Argyll and Bute Transport Connectivity and Economy Research Report

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HIE
Highlands and Islands Enterprise
Iomairt na Gàidhealtachd 's nan Eilean

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1 INTRODUCTION

Overview

1.1 This report presents the findings of the Argyll and Bute Transport Connectivity and Economy study. ekosgen was commissioned by Highlands and Islands Enterprise (HIE) in April 2015 to undertake the research. Steering group representation included Argyll and Bute Council and HITRANS. This review has incorporated desk-based research and extensive primary research with key stakeholders and business users of the transport infrastructure in Argyll and Bute.

1.2 The study is designed to identify the key transport challenges for businesses and major organisations/employers in the Argyll and Bute area, and the impact this has on their business activity and/or service provision. The study area *excludes* Lomond and Helensburgh, which has very different characteristics in terms of transport connectivity, being geographically closer to the Glasgow metropolitan area, with direct trunk road connection and frequent rail services, and fixed link connectivity into Renfrewshire via the Erskine Bridge (see map at section 2.3).

1.3 The focus has been on transport both between the main population centres in the study area (Dunoon, Campbeltown, Lochgilphead, Oban and Rothesay) and between these settlements and Glasgow/the Central Belt. Travel to other areas within Argyll and Bute, was included in the scope of the study where this was relevant for certain businesses/stakeholders.

1.4 The report is a strategic overview. As such, it is not designed to address all transport issues and concerns across the Argyll and Bute local authority area. Its focus is on the strategic transport corridors and movements, and to consider the relationship between the transport infrastructure and the economic and social potential of the area.

Study Purpose and Context

1.5 The purpose of the study is to identify perceived problems and opportunities in relation to transport connectivity within Argyll and Bute, and between the area and the major transport and employment hub of Glasgow and the central belt. The hypothesis is that transport challenges and barriers are acting as a brake on the economic performance of Argyll and Bute.

1.6 The area has experienced overall population decline over the last 10 years, continuing a long-term trend, and there has been economic under-performance, particularly in some parts of Argyll and Bute, including key towns. This has also had some social implications, for example in relation to service provision. The study aims to understand the *extent* to which transport infrastructure is constraining economic activity and its importance relative to other factors.

1.7 The study focuses on the needs of the existing business community, as well as the major organisations such as the NHS, Argyll and Bute Council and Argyll College UHI, as employers and service providers.

1.8 The evidence-based approach, which includes a review of relevant economic and transport data, lessons from elsewhere, and the focus on specific constraints and opportunities, is in line with Scottish Transport Appraisal Guidance (STAG)[1] principles, although the study is not a full STAG assessment. A full STAG assessment is typically a multi-staged process,

[1] http://www.transport.gov.scot/scottish-transport-appraisal-guidance-stag

involving a pre-appraisal stage, then an initial appraisal followed by a detailed appraisal, and concluding in reporting and post-appraisal monitoring and evaluation.

1.9 One of the key concepts underpinning STAG is that assessments need to be 'objective-led rather than solution-led'[2] i.e. no pre-conceived solutions to problems/opportunities should be suggested without giving consideration to other options which may arise that provide other solutions.

1.10 The report seeks to identify the problems and issues to be addressed (wider economic and specific transport-related), and develops high level objectives to address these issues. Various options for transport improvements are identified which could be considered in future appraisals.

Study Aims and Objectives

1.11 There are two specific research objectives for this study, namely to:

- **Identify problems** - assess the extent to which transport connectivity between the five population and economic centres of Campbeltown, Dunoon, Lochgilphead, Oban and Rothesay, and to/from these from the Glasgow/Inverclyde area, has a real impact on businesses, service providers, and the potential for future economic growth.

- **Identify opportunities** - consider the scope for major transformative investments in transport infrastructure to produce transformative economic impacts. These opportunities are articulated around the potential to reduce journey times and improve resilience, develop key sectors, attract investment and deliver associated social benefits.

Study Approach

1.12 The approach to the study adopted a mixture of desk-based research and consultations with key stakeholders and representatives from the business community. The focus of the study has been on the key transport corridors, based on the desk-based work in relation to volumes and usage, and feedback from major employers and transport users. Consultations aimed to assess the socio-economic impacts of transport connectivity and the scope for interventions to address any problems or challenges. Fieldwork was carried between July and October 2015.

1.13 Specifically, this included:

- A desk-based review of socio-economic indicators to provide an understanding of the Argyll and Bute demographic and employment profile, including dominant employment and high transport use sectors;

- A review of transport data, including Travel to Work and Travel to Study data and journey time and mode information;

- Telephone or face-to-face consultations with 15 key organisations/employers and 23 businesses, representing more than 1,700 private sector business employees;

[2] http://www.transport.gov.scot/report/j9760-03.htm

- A review of case study material where it exists on the economic and social benefits of fixed links/road investments in rural areas;

- A brief review of existing transport appraisals and planned investment, including proposed A82 and A83 trunk road improvements and the Scottish Ferries Plan; and

- Consideration of the potential economic and social benefits of addressing identified transport constraints.

Report Structure

1.14 The report is structured in the following way:

- Chapter 2 presents the socio-economic context for the Argyll and Bute study area, including data on employment, key sectors and travel to work - the wider economic and social problems/issues to be addressed, and economic opportunities;

- Chapter 3 examines the existing transport infrastructure for the Argyll and Bute study area, including traffic volumes, modes and journey times – the specific transport problems/issues to be addressed;

- A chapter 4 set out the key transport movements made by businesses and organisations in the Argyll and Bute study area as identified by the consulted stakeholders, and presents the related challenges arising from transport constraints. The chapter also highlights key learning from the case study analysis and considers how transport improvements could support economic opportunities;

- Chapter 5 summarises the problems discussed in chapters 2, 3 and 4, identifies objectives for addressing these, and a range of transport investment options ;

- Chapter 6 presents conclusions to the study.

1.15 **Appendix A** presents the list of businesses and organisation stakeholders consulted. **Appendix B** provides transport investment case studies from Scotland, Scandinavia and elsewhere. **Appendix C** presents more detail on ferry services in Argyll and Bute.

2 Socio-Economic Context

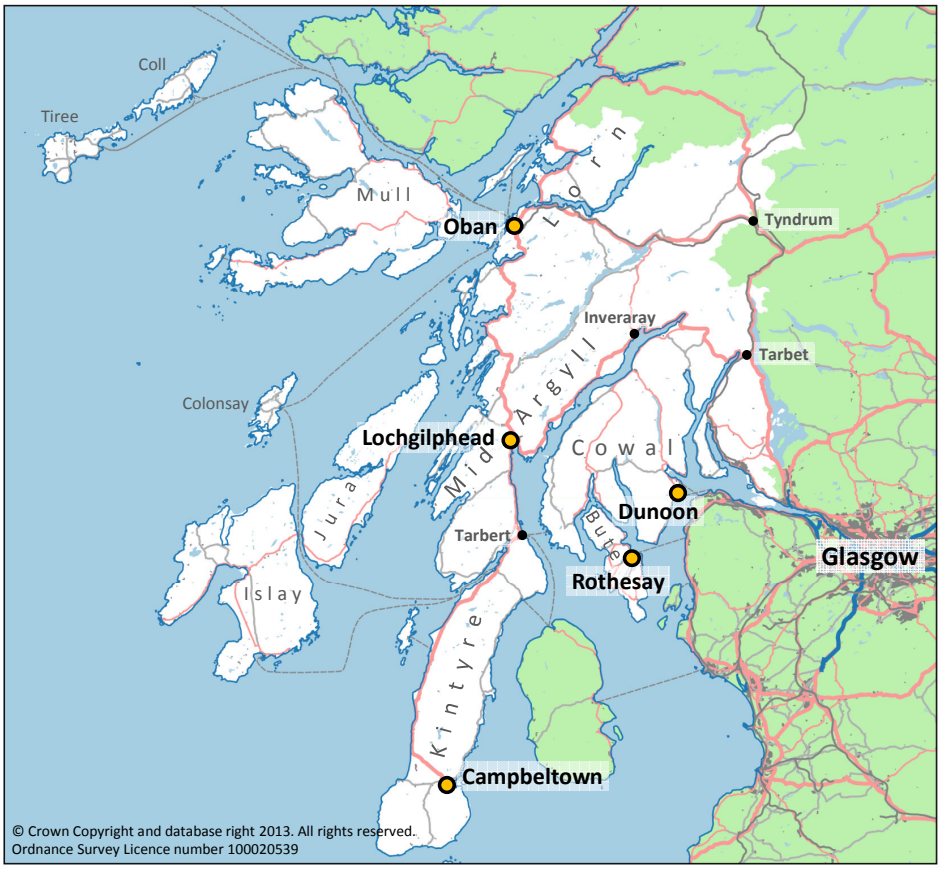
2.1 This chapter sets out the socio-economic context for Argyll and Bute, including details on population, employment, the business base and key sectors.

Area Profile

Geographic Area

2.2 Argyll and Bute is a sparsely populated local authority area in the West of Scotland. It lacks a single dominant employment and service centre and rather incorporates six main towns, five of which are explored in detail within the study. These are: Lochgilphead (the administrative centre) located in mid-Argyll; Oban to the north west of the area and part of Oban, Lorn and the Isles; Campbeltown in south Kintyre; Rothesay on the Isle of Bute; and Dunoon on the Cowal peninsula. Helensburgh, the largest town, is not explored in detail, given its far greater transport connectivity and proximity to Glasgow[3].

2.3 Argyll and Bute covers a large geographic area of just under 7,000km^2, which makes it the second largest local authority by area in Scotland. As shown on the map, parts of east Argyll and Bute are in relatively close proximity (by distance) to Glasgow and the central belt, but the distance increases significantly the further west you travel across the area. With the total population of Argyll and Bute being just under 88,000 in 2014, the area has a very low population density of approximately 12.7 inhabitants per km^2, which in itself presents a number of infrastructure, economic and connectivity challenges.

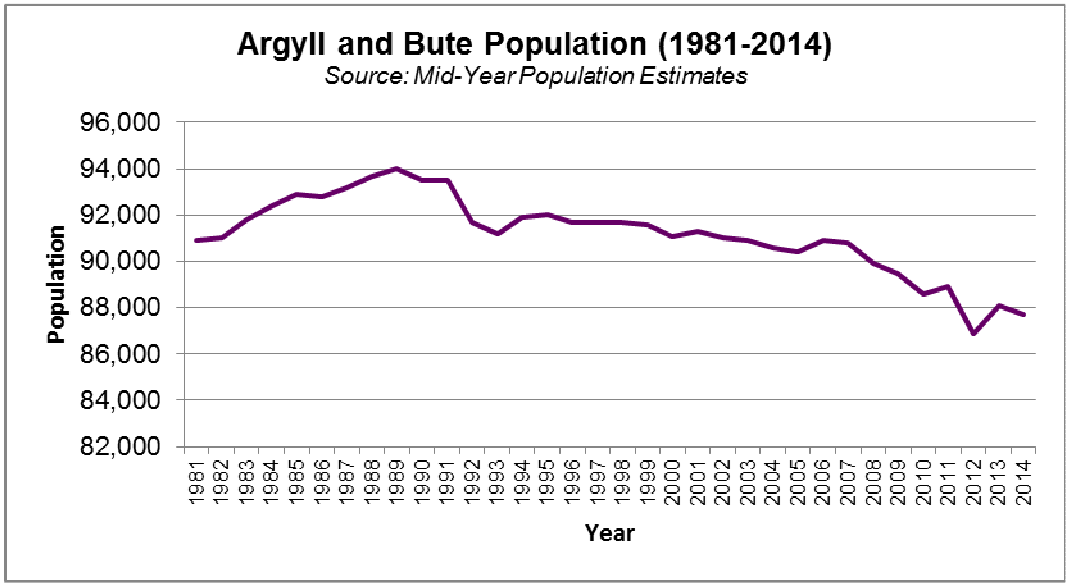


[3] Note, the socio-economic data in this chapter largely relates to Argyll and Bute as a whole rather than the specific study area which excludes Helensburgh given the availability of local authority-level data-sets

Demographic trends

2.4 Argyll and Bute's population has been declining for a number years, from a peak of 94,000 in the late 1980s. There was an estimated 87,700 people living in Argyll and Bute in 2014, a decline from 88,100 inhabitants the previous year and a 3.5% fall over the period from 1981. Over the past decade, the population of Argyll and Bute has fallen by 3.0% (or 2,700 people), despite a brief adjustment in 2013, as shown in Figure 2.1.

Figure 2.1



2.5 During the same period, 1981-2014, the population of the Highlands and Islands as a whole has grown by 9.2%, and across Scotland there has been growth of 3.2%, whilst the population of Argyll and Bute has fallen by 3.5%. This is shown in Table 2.1 below.

Table 2.1: Population Changes, 1981-2014

Year	Argyll and Bute	Highlands and Islands*	Scotland
1981	90,900	446,400	5,180,200
1991	93,500	452,700	5,083,300
2001	91,300	454,900	5,064,200
2011	88,900	487,500	5,299,900
2014	87,700	487,600	5,347,600
% change 1981 to 2014	**-3.5%**	**+9.2%**	**+3.2%**

Source: Mid-Year Population Estimates.
*Please note the Highlands and Islands here includes Argyll and Bute, Highland, Moray, Shetland, Orkney and Eilean Siar.

2.6 The population profile in Argyll and Bute is an ageing one. Those aged under 20 years old accounted for almost one third (30%) of the population in 1981, and this group had fallen to around one fifth (21%) by 2011, slightly lower than in the Highlands and Islands, and Scotland (both 22%). Conversely, in 1981 those aged 60 years old and above made up 22% of the total population, and this had risen to 30% by 2011, a higher proportion than in the Highlands and Islands (22%) and Scotland (27%).

2.7 More recently, between 2001 and 2011, there were net losses of younger age groups and net gains of older age groups, both of which exceeded Scottish averages. For both males and females, Argyll and Bute's greatest losses were from the 30-34 and 35-39 year old cohorts, and the biggest gains from the 60-64 year old cohort[4]. The loss of those aged 30-39 is of particular concern given that this age group is the one most likely to be economically active, to be raising a family and looking to progress their career.

2.8 Of the five main towns in the study area, Oban and Dunoon are the most populous. Over the ten-year period from 2001 to 2011, Oban has become the largest population centre ahead of Dunoon, a result of higher than national average population growth of 5.6%. The two towns have experienced positive growth over this period, although in the case of Dunoon this is still well below Highlands and Islands (2.9%) and Scotland (4.7%) averages. Lochgilphead has also experienced population growth, although again below the average rate of increase regionally and nationally.

2.9 At the same time, the population of Campbeltown fell by almost 5% between 2001 and 2011, a net loss of 328 persons. The greatest loss of population occurred in Rothesay where there was population decline of 9.2%. Rothesay's population loss in absolute terms was 469 people, in contrast with Oban's net gain of 526.

Table 2.2: Population Change in the Five Main Settlements, 2001-2011

Town	2001	2011	% change	Net change
Oban	9,448	9,974	5.6%	+526
Dunoon	9,803	9,960	1.6%	+157
Lochgilphead	3,708	3,825	3.2%	+117
Campbeltown	6,751	6,423	-4.9%	-328
Rothesay	5,106	4,637	-9.2%	-469

Source: Highlands and Islands Enterprise, settlement profiles for Campbeltown, Dunoon, Lochgilphead, Oban and Rothesay, 2014.

2.10 The population of the five towns is also an ageing one. For all towns, the proportion of those aged between 0-14 years fell between 2001 and 2011, while the proportion of those aged 45-64 years and 65 years and over has increased. Whilst this is a national trend, the dominance of older age groups (60 years plus) in Argyll and Bute is 30% higher than that across Scotland.

Economic Profile

Business Profile

2.11 In Argyll and Bute, the composition of the business base by size is almost identical to that of the Highlands and Islands as a whole, dominated by micro-businesses. Table 2.3 shows that, as of 2015, there were approximately 3,855 businesses located in Argyll & Bute, 89% of which were micro businesses and 10% of which were small enterprises. Despite strong growth in 2015, the total number of businesses in Argyll and Bute has risen by just 6% over the five years, compared to increases of 10% in the Highlands and Islands, and 16% across Scotland.

[4] http://www.argyll-bute.gov.uk/moderngov/documents/s76292/Ag%20Item%203%20-%20Census%20Report.pdf

Table 2.3: Business Count and Size, 2015						
Business Size	**Argyll and Bute**		**Highlands and Islands**		**Scotland**	
	n	**%**	**n**	**%**	**n**	**%**
Total	**3,855**	**100%**	**21,750**	**100%**	**168,275**	**100%**
Micro (0-9)	3,440	89%	19,335	89%	147,300	88%
Small (10-49)	375	10%	2,135	10%	17,575	10%
Medium(50-249)	35	1%	240	1%	2,735	2%
Large (250+)	5	0.1%	40	0.2%	665	0.4%

Source: UK Business Counts, 2015.

