.2% compound annual decrease.

- The population in Moray (Keith, Elgin and Forres) is based on a projected 8% fall by 2018, again from the local plan.

- The population of Nairn is estimated to fall by 3% by 2017 on the basis of the Nairnshire Structure plan.

National and Local Economy:

- The pessimistic economic scenario for Aberdeen uses the local structure plans and Scotland Planning Assessment, and takes the largest net combination of job losses from the offshore sector versus new jobs from emerging sectors. The number of job losses on this basis is approximately 5,650 by 2021 which is equivalent to an economic contraction of around 0.19% per annum.

Other Modes of Transport (Rail, Complementary and Competing):

- Similarly to the previous scenario the pessimistic case assumes that Fochabers bypass produces a 25% journey time reduction but the scheme has an earlier implementation year of 2011.

- Similarly to the pessimistic scenario a PDFH approach is used to estimate a small (0.5%-1%) annual increase in rail demand over the study period to reflect the historical trend of increased road congestion on the A96 between Inverness and Aberdeen in particular. It is assumed however that future highway improvement schemes will negate this effect by 2016.

Future Rail Growth.

There is a relatively low level of passenger growth forecast for Aberdeen ranging between 11% and 32% over 15 years. This is almost exclusively a result of the austere economic projections for the city resulting from a large loss of jobs from the decline of the offshore industry.

The rest of the line is forecast to perform relatively well with total growth ranging between around 30% and 90%. Similarly to other lines Inverness is a major factor in this, although everywhere on the line is forecast to have a buoyant economic performance relative to Aberdeenshire. The exception is Keith which is forecast to have a much lower pessimistic level of growth than the rest of the line. The main reason for this is that when completed the Fochabers bypass would be in direct competition with the line and significantly improves road journey times relative to rail between Elgin and Huntly.

On the line as a whole it is likely that the split of the forecast growth in passenger trips by journey type is expected to largely reflect the current trend. However, given the relative economic projections for Aberdeen and Inverness the majority of the growth in commuter traffic will occur to the west of Elgin.

6 Conclusion

6.1 *Summary*

The optimistic and pessimistic forecasts that have been produced represent the maximum and minimum levels of rail traffic that can reasonably be expected on the basis of current projections for the main determinants of demand, namely: population changes and new developments; national and local sector driven economic performance, and; changes to competing and complementary modes of transport as well as rail. The forecasts are based on current and committed levels of service provision, and the impact of enhanced services are considered in phase two of this study.

The range of growth forecast for the Highland Rail network as a whole (68% - 42%), and five individual lines is wide enough to offer a strong degree of certainty that future demand level will fall within this range. Conversely the range is not so far apart that demand levels at one end will have different planning implications than demand at the other. As such transport planning decisions in the rail corridor will be underpinned by robust and workable demand projections for the next 15 years.

6.2 *Main Sensitivities and Areas of Risk*

Whilst it is possible to confidently predict that the number of rail passenger trips will fall within the forecast range, the actual level of demand that occurs within this range is dependent on the actual level of the growth drivers in the model.

The main areas of sensitivity are largely exogenous in that they are beyond the control of traditional transport planning organisations and train operating companies.

Targeted Economic Growth

Although inevitably linked with population growth, the level of economic performance (national and local GDP) is the largest single driver of growth across the rail network, accounting for around two thirds of all demand growth on the Far North Line and Highlands Mainline. As a consequence of this government agencies such as HIE, who have a degree of control over strategic economic planning, can influence the success of the rail network by promoting initiatives that

increase economic growth particularly in rail catchment areas. This type of investment on rail demand would clearly have a significant impact if it is targeted in main conurbations such as Inverness (which is likely to account for 30% of the demand growth on entire network). It is more likely however that investment in more geographically separated areas will produce a greater proportional increase in rail demand , as economic activity in these areas is likely to be more heavily dependant on HIE initiatives than in the main centres.

Population Growth and New Development in Rail Catchments

The consensus of the more recent official population forecasts is that the effect of in-migration will serve to gradually increase population of most of the Highlands and Islands. This accounts for up to a quarter of the passenger growth forecast. The location of this additional populous in the catchment of the railway is fundamental to how much addition demand is produced. Consequently planning authorities can directly influence this by encouraging the construction of new developments near to stations.

Improvements to Rail Services

The impact of improvements to specific routes and services is addressed in detail in phase two of this study, however improvements to services within the existing infrastructure constraints are forecast to have a moderate impact on passenger numbers. The largest proportional increases in rail demand are likely to occur where the existing level of provision is at its least frequent, however the largest total increases in passenger numbers will usually be centred around stations with a high base demand.

Other Modes

In general the demand forecasts are less sensitive to the competing and complementary modes of transport. Despite this, transport improvements have the potential to have a sizeable localised impact on the number of rail trips. Road capacity enhancements may produce a significant reduction in the number of rail trips between individual origins and destinations, whereas improvements to ferry services could significantly increase the number of through trips between rail termini and large interchange stations. In addition increased road congestion across Scotland is likely to precipitate a gradual modal switch to rail.

7 Appendix A

Table 7.1. Breakdown of Far North Line Demand Forecast by Station: Optimistic Scenario.