2.12 The key sectors in Argyll and Bute in terms of business numbers[5] are:

- Agriculture, forestry and fishing: 825 businesses (21% of business base, compared to 10% for Scotland);
- Accommodation and food services: 470 businesses (12% of business base, compared to 8% for Scotland);
- Retail: 425 businesses (11% of business base, compared to 8% for Scotland); and
- Professional, scientific and technical activities: 375 businesses (10% of business base, although this is lower than the 19% for Scotland).

Employment Profile

2.13 There are around 38,100 people in employment in Argyll and Bute (2014). Almost two thirds (64%) are full-time employees, and the remainder (36%) are part-time. This is a similar split as for the Highlands and Islands as a whole, although there are proportionally fewer full-time employees than nationally, as shown at Table 2.4. In the five years to 2014, total employment in Argyll and Bute fell by almost 1%; while employment in the Highlands and Islands as a whole, and nationally, grew by around 4%.

Table 2.4: Employment (2014)						
Employment	**Argyll and Bute**		**Highlands and Islands**		**Scotland**	
	n	**%**	**n**	**%**	**n**	**%**
Employment	**38,100**	**-**	**222,900**	**-**	**2,540,200**	**-**
Employees	**36,200**	**100%**	**213,400**	**100%**	**2,437,100**	**100%**
Full-time	*23,300*	*64%*	*135,200*	*63%*	1,644,500	*67%*
Part-time	*12,900*	*36%*	*78,200*	*37%*	792,600	*33%*

Source: Business Register and Employment Survey, 2014.
Notes: Figures for employment include employees plus working proprietors

[5] UK Business Counts, 2015.

2.14 The key sectors in Argyll and Bute in terms of employment numbers[6] are:

- Health: 5,800 in employment (15% of total employment, compared to 16% for Scotland);
- Accommodation and food services: 5,000 in employment (13% of total employment, compared to 7% for Scotland);
- Public administration and defence: 4,200 in employment (11% of total employment, compared to 6% for Scotland); and
- Retail: 3,500 in employment (9% of total employment, compared to 10% for Scotland).

2.15 These four sectors alone employ just under half (49%) of the total workforce in Argyll and Bute, compared with 39% in Scotland overall. This shows a reliance on public sector employment in health and public administration, and the importance of tourism.

2.16 The matrix below shows how broad industries in Argyll and Bute have grown between 2012 and 2014, in terms of employment, and their relative size compared to national statistics. The larger circles represent sectors with higher employment. Those industries with a Location Quotient (LQ) of more than one denotes a high level of representation and specialisation when compared to the national level, while a LQ of less than one highlights that an industry is under-represented. Given the relatively small employment base in Argyll and Bute the data needs to be treated with a degree of caution, although the diagram illustrates recent sector employment trends.

2.17 Sectors in Argyll and Bute out-performing the Scotland average over the three years include information and communications (a growth of 35% in Argyll and Bute, compared to 8% nationally), business support services (18%, compared to -4%), professional, scientific and technical (16%, compared to 10%) and retail (13%, compared to 5%). Again these are positive recent trends. Seven industry sectors declined in Argyll and Bute between 2012 and 2014, which as well as the public sector (public administration, education and health), includes financial and insurance employment which was already under-represented. The other three sectors which declined in employment terms were property, arts, entertainment and recreation and accommodation and food services.

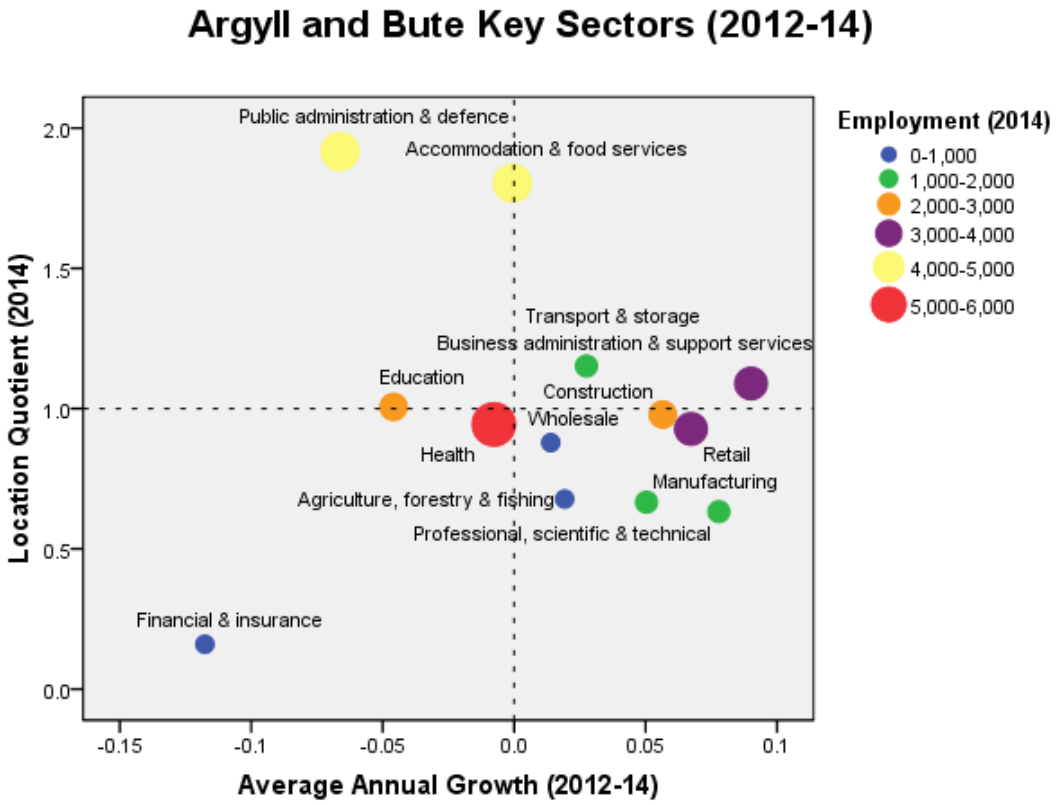
2.18 As detailed above, Argyll and Bute has a high concentration of public sector employment (notably in public administration) and in tourism (accommodation and food services) which are both significant employment sectors. Employment in accommodation and food services, the second largest sector, remained constant between 2012 and 2014, but nonetheless has a LQ of 1.8. However, employment in the relatively large public administration/defence sector, with a LQ of 1.9, fell by 13.2% over this period, representing a challenge to replace lost public sector jobs, where there has also been a loss of health and education sector jobs. Despite the loss of public sector jobs, the increase in private sector employment between 2012 and 2014 has offset this (with a total net gain of almost 500 in employment).

2.19 The compensatory growth in private sector jobs has been a result of increases in business administration and support service employment and in transport and storage (both more concentrated in Argyll and Bute than nationally), but also in the under-represented

[6] Business Register and Employment Survey, 2014.

professional, scientific and technical sector and in manufacturing. Growth in these two sectors is positive, given they are typically higher paid jobs.

2.20 Where there is employment growth between 2012 and 2014 in Argyll and Bute, it is almost entirely driven by growth in Oban, which increased by 4% over the period. Employment numbers have fallen in Dunoon (-9%) and Campbeltown (-3%) and remained largely the same in Lochgilphead and Rothesay.



Source: Business Register and Employment Survey, 2014.

Transport Dependency by Sector

2.21 The following Table 2.5 summarises the business and employment bases in key sectors, and identifies some key sub-sectors within them. The Table illustrates examples of transport dependencies that exist within sectors and sub-sectors.

Table 2.5: Transport Dependencies				
Sector	**Business Base (2015)**	**Employment (2014)**	**Key sub-sectors**	**Examples of Transport Dependencies**
Agriculture, Forestry	825	800	Forestry	Timber exports are c100,000 tonnes per annum (p.a.) from Argyll and Bute, transported by road to Sandbank (Cowal) then by sea; agricultural food products (milk, cheese) and cattle/sheep by road/sea
Food and drink	840 (2014)	3,800 (2013)	Whisky Seafood	Includes whisky by road e.g. Bowmore, Laphroaig distilleries (Islay), Tobermory (Mull) and Jura (Jura); high value fresh fish and sea food, largely by road; businesses including Loch Fyne Oysters (Cairndow), Islay Crab Exports (Islay), Scottish Sea Farms (Oban)
Sustainable tourism	530 (2014)	6,900 (2013)	Activities Accommodation and tour operators	The tourism sector is reliant on the transport network in order for tourists to access the area. Key activity providers attract large volumes of visitors, including golf (e.g. Machrihanish Dunes, Campbeltown at 30,000 visitors p.a., Portavadie Marina @ 32,500 visitors p.a), and golf tourism in Scotland is expected to rise by 30% to 2020. Key tourist attractions/destinations include; Inveraray, Oban and the Islands. Tour operators are also transport dependent e.g. Lochs & Glens Holidays cater for around 55,000 tourists p.a. in A&B
Life sciences	5 (2014)	200 (2012)	Marine	Scottish Association of Marine Sciences (Oban) professional and business travel
Education	35	2,900	FE/HE provision	Argyll College UHI has 13 centres throughout A&B and 9,000 students. Around one third of students use video conferencing due to transport difficulties.
Transport	110	1,800	Haulage	Examples include B Mundell (Islay), John MacKirdy Ltd (Bute), McKerrals Transport (Campbeltown) transporting wide range of products, including those for key sectors.
Construction	370	2,100	Construction	Examples include MacLeod Construction (Lochgilphead), TSL Construction; Renewable Parts, Aggregate Industries. Some export markets. Strong requirement for travel within A&B, mainly by road, including supplies of raw materials. Some are heavy road users.
Public Utilities	~25	~300	Electric; Tele-communications	A number of key companies including SSE (throughout A&B); BT Openreach (throughout A&B) travel throughout A&B to deliver their service and can cover 30,000 miles per year per service employee
Retail	425	3,500	Groceries	Supermarkets dispersed through A&B dependent on road for stock; large number of smaller retailers with road delivery requirements
Health	155	5,800	General healthcare	NHS Highland, travel throughout A&B (and elsewhere) to deliver their services: 12,000 referrals of A&B patients to A&B hospitals p.a, plus referrals to other Health Board areas.

Source: Business Base (number of businesses) - UK Business Counts and Scottish Government Growth Sectors Database. Employment (number of employees including working proprietors) – Business Register and Employment Survey and Scottish Government Growth Sectors Database.

2.22 Within Argyll and Bute, key sectors by employment and business count vary slightly between the five main population centres. Table 2.6 shows the key sector, in terms of employment, by town. The key things to note are:

- The health sector is the largest employer in four of the five towns.
- Retail is a key industry in all settlements bar Lochgilphead, where construction is more dominant.
- Accommodation and the public sector are key employers in three areas each.

Table 2.6: Key Sectors by Employment, 2014			
Town	**1st Sector**	**2nd Sector**	**3rd Sector**
Oban	Health	Accommodation & food services	Retail
Dunoon	Public administration & defence	Retail	Accommodation & food services
Lochgilphead	Health	Public admin & defence	Construction
Campbeltown	Health	Public admin & defence	Retail
Rothesay	Health	Retail	Accommodation & food services

Source: Business Register and Employment Survey, 2014.

2.23 Further, Table 2.7 displays the key sectors by business count for the five main population centres within Argyll and Bute. Again, the key points to note are:

- Retail has the largest business base in all towns bar Oban and Rothesay, where there are more accommodation and food service providers;
- Accommodation/food services is a key business base within all towns bar Lochgilphead.
- The construction industry is key in Oban and Lochgilphead, while there are more primary industry businesses in Campbeltown.

Table 2.7: Key Sectors by Business Count, 2015			
Town	**1st Sector**	**2nd Sector**	**3rd Sector**
Oban	Accommodation & food services	Retail	Construction
Dunoon	Retail	Accommodation & food services	Health; Professional, scientific & technical
Lochgilphead	Retail	Construction	Professional, scientific and technical activities
Campbeltown	Retail	Accommodation & food services	Agriculture, forestry & fishing
Rothesay	Accommodation & food services	Retail	Arts, entertainment, recreation

Source: UK Business Counts, 2015.

Future Growth Opportunities

2.24 There are a number of key employment sectors across the study area, and a range of potential growth opportunities associated with these sectors. These include Tourism, Food and drink, and aquaculture - the three sectors identified with the strongest growth forecasts in the recent Compelling Argyll and Bute economic development action plan[7]. Other sectors with growth potential identified include renewables, defence, care, construction, agriculture, forestry and marine science. A more detailed review of economic opportunities is also included in the Argyll and Bute Economic Forum Report published in February 2016[8].

2.25 Some of the opportunities are considerable. For the Tourism sector, although there are 500,000+ visitors to the study area annually, the number could be very much higher. The more accessible Loch Lomond and Trossachs National Park attracts over 4.5 million visitors annually. Significant investments have been made in recent years at the Machrihanish Dunes Golf Resort at Campbeltown, and are currently being made at The Machrie on Islay.

2.26 Marine tourism is one of the fastest growing areas, with a number of marinas on both the Clyde and west coast, and the concentration of marine activity along the Argyll coast is highlighted in the 2015 Scottish Marine Recreation and Tourism Survey report[9]. Major investments have recently been made in a new marina and leisure resort at Portavadie, and the Economic Forum Report identifies scope for significant developments at Oban Bay, plus additional investment in marinas at Campbeltown, Loch Fyne and Tobermory. The development of Oban and Tobermory is likely to be further stimulated by the expected growth in demand for trips to Mull due to the ferry fare reductions that have now been implemented on this route, which are likely to encourage private sector investment in tourist accommodation, facilities and activities in both Oban and Mull.

2.27 For food and drink (including aquaculture), there is an increasing brand identity linked to food from Argyll and locations within the area (e.g. Mull, Islay, Bute, Kintyre, Loch Fyne), and there is the potential to move goods more quickly to tourism/restaurant businesses within the area, and more importantly for exports outside Argyll and Bute. Examples include Loch Fyne Oysters and new/re-opened distilleries including Glengoyle distillery in Campbeltown and Kilchoman on Islay. Aquaculture and fishing were amongst the sectors for which strongest growth was forecast in Compelling Argyll and Bute, and Niri onshore fish farming near Machrihanish is an example of this.

2.28 The marine and life science sector is another sector which has the potential to grow further, notably at the European Marine Science Park, home to the Scottish Association for Marine Science (SAMS) and a growing cluster of marine science businesses at Dunstaffnage near Oban[10]. Over 150 scientists are currently studying or are employed at the site, which has potential to become a centre of excellence in marine biotechnology. Oban has potential to become a University town attracting research students in these and others fields, and bringing wider opportunities in education/research to Oban as the area develops a “critical mass” of activity, building on the presence of existing institutions such as Argyll College UHI and SAMS.

[7] https://www.argyll-bute.gov.uk/compelling-argyll-and-bute

[8] http://www.argyll-bute.gov.uk/economic-forum-report

[9] http://www.gov.scot/Topics/marine/seamanagement/national/RecandTourism

[10] http://www.europeanmarinesciencepark.co.uk

The education/research opportunities extend to the renewable energy sector, also a sector where jobs growth is expected[11].

2.29 In response to the opportunities in the Oban area, the Lorn Arc Tax Increment Financing (TIF) project[12] is creating new infrastructure that will facilitate further commercial development including two new business locations at Oban Airport for industrial/freight/haulage uses and at Barcaldine Industrial Estate for general business and industry uses and (at the time of reporting) possibly including a renewables/offshore facility.

2.30 There are further transformational projects in the pipeline, such as the Machrihanish UK spaceport bid which is currently under consideration. This has the potential to generate a multi-billion pound infrastructure project as well as securing additional related investment.

Summary

2.31 Argyll and Bute has, and continues to experience, challenging demographic trends, with the area characterised by a small and dispersed, ageing population, which has been in decline since the late 1980s. There is no single dominant centre but rather five locally important towns within the Argyll and Bute study area (which excludes Helensburgh the largest town), which serve their hinterlands with long distances between them. There has been population decline in the east of the area (most notably in Rothesay but also in Campbeltown), in common with some neighbouring mainland areas such as Inverclyde. Growth in Lochgilphead and Dunoon has been below the national average, while Oban has become the largest population centre ahead of Dunoon, a result of higher than national average population growth. While overall there has been employment growth between 2012 and 2014 in Argyll and Bute, it has been almost entirely driven by growth in Oban.

2.32 Argyll and Bute remains overly dependent on public sector employment and a few traditional sectors, including primary industries, forestry and tourism, all reliant on the transport network. Whilst there are signs that the employment mix is starting to change, with a growth in services, renewables and energy, aquaculture, marine sciences and professional and technical jobs, there is more to be done to restructure and diversify the employment mix and to change the dynamic of the area. The 'Compelling Argyll and Bute' economic development action plan calls for a strategic rebalance of the economy, and identifies key strengths in each area of Argyll and Bute.