	Wick	Georgemas Junction	Thurso	Scotscalder	Altnabreac	Forsinard	Kinbrace	Kildonan	Helmsdale	Brora	Dunrobin	Golspie	Rogart	Lairg	Invershin	Culrain	Ardgay	Tain	Fearn	Invergordon	Alness	Dingwall	Muir of Ord	Beauly	Inverness	*Kyle Line*	*Highland Mainline*	*Inverness - Aberdeen Line*	*Total*	*% Growth*
Base Year	8,674	579	12,756	84	133	979	252	100	1,783	1,982	138	6,578	773	1,882	116	992	1,074	5,455	2,514	4,100	3,871	12,993	9,541	13,649	49,755	909	13,518	1,300	156,478	
2005/06	9,030	597	13,329	88	138	1,017	262	104	1,858	2,058	143	6,802	806	1,991	125	1,074	1,160	5,998	2,793	4,538	4,255	14,266	10,622	15,283	55,030	953	13,903	1,341	169,560	8.4%
2006/07	9,183	600	13,606	89	140	1,032	266	105	1,891	2,088	144	6,869	820	2,060	133	1,138	1,226	6,457	3,036	4,917	4,579	15,340	11,575	16,748	59,584	976	13,963	1,350	179,917	6.1%
2007/08	9,541	617	14,190	93	145	1,070	276	109	1,967	2,164	149	7,089	853	2,178	145	1,233	1,325	7,100	3,369	5,442	5,035	16,854	12,878	18,727	65,878	1,021	14,331	1,389	195,169	8.5%
2008/09	9,943	636	14,843	97	150	1,119	287	113	2,052	2,250	155	7,338	890	2,311	158	1,341	1,436	7,837	3,750	6,044	5,558	18,591	14,374	21,003	73,091	1,072	14,753	1,434	212,619	8.9%
2009/10	10,341	655	15,524	101	156	1,155	298	118	2,136	2,333	160	7,575	926	2,413	165	1,402	1,498	8,249	3,948	6,376	5,846	19,573	15,154	22,206	77,262	1,126	15,202	1,481	223,381	5.1%
2010/11	10,757	674	16,239	105	161	1,200	309	122	2,224	2,420	166	7,821	964	2,520	173	1,466	1,563	8,684	4,156	6,726	6,150	20,610	15,976	23,478	81,672	1,184	15,666	1,531	234,716	5.1%
2011/12	11,105	688	16,759	108	166	1,236	319	125	2,293	2,495	171	8,056	994	2,597	178	1,513	1,611	9,002	4,288	6,984	6,385	21,424	16,571	24,295	84,497	1,220	16,120	1,578	242,779	3.4%
2012/13	11,465	701	17,297	112	171	1,274	328	129	2,364	2,574	177	8,299	1,024	2,676	184	1,561	1,661	9,332	4,424	7,252	6,628	22,272	17,188	25,140	87,420	1,258	16,588	1,627	251,126	3.4%
2013/14	11,836	716	17,852	115	177	1,313	338	133	2,438	2,654	182	8,550	1,055	2,758	190	1,611	1,712	9,675	4,565	7,530	6,881	23,154	17,829	26,014	90,446	1,297	17,070	1,678	259,767	3.4%
2014/15	12,220	730	18,425	118	182	1,353	349	137	2,513	2,738	188	8,808	1,087	2,842	196	1,662	1,764	10,030	4,710	7,819	7,145	24,072	18,495	26,919	93,577	1,337	17,586	1,730	268,713	3.4%
2015/16	12,616	745	19,017	122	188	1,394	360	141	2,592	2,824	194	9,075	1,120	2,928	202	1,715	1,818	10,398	4,860	8,120	7,418	25,027	19,186	27,856	96,818	1,379	18,078	1,784	277,975	3.4%
2016/17	13,011	760	19,587	126	193	1,435	370	146	2,665	2,910	201	9,347	1,152	3,010	208	1,763	1,871	10,732	4,986	8,384	7,664	25,950	19,760	28,548	99,456	1,414	18,605	1,839	286,093	2.9%
2017/18	13,364	780	20,093	129	198	1,475	381	150	2,740	2,994	206	9,609	1,185	3,092	214	1,811	1,924	11,007	5,114	8,598	7,863	26,622	20,264	29,251	101,917	1,448	19,071	1,884	293,384	2.5%
2018/19	13,727	800	20,613	133	204	1,516	392	154	2,816	3,080	212	9,879	1,218	3,177	219	1,860	1,977	11,289	5,246	8,817	8,067	27,312	20,781	29,970	104,439	1,484	19,548	1,931	300,863	2.5%
2019/20	14,099	822	21,146	136	210	1,558	403	158	2,895	3,168	218	10,156	1,253	3,264	225	1,910	2,033	11,579	5,382	9,042	8,276	28,020	21,311	30,708	107,023	1,521	20,038	1,979	308,533	2.5%
15 Year % Growth	63%	42%	66%	62%	57%	59%	60%	58%	62%	60%	58%	54%	62%	73%	95%	93%	89%	112%	114%	121%	114%	116%	123%	125%	115%	67%	48%	52%		97.2%

Table 7.2. Breakdown of Far North Line Demand Forecast by Station: Pessimistic Scenario.

	Wick	Georgemas Junction	Thurso	Scotscalder	Altnabreac	Forsinard	Kinbrace	Kildonan	Helmsdale	Brora	Dunrobin	Golspie	Rogart	Lairg	Invershin	Culrain	Ardgay	Tain	Fearn	Invergordon	Alness	Dingwall	Muir of Ord	Beauly	Inverness	*Kyle Line*	*Highland Mainline*	*Inverness - Aberdeen Line*	*Total*	*% Growth*
Base Year	8,674	579	12,756	84	133	979	252	100	1,783	1,982	138	6,578	773	1,882	116	992	1,074	5,455	2,514	4,100	3,871	12,993	9,541	13,649	49,755	909	13,518	1,300	156,478	
2005/06	8,797	588	13,006	86	136	1,000	258	103	1,829	2,026	141	6,680	794	1,988	123	1,052	1,136	5,839	2,728	4,407	4,136	13,858	10,317	14,734	53,470	936	13,750	1,324	165,245	5.6%
2006/07	8,775	586	13,002	87	136	1,005	260	103	1,844	2,038	141	6,682	802	2,063	129	1,095	1,183	6,135	2,897	4,649	4,342	14,522	10,942	15,553	56,206	943	13,737	1,324	171,180	3.6%
2007/08	8,889	594	13,236	89	139	1,026	265	106	1,890	2,081	144	6,777	822	2,179	137	1,161	1,252	6,565	3,139	4,996	4,639	15,490	11,823	16,762	60,356	970	13,952	1,347	180,826	5.6%
2008/09	9,024	603	13,510	92	142	1,050	272	108	1,941	2,129	147	6,887	845	2,310	146	1,235	1,328	7,048	3,411	5,386	4,972	16,575	12,811	18,120	65,033	1,000	14,202	1,373	191,701	6.0%
2009/10	9,145	612	13,790	94	144	1,073	278	111	1,990	2,173	150	6,983	868	2,380	151	1,271	1,366	7,274	3,539	5,563	5,120	17,062	13,238	18,642	67,283	1,032	14,470	1,400	197,201	2.9%
2010/11	9,271	621	14,078	97	147	1,097	284	113	2,040	2,218	153	7,082	890	2,452	155	1,308	1,404	7,508	3,672	5,746	5,273	17,566	13,679	19,181	69,615	1,066	14,743	1,428	202,886	2.9%
2011/12	9,360	628	14,269	99	150	1,116	289	115	2,081	2,257	156	7,173	909	2,507	159	1,337	1,434	7,686	3,768	5,883	5,392	17,960	14,011	19,510	71,195	1,092	15,006	1,455	206,998	2.0%
2012/13	9,451	634	14,463	101	152	1,136	295	117	2,123	2,297	158	7,266	927	2,564	162	1,366	1,465	7,869	3,868	6,025	5,514	18,364	14,352	19,846	72,815	1,120	15,276	1,483	211,209	2.0%
2013/14	9,544	640	14,662	103	154	1,157	300	120	2,165	2,338	161	7,361	947	2,622	166	1,397	1,497	8,055	3,970	6,170	5,639	18,777	14,701	20,189	74,476	1,148	15,551	1,511	215,520	2.0%
2014/15	9,640	646	14,864	106	157	1,177	306	122	2,209	2,380	164	7,458	966	2,682	170	1,428	1,529	8,247	4,074	6,319	5,767	19,200	15,059	20,539	76,178	1,177	15,832	1,540	219,935	2.0%
2015/16	9,737	653	15,071	108	159	1,199	311	124	2,254	2,423	167	7,557	986	2,743	173	1,459	1,563	8,444	4,182	6,471	5,898	19,634	15,426	20,896	77,922	1,206	16,119	1,569	224,456	2.1%
2016/17	9,836	660	15,283	110	162	1,221	317	126	2,299	2,467	170	7,658	1,007	2,806	177	1,492	1,597	8,645	4,292	6,627	6,032	20,078	15,803	21,260	79,711	1,237	16,413	1,599	229,085	2.1%
2017/18	10,082	676	15,663	113	166	1,253	325	130	2,359	2,532	175	7,855	1,034	2,879	182	1,531	1,639	8,868	4,402	6,796	6,187	20,603	16,200	21,784	81,708	1,267	16,831	1,640	234,878	2.5%
2018/19	10,265	689	15,995	116	169	1,277	332	132	2,407	2,579	178	7,990	1,055	2,944	186	1,564	1,675	9,071	4,513	6,952	6,321	21,058	16,566	22,321	83,756	1,298	17,164	1,672	240,243	2.3%
2019/20	10,451	703	16,334	118	172	1,303	338	135	2,456	2,627	181	8,126	1,077	3,011	190	1,599	1,711	9,279	4,626	7,111	6,458	21,524	16,941	22,871	85,855	1,329	17,505	1,706	245,736	2.3%
15 Year % Growth	20%	21%	28%	40%	29%	33%	34%	34%	38%	33%	31%	24%	39%	60%	65%	61%	59%	70%	84%	73%	67%	66%	78%	68%	73%	46%	29%	31%		57.0%

Table 7.3. Breakdown of Highland Mainline Demand Forecast by Station: Optimistic Scenario.

	Inverness	Carrbridge	Aviemore	Kingussie	Newtonmore	Dalwhinnie	Blair Atholl	Pitlochry	Dunkeld & Birnam	Perth	Ladybank	Markinch	Kirkcaldy	Kinghorn	Burntisland	Aberdour	Dalgety Bay	Inverkeithing	Haymarket	Edinburgh Airport Bus-K	Edinburgh Waverley	Gleneagles	Dunblane	Bridge of Allan	Stirling	Larbert	Glasgow BR	Glasgow Central	Glasgow Queen Street	Falkirk BR	Falkirk High	Falkirk Grahamston	Far North Line	Kyle Line	Aberdeen-Inverness Line	West Highland Line	*Total*	% Growth
Base Year	145,078	910	32,020	11,741	2,401	674	5,230	33,479	7,982	31,597	222	384	3,280	50	64	39	264	1,806	3,235	14	81,919	287	833	138	10,188	386	52,232	599	18,937	755	31	447	5,677	542	20,673	4,719	478,833	
2005/06	152,814	969	33,792	12,476	2,511	705	5,426	34,738	8,287	32,997	231	400	3,424	52	66	40	271	1,886	3,390	15	85,572	300	866	142	10,583	401	54,466	625	19,748	784	32	464	5,863	560	21,394	4,888	501,179	4.7%
2006/07	156,815	993	34,483	12,762	2,566	720	5,499	35,207	8,404	33,666	236	407	3,492	52	66	41	272	1,925	3,470	15	87,319	306	880	143	10,739	406	55,479	637	20,116	796	33	470	5,913	566	21,624	4,944	511,458	2.1%
2007/08	164,376	1,039	35,951	13,336	2,679	751	5,694	36,459	8,707	35,096	246	423	3,639	54	68	42	279	2,007	3,628	16	91,026	319	913	147	11,135	420	57,732	663	20,934	825	34	487	6,093	584	22,331	5,110	533,241	4.3%
2008/09	174,104	1,215	38,576	14,194	2,806	786	5,914	37,867	9,048	36,698	257	441	3,803	56	70	43	287	2,099	3,805	17	95,166	333	950	152	11,581	436	60,251	692	21,848	858	35	506	6,297	605	23,130	5,297	560,222	5.1%
2009/10	183,225	1,277	40,401	14,896	2,941	823	6,148	39,369	9,412	38,416	269	460	3,978	59	72	44	295	2,198	3,994	17	99,593	348	990	157	12,058	453	62,941	723	22,825	894	36	526	6,515	627	23,981	5,497	586,460	4.7%
2010/11	192,831	1,343	42,317	15,634	3,083	862	6,392	40,933	9,792	40,220	281	481	4,163	61	75	46	304	2,301	4,193	18	104,229	364	1,032	162	12,557	471	65,753	755	23,845	931	38	547	6,741	650	24,864	5,704	613,974	4.7%
2011/12	199,315	1,392	43,751	16,191	3,196	892	6,606	42,245	10,094	41,690	290	495	4,290	63	77	47	312	2,371	4,327	19	107,566	375	1,061	167	12,910	484	67,746	774	24,437	959	39	561	6,918	668	25,516	5,875	633,716	3.2%
2012/13	206,022	1,444	45,234	16,769	3,313	924	6,827	43,589	10,405	43,214	298	510	4,421	65	79	49	321	2,444	4,466	20	111,010	387	1,090	171	13,272	497	69,801	793	25,044	987	40	575	7,099	686	26,186	6,050	654,110	3.2%
2013/14	212,959	1,497	46,770	17,368	3,434	956	7,056	44,986	10,726	44,794	308	525	4,566	66	82	50	330	2,519	4,610	20	114,566	399	1,120	175	13,645	510	71,920	813	25,666	1,015	41	589	7,286	704	26,874	6,231	675,178	3.2%
2014/15	220,136	1,552	48,360	17,989	3,559	990	7,293	46,442	11,057	46,434	317	540	4,695	68	84	52	339	2,596	4,757	21	118,238	411	1,151	180	14,029	523	74,105	833	26,303	1,045	42	603	7,477	723	27,580	6,418	696,942	3.2%
2015/16	227,288	1,608	49,959	18,624	3,688	1,024	7,531	47,882	11,380	48,134	327	557	4,838	70	86	53	349	2,675	4,877	22	121,570	423	1,183	185	14,424	537	76,359	854	26,956	1,076	43	618	7,664	741	28,262	6,578	718,445	3.1%
2016/17	233,492	1,662	51,532	19,264	3,816	1,059	7,775	49,350	11,706	49,775	336	572	4,973	72	89	55	359	2,749	4,997	22	124,588	434	1,213	189	14,785	551	78,252	875	27,620	1,103	44	633	7,855	760	28,961	6,743	738,259	2.8%
2017/18	239,870	1,718	53,155	19,926	3,948	1,094	8,026	50,865	12,042	51,472	345	589	5,111	74	91	56	367	2,826	5,120	23	127,682	446	1,243	194	15,155	564	80,193	897	28,299	1,130	45	649	8,052	779	29,678	6,911	758,634	2.8%
2018/19	246,426	1,776	54,831	20,612	4,085	1,131	8,285	52,427	12,388	53,227	354	605	5,253	77	94	58	377	2,904	5,247	23	130,852	457	1,274	199	15,534	578	82,182	919	28,995	1,158	46	665	8,253	798	30,412	7,084	779,587	2.8%
2019/20	253,166	1,836	56,561	21,321	4,227	1,169	8,553	54,038	12,745	55,043	364	622	5,399	79	96	59	388	2,985	5,376	24	134,101	469	1,306	204	15,923	593	84,220	942	29,709	1,187	47	681	8,459	818	31,164	7,261	801,135	2.8%
15 Year % Growth	75%	102%	77%	82%	76%	73%	64%	61%	60%	74%	64%	62%	65%	58%	52%	52%	47%	65%	66%	69%	64%	63%	57%	48%	58%	53%	61%	57%	57%	57%	50%	52%	49%	51%	51%	54%		67.3%