2.33 There are a number of economic growth opportunities in Argyll and Bute. In particular, these relate to Tourism, Food and drink, aquaculture and marine science/renewables, with a cluster of key development sites in the Lorn Arc (including Oban Bay, European Marine Science Park, Oban Airport and Barcaldine), in Kintyre at Campbeltown/Machrihanish, and in Cowal at Sandbank (Dunoon) and Portavadie.

[11] Compelling Argyll and Bute study, page 47 of the stakeholder report
[12] https://www.argyll-bute.gov.uk/lorn-arc

3 Existing Transport Infrastructure and Usage

3.1 This chapter sets out existing road, ferry, bus, rail and air provision in Argyll and Bute. It highlights the considerable distances to be travelled to move around Argyll and Bute, given the large geographic area it covers. The chapter also provides a summary of recent and planned investment into the transport network within Argyll and Bute.

Roads

The Road Network

3.2 Scottish Transport Statistics (No.33, 2014) shows that Argyll and Bute has around 2,600km of public roads within its boundaries. This includes the following four trunk roads for which Transport Scotland are responsible:

- A82 – This runs from Glasgow to Inverness, via Loch Lomond and Crianlarich.
- A83 – This runs from Campbeltown to Tarbet, through the heart of Argyll, via Lochgilphead and Inveraray.
- A85 – This runs from Oban to Perth, via Dalmally, Tyndrum and Crianlarich.
- A828 – This runs from South Ballachulish to Connel where it meets the A85.

3.3 These four trunk roads account for 10% (259km) of the area's road network. The remainder (amounting to 90% of the road network) are the responsibility of Argyll and Bute Council, and are a mix of class of roads as follows:

- A class: 557km;
- B: 614km;
- C: 435km; and
- Unclassified: 726km.

3.4 Scottish Transport Statistics (No.33, 2014) also shows that in 2013 an estimated total of 880 million vehicle kilometers were travelled on the area's roads (both trunk and local authority ones), 2% of all road travel in Scotland. Some 40% of the vehicle kilometers within Argyll and Bute were on the area's trunk roads, with the remaining 60% on those for which the local authority is responsible. The respective shares are very similar to those for Scotland as a whole.

3.5 Between 2003 and 2013 the vehicle kilometres in Argyll and Bute were virtually unchanged (there was a slight increase of 1%). This compares to a 4% increase across Scotland as a whole.

3.6 During the same period, trunk road traffic increased by a little over 3% in Argyll and Bute. However, this is much lower than the 9% growth at the Scottish level. Travel on Argyll and Bute's local authority roads declined very slightly between 2003 and 2013. In contrast, there was a modest increase (of just under 2%) for Scotland as a whole.

Road Miles and Car Journey Times

3.7 The following table provides road mile distances between some of the main settlements in Argyll and Bute, and also between these settlements and Glasgow.

Table 3.1: Road Miles Between Key Settlements					
Road Miles: From/To	**Dunoon**	**Rothesay**	**Oban**	**Lochgilphead**	**Glasgow**
Campbeltown	66* or 113**	65* or 125**	87	50	138**
Dunoon		28	77	63	32 or 83***
Rothesay			88	41* or 75**	34
Oban				37	97
Lochgilphead					88**

Source: AA Route Planner / Google Maps. *Routing via Tarbert-Portavadie ferry. **Not using Tarbert-Portavadie ferry. ***Longer distance is by road only, shorter one includes use of Western Ferries

3.8 Table 3.1 shows that different options are available for some trips, depending on whether a ferry service is used. Specifically, travel between Dunoon and Glasgow can be wholly by road or by using the Western Ferries service to travel via Inverclyde, while Campbeltown-Rothesay and Lochgilphead-Rothesay journeys can be made wholly by road or by road and the Tarbert-Portavadie ferry.

3.9 The majority of the journeys are 50 miles or more, with relatively long road distances involved where one or both settlements are outside Cowal and Bute. In particular each of Lochgilphead, Oban and Campbeltown are more than 80 miles from Glasgow, with the latter being almost 140 miles. In terms of intra-Argyll and Bute trips, Campbeltown is 50 miles from Lochgilphead and 65 miles or more from the other key settlements within Argyll and Bute (and approaching 90 miles to Oban). Dunoon is more than 75 miles from Oban.

3.10 Rothesay and Dunoon are slightly more than 30 miles road distance from Glasgow, although both of these also include a ferry journey. Dunoon-Rothesay is less than 30 miles, although again a ferry service (between Colintraive and Rhubodach) forms part of the journey.

3.11 The distances shown at Table 3.1 reflect that Argyll and Bute covers a large area and has a number of locally significant settlements dispersed within its boundaries. This is evident in the journey times (expressed in hours and minutes) shown in the following table.

Table 3.2: Journey Times Between Key Settlements					
Journey Times: Hours-Minutes	**Dunoon**	**Rothesay**	**Oban**	**Lochgilphead**	**Glasgow**
Campbeltown	2h-20* or 2h-42**	2h-43* or 3h-30**	2h-07	1h-11	3h-08**
Dunoon		1h-18	1h-54	1h-31	1h-38 or 1h-58***
Rothesay			2h-40	2h-14* or 2h-20**	1h-51
Oban				0h-59	2h-21
Lochgilphead					2h-00**

Source: AA Route Planner / Google Maps. *Routing via Tarbert-Portavadie ferry. **Not using Tarbert-Portavadie ferry. ***Longer journey time is by road only; *shorter one includes use of Western Ferries*

3.12 Particular points to note are that:

- Campbeltown is more than two hours from all the settlements other than Lochgilphead;
- Oban is either approaching or more than two hours from all the settlements, aside from Lochgilphead;
- Despite the relatively short distance involved (28 miles) a trip between Dunoon and Rothesay takes more than 1¼ hours; and
- Despite their relative proximity to the central belt, a journey to Glasgow from either Dunoon or Rothesay takes over 1½ hours due to the need to travel by ferry:
- All bar one of the journeys (Oban-Lochgilphead which is just under an hour) take over an hour.

3.13 The journey times reflect the nature of some of the roads, rather than just the distances involved. For example, the journey time between Lochgilphead and Oban is almost one hour to cover a distance of just 37 miles. Some also involve the use of at least one ferry service (which also increases the trip cost by having to pay ferry fares).

3.14 Based on information from AA Route Planner, average speeds for the road legs of the journeys between the key settlements range from 32 mph to 44 mph (Table 3.3). In general, the average speeds for trunk roads are higher than non-trunk roads. However, compared to the A82 and A83, the A85 has relatively low average speeds, while speeds on the A815 / A886 between the A83 junction and Colintraive or Dunoon (40mph) are higher than on some of the trunk roads. Average speeds are particularly slow on the A85 trunk road close to Oban (Oban-A819 junction and Tyndrum-Oban) and on the routes across the Cowal peninsular from Dunoon to Portavadie and to Colintraive.

3.15 There are a number of factors that can affect average speeds and journey times on a section of road. This can include road conditions and quality, such as poor horizontal and vertical geometry which require vehicles to slow down, and narrow carriageway widths which make it difficult for vehicles to pass each other without slowing down and/or pulling over. In 2014, Argyll and Bute was the only local authority area where between 50% and 59% of the road network was identified by Transport Scotland as being in red or amber condition (red is where action is needed, amber where investigation is required)[13]. In all other parts of Scotland the proportion is lower, between 20% and 49%.

3.16 In addition, the presence of HGVs will affect average speeds for all vehicles since the national speed limit for HGVs on single-carriageway roads in Scotland is 40mph, rather than the 60mph for cars. When passing through settlements, lower 30mph limits may also apply, thus lowering the overall route average. (See table 3.5 for a breakdown of traffic volumes by vehicle type on some of the key roads within the study area).

[14] Impacts of Ferry Services: Case Study Evidence from Tarbert-Portavadie Service (2008)

Table 3.3: Average Speeds (MPH) For Road Legs of Journeys Between Key Settlements			
Trip Ends	**Road**	**Type**	**Average Speed (MPH)**
Campbeltown-Tarbert	A83	Trunk	44
Glasgow- Campbeltown	A83	Trunk	44
Glasgow- Lochgilphead	A83	Trunk	44
A85 junction-Inveraray	A819	Non-Trunk	43
Campbeltown-A815 junction	A83	Trunk	42
Campbeltown-Lochgilphead	A83	Trunk	42
Glasgow-Tyndrum	A82	Trunk	42
Lochgilphead-A815 junction	A83	Trunk	41
Colintraive-A83 junction	A815/A886	Non-Trunk	40
Dunoon-A813 junction	A815	Non-Trunk	40
Inverarary-A815 junction	A83	Trunk	38
Oban-Lochgilphead	A816	Non-Trunk	38
Tyndrum-Oban	A85	Trunk	38
Oban-A819 junction	A85	Trunk	36
Dunoon-Portavadie	B836/A8003	Non-Trunk	32
Dunoon-Colintraive	B836/A886	Non-Trunk	32

Source: AA Route Planner / Google Maps

Traffic Volumes

3.17 The following analysis is based on road vehicle count data from the UK Department for Transport and Transport Scotland. It reviews vehicle flows on A-class roads in Argyll and Bute (B-class roads are not included in the dataset). It concentrates on traffic between the main settlements covered in this study. Thus, data from count sites near to or in main towns are omitted as they will include a significant amount of local traffic.

3.18 Table 3.4 sets out average annual daily and total annual vehicle flows. Overall traffic volumes range from around 600 vehicles per day on the A8003 to around 8,000 on the A85 split and A828 near Connel Bridge. On the A82, traffic volumes decrease as the road heads northwards from almost 7,000 vehicles per day near Luss to around 3,000 north of Ardlui.

Table 3.4: Vehicle Flows on Key Roads: 2014			
Road	**Count Site Between Junctions**	**Average Annual Daily Flow**	**Annual Flow (million vehicles)**
A82	A817 and A83-north of Luss	6,674	2.4
	A83 and Argyll and Bute Boundary-north of Ardlui	2,913	1.1
	B8074 and Argyll and Bute Boundary-north of Bridge of Orchy	2,665	1.0
A83	A814 and A82-between Tarbet and Arrochar	4,914	1.8
	A815 and A814-Rest and Be Thankful	3,774	1.4
	A819 and A815-between Clachan and Inveraray	5,613	2.0
	C-road Furnace and A819-west of Inveraray	2,730	1.0
	A8015 and A816-between Lochgilphead and Tarbert	2,499	0.9
	A83 (trunk) Kennacraig and B8001-by Kennacraig ferry terminal	1,897	0.7
	On A83-1 mile north east of Campbeltown	2,151	0.8
A85	A819 and Argyll and Bute Boundary-by Arrivain	2,089	0.8
	A828 and A819-just west of Taynuilt	4,274	1.6
	A85 split and A828-near Connel Bridge	8,116	3.0
A816	B841 and B840-south of Kilmartin	2,002	0.7
	B840 and B844-just north of B840 junction	1,456	0.5
	B844 and A85-north of Kilninver	2,509	0.9
A819	B840 and A85-north of Cladich	1,357	0.5
A8003	B8000 Tighnabruaich and A886	586	0.2

Source: Based on Department for Transport data

3.19 On the A83 the flows increase at first from east to west, with the highest volumes (c. 5,600 vehicles per day) recorded between Clachan and Inveraray. Thereafter volumes fall to around 2,000 vehicles per day as the road heads further west and finally south to Campbeltown.

3.20 In contrast volumes on the A85 increase as the road heads westwards towards Oban. Vehicle numbers west of Connel Bridge are more than three times those at the eastern end of the road, and the highest of any trunk road in Argyll and Bute. This implies that a significant amount of A85 traffic connects with the A819 to its south and the A828 to the north. However, the relatively high volumes west of Connel Bridge (c. 8,100 vehicles per day) will also include local traffic to Oban from settlements to its east. It is worth noting that the section of the A85 between Oban and the A819 was also identified as the slowest section of trunk road in Table 3.3, with an average speed of just 36mph.

3.21 Volumes on the three non-trunk roads (A816, A819 and A8003) are lower than on the trunk roads. Those on the A816 are higher than on the other two non-trunk roads. This is particularly the case north of Kilninver (c 2,500 vehicles per day) where volumes will include local traffic to Oban as well as through trips between Lochgilphead and Oban.

3.22 Volumes are lower on the A819 (around 1,350 vehicles per day). This reflects that it will act as a connecting route between the trunk road to the north (A85) and the one to the south (A83), with no significant settlements along the A819 itself.

3.23 Traffic is lightest on the A8003. It sees less than 600 vehicles per day. This reflects the sparse population in west Cowal, although there will be some through traffic to/from the ferry terminal at Portavadie. The slow, single-track nature of this road might also act as a constraint on traffic volumes.

3.24 Table 3.5 breaks down vehicle numbers by vehicle type. As on roads throughout Scotland cars/taxis/motorbikes account for most vehicles. Their average (median) share for the 18 selected sites is 77% of all vehicles, with a range of between 67% and 82%. The A82, A83 near Inveraray, and A85 approaches to Oban have the highest shares of car traffic overall.

Table 3.5: Vehicle Flows By Vehicle Type-Shares of All Traffic: 2014

Road	Count Site	Car/Taxi/ Motorbike	Bus/ Coach	Light Goods Vehicle	HGV
A82	A817 and A83-north of Luss	78%	1%	14%	7%
	A83 and Argyll and Bute Boundary-north of Ardlui	82%	2%	12%	4%
	B8074 and Argyll and Bute Boundary-north of Bridge of Orchy	79%	3%	11%	7%
A83	A814 and A82-between Tarbet and Arrochar	78%	2%	14%	7%
	A815 and A814-Rest and Be Thankful	73%	3%	15%	9%
	A819 and A815-between Clachan and Inveraray	80%	4%	10%	7%
	C-road Furnace and A819-west of Inveraray	72%	1%	19%	8%
	A8015 and A816-between Lochgilphead and Tarbert	69%	1%	21%	9%
	A83 (trunk) Kennacraig and B8001-by Kennacraig ferry terminal	67%	2%	22%	9%
	A83-1 mile north east of Campbeltown	70%	3%	19%	7%
A85	A819 and Argyll and Bute Boundary-by Arrivain	74%	3%	15%	8%
	A828 and A819-just west of Taynuilt	77%	3%	14%	6%
	A85 split and A828-near Connel Bridge	79%	2%	15%	4%
A816	B841 and B840-south of Kilmartin	77%	1%	16%	7%
	B840 and B844-just north of B840 junction	78%	1%	15%	5%
	B844 and A85-north of Kilninver	76%	2%	16%	6%
A819	B840 and A85-north of Cladich	78%	3%	12%	7%
A8003	B8000 Tighnabruaich and A886	70%	4%	18%	8%

Source: Based on Department for Transport data. Note: Blue shading highlights notably low values; red shading highlights notably high values.

3.25 The average (median) share for bus/coach traffic is 2% of all traffic, with a range of between 1% and 4%. The average (median) share for Light Goods Vehicles is 15%. This is across a range of between 10% and 22% of all vehicles. The higher shares tend to be on roads with lower traffic volumes, and particularly in the more western sections of the A83.

3.26 Finally, the average (median) share for HGVs is 7% of all traffic, with a range of between 4% and 9%. The highest shares tend to be on the A83. Taking LGVs and HGVs together their highest shares are on the A83 and A8003. At the sites by Kennacraig ferry terminal and between Lochgilphead and Tarbert, goods vehicles account for c.30% of all vehicles. The relatively high proportion of goods vehicles on the A8003 indicates that despite its low overall traffic volumes this road serves an important economic function in Cowal.

3.27 The picture is somewhat different if the absolute number of vehicles is considered rather than their share of all vehicle traffic. The highest numbers of:

- Cars, etc., and light goods vehicles are on the A82 north of Luss and the A85 near Connel Bridge.
- Buses/coaches are on the A83 between Clachan and Inveraray and the A85 near Connel Bridge.
- HGVs are on the A82 north of Luss and the A83 between Clachan and Inveraray.

3.28 Table 3.6 contains analysis of the seasonality of road traffic based on available data.

Table 3.6: Seasonality of Trunk Road Traffic

Road	Count Site	Year	Average Annual Daily Flow	Average Peak Month Flow	Average Trough Month Flow	June, July & August Share of Annual Traffic
A82	North of Luss	2012	7,411	9,661	5,015	32%
	North of Tarbet	2012	3,557	5,161	2,202	34%
	Bridge of Orchy	2013	2,867	4,313	1,247	36%
A83	East of Arrochar	2012	4,672	5,617	3,387	30%
	Head of Loch Long	2012	4,391	5,413	2,518	31%
	Between Cairndow and Inveraray	2012	3,307	4,128	2,261	31%
	One mile south of Inveraray	2014	2,946	3,710	2,122	31%
	Between Ardrishaig and Tarbert	2013	2,629	3,175	2,006	30%
	Between Tarbert and Kennacraig	2014	2,196	2,698	1,676	30%
A85	Just west of junction with A82	2012	2,359	3,474	1,482	33%
	Between Lochawe and Taynuilt	2012	4,114	5,487	2,481	31%
	Dunbeg-2.5km west of A828	2010	7,569	9,948	5,460	31%

Source: Based on Transport Scotland data. Locations and years covered reflect the availability of data.