Table 7.4. Breakdown of Highland Mainline Demand Forecast by Station: Pessimistic Scenario.

	Inverness	Carrbridge	Aviemore	Kingussie	Newtonmore	Dalwhinnie	Blair Atholl	Pitlochry	Dunkeld & Birnam	Perth	Ladybank	Markinch	Kirkcaldy	Kinghorn	Burntisland	Aberdour	Dalgety Bay	Inverkeithing	Haymarket	Edinburgh Airport Bus-K	Edinburgh Waverley	Gleneagles	Dunblane	Bridge of Allan	Stirling	Larbert	Glasgow BR	Glasgow Central	Glasgow Queen Street	Falkirk BR	Falkirk High	Falkirk Grahamston	Far North Line	Kyle Line	Aberdeen-Inverness Line	West Highland Line	*Total*	% Growth
Base Year	145,078	910	32,020	11,741	2,401	674	5,230	33,479	7,982	31,597	222	384	3,280	50	64	39	264	1,806	3,235	14	81,919	287	833	138	10,188	386	52,232	599	18,937	755	31	447	5,677	542	20,673	4,719	478,833	
2005/06	150,782	953	33,403	12,316	2,484	698	5,385	34,480	8,225	32,626	229	397	3,394	51	66	40	271	1,868	3,359	15	84,907	297	858	141	10,486	397	53,869	618	19,523	777	32	460	5,839	558	21,279	4,863	495,949	3.6%
2006/07	152,709	961	33,745	12,459	2,511	705	5,415	34,678	8,277	32,902	232	401	3,430	52	66	40	272	1,890	3,408	15	85,949	299	862	141	10,539	399	54,254	622	19,654	780	32	462	5,863	561	21,389	4,897	500,869	1.0%
2007/08	158,022	991	34,833	12,879	2,593	728	5,565	35,640	8,511	33,904	239	414	3,542	53	68	42	279	1,952	3,529	15	88,897	308	886	145	10,824	409	55,836	640	20,220	802	33	474	6,017	576	21,968	5,038	516,870	3.2%
2008/09	163,995	1,025	36,062	13,352	2,685	754	5,735	36,737	8,777	35,040	248	428	3,668	55	70	43	287	2,023	3,667	16	92,213	318	913	148	11,151	421	57,631	660	20,862	826	34	488	6,193	594	22,631	5,198	534,946	3.5%
2009/10	170,361	1,061	37,372	13,856	2,784	782	5,917	37,905	9,061	36,251	257	444	3,803	57	72	44	295	2,098	3,814	16	95,747	329	942	152	11,498	434	59,542	682	21,545	852	35	502	6,380	613	23,336	5,368	554,203	3.6%
2010/11	176,976	1,098	38,730	14,379	2,886	811	6,104	39,111	9,354	37,505	266	460	3,943	59	74	46	303	2,176	3,967	17	99,417	340	971	157	11,857	447	61,516	704	22,251	878	36	518	6,573	632	24,063	5,544	574,188	3.6%
2011/12	181,885	1,128	39,856	14,815	2,973	835	6,274	40,179	9,605	38,585	274	473	4,054	61	76	47	312	2,237	4,067	17	102,257	349	994	160	12,141	457	63,073	720	22,743	900	37	529	6,740	648	24,670	5,700	589,891	2.7%
2012/13	186,932	1,159	41,014	15,263	3,063	860	6,450	41,276	9,864	39,696	282	486	4,168	63	78	48	320	2,301	4,212	18	105,179	358	1,018	164	12,432	468	64,670	736	23,246	922	38	541	6,911	665	25,292	5,861	606,051	2.7%
2013/14	192,121	1,190	42,207	15,725	3,156	886	6,630	42,404	10,130	40,839	289	500	4,286	64	81	50	329	2,366	4,339	18	108,184	367	1,042	168	12,730	478	66,308	752	23,760	944	38	553	7,087	683	25,930	6,026	622,660	2.7%
2014/15	197,455	1,223	43,435	16,201	3,251	912	6,815	43,562	10,402	42,015	298	514	4,407	66	83	51	338	2,433	4,471	19	111,276	376	1,066	171	13,036	489	67,988	768	24,286	967	39	565	7,267	701	26,585	6,196	639,730	2.7%
2015/16	199,927	1,312	45,599	17,465	3,514	978	7,290	45,628	10,834	46,194	296	511	4,376	66	84	52	347	2,418	4,417	19	110,581	359	1,023	166	12,565	481	67,062	750	23,672	960	39	551	7,447	718	27,240	6,351	651,091	1.8%
2016/17	205,381	1,350	46,909	17,990	3,620	1,007	7,491	46,848	10,911	47,526	304	525	4,500	68	87	53	356	2,486	4,526	19	113,399	368	1,048	170	12,883	493	68,807	768	24,256	985	40	564	7,632	736	27,911	6,510	668,527	2.7%
2017/18	210,732	1,388	48,242	18,528	3,727	1,037	7,696	48,097	11,193	48,869	313	540	4,624	70	89	55	366	2,555	4,638	20	116,197	377	1,074	174	13,200	505	70,507	787	24,852	1,009	41	578	7,822	754	28,586	6,672	685,926	2.6%
2018/19	216,223	1,427	49,612	19,082	3,838	1,067	7,907	49,379	11,483	50,250	321	555	4,751	72	92	56	376	2,626	4,752	20	119,065	386	1,101	178	13,525	517	72,249	806	25,464	1,034	42	592	8,017	773	29,303	6,839	703,781	2.6%
2019/20	221,858	1,467	51,023	19,653	3,952	1,098	8,124	50,695	11,780	51,670	330	571	4,883	74	94	58	387	2,698	4,869	21	122,003	396	1,128	183	13,858	530	74,033	826	26,090	1,059	43	607	8,216	792	30,024	7,010	722,104	2.6%
15 Year % Growth	53%	61%	59%	67%	65%	63%	55%	51%	48%	64%	49%	49%	49%	50%	48%	48%	46%	49%	50%	47%	49%	38%	35%	33%	36%	37%	42%	38%	38%	40%	36%	36%	45%	46%	45%	49%		50.8%

Table 7.5. Breakdown of West Highland Line Demand Forecast by Station: Optimistic Scenario.

	Mallaig	Morar	Arisaig	Beasdale	Lochailort	Glenfinnan	Locheilside	Loch Eil O.B	Corpach	Banavie	Fort William	Spean Bridge	Roy Bridge	Tulloch	Corrour	Rannoch	Bridge of Orchy	Upper Tyn	Oban	Connel Ferry	Taynuilt	Falls of Cruachan	Loch Awe	Dalmally	Tyndrum Lower	Crianlarich	Ardlui	Arrochar & Tarbet	Garelochhead	Helensburgh	Dumbarton Central	Dalmuir	Westerton	Glasgow	Edinburgh	Stirling	Perth	Dundee	Inverness	Aberdeen	Total	% Growth
Base Year	33,376	1,703	3,474	161	826	1,875	174	224	1,024	1,228	49,005	2,659	1,596	927	5,064	5,416	2,062	2,810	51,693	1,522	5,677	64	1,223	1,914	966	4,916	1,006	3,542	1,948	3,443	1,223	1,589	125	59,718	8,349	510	164	237	28	308	263,768	
2005/06	34,468	1,758	3,589	166	854	1,935	179	231	1,058	1,268	50,635	2,748	1,649	957	5,225	5,590	2,125	2,897	53,435	1,572	5,849	66	1,260	1,973	996	5,067	1,035	3,713	2,056	3,605	1,281	1,628	128	61,884	8,665	522	168	243	30	309	272,838	3.4%
2006/07	34,761	1,774	3,621	168	861	1,951	181	233	1,067	1,279	51,092	2,773	1,663	965	5,264	5,635	2,136	2,912	53,894	1,585	5,876	66	1,266	1,983	1,001	5,093	1,039	3,720	2,067	3,610	1,286	1,627	128	62,596	8,824	522	168	243	30	302	275,261	0.9%
2007/08	35,821	1,828	3,732	173	888	2,010	186	240	1,100	1,319	52,677	2,859	1,715	994	5,418	5,804	2,195	2,991	55,543	1,632	6,032	68	1,299	2,037	1,028	5,232	1,066	3,810	2,124	3,695	1,320	1,662	131	64,894	9,159	534	172	248	32	301	283,767	3.1%
2008/09	37,022	1,889	3,858	179	918	2,077	192	249	1,138	1,363	54,471	2,957	1,773	1,027	5,594	5,995	2,262	3,082	57,420	1,686	6,212	70	1,338	2,099	1,059	5,391	1,097	3,914	2,188	3,792	1,358	1,703	134	67,062	9,535	547	176	254	34	301	293,417	3.4%
2009/10	38,299	1,955	3,993	185	950	2,148	199	257	1,178	1,411	56,380	3,061	1,835	1,062	5,780	6,198	2,333	3,177	59,396	1,742	6,399	72	1,378	2,163	1,092	5,558	1,130	4,022	2,255	3,894	1,398	1,746	138	69,568	9,935	561	181	261	35	301	303,628	3.5%
2010/11	43,450	2,079	4,223	195	998	2,267	208	270	1,255	1,504	60,927	3,184	1,916	1,101	5,977	6,535	2,414	3,396	67,365	1,827	7,054	77	1,509	2,352	1,166	5,905	1,180	4,194	2,364	4,275	1,512	1,897	147	76,581	10,894	612	199	285	39	327	333,661	9.9%
2011/12	44,681	2,138	4,342	200	1,026	2,332	214	277	1,291	1,547	62,623	3,272	1,970	1,132	6,144	6,723	2,478	3,481	68,980	1,870	7,230	79	1,547	2,411	1,195	6,056	1,208	4,290	2,418	4,382	1,554	1,942	151	78,367	11,220	627	204	292	40	328	342,258	2.6%
2012/13	45,948	2,198	4,465	206	1,055	2,398	220	285	1,328	1,591	64,367	3,364	2,025	1,164	6,317	6,916	2,544	3,568	70,663	1,915	7,416	81	1,587	2,473	1,226	6,214	1,235	4,386	2,473	4,493	1,598	1,987	154	80,216	11,556	642	209	299	41	325	351,150	2.6%
2013/14	47,250	2,261	4,591	212	1,085	2,468	227	293	1,366	1,636	66,160	3,457	2,082	1,197	6,494	7,114	2,612	3,660	72,379	1,961	7,605	83	1,627	2,535	1,257	6,375	1,264	4,486	2,530	4,605	1,643	2,034	158	82,103	11,903	658	214	307	43	324	360,259	2.6%
2014/15	48,589	2,325	4,721	218	1,115	2,540	233	301	1,405	1,682	68,000	3,553	2,141	1,231	6,676	7,318	2,681	3,752	74,126	2,008	7,797	86	1,668	2,599	1,288	6,539	1,292	4,582	2,588	4,720	1,689	2,082	162	84,026	12,260	674	219	314	44	323	369,567	2.6%
2015/16	49,956	2,391	4,854	224	1,146	2,612	240	309	1,445	1,730	69,876	3,652	2,201	1,266	6,861	7,526	2,750	3,845	75,867	2,055	7,991	88	1,710	2,664	1,320	6,704	1,321	4,684	2,644	4,834	1,736	2,131	166	85,963	12,556	690	225	322	45	322	378,947	2.5%
2016/17	51,369	2,459	4,991	230	1,179	2,687	247	318	1,485	1,779	71,823	3,754	2,263	1,302	7,056	7,745	2,828	3,952	77,811	2,108	8,215	90	1,758	2,738	1,357	6,892	1,357	4,814	2,714	4,975	1,786	2,183	170	88,100	12,865	707	231	330	46	322	389,037	2.7%
2017/18	52,822	2,529	5,132	237	1,212	2,765	254	327	1,528	1,830	73,825	3,859	2,327	1,339	7,256	7,968	2,908	4,062	79,806	2,163	8,446	93	1,808	2,814	1,395	7,085	1,394	4,947	2,785	5,120	1,838	2,237	174	90,268	13,182	724	237	338	47	322	399,398	2.7%
2018/19	54,316	2,600	5,277	244	1,245	2,844	261	336	1,571	1,881	75,883	3,966	2,393	1,377	7,462	8,197	2,990	4,175	81,852	2,220	8,683	95	1,859	2,892	1,434	7,284	1,431	5,084	2,859	5,269	1,892	2,292	178	92,488	13,506	742	243	346	48	322	410,037	2.7%
2019/20	55,852	2,674	5,426	251	1,280	2,926	269	346	1,615	1,935	77,999	4,077	2,460	1,417	7,674	8,433	3,074	4,291	83,951	2,277	8,927	98	1,911	2,972	1,474	7,488	1,470	5,225	2,934	5,422	1,947	2,348	182	94,763	13,838	761	249	355	50	321	420,962	2.7%
15 Year % Growth	67%	57%	56%	56%	55%	56%	55%	55%	58%	58%	59%	53%	54%	53%	52%	56%	49%	53%	62%	50%	57%	54%	56%	55%	53%	52%	46%	48%	51%	57%	59%	48%	46%	59%	66%	49%	52%	50%	76%	4%		59.6%

Table 7.6. Breakdown of West Highland Line Demand Forecast by Station: Pessimistic Scenario.