3.29 There is clearly a seasonal uplift in traffic. In each case, the combined share of traffic for June, July and August is above their 25% share of the months of the year. The greatest seasonality is on the A82, and increases as the road heads north. At Bridge of Orchy more than one third (36%) of total annual traffic is seen between June and August.

3.30 In most cases the peak month is in August. On the A82 (Bridge of Orchy and north of Tarbet), the peak month traffic is around 1.5 times the average for the whole year. That is also the case on the A85 just west of its junction with the A82. Peaking is less pronounced on the A83.

3.31 The largest variation between the peak and trough months is also on the A82. This is at Bridge of Orchy where traffic levels in June are 3.5 times those seen in December. Again, the other largest variations are on the A82 north of Tarbet and the A85 west of its junction with the A82, where traffic levels in August are 2.3 times those in December.

3.32 The seasonal variation is lowest on the A83. However, even there the average flow in the peak month is more than 1.5 times that of the trough.

3.33 Finally in this section, Table 3.7 describes the seasonality of flows by different vehicle type where data are available.

Table 3.7: Seasonality of Road Traffic: Average Daily Vehicle Flows By Vehicle type

Road	Measure	A83 Between Arrochar and B828 Junction (2013/14)	A83 Between Ardrishaig and Tarbert (2013)	A816 Loch Melfort (2011/12)
Car/Taxi/Motorbike/LGV	Annual	3,839	2,532	1,330
	Peak	5,094	3,087	1,717
	Trough	2,648	1,913	955
Bus/Coach	Annual	4	8	6
	Peak	7	11	7
	Trough	2	4	4
HGV	Annual	164	88	21
	Peak	197	98	25
	Trough	137	65	17

Source: Based on Transport Scotland data. Years and locations covered reflect the availability of data.

3.34 Cars, etc. are the most seasonal of the three traffic groupings. Across the three locations their peak month volumes are between 1.6 and 1.9 greater than in the trough month. The same ratios for HGVs are between 1.4 and 1.5, although the absolute vehicle numbers are much lower than cars, etc. The very low bus/coach numbers mean that their seasonal variation has no real implications for traffic movement.

3.35 In all three cases August is the peak month for cars, etc. On the A816 this coincides with the peak for HGV traffic. At the A83 Arrochar site HGV numbers peak in July, while its HGV volumes are generally higher throughout the summer months than in the winter.

Bus Services

3.36 There is a wide range of bus services across Argyll and Bute. The services between the key settlements and also to/from Glasgow are shown in the following table.

Table 3.8: Bus Services Between Key Settlements

Service	Frequency Per Day	Journey Time
Campbeltown-Glasgow	Summer: 5 Winter: 4-5	3h 59-4h 13
Campbeltown-Dunoon (change at Inveraray)	3 Mon-Sat	3h 40-4h 50
Campbeltown-Lochgilphead	4-8	1h 20-2h15
Lochgilphead-Glasgow	Summer: 5 Winter: 4-6	2h 28-2h 37
Lochgilphead-Dunoon (change at Inveraray)	3 Mon-Sat	2h 04-3-h17
Lochgilphead-Oban	2-5 Mon-Sat	1h 18-1h 43
Oban-Glasgow	Summer: 5 Winter: 2-3	2h 51-2h 55
Oban-Fort William	Summer: 3 Winter: 2	1h 27
Oban-Dunoon (change at Inveraray)	2-3 Mon-Sat	2h 25-3h 35
Dunoon-Glasgow direct (via Western Ferries sailings)	6-8 Mon-Sat 5-6 Sun	1h 38-2h 13
Dunoon-Rothesay (via Colintraive)*	2-3 Mon-Sat	1h 09-2h 38
Dunoon-Portavadie*	3-4 Mon-Sat	1h 0-1h 49

Sources: Citylink timetables, Argyll and Bute Council website.*Some services require a change.

3.37 There are services to/from Glasgow from all the key settlements apart from Rothesay. These operate seven days per week, although in some cases with a slightly lower frequency in winter.

3.38 In addition:

- Campbeltown has a seven day service to/from Lochgilphead and a six day one to/from Dunoon.
- Lochgilphead has a seven day service to/from Campbeltown and six day ones to/from each of Oban and Dunoon.
- Oban has a seven day service to/from Fort William and six day services to/from each of Dunoon and Lochgilphead.
- Dunoon has a six day service to/from each of Rothesay, the ferry terminal at Portavadie, Campbeltown, Lochgilphead and Oban.

3.39 Frequency is highest on the Glasgow services. It is generally lower on the services connecting the Argyll and Bute key settlements with one another, almost all of which do not have Sunday services.

3.40 All of the bus journeys take at least one hour. Taking the mid points of the range of journey times shown in the table only two services (Oban-Fort William and Dunoon-Portavadie) take less than 1 hour 30 minutes. Around half of all the services have a midpoint of at least 2 hours 30 minutes.

3.41 The journey times for Dunoon's services within Argyll are extended by the need to change bus on some or all of the routes. The result is that bus journeys from Dunoon to each of Oban, Campbeltown and Lochgilphead take at least 2 hours and in some cases more than 3 hours.

3.42 Almost all the journeys by bus take longer than by car (see table 3.2). Even taking the bottom end of the range of bus journey times, in most cases the bus takes at least 30 minutes longer than by car.

Ferry Services

3.43 Argyll and Bute has a very large number of ferry services. The vast majority of them carry vehicles as well as passengers. Reflecting the geography of the area some ferries connect two parts of the mainland rather than serving an island.

3.44 Most routes are part of the CalMac network operated on behalf of Scottish Government. Four are run by or on behalf of Argyll and Bute Council, while other operators include Argyll Ferries and privately owned Western Ferries. Oban is an important port, with seven ferry services sailing to/from there.

3.45 Reflecting the geography of the area some islands/areas have more than one ferry service. For example, Mull has three services, each offering access to/from different parts of the mainland. Islay has services to both Colonsay and Oban in addition to its main link to Kennacraig, while Bute has one ferry service to Inverclyde and another to Cowal. Even the small island of Lismore has two services - one passenger only, the other a vehicular operation.

3.46 Some of Argyll and Bute's services connect to other areas. For example to:

- Highland - e.g. Fishnish-Lochaline
- North Ayrshire - e.g. Ardrossan-Campbeltown
- Inverclyde - e.g. the Western Ferries service from Cowal
- Outer Hebrides - i.e. Oban-Castlebay/Lochboisdale

3.47 Island ferry services very largely provide links to the mainland. However, there are also some limited inter-island sailings, for example between Coll and Tiree, and between Islay and Colonsay, which are often a by-product of services to/from the mainland. In addition, travelling between some islands (e.g. Iona, Jura) and the mainland requires the use of two ferry services to complete the journey.

3.48 The areas and islands served vary tremendously in size - both physically and in terms of population. The largest populations are in Cowal (around 15,000) and Bute (over 6,000) which is reflected in the traffic volumes on their ferry services. In contrast some of the ferry services are to communities with populations of less than 200 - e.g. Colonsay, Lismore.

3.49 Some Argyll and Bute routes saw reduced Road Equivalent Tariff (RET) fares for passengers, cars and coaches introduced in either 2009 or 2012. These have had some significant impacts. For example, the first year of RET fares on services to Coll and Tiree saw car traffic increase by more than 20%. However, many of Argyll and Bute's CalMac services had RET fares for the first time in October 2015. Thus, future car volumes in particular could be well above those to date. This could lead to further pressure on ferry capacity in the peak summer months.

3.50 The following tables show the main ferry services in Argyll and Bute and the volumes of traffic they carried in 2013. Given the importance of tourism, many of the routes see much higher passenger and car numbers in the summer months. This places pressure on vehicle capacity on some of the major routes. However, as the tables show, many of the routes see fewer than 100,000 passengers per year reflecting their small scale economies and low population levels.

Table 3.9: Traffic Volumes, 2013 (000s): ISLAND ROUTES

Route	Passengers	Cars	Coaches	Commercial Vehicles
Wemyss Bay-Rothesay	677	145	0.8	12.3
Oban-Craignure	553	110	1.9	9.1
Fionnphort-Iona	224	0.7	<0.1	1.1
Colintraive-Rhubodach	222	76	2.9	10.0
Kennacraig-Islay	181	62	0.3	10.0
Fishnish-Lochaline	109	43	0.3	3.7
Islay-Jura (Argyll and Bute Council)	63	22	1.6	
Tayinloan-Gigha	58	14	<0.1	1.3
Oban-Castlebay/Lochboisdale	58	17	<0.1	1.2
Oban-Coll-Tiree	52	16	<0.1	1.6
Appin-Lismore (Argyll and Bute Council)*	44	n/a		
Claonaig-Lochranza	43	14	<0.1	0.4
Tobermory-Kilchoan	36	5	<0.1	<0.1
Oban-Lismore	20	3	<0.1	0.5
Cuan-Luing (Argyll and Bute Council)	16	6	0.3	
Oban-Colonsay	16	5	<0.1	0.3
Seil-Easdale (Argyll and Bute Council)*	15	n/a		
Oban-Coll/Tiree-Castlebay	10	3	<0.1	0.3
Kennacraig-Islay-Colonsay-Oban	9	5	<0.1	0.6

Sources: CalMac, Scottish Transport Statistics 2014 Edition. *Note: Passenger only service.

Table 3.10: Traffic Volumes, 2013 (000s): MAINLAND-MAINLAND ROUTES				
Route	**Passengers**	**Cars**	**Coaches**	**Commercial Vehicles**
McInroy's Point-Hunter's Quay (Western Ferries)	1,343	578	37.9	
Gourock-Dunoon (Argyll Ferries)*	299	n/a		
Tarbert-Portavadie	62	19	<0.1	0.5
Gourock - Kilcreggan (SPT)*	57	n/a		
Ardrossan-Campbeltown	10	2	3	12

Sources: CalMac, Scottish Transport Statistics 2014 Edition. *Note: Passenger only service located outwith the study area.

3.51 There is a very large variation in carryings. This reflects the significant differences in population served as noted earlier. Traffic levels also reflect the number of sailings provided, with more frequent services likely to stimulate demand. Sailing frequencies and crossing times for both island and mainland routes are detailed in Appendix C.

3.52 Frequency is highest on the shortest routes, with fewer sailings tending to be made on the longer crossings. Thus, islands with similar populations may have quite different levels of traffic as a result of different frequency of sailing. The relatively short crossings from Bute and Cowal to main population centres in west Scotland, and associated rail connections, means that these ferries play a key role in facilitating commuting.

3.53 Almost all routes have at least a daily service, although on longer routes it may simply be one return sailing. Reflecting their largely "lifeline" nature almost all the ferries operate all year round. In most cases, however, there is a lower frequency of sailing in the winter timetable.

3.54 Crossing times can be very short - five minutes or even less on the shortest crossings. In contrast on a number of routes to islands within Argyll and Bute they are over 2 hours – ranging between 2 hours and 20 minutes (Colonsay, Islay) and 4 hours and 10 minutes on some sailings between Oban and Tiree. This limits the frequency and/or requires more than one vessel to provide the service. In some cases a long ferry crossing time is on a route where the mainland terminal is not at a centre of population (e.g. the Islay-Kennacraig service). This further increases the total journey time between the island and main centres (e.g. between Islay and Glasgow).

3.55 There will be significant changes to services operating out of Oban in summer 2016, with more sailings and greater vessel capacity on the routes to Mull (Craignure), Coll, Tiree, Colonsay, and Barra. This is due to an increase in the number of vessels based at Oban in order to cope with the anticipated growth in car demand on Oban-Craignure from RET fares, and to offer improved frequency and timing of sailings to/from Barra.

3.56 As noted earlier a number of the ferry routes connect two parts of the mainland. They provide time savings compared to making a journey by road. They also offer a round trip for tourists and other leisure travellers, allowing them to travel to an area by road and return via the ferry or vice versa.

3.57 The mainland routes in Argyll and Bute play specific roles. Tarbert-Portavadie is significant for business travel by organisations with an area-wide remit and who may also have offices distributed throughout Argyll and Bute e.g. the local authority. Previous research by Reference Economic Consultants[14] identified a range of benefits from the Tarbert-Portavadie service. These included:

- Allowing organisations (both public and private sector) to operate throughout Argyll and Bute and thus benefit from economies of scale.
- Retaining employment and income in the area that might otherwise be lost due to relatively poor/extended transport links. For example, Kintyre contractors undertaking projects in Cowal that might otherwise be done by companies in west central Scotland.
- Facilitating quick responses to emergency situations, both from public services (e.g. Police) and businesses (e.g. diving companies serving fish farms).
- Offering an alternative to the A83 when the road is closed due to landslips, road traffic accidents, etc.

3.58 The services operated by Western Ferries and Argyll Ferries provide Cowal residents with commuting opportunities to Inverclyde and further afield. The Argyll Ferries service provides a town centre to town centre connection between Gourock and Dunoon. It also facilitates onward rail travel from Gourock to stations in Glasgow and thus supports commuting by public transport. The Ardrossan-Campbeltown service offers direct access to Kintyre for visitors who wish to bring their own car and are deterred by the road journey via the A83, but currently only provides three return sailings per week in the summer timetable.

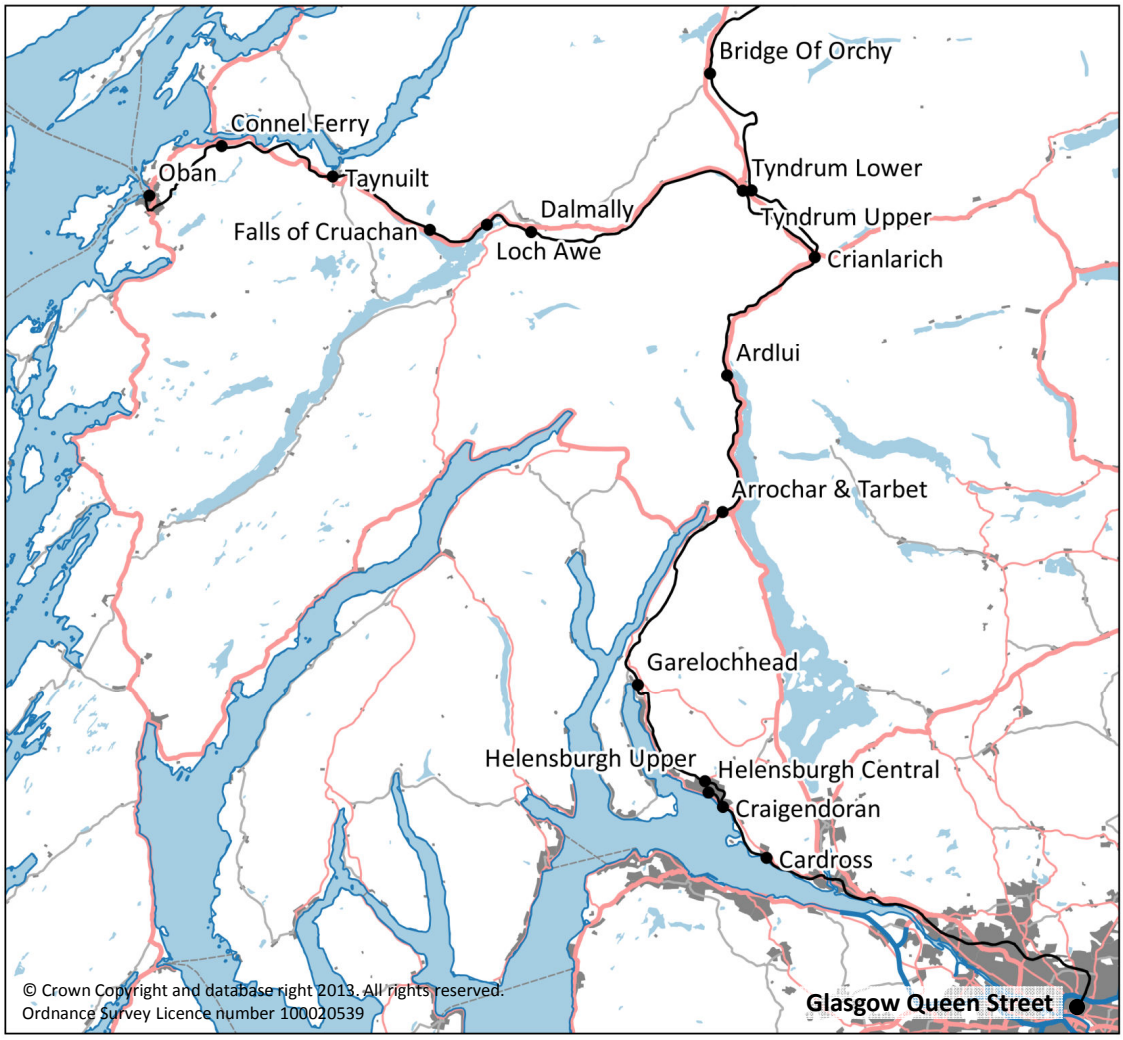
Rail Services

3.59 Rail within Argyll and Bute consists of:

- A line from Glasgow that ends at Helensburgh Central (outside of the study area).
- The West Highland Line from Glasgow that travels through the east of the area and onto Fort William, with a spur at Crianlarich to Oban.