	Mallaig	Morar	Arisaig	Beasdale	Lochailort	Glenfinnan	Locheilside	Loch Eil O.B	Corpach	Banavie	Fort William	Spean Bridge	Roy Bridge	Tulloch	Corrour	Rannoch	Bridge of Orchy	Upper Tyndrum	Oban	Connel Ferry	Taynuilt	Falls of Cruachan	Loch Awe	Dalmally	Tyndrum Lower	Crianlarich	Ardlui	Arrochar & Tarbet	Garelochhead	Helensburgh Upper	Dumbarton Central	Dalmuir	Westerton	Glasgow	Edinburgh	Stirling	Perth	Dundee	Inverness	Aberdeen	Total	% Growth
Base Year	33,376	1,703	3,474	161	826	1,875	174	224	1,024	1,228	49,005	2,659	1,596	927	5,064	5,416	2,062	2,810	51,693	1,522	5,677	64	1,223	1,914	966	4,916	1,006	3,542	1,948	3,443	1,223	1,589	125	59,718	8,349	510	164	237	28	308	263,768	
2005/06	33,948	1,730	3,533	164	841	1,904	176	228	1,041	1,247	49,890	2,706	1,623	942	5,158	5,501	2,109	2,881	53,125	1,564	5,821	65	1,254	1,963	991	5,038	1,029	3,649	2,027	3,550	1,263	1,624	128	61,339	8,661	520	167	243	29	307	269,980	2.4%
2006/07	33,709	1,717	3,507	163	835	1,889	175	226	1,034	1,237	49,583	2,688	1,610	935	5,128	5,454	2,105	2,880	53,263	1,567	5,819	65	1,253	1,963	990	5,031	1,027	3,636	2,027	3,537	1,259	1,619	127	61,485	8,774	519	167	243	30	299	269,575	-0.2%
2007/08	34,213	1,741	3,558	165	848	1,915	177	230	1,049	1,255	50,370	2,729	1,634	949	5,211	5,528	2,147	2,942	54,574	1,605	5,945	67	1,280	2,006	1,011	5,138	1,047	3,704	2,072	3,602	1,283	1,650	130	62,985	9,083	528	170	248	31	297	275,113	2.1%
2008/09	34,829	1,771	3,621	168	863	1,947	180	234	1,068	1,276	51,324	2,779	1,662	965	5,311	5,619	2,196	3,015	56,091	1,649	6,093	68	1,312	2,057	1,036	5,260	1,071	3,785	2,124	3,678	1,311	1,687	133	64,717	9,429	540	174	254	32	296	281,627	2.4%
2009/10	35,491	1,803	3,689	171	880	1,982	183	239	1,088	1,299	52,346	2,833	1,693	983	5,418	5,718	2,249	3,091	57,684	1,695	6,248	70	1,345	2,109	1,062	5,390	1,096	3,899	2,178	3,799	1,341	1,726	136	66,545	9,798	552	179	260	33	295	288,526	2.4%
2010/11	37,941	1,862	3,800	175	904	2,038	188	245	1,125	1,343	54,572	2,895	1,732	1,002	5,529	5,876	2,306	3,227	62,195	1,755	6,630	73	1,422	2,223	1,109	5,607	1,130	3,984	2,253	3,976	1,407	1,818	141	70,545	10,451	583	189	276	35	307	304,871	5.7%
2011/12	38,566	1,892	3,861	178	919	2,071	191	249	1,143	1,364	55,480	2,942	1,760	1,018	5,628	5,968	2,353	3,295	63,553	1,792	6,771	75	1,452	2,270	1,132	5,724	1,152	4,061	2,299	4,056	1,436	1,857	144	72,003	10,740	595	194	283	36	306	310,807	1.9%
2012/13	39,202	1,922	3,923	181	934	2,103	194	254	1,161	1,385	56,404	2,990	1,788	1,035	5,726	6,062	2,402	3,366	64,968	1,832	6,920	77	1,484	2,320	1,156	5,847	1,174	4,136	2,347	4,138	1,467	1,896	147	73,509	11,037	608	198	290	37	306	316,926	2.0%
2013/14	39,849	1,952	3,987	184	950	2,137	197	258	1,180	1,407	57,344	3,038	1,816	1,052	5,828	6,157	2,451	3,439	66,409	1,872	7,071	78	1,516	2,371	1,181	5,971	1,197	4,214	2,395	4,221	1,498	1,937	151	75,043	11,343	621	202	297	38	305	323,156	2.0%
2014/15	40,507	1,983	4,051	187	965	2,171	200	262	1,199	1,429	58,297	3,088	1,845	1,069	5,931	6,253	2,501	3,512	67,870	1,913	7,224	80	1,549	2,422	1,206	6,096	1,219	4,289	2,444	4,306	1,530	1,978	154	76,601	11,657	634	207	304	38	304	329,476	2.0%
2015/16	41,180	2,015	4,117	190	981	2,205	203	267	1,218	1,451	59,272	3,139	1,875	1,086	6,036	6,352	2,553	3,586	69,384	1,954	7,378	82	1,582	2,474	1,232	6,224	1,243	4,370	2,493	4,389	1,564	2,023	157	78,283	11,926	649	212	311	39	303	336,001	2.0%
2016/17	41,871	2,047	4,184	193	998	2,240	206	271	1,238	1,474	60,283	3,191	1,905	1,104	6,148	6,453	2,611	3,673	71,082	2,003	7,559	84	1,621	2,535	1,262	6,372	1,273	4,477	2,554	4,495	1,602	2,072	161	80,106	12,206	664	217	319	40	303	343,096	2.1%
2017/18	42,901	2,098	4,287	198	1,022	2,295	211	278	1,269	1,510	61,765	3,269	1,952	1,131	6,299	6,612	2,675	3,763	72,825	2,052	7,745	86	1,661	2,597	1,293	6,529	1,304	4,587	2,617	4,606	1,641	2,123	165	82,076	12,506	681	222	326	41	303	351,521	2.5%
2018/19	43,955	2,149	4,392	203	1,048	2,352	216	285	1,300	1,547	63,284	3,350	2,000	1,159	6,454	6,774	2,741	3,856	74,611	2,102	7,936	88	1,702	2,661	1,325	6,689	1,337	4,699	2,681	4,719	1,681	2,175	169	84,096	12,814	698	227	334	42	303	360,154	2.5%
2019/20	45,036	2,202	4,501	208	1,073	2,410	222	292	1,332	1,585	64,841	3,432	2,049	1,188	6,612	6,941	2,808	3,951	76,440	2,154	8,131	90	1,744	2,727	1,357	6,854	1,369	4,815	2,747	4,835	1,723	2,229	173	86,164	13,129	715	233	343	43	303	368,999	2.5%
15 Year % Growth	35%	29%	30%	29%	30%	29%	28%	31%	30%	29%	32%	29%	28%	28%	31%	28%	36%	41%	48%	42%	43%	41%	43%	42%	40%	39%	36%	36%	41%	40%	41%	40%	38%	44%	57%	40%	42%	45%	54%	-2%		39.9%