3.60 As shown in the map below, Argyll and Bute has 14 rail stations, covering the majority of the north-west. Two train stations are in Helensburgh. The other 11 stations in Argyll and Bute lie between the Oban and Glasgow line, apart from Bridge of Orchy which is further north on the line to Fort William.

[14] Impacts of Ferry Services: Case Study Evidence from Tarbert-Portavadie Service (2008)



3.61 Helensburgh Central, Cardross and Craigendoran have frequent ScotRail services to central Glasgow and beyond. The journey time to central Glasgow is around 48 minutes from Helensburgh and slightly less from the other two stations.

3.62 There are presently seven ScotRail departures on weekdays from Oban: six are to Glasgow, with the other to Dalmally. There are six departures to Glasgow on Saturdays. There is a reduced frequency on Sundays, with four trains between Oban and Glasgow in the summer months and two during the rest of the year.

3.63 Almost all journey times between Oban and Glasgow Queen Street are over 3 hours. They range from 2 hours and 57 minutes to 3 hours and 17 minutes. That is well above the road journey time of 2 hours and 21 minutes. Towards the southern end of the rail line, journey times are clearly shorter. For example it is slightly more than 1½ hours between Glasgow Queen Street and Ardlui.

3.64 The overnight Caledonian Sleeper service between London and Fort William calls at each of Bridge of Orchy, Ardlui, Arrochar & Tarbet, Garelochhead, and Helensburgh Upper. Those travelling to/from stations between Oban and Dalmally can connect with the sleeper by using a ScotRail train to/from Crianlarich. Passenger numbers for 2014-2015 at Argyll and Bute's rail stations are shown in Table 3.11.

Table 3.11: Argyll and Bute Rail Station Passenger Numbers, 2014-2015	
Station	Number of Passengers
*Helensburgh Central**	*843,343*
*Cardross**	*180,394*
*Craigendoran**	*170,944*
Oban	170,682
Taynuilt	21,968
Helensburgh Upper	15,731
Arrochar & Tarbet	13,618
Connel Ferry	8,564
Dalmally	8,338
Garelochhead	6,920
Bridge of Orchy	6,024
Ardlui	5,074
Loch Awe	4,752
Falls Of Cruachan	654
Total	**1,457,006**

Source: Office of Rail Regulation. * Note: outside study area

3.65 In total over 1.4 million passengers used the stations in 2014-2015. However, these volumes are dominated by four stations - Helensburgh Central, Cardross, Craigendoran and Oban. The first three of these stations offer frequent services to central Glasgow that are well used by commuters in particular. Helensburgh Central alone accounts for more than half (58%) of all passengers. The four main stations combined account for the vast majority (94%) of the total.

3.66 Over 170,000 passengers travelled through Oban, an increase of 32% over the previous year, with the result that Oban is now the busiest station on the West Highland Line, ahead of Fort William (144,000). This is primarily due to the increased frequency of services between Glasgow and Oban, from three to six trains per day, introduced in May 2014.

3.67 The remaining stations shown at Table 31.3 are very lightly used. Most see less than 10,000 passengers per year, but stations between Oban and Dalmally have also seen very significant growth in patronage in 2014/15 reflecting the much improved services, including use of these by school children travelling to/from Oban High School.

3.68 Finally, rail stations at Gourock and Wemyss Bay are important for travel to/from Dunoon and Rothesay, respectively. They offer total rail/ferry journey times of:

- Around 1 hour 15 minutes and upwards between Dunoon and Glasgow.
- Around 1 hour 30 minutes and upwards between Rothesay and Glasgow.

3.69 Thus, at least some rail/ferry journey times are quicker than the car/ferry alternatives shown earlier.

Air Services

3.70 Argyll and Bute has three air services that provide flights to/from Glasgow. Loganair operate services under a Public Service Obligation (PSO) contract to Scottish Government from Glasgow to both Campbeltown and Tiree, providing two return flights per day Monday-Friday, including opportunities for day return trips. Flights are also operated at weekends, although for Campbeltown these are limited to a single rotation on Sundays from May to September. The flight time is 45 minutes to Campbeltown and 60 minutes to Tiree, using 18-seat Twin Otter aircraft.

3.71 Loganair also operate a commercial air service connecting Glasgow with Islay, similarly providing two return flights per day Monday-Friday, plus a single rotation on each of Saturday and Sunday. The flight time is 35-45 minutes using a 33-seat Saab 340 aircraft.

3.72 Data from the Civil Aviation Authority shows that, in 2014, passenger carryings on the Glasgow services were as follows:

- Islay: 27,196.
- Campbeltown: 9,331.
- Tiree: 7,996.

3.73 The volumes are much lower than on the ferry services to Islay and Tiree. However, air services play an important role by offering fast access to/from Glasgow including a day return opportunity. Health-related traffic is significant on each of the three routes.

3.74 Hebridean Airways provide an air service based at Oban under PSO contract to Argyll and Bute Council, using a 9-seat BN Islander aircraft. This primarily serves Coll, Tiree and Colonsay, with a link also to Islay via Colonsay. Each island is served on two days of the week all year round with a day trip possible in each direction.

3.75 The Oban flights serve a range of trip purposes. They include secondary pupils who attend school in Oban during the week but can return home to Coll at the weekend if they choose to do so. The service has more than 3,000 passengers per year including scholars and other users.

Household Travel

3.76 Argyll and Bute households are more reliant on access to their own vehicle than those across Scotland as a whole. Just 23% have no cars or vans in their household, lower than the Scottish average of 31% (Census 2011 data).

3.77 Argyll and Bute residents who are aged 16-74 and in employment are less reliant on travelling to work than those of Scotland as a whole. That is because 18% of them work mainly or wholly at or from home, compared to 11% for Scotland. The rate for Argyll and Bute is the highest of all Highlands and Islands local authorities apart from Orkney. This could be for a variety of reasons, including that Argyll and Bute has the second highest self-employment rate in the Highlands and Islands.

3.78 Of those who do **not** work mainly or wholly at or from home 70% travel to work by car – the same percentage as for Scotland as a whole. Those in Argyll and Bute are more likely to walk to work (18% compared to 11% for Scotland), and less likely to commute by bus (4% compared to 11% for Scotland).

3.79 The following table compares the distances travelled to work and to study by residents of Argyll and Bute to those for Scotland as a whole. It shows that compared to Scotland as a whole **working residents within the study area**[15] are:

- Much more likely to work a very short distance from their home. More than one third (34%) are less than 2km from where they work, compared to 15% of all Scots residents.
- More likely to be longer distance commuters. Some 10% travel 30km or more to their place of work, with 5% travelling at least 60km. This compares to 7% and 2%, respectively, for Scotland.
- Slightly more likely to either have no fixed place of work, or be working on an offshore installation or outside the UK.

3.80 The commuting patterns of Argyll and Bute residents to a large extent reflect the geography of the area (i.e. small towns separated by large distances) and commuting distances tend to be very small or very large. This could potentially restrict labour market mobility and the area over which individuals can commute to work.

Table 3.12: Distances to Work and Study (excluding those working or studying mainly at or from home)

Distance	To Work (16-74 years old in employment		To Study (18 years and over)	
	Argyll and Bute (study area only)	Scotland	Argyll and Bute (study area only)	Scotland
Less than 2km	34%	15%	28%	28%
2km to less than 5km	16%	22%		23%
5km to less than 10km	10%	19%	5%	16%
10km to less than 20km	11%	17%	23%	12%
20km to less than 30km	3%	7%		6%
30km to less than 40km	2%	3%	40%	3%
40km to less than 60km	3%	2%		3%
60km and over	5%	2%		3%
Other	15%*	12%*	4%**	5%**
Total	**100%**	**100%**	**100%**	**100%**

*Includes no fixed place of work, working on an offshore installation and working outside the UK.
**Includes no fixed place of study and studying outside the UK.

3.81 Compared to Scotland as a whole **residents of Argyll and Bute** who are 18 and over and studying are much less likely to travel short distances to study. Only 28% are less than 5km from their place of study compared to over half (51%) for Scotland.

[15] This data excludes Arran and the Cumbraes which are within the HIE area but outside of Argyll and Bute.

3.82 Some 40% of the Argyll and Bute residents travel 30km or more to their place of study, compared to only 9% for Scotland as a whole.

Travel to Work Patterns

3.83 Table 3.13 sets out 2007 data for Travel to Work Areas (TTWA) in Argyll and Bute. Supply side self-containment shows the proportion of employed residents who work locally, while demand side self-containment displays the proportion of people working in the area who live locally, showing there to be a deficit of jobs relative to the people in or seeking employment in all of Argyll and Bute's TTWAs. As residents have to seek employment outside their respective TTWAs adequate transport infrastructure for commuting is important.

Table 3.13: Argyll and Bute Travel to Work Areas, 2007

TTWA name	No of people in employment resident in the TTWA	No of jobs in the TTWA	Supply side self-containment	Demand side self-containment
Dunoon & Bute	8752	8094	85%	92%
Oban	7697	7567	90%	91%
Lochgilphead	4630	4561	88%	90%
Campbeltown	3319	3231	90%	93%

Transport Issues

Issues for Young People aged 16-30

3.84 Although the focus of the study is primarily on the impact of transport connectivity on economic performance, transport is a very major issue for young people in Argyll and Bute, as shown by a recently completed survey of the attitudes and aspirations of almost 600 young people aged 15 to 30 in Argyll and Bute[16]. Less than half consider transport to be either available or affordable. When asked about the *availability* of bus, ferry, train and air services, the proportions reporting these transport modes to be available ranged from 21% (air) to 47% (bus). Similarly, those believing these transport modes to be *affordable* ranged from 15% (air) to 36% (bus).

3.85 Furthermore, young people from Argyll and Bute feel more isolated from the rest of the country than young people elsewhere in the Highlands and Islands, despite closer proximity in terms of distance, especially for those in Bute and Cowal. As shown at Table 3.14, half (50%) of young people reported it to be easy to travel to other parts of Scotland, while a smaller proportion (45%) consider it easy to travel to other parts of the Highlands and Islands, both lower than the proportions region-wide.

3.86 Timetabling is an issue for young people in Argyll and Bute, with just four in 10 (40%) agreeing that public transport timetabling is joined-up, and one third (32%) disagreeing.

[16] Young People and the Highlands and Islands: Attitudes and Aspirations, June 2015. Data is for Argyll and the Islands area which includes Arran and the Cumbraes but excludes Helensburgh and Lomond.

Similarly, 42% feel that public transport provision is adequate, while one third (32%) disagree with this.

Table 3.14: % that agree that:		
	A&B	**H&I**
It is easy to travel to other parts of Scotland	50%	56%
It is easy to travel to other parts of the H&I	45%	49%
Public transport provision is adequate	42%	40%
Public transport timetabling is joined-up	40%	34%

Source: ekosgen Young People and the Highlands and Islands: Attitudes and Aspirations survey, 2015.

Summary of Recent and Planned Investment

3.87 There are a number of existing plans for investment in trunk roads, ferry and rail services in Argyll and Bute, and these are summarised here.

3.88 With regards to the A82, Transport Scotland completed a new £5m bypass at Crianlarich, where the A82 and A85 meet, in December 2014[17]. This is a new 1.3km single two-lane carriageway road which allows traffic to bypass Crianlarich and avoid low bridges. Work has also recently been completed on the A82 at Pulpit Rock to widen the road from one lane to a two-way carriageway, which has allowed traffic signals, which have been in place for some 30 years, to be removed[18]. This £9.2m investment was opened in May 2015.

3.89 Furthermore, Transport Scotland announced in September 2015 the preferred option for upgrading the A82 on the 17km section between Tarbet and Inverarnan[19] which is expected to improve average journey times for A82 trunk road users and reduce the number of accidents and their severity. Transport Scotland is now progressing the next phase of design work, which is the development and assessment of the preferred option, with a view to preparing draft Orders for the scheme. In advance of the upgrade a programme of short term improvements to cut back vegetation, clear blocked drains, and to remove loose stones and boulders from the verge of the existing A82 has recently been completed between Tarbet and Inverarnan.

3.90 Improvements are also being made to the A83. Following the completion of the A83 Route Study in early 2013[20], Transport Scotland has since invested £10m on a programme of work, focussing on landslide risk reduction measures at the Rest and Be Thankful. Road improvements are being planned at various pinch points identified in the Route Study (Strone Point, Erines, Dunderave and Barmore Road, Tarbert) with work at Strone Point due to proceed in 2016.

3.91 There are also planned changes to the ferry network outlined in the Scottish Ferries Plan (2013-2022)[21] and in subsequent announcements by Transport Scotland. These are summarised as follows:

[17] http://www.transport.gov.scot/project/a82-crianlarich-bypass
[18] http://www.transport.gov.scot/project/a82-pulpit-rock
[19] http://www.transport.gov.scot/project/a82-tarbet-inverarnan-upgrade
[20] http://www.transport.gov.scot/road/a83-rest-and-be-thankful/a83-route-study
[21] http://www.transport.gov.scot/water/scottish-ferries-plan

Kintyre

- Following a successful pilot in the summers of 2013, 2014 and 2015, the summer ferry service between Ardrossan and Campbeltown (via Arran) will be made permanent.[22]

Bute

- Major changes to the Colintraive to Rhubodach service were not considered, although minor improvements, such as extending the last sailing of the day to all year round, have been made in the short term and the slip is to be upgraded.

Cowal Peninsula and Dunoon

- Transport Scotland has confirmed to the Dunoon Gourock Steering Group that the next contract for the Gourock to Dunoon passenger ferry service will require improved vessels to be introduced, which should address issues with service reliability.

Mull

- The recommended upgrade to a two-vessel service between Oban and Craignure will form the basis of future service provision for this route – with improvements commencing in Summer 2016.

- It is intended that the Isle of Mull vessel will be dedicated to the Oban to Craignure route to allow for increased sailings all year round. Furthermore, the introduction of RET on this route has resulted in a significant reduction in fares and so a substantial increase in demand is expected.

Colonsay, Coll and Tiree

- Increasing the number of sailing days during the winter is a priority, with some improvements already achieved.

3.92 In addition, there is planned investment by the new ScotRail franchise holder, Abellio. For the West Highland Line between Oban and Glasgow this will see the introduction of refurbished 'Scenic' Class 158 trains to replace the existing Class 156 trains by 2019, in addition to the recent increased frequency of journeys. These are more comfortable with additional capacity, air-conditioning and wi-fi which are not available on the existing trains. They are also faster, which might enable a reduction in journey times, although for most of the West Highland Line it is the track which limits speed more than the rolling stock.

Summary

3.93 Argyll and Bute covers a large geographic area and its main settlements are dispersed. There are long journey times to travel between the five main settlements and to/from Glasgow. Most road journeys are 50 miles or more. In part this reflects the physical distances between each of them. However, the challenges of distance are exacerbated by the following:

[22] http://www.transport.gov.scot/news/ardrossan-campbeltown-ferry-sets-sail

- **Limitations and quality of the road network**, resulting in low average speeds (below 40 mph on some key routes, including parts of the A85, A816 and B836/A8003)[23]. Challenging terrain, poor road alignment and carriageway width, volumes of HGV traffic and reduced speed limits when passing through settlements can all affect journey times. The vast majority of car journeys between the five main settlements and to/from Glasgow take over 1½ hours, and most are over 2 hours. Due to the importance of tourism to the area, the roads generally see a significant uplift in traffic levels in the summer.

- **Bus** services have longer road journey times than car trips. Those between the five main settlements are of limited frequency, and only one (Campbeltown-Lochgilphead) runs on a Sunday. In some cases the passenger has to connect with another bus en route (e.g. Dunoon-Lochgilphead), or there is no timetabled service at all (e.g. Campbeltown-Oban).

- **Long crossing times and limited frequency of sailing on ferry services** to some of the more populous islands (e.g. Islay, Tiree). On services with fewer sailings it is challenging to devise a timetable that can meet the needs of freight, business travellers, residents' personal travel and tourists. It can also mean capacity constraints because demand is not spread evenly across the days of the week or the months of the year.

- There has been a significant increase in the frequency of trains on the Oban-Glasgow route. However, there are **long rail journey times** for stations between Oban and Glasgow which are not competitive with the road alternative. Some rail/ferry journey times from Cowal and Bute to Glasgow are competitive with the road/ferry alternative. However, they are still at least 30 minutes greater than, for example, rail between Helensburgh and Glasgow.

- **Air can only meet some travel needs.** This is due to the value that many place on accompanying their own vehicle, as well as air fare levels and limited flight frequency. Thus, air can only partly address the long surface journey times to the likes of Islay, Tiree and Campbeltown, with air passenger numbers far below those for surface modes. Air does, however, play an important role in facilitating day trips and business travel and providing access to specialist healthcare.

3.94 These factors also impact on the mobility of the labour market. That is evident in the working patterns and relatively long distances travelled by some commuters and students. This can constrain business productivity and growth, as the labour pool in each area (in terms of the number and skills of workers available within a reasonable commuting time), and the area over which individuals can commute to work are limited.

[23] Based on google maps/AA Route Planner analysis

4 Transport Issues and Opportunities for Businesses and Organisations

Introduction

4.1 This chapter discusses the role of transport for the businesses and organisations consulted for the review, and the general issues arising from use of the transport infrastructure. Specific transport corridors are then considered, identifying the challenges associated with them. The consultations were designed to identify issues and constraints arising from the existing transport infrastructure, and views on the opportunities that improved transport connectivity may provide.

4.2 In total 38 consultations were carried out with a range of stakeholders and key businesses and organisations/employers across the study area, representing more than 1,700 private sector business employees. Businesses consulted were representative of the sectoral mix across Argyll and Bute, and included those in transport-dependent sectors, utilities and service providers. (See appendix A for a full list of consultees).

4.3 The second part of the chapter further explores the potential opportunities arising from investment in the transport infrastructure, should this be made. This covers the types of inward investment that may be unlocked should there be transformative investment in transport (linked to key sector opportunities outlined in Chapter 2). This section also draws on the case study review at Appendix B, where economic benefits have been derived in other regions/countries as a result of transport investment.

Role of Transport for Businesses and Organisations

4.4 Transport performs a variety of functions for businesses and organisations, relating to staff movements, bringing in supplies, product distribution, networking and client contact, and delivering services. Transport is also important for tourism businesses, and those reliant on the tourism sector, in terms of the ability of visitors to travel to, and through, the area.

Staff Travel to/from Work

4.5 Transport plays a key role in terms of staff travel to and from work. Consultees reported that the majority of their staff lives quite locally, as indicated in Chapter 2, where 30% live within 2km (twice the national average). This is likely to be a result of a preference to do so, but also through a certain degree of necessity, given poor public transport and the long journey times associated with living further away from the workplace. The data exclude those working from home, yet shows that a small but significant proportion travel much longer distances to work (13% travel more than 30km), more likely to be those in higher skilled/more professional occupations.

4.6 Consultees reported that long travel to work journey times can be an issue for recruiting/attracting staff. This impacts on business performance, and can constrain business expansion, although transport is just one of a number of factors related to staff recruitment and retention, including the availability of housing, and culture and leisure offer factors.

Goods Inwards (suppliers)

4.7 There is a considerable need for businesses and organisations to utilise the transport infrastructure for supplies. This clearly varies according to the business or the sector, although it is evident from the consultations that the vast majority of businesses need to bring supplies in to the business, often from outside Argyll and Bute.

4.8 For some businesses/organisations, consultees indicate that the need to use the transport network to bring in supplies can be very significant. This includes the tourism and hospitality sectors, (where there is a need to bring in foodstuffs), but also agriculture (e.g. feedstock) and others reliant on raw materials (e.g. textiles). As outlined in chapter 2, these are some of the key sectors in terms of the number of businesses and employment in Argyll and Bute. Haulage companies clearly play a key role in the transport of goods for a variety of businesses, including the retail and wholesale sectors.

4.9 In many cases, consultees noted a need to build in time to ensure supplies reach the business from outside the area. In others, there are issues of obtaining supplies *within* the Argyll and Bute area, for example food and drink, particularly where there is a desire to source food of local provenance, which is often of high quality but where stock can be limited (and where it is important to receive the product quickly).

Goods Outwards (products)

4.10 As noted in Table 2.5 (page 10), and highlighted by consultees, there is a key requirement to use the transport network to get goods to markets and customers both within and outside of Argyll and Bute. In terms of getting product *out* of Argyll and Bute, some of this is significant in terms of volume (e.g. fish for processing which can be many tonnes per day, and timber, via haulage). These are key export markets, and rely heavily on the three trunk roads serving the region to access markets and distribution hubs in the Glasgow area or further afield. Some parts of the non-trunk road are also important, such as the A816 for aquaculture, and B836 for timber. Transporting some products is also time critical, including perishables such as fresh fish and shellfish. Most businesses find a way to deal with getting products out of the area using the existing transport network, although there are some reliability issues when key routes are closed and time delays can be costly. Again, haulage companies clearly transport goods out for a variety of businesses.

In-bound Tourists

4.11 Tourists coming to Argyll and Bute, and moving within it, use the transport network to access the area and to visit various visitor attractions and locations. For many tourism *businesses*, the issue of visitors coming to, and moving around Argyll and Bute, is generally not regarded as problematic i.e. at least to some extent the journeys to, and within the area, are "part of the visitor experience". Data on visitor numbers are not readily available (given Argyll and Bute data is often combined with data from the Loch Lomond and Trossachs national park), yet there were 570,000 visitors to 35 attractions in 2009 for which data are collected, which provides an indication of the scale of importance of tourism to the local economy[24]. One tour operator alone brings around 55,000 visitors to Argyll and Bute annually, which equates with 70% of the resident population of the area.

[24] Moffat Centre for Travel and Tourism Business Development (2010)

4.12 At the same time, some tourism businesses and organisations/stakeholders believe the historic perception that travelling around Argyll and Bute is a positive part of the visitor experience is beginning to change, and the quality of the internal road network is becoming a concern. They also felt that the quality of the transport infrastructure is increasing travel times, and the extensive journey times may miss the "impulse" and day visitor market. For major tour operators, the long journey times into Argyll and Bute adds time to what visitors already regard as a long journey (for example coach tours from northern England).

Business Visitors and Business to Business Activity

4.13 Business to business engagement is a key requirement for most organisations, including meeting current or prospective customers or suppliers. It may involve outward or inbound travel to/from and across Argyll and Bute. For business visitors coming *to* the area, journey times can be prohibitive (and difficult to achieve in a business day) and can therefore reduce the number of business interactions/visits made. This often places responsibility on the Argyll and Bute business to undertake the journey (e.g. to the Central Belt), which can require a full day.

Service Delivery

4.14 Businesses and organisations use the transport network to deliver services to customers. There can be issues reaching customers and users given the dispersed settlements, long distances between them and low population density, which results in long journey times and challenges to serve sufficiently high numbers of customers per day cost effectively. Utility companies and key organisations such as the NHS are important users of the transport network to serve their customer/user base. Data from NHS Highland estimates that there are 26,000 referrals for Argyll and Bute patients each year, of which 44% are to hospitals within Argyll and Bute and 56% are to hospitals in the NHS Greater Glasgow and Clyde area. This is a considerable level of patient use and travel, often with long journey times.

General Transport Issues and Travel Constraints

Journey Times

4.15 Consultees highlighted a number of general issues with respect to travelling around Argyll and Bute. A principal issue, reflected in chapter 3, is the extensive journey times of travelling within the study area. This is acknowledged to be principally (although not entirely) a result of the large geographic area and its configuration, where there is landmass interspersed with a number of lochs and many promontories and headlands, as well as numerous islands. The result is the need for sea-crossings, or long distances by road using the mainland, although other factors (discussed below) also increase journey times.

Resilience

4.16 Resilience is the ability of the network to cope under abnormal conditions. For some routes, the resilience is regarded by many consultees as poor, mainly as a result of closures (roads) or cancellations (ferry). For roads, this includes major closures due to landslips or accidents (where time is needed to allow investigations to be carried out), notably the Rest and Be Thankful (see later). This can impose constraints on business activity. There can also be additional delays for businesses and other users arising from confusion regarding alternatives and self-diversion to alternative routes.

4.17 Businesses cited that the reliability and capacity of ferry services can also be an issue on certain routes, such as capacity on the Islay route following the introduction of RET (from October 2012) which has increased non-business use. Other routes are reported to be more resilient, including the Western Ferries Dunoon to Gourock vehicle service.

Lack of Alternative Routes

4.18 As well as resilience (e.g. in terms of accidents), the lack of alternative routes (by any mode) is an issue for those consulted. This can make any closure or cancellation more significant. For the road network, an unforeseen event (a landslip, a road accident) that blocks the road can mean very long diversions, which substantially increase journey times. There are some notable examples of this. The first three listed in Table 4.1 are the ones most frequently cited by consultees. In some cases, such as the A816 Oban to Lochgilphead, the diversion adds more than one hour to the journey time.

Table 4.1: Diversions via 'A' Roads required if there is a road closure

Main Transport Corridors	Diversion via A Roads and mileages
A816 Oban to Lochgilphead	Via B840, 1hr 33mins, 48 miles
A82 Crianlarich to Tarbet	Via A819 and A83, 1hr 17mins, 56 miles
A85 Tyndrum to Dalmally	Via A82 and B8074, 31 mins, 18 miles
A85 Dalmally to Connel	Via B840 and A816, 1hr 41mins, 61 miles
A85 Connel to Oban	Via Glencruitten Rd, 16 mins, 6 miles*
A83 Inveraray to Lochgilphead	Via B840, 1hr 10 mins, 42 miles
A83 Kennacraig to Campbeltown	Via B842, 1hr 0 mins, 33 miles

* this is an unofficial route, not suitable for HGVs or any significant volume of traffic.

4.19 For ferry use, even where services are typically reliable, the alternative if required results in much lengthier journeys. For example, should the Dunoon-Gourock vehicle service not run, the alternative is an 83 mile road journey. When the Rothesay-Wemyss Bay ferry service is suspended for those travelling from Rothesay to Glasgow, and the Rhubodach-Colintraive service is in operation as the alternative, this adds 61 minutes to the journey to Glasgow via Western Ferries from Dunoon, or 46 minutes by road.

Timetabling

4.20 Timetabling for trains and air services can be a concern and frustration for businesses and organisations. This was found to be particularly pronounced for the ferry from Mull to Oban. However, proposals outlined in the Scottish Ferries Plan[25] to be implemented in 2016 (which include an increase in the frequency of sailings) should help to address this. In other cases, there are fewer issues, including Dunoon-Gourock (where the vehicle ferry runs every twenty minutes from 06.10 in the morning until 22.30, and until midnight at the weekends). There are constraints arising from the Rothesay-Wemyss Bay and Rhubodoch-Colintraive routes in terms of limited evening services, although businesses cite minimal negative impact on their business performance.

[25] http://www.transport.gov.scot/water/scottish-ferries-plan

Seasonality and Conflict between Transport Users

4.21 A considerable issue for consultees is the seasonality of use, which principally relates to the road network although it affects ferry and rail travel capacity too. On the road network, consultees identified that this can cause tensions between tourist and non-tourist users. As Chapter 3 indicates, the peak road usage can be 75%-100% above trough month usage. High visitor demand can also make it difficult for some businesses to access certain ferry routes, especially if they need to arrange travel close to the date of departure (also see RET below).

4.22 Overall, the quality of B roads and non-trunk A roads in relation to their usage means many consultees do not regard them as fit-for-purpose. There are considerable issues with regard to conflicts between different road users – tourists, heavy industry and/or daily deliveries. This is not confined to the smaller roads. With the trunk roads too, there are conflicts between many different types of user, notably on the A82 at Loch Lomondside (see below).

Road Conditions

4.23 By extension, consultees regard road conditions to be poor. They report a number of concerns, including slow average speeds (as detailed in chapter 3), issues of driver frustration, poor drainage, lack of overtaking stretches, insufficient number of lay-bys, narrow carriageway widths, poor visibility with overgrown vegetation and lack of sightlines. These can cause unnecessary delays to journey times and can pose safety issues, sometimes leading to accidents. The level of road maintenance is also criticised by more than 60% of all businesses and organisations consulted:

> *"for me, it is the biggest issue, the standard of roads and the effects this has on travel time"* (service provider)

> *"the simple things would help a lot – scrub cutting to give line of sight for overtaking and road clearing after accidents"* (haulage company)

Ferries and Road Equivalent Tariff (RET)

4.24 RET has brought lower fares that have largely been welcomed, particularly by the tourism sector, and by island businesses benefiting from an increase in visitors. RET allows more affordable access to and from the islands for visitors and Argyll and Bute residents.

4.25 However, RET, where it has been introduced, is not always viewed positively from a business perspective. In certain sectors, the introduction of RET raises significant issues relating to the capacity of vessels to take freight/HGVs as well as additional local car or tourist users (e.g. Islay). This was highlighted by the majority of businesses in the haulage sector, but also by some businesses who supply or cater to the tourism industry, including food and drink and event/hospitality businesses. To some extent this is being addressed via the Vessel Replacement and Deployment Plan recently published by Transport Scotland which notes capacity constraints on ferry routes and sets out indicative plans to address these issues[26].

[26] The Vessel Replacement and Deployment Plan – Annual Report 2014 can be found at: http://www.transport.gov.scot/water/scottish-ferries-plan

Public Transport

4.26 Public transport provision is not regarded by consultees particularly positively, and one respondent noted that it *"doesn't need to be as poor as it is"*. The availability, affordability and timetabling of public transport is also a key issue for young people in Argyll and Bute (as highlighted in Chapter 3). This can cause issues for employers in terms of recruitment and staff access to the workplace, and some take steps to work around the limited provision. For example, some businesses bus in employees (e.g. Loch Fyne Oysters) from other parts of Argyll and Bute (in this case Dunoon). As Chapter 2 indicates, staff are more likely to need a car to access their place of work, although there is a degree of polarisation, with higher proportions also living very close to where they work.

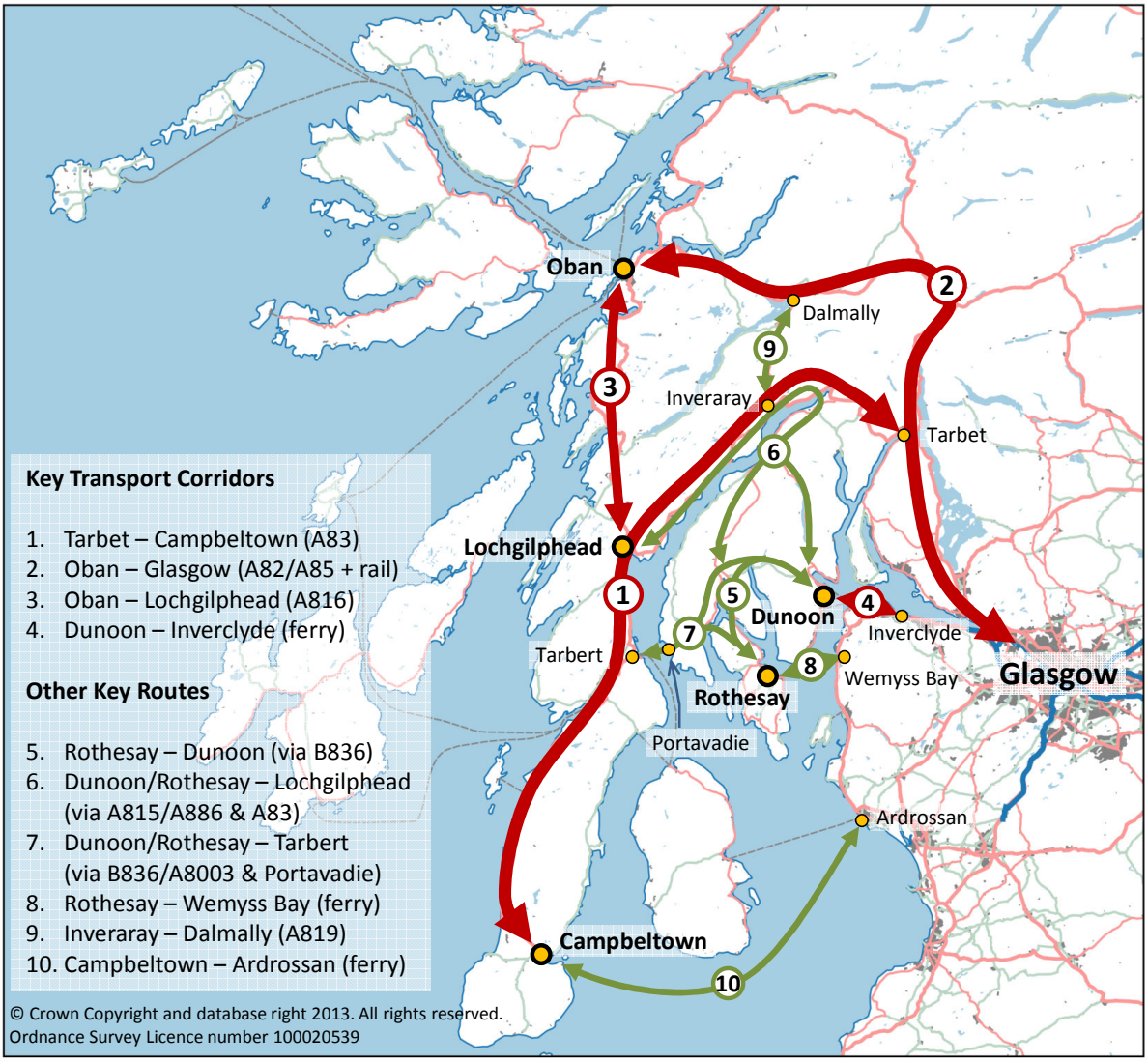
Air Travel

4.27 There are few air routes, and for some businesses and organisations this is a constraint to their operation. This includes the lack of an air service from Oban to Glasgow and Edinburgh, although there is a service from Campbeltown to Glasgow, as well as services from Islay and Tiree. A number of tourist businesses cited that increasing the number of air links from the area to Glasgow and Edinburgh would enable more visitors to access the area, as well as providing additional social benefits to residents.