Table 7.7. Breakdown of Kyle Line Demand Forecast by Station: Optimistic Scenario.

	Kyle of Lochalsh	Duirinish	Plockton	Duncraig	Stromeferry	Attadale	Strathcarron	Achnashellach	Achnasheen	Achanalt	Lochluichart	Garve	Dingwall	Muir of Ord	Inverness	*Aberdeen-Inverness Line*	*Highland Mainline*	*Far North Line*	*Total*	*% Growth*
Base Year	19,045	284	4,273	222	464	155	4,118	323	956	68	79	3,540	5,450	227	12,415	262	1,796	27	53,699	
2005/06	19,845	296	4,435	231	483	161	4,286	336	995	70	82	3,661	5,621	234	13,082	269	1,845	28	55,960	4.2%
2006/07	20,201	301	4,497	234	491	163	4,358	342	1,013	71	84	3,698	5,662	236	13,469	270	1,851	28	56,969	1.8%
2007/08	21,010	312	4,658	243	511	169	4,527	356	1,053	74	87	3,816	5,829	243	14,163	277	1,898	29	59,256	4.0%
2008/09	21,918	326	4,840	253	533	176	4,717	371	1,098	77	91	3,951	6,017	251	14,936	285	1,952	29	61,820	4.3%
2009/10	22,889	340	5,035	263	556	183	4,920	387	1,146	80	95	4,094	6,218	260	15,766	294	2,009	30	64,564	4.4%
2010/11	23,906	354	5,237	274	581	191	5,132	404	1,196	83	100	4,242	6,425	269	16,642	303	2,068	31	67,437	4.5%
2011/12	24,642	366	5,411	283	599	197	5,300	418	1,234	85	103	4,375	6,630	277	17,126	311	2,126	32	69,517	3.1%
2012/13	25,400	378	5,592	293	619	204	5,474	431	1,273	88	106	4,512	6,842	286	17,624	320	2,185	33	71,662	3.1%
2013/14	26,183	391	5,778	303	639	211	5,654	446	1,313	91	109	4,654	7,060	296	18,138	330	2,247	34	73,875	3.1%
2014/15	26,991	404	5,971	313	659	218	5,840	460	1,354	94	113	4,800	7,286	305	18,666	339	2,310	35	76,157	3.1%
2015/16	27,429	413	6,112	322	673	219	5,872	473	1,392	97	116	4,913	7,431	311	18,958	349	2,374	36	77,490	1.7%
2016/17	28,194	426	6,298	332	694	225	6,046	486	1,431	100	120	5,062	7,666	321	19,441	357	2,435	37	79,670	2.8%
2017/18	28,969	437	6,472	342	712	231	6,209	500	1,471	103	123	5,216	7,906	331	19,922	366	2,495	38	81,844	2.7%
2018/19	29,766	449	6,652	351	732	238	6,377	514	1,512	105	126	5,374	8,155	342	20,415	375	2,557	39	84,078	2.7%
2019/20	30,585	462	6,837	361	751	244	6,549	528	1,555	109	130	5,538	8,411	352	20,920	384	2,620	40	86,374	2.7%
15 Year % Growth	61%	63%	60%	63%	62%	58%	59%	64%	63%	61%	65%	56%	54%	55%	69%	47%	46%	46%		60.8%

Table 7.8. Breakdown of Kyle Line Demand Forecast by Station: Pessimistic Scenario.

	Kyle of Lochalsh	Duirinish	Plockton	Duncraig	Stromeferry	Attadale	Strathcarron	Achnashellach	Achnasheen	Achanalt	Lochluichart	Garve	Dingwall	Muir of Ord	Inverness	*Aberdeen-Inverness Line*	*Highland Mainline*	*Far North Line*	*Total*	*% Growth*
Base Year	19,045	284	4,273	222	464	155	4,118	323	956	68	79	3,540	5,450	227	12,415	262	1,796	27	53,699	
2005/06	19,477	291	4,356	226	475	158	4,213	330	980	69	81	3,603	5,528	230	12,856	268	1,838	28	55,008	2.4%
2006/07	19,570	292	4,371	227	478	158	4,237	332	988	69	81	3,617	5,540	231	13,002	268	1,837	28	55,326	0.6%
2007/08	19,985	299	4,451	231	489	161	4,329	340	1,012	71	83	3,678	5,613	234	13,436	273	1,877	28	56,591	2.3%
2008/09	20,456	306	4,542	235	501	165	4,434	348	1,039	72	86	3,747	5,696	237	13,925	279	1,923	29	58,021	2.5%
2009/10	20,957	313	4,638	240	515	169	4,546	357	1,069	74	88	3,819	5,783	240	14,445	286	1,972	30	59,541	2.6%
2010/11	21,167	318	4,692	244	523	167	4,539	364	1,094	76	91	3,864	5,802	241	14,790	293	2,022	30	60,316	1.3%
2011/12	21,567	325	4,774	248	533	170	4,629	372	1,118	77	93	3,929	5,886	244	15,165	300	2,070	31	61,532	2.0%
2012/13	21,974	331	4,859	252	544	173	4,722	379	1,142	79	95	3,996	5,972	248	15,551	307	2,120	32	62,775	2.0%
2013/14	22,391	337	4,945	256	555	176	4,816	387	1,167	80	97	4,064	6,059	251	15,946	314	2,171	32	64,046	2.0%
2014/15	22,816	344	5,033	260	567	180	4,913	395	1,192	82	99	4,133	6,147	255	16,351	321	2,224	33	65,344	2.0%
2015/16	23,250	351	5,123	264	578	183	5,012	403	1,218	83	102	4,203	6,236	259	16,767	329	2,277	34	66,672	2.0%
2016/17	23,693	358	5,214	269	590	186	5,113	411	1,244	85	104	4,275	6,327	262	17,193	337	2,332	35	68,029	2.0%
2017/18	24,297	367	5,351	276	606	191	5,248	422	1,277	87	106	4,390	6,498	269	17,626	345	2,391	36	69,783	2.6%
2018/19	24,777	374	5,450	281	618	195	5,355	431	1,304	89	109	4,465	6,593	273	18,070	353	2,451	37	71,225	2.1%
2019/20	25,266	382	5,551	286	631	198	5,465	439	1,332	90	111	4,542	6,690	277	18,524	362	2,513	38	72,698	2.1%
15 Year % Growth	33%	34%	30%	29%	36%	28%	33%	36%	39%	34%	42%	28%	23%	22%	49%	38%	40%	39%		35.4%

Table 7.9. Breakdown of Inverness to Aberdeen Line Demand Forecast by Station: Optimistic Scenario.