Key Transport Corridors

4.28 There are a number of key transport corridors identified by businesses and major service providers and stakeholders. These are illustrated on the map and summarised overleaf.

Key Transport Corridors Highlighted by Consultees



A83 Tarbet-Campbeltown (including the Rest & Be Thankful)

About the Corridor

4.29 This trunk road is the key transport link for consultees from Mid Argyll and Kintyre. It runs from Campbeltown in Kintyre to Tarbet on Loch Lomond where it joins the A82. It is 98.3 miles long and connects Campbeltown and Lochgilphead by road via the mainland to Glasgow, and includes the Rest & Be Thankful (R&BT) at Glen Croe. Consultees identify this as the principal route for goods and tourists travelling in and out from Mid Argyll and Kintyre, with no easy overland alternative identified, although there are up to three available if the A83 is closed at the R&BT:

- The Old Military Road diversionary route, which operates under a one-way convoy system during daylight hours;
- The route north from Inveraray via the A819 to the A85 near Loch Awe, and then the A82;
- The route south from Cairndow via the A815 and the Dunoon vehicle and passenger ferry links to Gourock.

Ability to Meet Needs

4.30 There is widespread feedback that the R&BT part of the route in particular is rated poorly for resilience (albeit mitigation measures are now being undertaken). On a scale where 5 is where the transport corridor fully meets needs and 1 is where needs are not met at all, the corridor scores 2.5 out of 5, based on more than half of those consulted (which is a high proportion given that some consulted do not make use of the route). This is illustrated in the following quotes:

> *"the R&BT is always in mind and is a severe perception issue. It has a severe impact"*
>
> *"there is no margin for error with this, it is the most do-able investment… losing 5 days per year due to slips is 5 days too many… it is the absolute lifeline for the area"*
>
> *"depending on the situation we can use the Old Military Road as an alternative, but this road is poor quality"*

4.31 Other businesses and organisations were less negative, yet there remain issues for them:

> *"R&BT is of great importance, but generally [A83] is a great road. Gets a lot of flak, but maybe just 5 days per year you can't get through"*
>
> *"it is not as significant as the A82, but could be much better"*
>
> *"the relief road has been of some success, however it is still quite slow"*

4.32 A number of consultees reported the R&BT could be closed four to six days per year. This perception is reinforced by data indicating six separate incidents between 2007 and 2012 amounting to 34 closed days in total[27], principally a result of landslips. A separate source states that between 2008 and 2013 the R&BT closed seven times due to landslips[28], and the most recent slip, in December 2015[29], caused the road to be closed for 30 hours. Consultees also cited that the road can be closed as a result of accidents. Again, data shows that for the A83 between 2007 and 2011 there were 22 accidents between Ardgartan and the R&BT, with the road closed on eight occasions as a result[30].

Issues for Business and Organisations

4.33 Road closures have negative consequences for businesses:

> *"journey [resilience] is deficient...we can lose around 4 business days per year due to road closures at the R&BT and elsewhere"* (energy sector business)
>
> *"if we lose one day due to the R&BT…it lets some customers down and reduces our credibility…it's less about real impact on business performance but it's always in the back of our minds…we have just learned to manage it"*. (seafood sector business).

4.34 For businesses, resilience is the main issue with the R&BT. Businesses largely accept there will be working days lost. Some also report planning *not* to use it, particularly in some

[27] Transport Scotland A83 Trunk Road Route Study, Transport Scotland, 2013

[28] http://www.transport.gov.scot/water/scottish-ferries-plan

[29] http://forargyll.com/?p=103727

[30] Transport Scotland, 2013, p.6

weather conditions or later at night, when the alternative (i.e. the ferry crossing to Dunoon) is not available. Organisations delivering services also cite *"severe impacts"* when the R&BT is closed.

4.35 There is evidence that businesses have moved some or the majority of their activity outwith Argyll and Bute to the Central Belt (e.g. one renewables company) as a result. Seafood companies (where delays are costly) and the hospitality sector are amongst those most affected. One hospitality company, when serving Argyll and Bute, plans to leave a day early if needing to use the R&BT in order to build in the required contingency to ensure they are able to deliver for the customer.

4.36 The principal reason why there is an acceptance of a certain loss of productivity is due to the real impact for businesses and organisations when the Old Military Road is unavailable. There are significant impacts associated with the additional journey times and costs of alternatives when the Old Military Road cannot be used.

4.37 As well as investment in debris traps and netting to prevent landslides and reduce the likelihood of road closures, the lack of reliability at the R&BT is being partially addressed by the introduction of the Old Military Road as an alternative when the main carriageway is closed. This has been considered a better solution than the forestry road, although not all agree. However, this is a partial solution (depending on the nature and location of the incident) and there is a certain appetite (strong in some) for a radical and permanent intervention via a tunnel, viaduct and/or dualling in both directions either side of the valley (see chapter 5).

4.38 For the remainder of the A83, many consider the road to be good (i.e. with the exception of the R&BT) and parts of the route have been improved. Some also cite issues south of Tarbert to Campbeltown which is slow and winding, adding to already long journey times. Again, when road closures *do* occur, the impact is disproportionate given the lack of alternatives. Transport Scotland is planning to improve the A83 in a number of places over the next 3-5 years, as detailed in Chapter 3.

A85/A82 – Oban to Glasgow

About the Corridor

4.39 The A85 and A82 are the two trunk roads linking Oban to Glasgow, a route identified by consultees as a key transport corridor. The A85 runs from Oban town centre (next to the rail station), past Connel Bridge and eastwards along the south shore of Loch Etive, through Loch Awe and Dalmally to Tyndrum. It then continues eastwards from Crianlarich towards Stirling and Perth, but most users travelling to Glasgow turn south on to the A82 at Crianlarich. The A82 runs down the west shore of Loch Lomond, through Tarbet (where it is joined by the A83) and on to Glasgow. The Oban-Glasgow rail service also serves this transport corridor.

Ability to Meet Needs

4.40 The corridor scores 2.3 out of 5, based on a third of respondents (given many consulted do not use the corridor), with particular challenges cited for coaches and HGV vehicles.

> (Tyndrum to Oban) *"despite Transport Scotland upgrades there are a number of pinch points and traffic lights"*
>
> (Tarbet to Crianlarich) *"is a disgraceful trunk road, often with water on the road"*

"north of Tarbet it is almost unusable"

"this is a very poor road, narrow and windy. Many coach companies will not use this road and often vehicles get damaged"

"need to introduce overtaking lanes or three lane sections of the trunk road"

'this is a very narrow, windy road so the upgrades are welcome but the works themselves disrupt us"

Issues for Businesses and Organisations

4.41 For businesses based in Oban or travelling to the Central Belt from beyond Oban, the principal issues are the long journey times to Glasgow. The A85 road in places is regarded by consultees as being in poor condition (e.g. potholes from Loch Awe to Tyndrum) which impacts on journey times and safety. There are a number of pinch-points (such as the low bridge on the A85 between Connel and Taynuilt) and on many stretches, in the view of consultees, limited opportunity for overtaking.

4.42 The most critical issue reported by consultees is the A82 Tarbet-Crianlarich, and this is a constraint to such an extent that some businesses transport their goods via Stirling (for example a fresh fish company) where certainty of delivery is more important than a slightly longer journey time. Again, accidents can cause very considerable delays, and there are significant constraints caused by seasonality. Consultees cited long diversions on the A85 between Dalmally and Tyndrum if there is a blockage, although it is clear the issue also applies on the A85 between Dalmally and Connel.

4.43 There are views amongst consultees that the long journey times to Oban, and the Loch Lomond-side challenges on the A82 are acting as a constraint on business growth. These include those transporting perishable foodstuffs and other goods that connect with Glasgow airport and onwards travel by road from Lanarkshire, those with strong business links with Glasgow and Edinburgh including service businesses, and those who regularly use the A82 Tarbet to Crianlarich route, especially in the summer months. However, as noted in Chapter 3, there are plans by Transport Scotland to upgrade the A82.

4.44 Consultees also reported problems travelling into and around Oban, with the A85 providing the only route into the town from the north and east, and the primary means of access to the busy ferry terminal. For some, the constraints of travelling into and across Oban are severe:

"the congestion around Oban can be problematic. It can take 90 minutes for staff to reach the office… " (key sector business)

"*Oban congestion can be an issue, and at peak times this is a total bottleneck"* (transport provider).

4.45 The lack of a cycle route into Oban was also cited as a constraint to employee access to their place of work (aside from the Fort William route which has already been installed).

4.46 Transport access to Oban town centre is important for a number of reasons. One of these is Oban's role as a tourism destination and transport hub, and the potential for traffic problems to undermine the attractiveness of the town for tourism. There is also some concern

regarding increasing volumes of traffic using the ferry services departing out of Oban which will increase road traffic in the town. This is likely to put further pressure on the A85, particularly on the already busy section west of Connel Bridge, as well as the local road network in the town centre. More generally, there is a concern that insufficient capacity in the road network, including the A85, may constrain the future development of Oban and the wider Lorn Arc area. The A85 also plays an important role linking north and south Argyll given that it joins the A816 Oban-Lochgilphead route.

4.47 Despite improvements to the rail service, this is still regarded by consultees as weak, both in terms of journey times (mostly over 3 hours) and the quality of service (e.g. no Wi-Fi connection). A number of businesses, including the Marine Science institution, indicated that they would do more business with a better service, particularly one with a shorter journey time and/or one they could work/do business on.

4.48 The lack of an air service to Glasgow is also considered by business consultees in and around Oban to be a constraint, limiting high end tourism and similarly higher value added business activity.

A816 Oban-Lochgilphead

About the Corridor

4.49 This non-trunk road connects the largest employment centre in the Argyll and Bute study area, Oban, with the area's administrative centre, Lochgilphead. It is widely regarded by consultees as a poor road, with many bends and limited overtaking opportunities. As Chapter 3 indicates, it takes around an hour to cover the 37 miles between the two settlements. Given the growth of Oban, and the administrative role of Lochgilphead (and the access the road provides south towards Islay and Campbeltown), the A816 is an important transport corridor.

Ability to Meet Needs

4.50 The corridor scores 1.7 out of 5, based on around 15-20% of respondents who provided comment:

> *"this route is very significant for inward investment"*
>
> *"there are 3 sections of this route which go down to single track…some sections have traffic lights which is bizarre…driver frustration is severe"*
>
> *"this is the worst road, even with a clear run the 37 miles takes 50 mins"*
>
> *"[the road] is very poor…with areas north of Ardfern and south of Ardfern at Kilmartin key pinchpoints…we go through quite a few wing mirrors…"* (food distribution business)
>
> *"We don't use it because it's a little too slow due to windy roads…but would really like to because it's so attractive"* (tour operator)

Issues for Businesses and Organisations

4.51 Consultees state that the poor experience for road users on the A816 Oban to Lochgilphead limits and constrains business. This includes the negative impact in terms of deliveries to businesses and business-to-business activity, and also for reaching customers

(e.g. telecommunications) and service delivery. As the quotes illustrate, some businesses do not use the road at all due to its bends. As well as long journey time for the distance, users complain about conflicts between user types, lack of alternatives and driver stress.

4.52 With Oban a key distribution centre for Argyll and Bute, delivery times south to Mid Argyll and Kintyre are long. One business reported that it takes longer for the Oban to Campbeltown part of an international delivery from the United States than it does for the cross-Atlantic part of the journey. Lochgilphead could benefit from the success of Oban, given its relative proximity, however there is little evidence of this occurring at present.

Dunoon – Inverclyde (via car or passenger ferry)

About the Corridor

4.53 With the Firth of Clyde separating the Cowal peninsula from the Glasgow/Inverclyde area, this is a key transport corridor providing those in Dunoon and other parts of Cowal with access to the mainland at Inverclyde. Although there is the 83 mile overland route to Glasgow via the A815 and A83, most journeys use either of the two ferry services operated by Western Ferries (vehicles and passengers) and Argyll Ferries (passengers only). This is a key route identified by consultees in Dunoon and Cowal, although not by those further afield.

Ability to Meet Business Needs

4.54 The corridor scores 2.5 out of 5, based on around 20% of respondents citing this as an important transport route for them:

> *"this corridor is very important for Cowal, but for Cowal only"*

> *"a lot of people who commute don't have any issues with Western Ferries"*

Issues for Businesses

4.55 The businesses taking part in this study did not typically regard the Dunoon-Inverclyde corridor as a constraint to their business. This included those from Cowal itself where those consulted found the vehicle ferry service sufficient for their needs. Some Cowal businesses have sited depots in the Central Belt although it is not clear whether these would have been required if a fixed link was available. Businesses located further afield from Cowal (i.e. those located in Mid Argyll and Kintyre) were more likely to cite the Dunoon-Inverclyde route a constraint to their business. In these cases, it was the long journey time to Glasgow (and R&BT resilience) that was the greatest constraint, rather than the Dunoon-Inverclyde link in isolation.

4.56 There were some negative impacts identified by businesses in having to use a ferry, however for the majority of existing businesses the vehicle ferry is regarded as sufficient, being both generally reliable and frequent. Few businesses reported that the vehicle ferry timetable was insufficient to meet their needs.

4.57 For some, there were issues cited about a lack of town centre to town centre service afforded by the vehicle service. However, this was not cited by key employers consulted. The issue of the ferry *passenger* service resilience is one that most negatively impacts on commuters from Cowal to the mainland, and residents seeking to access services, such as hospital appointments. It can also affect those that are commuting *into* Dunoon, which can be

to the detriment of local businesses (staff absenteeism) and service provision (e.g. education, where teachers are reliant on the service).

Other key routes

4.58 There are a number of locally significant transport corridors identified by consultees. These include:

Rothesay-Colintraive-Dunoon (A886/B836/A815)

4.59 There is a corridor of movement between Rothesay and Dunoon which requires use of the Rhubodoch-Colintraive ferry and the B836 across the Cowal peninsula to connect with the A815 into Dunoon itself. The B836 is a slow road, predominantly single track and not regarded as a good route by consultees. It is also an important route for timber haulage from Glendaruel Forest, and this has enabled some recent improvements including resurfacing to be undertaken by Argyll and Bute Council with support from the Strategic Timber Transport Fund, at a cost of £1.5m. As Chapter 3 indicates, the journey time for the 28 miles between Rothesay and Dunoon can be up to one hour and twenty minutes, with the 20 mile road section between Colintraive and Dunoon alone taking almost 40 minutes at an average speed of just 32mph. The remaining 40 minutes includes the 8 mile section between Rothesay and Rhubodach and the ferry crossing.

4.60 Rothesay-Dunoon scores 2.0 out of 5, although this is based on less than 10% of consultees able to comment:

> *"[for us] this* [route] *is the priority and would greatly benefit the College due to the number of staff and students travelling from Rothesay to Dunoon"*

4.61 There is little evidence this specific corridor is a constraint to business, although the need for a ferry crossing and the long journey time (via the B836) affects some organisations' provision of services, and there is evidence of some commuting on the route (such as College staff and students). As in 4.19 above, the route is also used by commuters and businesses if the Rothesay-Wemyss Bay ferry service is suspended, so that they can access the mainland via the Dunoon-Inverclyde passenger or car ferry.

Dunoon-Lochgilphead/Tarbert (via A815/A83 or Tarbert-Portavadie ferry)

4.62 Dunoon to Lochgilphead by road requires a 63 mile journey via the A815 and A83, where the journey time is around one hour and thirty minutes. Alternatively, those travelling between Dunoon and Lochgilphead can make use of the Tarbert-Portavadie ferry. Tarbert to Portavadie and then Portavadie to Dunoon (via A8003 and then B836) is an important transport corridor for some (and from Tarbert southwards this is generally quicker than taking the A83 via Lochgilphead), although one where the road part of the route is identified by consultees as challenging. As well as the difficult B836 mentioned above, the non-trunk A8003 road from Portavadie past Tighnabruaich (to the junction with the A886[31]) also has several single-track sections and is regarded unfavourably by consultees (including its road condition and conflict between users). The 28 mile journey between Portavadie and Dunoon takes almost one hour, with an average speed of 32mph noted in Chapter 3.