	Aberdeen	Dyce	Inverurie	Insch	Huntly	Keith	Elgin	Forres	Nairn	Inverness	Far North	Kyle Line	Highland Main Line	*Total*	*% Growth*
Base Year	118,070	19,485	6,775	1,444	4,497	28,051	95,281	42,945	39,608	143,958	1,721	272	10,321	512,429	
2005/06	120,678	20,505	7,125	1,514	4,722	28,730	98,556	44,731	41,988	151,725	1,732	274	10,610	532,890	4.0%
2006/07	121,095	21,136	7,330	1,554	4,849	28,982	100,361	45,888	43,540	156,807	1,705	270	10,736	544,253	2.1%
2007/08	123,920	22,254	7,703	1,629	5,087	29,830	104,341	48,077	46,105	165,484	1,712	271	11,100	567,513	4.3%
2008/09	127,121	23,499	8,119	1,713	5,352	30,785	108,805	50,525	48,971	175,173	1,724	273	11,510	593,569	4.6%
2009/10	130,572	24,840	8,566	1,803	5,636	31,813	113,624	53,164	52,083	185,671	1,738	275	11,947	621,731	4.7%
2010/11	133,967	26,189	9,006	1,891	5,912	32,884	118,658	55,945	54,556	196,132	1,751	277	12,346	649,513	4.5%
2011/12	136,648	27,292	9,339	1,961	6,147	33,863	122,939	58,149	56,301	203,424	1,760	279	12,742	670,843	3.3%
2012/13	138,926	28,375	9,673	2,032	6,384	34,631	126,530	59,988	58,089	210,358	1,768	280	13,049	690,083	2.9%
2013/14	141,254	29,502	10,019	2,105	6,631	35,423	130,249	61,892	59,941	217,543	1,776	282	13,365	709,981	2.9%
2014/15	143,636	30,674	10,379	2,180	6,887	36,241	134,103	63,863	61,858	224,987	1,785	283	13,688	730,562	2.9%
2015/16	146,071	31,893	10,751	2,258	5,657	36,862	136,377	65,904	63,844	232,701	1,794	285	14,019	748,415	2.4%
2016/17	148,476	33,033	11,120	2,337	5,871	37,755	140,435	67,953	65,782	239,967	1,805	286	14,358	769,177	2.8%
2017/18	150,935	34,214	11,503	2,417	6,092	38,676	144,634	70,070	67,784	247,480	1,817	288	14,706	790,618	2.8%
2018/19	153,450	35,438	11,898	2,501	6,322	39,626	148,981	72,259	69,852	255,250	1,829	290	15,063	812,761	2.8%
2019/20	156,023	36,707	12,308	2,588	6,560	40,606	153,481	74,523	71,987	263,286	1,841	292	15,428	835,630	2.8%
15 Year % Growth	32%	88%	82%	79%	46%	45%	61%	74%	82%	83%	7%	7%	49%		63.1%

Table 7.9. Breakdown of Inverness to Aberdeen Line Demand Forecast by Station: Pessimistic Scenario.

	Aberdeen	Dyce	Inverurie	Insch	Huntly	Keith	Elgin	Forres	Nairn	Inverness	Far North	Kyle Line	Highland Main Line	*Total*	*% Growth*
Base Year	118,070	19,485	6,775	1,444	4,497	28,051	95,281	42,945	39,608	143,958	1,721	272	10,321	512,429	
2005/06	119,184	20,145	6,999	1,491	4,653	28,427	97,332	44,051	40,783	148,609	1,726	273	10,516	524,192	2.3%
2006/07	117,659	20,340	7,063	1,504	4,702	28,165	97,178	44,143	41,026	149,898	1,693	268	10,462	524,100	0.0%
2007/08	118,479	20,986	7,283	1,550	4,855	28,477	99,076	45,192	42,163	154,440	1,693	268	10,638	535,100	2.1%
2008/09	119,592	21,716	7,531	1,602	5,028	28,867	101,299	46,404	43,459	159,584	1,698	269	10,848	547,895	2.4%
2009/10	120,861	22,494	7,796	1,657	5,211	29,298	103,701	47,702	44,846	165,088	1,705	270	11,074	561,702	2.5%
2010/11	122,379	23,312	8,080	1,716	5,299	29,619	106,002	49,060	46,298	170,904	1,715	272	11,305	575,961	2.5%
2011/12	123,480	24,002	8,310	1,766	5,472	30,024	108,129	50,111	47,412	175,182	1,721	273	11,525	587,408	2.0%
2012/13	124,835	24,747	8,553	1,819	5,654	30,553	110,714	51,397	48,638	179,921	1,729	274	11,803	600,637	2.3%
2013/14	125,986	25,479	8,797	1,873	5,839	30,981	112,968	52,507	49,816	184,454	1,736	275	12,033	612,744	2.0%
2014/15	127,163	26,234	9,048	1,927	6,029	31,419	115,285	53,646	51,026	189,116	1,744	276	12,267	625,181	2.0%
2015/16	128,366	27,011	9,307	1,984	6,226	31,868	117,666	54,814	52,270	193,910	1,751	278	12,507	637,958	2.0%
2016/17	128,983	27,663	9,529	2,032	6,382	32,096	119,240	55,791	53,351	197,798	1,762	279	12,751	647,656	1.5%
2017/18	129,563	28,307	9,753	2,080	6,541	32,328	120,833	56,773	54,511	201,667	1,773	281	13,006	657,417	1.5%
2018/19	130,386	29,004	9,987	2,131	6,708	32,689	122,909	58,011	55,711	205,961	1,785	283	13,321	668,886	1.7%
2019/20	131,229	29,717	10,228	2,184	6,879	33,059	125,036	59,279	56,939	210,361	1,797	285	13,644	680,637	1.8%
15 Year % Growth	11%	53%	51%	51%	53%	18%	31%	38%	44%	46%	4%	5%	32%		32.8%