[31] The A886 is required for a short section before turning on to the B836

4.63 The A815/A83 route is scored as 2.7 out of 5, although this is based on less than 10% of those consulted who were users of the route. Via the Tarbert-Portavadie ferry, the route also scores 2.7 out of 5, again based on fewer than 10% who used this corridor.

> *"the road from Dunoon across is poor for those coming [to Portavadie] by Western Ferries"*
>
> *"poor transport links to Dunoon from Portavadie".*

Rothesay-Lochgilphead (via A886/A815/A83 or Tarbert-Portavadie ferry)

4.64 This route overlaps the Dunoon-Lochgilphead/Tarbert route, with the addition of the Rhubodach to Colintraive ferry crossing and the A886, which joins the A815 at Strachur in Cowal. Road distances between Rothesay and Lochgilphead are reported by consultees as long, although average speeds are higher than on a number of other Argyll and Bute routes, with typically straight roads (on the A886) and better sightlines. However, at 75 miles this is a considerable distance when not using the Tarbert-Portavadie ferry. The ferry brings acknowledged benefits for consultees using the route, which reduces mileage to 48 miles. However, consultees stated that these benefits are, to quite a significant degree, undermined by the poor A8003 road, as discussed above.

Rothesay-Wemyss Bay ferry link

4.65 The ferry link is a key route for businesses located in Bute. It is not typically regarded as a constraint for businesses, although capacity can be an issue at times in the summer season. The ferry service is regarded as frequent, with sufficient morning and evening services, with the Rhubodoch-Colintraive service allowing earlier/later crossings to the mainland if required. Ferry service reliability is cited as an issue: particularly given weather-related cancellations have increased in recent years.

A819 Inveraray-Dalmally

4.66 This non-trunk road is cited by users as one that has benefited from significant improvement works in recent years. Although the road features a number of bends, given the topography, no significant constraints were identified.

Campbeltown-Ardrossan ferry link

4.67 This ferry link connects Campbeltown to mainland Ayrshire via what has, until recently, been a pilot summer-only sea crossing. This route has been regarded as helpful by key local businesses, largely by those in the tourism sector, with better access for visitors cited. As Chapter 3 indicates, from Summer 2016 the link has been made permanent.

Transport Considerations for Future Growth Opportunities

4.68 The previous sections in this chapter have outlined the important role that transport plays for businesses and organisations, and the constraints imposed by the current transport infrastructure. There are issues identified with regard to long journey times across the majority of the study area and issues of resilience. This is increasing business costs, reducing productivity and constraining investment.

4.69 As well as supressing investment by indigenous businesses (linked to sub-optimal levels of profitability), the transport infrastructure could be constraining inward investment by those

who may be attracted to the area. It is well documented[32] that successful economies are well connected physically and digitally. Businesses benefit from the ability to quickly access markets (customer, suppliers and labour) and to interact with other businesses and organisations.

4.70 There are many examples of the economic benefits of being well connected, including those drawn from the case studies at Appendix B. The examples include, but are not confined to fixed links which can provide economic impetus and enable new business activity, particularly where they build on existing assets. Positive impacts are typically in the form of traffic volumes, labour market consolidation, increased commuting, higher visitor numbers and population retention. Major transport investment has benefited known tourist destinations (as in Skye), communities connected by through routes, locations where there is strong demand from key sectors (e.g. Norway) and where there has been relative proximity to main centres (e.g. Sweden).

4.71 Within the study area, significantly enhanced transport infrastructure (alongside investment in digital infrastructure and skills) would help Argyll and Bute to fulfil its economic potential. Compelling Argyll and Bute, the Economic Development Action Plan for the area,[33] cites communication infrastructure as one of the "hygiene factors" required to ensure the basic infrastructure is in place to support strategic rebalancing.

4.72 Across the key sectors of Tourism, Food and drink and marine/renewables/R&D, high quality transport links help to facilitate business activity. For tourism, improved routes into the study area could encourage more of the area to be accessed by day visitors (including the 1,750,000 residents in the Glasgow and Clyde Valley metropolitan area). The golf sector is an example where there would be considerable advantages to increasing the on-course time through shorter journey times into and from the area. The Food and drink sector is very transport dependent, and improving transport accessibility would increase access to existing and new markets (e.g. for the location and time-dependent shellfish/perishables sector). There would be opportunities for more Food and drink businesses to transport their goods quickly and reliably to UK and international markets, and for more businesses to operate at scale (although other issues such as capacity to grow and access to raw materials would also need to be addressed).

4.73 Improvements in transport accessibility from the Central Belt could help to increase speed of business access to markets, customers and collaborators in the Central Belt and beyond. In turn, this would stimulate economic activity and increase demand for sectors serving businesses and customers within the study area, including the locally significant employment sectors of construction, retail, transport (including road haulage) and health and social care.

4.74 Transport improvements such as reduced road and rail journey times, and better resilience of the transport network may help to unlock (further) investment in the key investment sites in the study area, which were identified in Chapter 2. These include the sites located in the 'Lorn Arc' (Oban Bay, European Marine Science Park, Oban Airport Business Park and Barcaldine Industrial Estate), plus Machrihanish, Portavadie, and Sandbank, north of Dunoon in Cowal, where there is now flexible space targeted at business services, light engineering and technology businesses.

[32] See for example https://ec.europa.eu/jrc/en/research-topic/transport-sector-economic-analysis

[33] https://www.argyll-bute.gov.uk/compelling-argyll-and-bute

Further economic growth considerations

4.75 Overall, enhanced transport infrastructure can help realise future growth opportunities as part of a *package of investment*. This includes digital connectivity (which for many consulted is the top investment priority), one that is often a more direct constraint. Yet transport investment is clearly important, and for others consulted, it is the top, or one of the top priorities to address, and the greatest barrier to improved economic performance.

4.76 The Compelling Argyll and Bute study identifies digital as a driver (broadband and 4G mobile coverage) for business growth, particularly in tourism and healthcare. Transport investment alongside digital investment can help Argyll and Bute to take advantage of future growth opportunities linked to business and professional services able to benefit from broadband improvements. Whilst digital connectivity is the most important requirement in this regard (4G and broadband to allow home working and quality of life benefits to be derived), the ability to physically move around the area and to access customers in the Central Belt and beyond is critical.

4.77 Over one in four young people aged 15-30 currently living in Argyll and Bute would like to work locally if there were sufficient opportunities to do so (more than 2,700 young people), and transport is cited as the third most important factor in making the Highlands and Islands a more attractive place to live and work. However only half think it is easy to travel to other parts of Scotland from Argyll and Bute, lower than the Highlands and Islands regional average[34]. Improving transport connectivity and capitalising on opportunities for economic growth could help to address these issues and help to stem the outflow of young people from Argyll and Bute (as highlighted in Chapter 2).

4.78 Overall, the quality of the Argyll and Bute 'product' is seen as extremely important by those consulted for the research i.e. increasing the demand to live and work in the area. Creating the reason for people to come to Argyll and Bute, and increasing its appeal (and hence the demand for travel) is seen as important. There is a recognised need for high quality education and skills, and for more and better jobs (including key sectors) in addressing Argyll and Bute's economic needs. Along with digital connectivity and the sectors of tourism and aquaculture, these are the Argyll and Bute Economic Forum's priorities[35]. It is important that these aspirations are underpinned by communications infrastructure as a key enabler.

Summary

4.79 The chapter has reviewed the wide range of feedback provided by consulted businesses and organisations on the constraints of the existing transport network, and has identified a number of issues arising from the current infrastructure which are having an impact on business and service performance. This is evident from the consultations; although businesses are not always able to quantify the scale of this impact, key employment and potential growth sectors are highly transport dependent. There are a variety of opportunities for developing the Argyll and Bute economy that may be constrained by certain elements of the current transport network.

[34] Young People and the Highlands and Islands: Attitudes and Aspirations Research (HIE 2015)

[35] http://www.argyll-bute.gov.uk/economic-forum-report

4.80 The consultations identified a number of key transport corridors connecting the Argyll and Bute towns to each other and with Glasgow. These are:

- The A83 via the R&BT for those in Mid Argyll and Kintyre which connects with the A82 at Tarbet on Loch Lomond;
- The A85 and A82, and West Highland Line rail service, which connect Oban to Glasgow, and provides access to Oban town centre and ferry terminal;
- The vehicle and passenger ferry routes that connect Dunoon to Inverclyde; and
- The A816 connecting Oban with Lochgilphead.

4.81 Other transport corridors also serve important economic functions at a sub-regional level. These include:

- The route across the Cowal peninsula connecting the ferry services at Colintraive and Portavadie with Dunoon (B836/A8003)
- The Rothesay – Wemyss Bay ferry services;
- The A819 connecting Inveraray with Dalmally;
- The Campbeltown-Ardrossan ferry link

4.82 There are a number of issues arising for businesses and major organisations in dealing with the transport infrastructure. These include both journey times and resilience of many of the corridors identified above, plus congestion and lack of capacity for growth on the A85 approaches to Oban and in Oban town centre. Resilience is a widespread concern, notably regarding the R&BT on the A83, but also for other roads when there are accidents, and regarding weather disruption of ferries. This is compounded by a general lack of alternative routes, which can greatly increase journey times where there are long diversions.

4.83 The impact on businesses is typically experienced in terms of increased costs, which will also affect profits and the potential for reinvestment. Increased costs are in the form of driver times, especially when there are delays but also from the long journey times, and ferry tickets for those reliant on ferry crossings. There are also costs in terms of contingency planning (in case there are delays, capacity issues) or reduced quality of product (perishability). These vary depending on the sector and nature of business.

4.84 Most businesses consulted stated they would not expect to do more business with major transport improvements, although they would have lower costs. As well as financial cost, the loss of productivity from spending so much time travelling (which is mostly by car) impacts on businesses. There is also a lack of labour market consolidation, reducing the pool of available staff, reduced contacts with customers and suppliers, and difficulties in networking with other businesses. Some businesses have opened up facilities on the mainland/close to Glasgow to serve markets outside Argyll and Bute, and in a small number of cases the business has all but relocated out of Argyll and Bute. It is possible that transport improvements could positively influence such business location decisions, and encourage new businesses into the area to take advantage of the improved opportunities.

4.85 For service providers, and those with customers across Argyll and Bute, the long journey times make it more difficult to meet user or customer needs, compounded by (seasonal) reliability and resilience (un-planned road closures). For some services, such as the NHS, the need to use ferry services to access island towns and other communities can increase costs considerably. For others needing to serve the main towns in Argyll and Bute, the long journey times between the main towns makes service provision more challenging and costly per user/customer.

4.86 There are a number of economic growth opportunities in Argyll and Bute. It is not possible to quantify the impact of current transport constraints on these, yet alongside investment in digital connectivity, transport improvements could make the area significantly more attractive to potential investors (indigenous and new) and those who may be attracted to live and work in the area.

5 Problems, Objectives and Options

Introduction

5.1 This section reflects upon the socio-economic issues and travel constraints in Argyll and Bute, drawing on the analysis in chapters 2 and 3. It also takes into account the business and organisation views and opportunities discussed in chapter 4. From these, a number of objectives are developed for tackling the issues. A range of options for transport investment are then considered in light of these objectives, taking account of the experience elsewhere from transport investment case studies presented in Appendix B.

5.2 There are clearly a wide range of potential transport improvements, with very different cost implications associated with them. Some are ambitious, radical, potentially transformational and undoubtedly expensive, while others present what might be perceived as more pragmatic or affordable solutions to current concerns. This chapter considers a number of these, including the broad balance between investment and return/impact.

Approach to Defining the Problem

5.3 The analysis of the Argyll and Bute economy (chapter 2), current transport infrastructure (chapter 3), and views of businesses and other stakeholders (chapter 4) identifies several issues and constraints for the study area. These are likely to be acting as barriers to economic growth, and can be grouped into those that relate to:

- Wider economic concerns across Argyll and Bute;
- Transport corridors or nodes.

5.4 Under each of these, the review assesses whether there is a current response (from the Scottish Government, Argyll and Bute Council as the local authority, or partners), and whether these are sufficient to address the problems identified. Where the response may not be sufficient, the report discusses whether further intervention or an alternative solution is required to remove the constraint and/or achieve socio-economic objectives. Where there is an adequate response/solution in place, the option is not discussed further.

The Problems

5.5 The identified problems can be summarised as:

Wider Economic and Social Problems

1. The economic performance in parts of Argyll and Bute (particularly Cowal and Bute, Mid-Argyll and Kintyre) is weak;

2. There is de-population - and associated issues in terms of service delivery – in parts of Argyll and Bute (particularly Cowal and Bute, Mid-Argyll and Kintyre).

Transport problems

3. Long journey times between Oban and Glasgow by road for the distance, with reliability issues due to constraints on A82 Tarbet – Inverarnan and relatively slow average speeds on A85 Tyndrum - Oban, as well as congestion and restricted capacity for growth in/around Oban;

4. Journey times between Oban and Glasgow by rail which are uncompetitive with those by road;

5. Poor resilience of journeys between Lochgilphead, Campbeltown and Glasgow by road, due to impacts of landslide and road accident related closures on A83;

6. Disproportionate journey time for the distance between Oban and Lochgilphead, due to sub-standard nature of A816;

7. Disproportionate journey times for the distance across Cowal between Dunoon, Bute (via Colintraive) and Kintyre (via Portavadie), where much of the road is single-track;

Summary of Evidence and Current/Planned Investment

5.6 Both the wider economic and social issues, and the issues associated with transport corridors or nodes, are considered in Table 5.1 overleaf. This Table summarises the evidence relating to each of the problems, the current and planned investment in place to address the issue, and the extent to which this investment may address each issue.

Table 5.1: Summary of problems and extent to which these are/will be addressed			
Problem	**Summary of Evidence**	**Current and planned investment to address the issue**	**Extent to which issue is/will be addressed**
Wider Economic and Social Issues			
The economic performance in parts of Argyll and Bute (Cowal and Bute, Mid-Argyll and Kintyre) is weak	Evidence shows economic performance varies within the Argyll and Bute study area. Particular challenges face Cowal and Bute, but also Kintyre and Mid-Argyll. These include low business and employment growth, reliance on traditional and low paid sectors, and a weak private sector (the economy of Oban by contrast is growing). This performance is reflected in the economic performance of the key towns of Rothesay, Dunoon, Lochgilphead and Campbeltown.	There are a range of current and planned investments seeking to address the issue. These include: the work of the Economic Forum; A&BC Economic Development Action Plans priorities; strategic rebalancing priorities from Compelling A&B including identified sectors - tourism, food & drink, aquaculture, renewables, defence, care, construction, agriculture/forestry. Includes using digital to achieve business growth.	The current and planned investments are likely to make a major contribution to improving the economic performance in these parts of Argyll and Bute, although the challenges are considerable and there are still likely to be constraints imposed by the transport infrastructure (particularly if there is economic growth). Transport remains a barrier to achieve economic growth objectives for Cowal and Bute, Mid-Argyll and Kintyre.
There is de-population - and associated issues in terms of service delivery – in parts of Argyll and Bute (Cowal and Bute, Mid-Argyll and Kintyre)	Alongside the economic challenges, parts of the area experienced de-population between 2001 and 2011, and for decades prior to this. This is related to the economic weaknesses above, however de-population and low populations bring additional challenges in terms of serving dispersed and low populations.	As with attempts to address economic under-performance, there are a range of current and planned investments for reversing population decline. One key priority is housing, and removing this as a constraint. Digital connectivity also plays an important role here, in reducing the need to travel and facilitating home-working.	The current and planned investments are likely to make a major contribution to reversing population decline in these parts of Argyll and Bute, although there is still likely to be constraints imposed by the transport infrastructure. The long journey times to the Central Belt can make many communities feel isolated from the nearest major urban centre.

Table 5.1: Summary of problems and extent to which these are/will be addressed			
Problem/Issue	**Summary of Evidence**	**Current and planned investment to address the issue**	**Extent to which issue is/will be addressed**
Transport problems			
Long journey times between Oban and Glasgow by road for the distance, with reliability issues due to constraints on A82 Tarbet – Inverarnan and relatively slow average speeds on A85 Tyndrum - Oban, as well as congestion and restricted capacity for growth in/around Oban.	As identified in chapter 3, the journey time is 2h 20m for the 97 mile journey, with average speeds on A85 between Tyndrum and Oban of 38 mph – slower than those for the other trunk roads in the study area. The route was also identified as a key transport corridor by consultees. Congestion in/around Oban is adding to journey times for commuting and business travel to/from ferry terminal, and also affects tourists visiting the town.	Some actions are being taken to address the problems. In terms of the road route to Glasgow there are plans to upgrade the A82 Tarbet to Inverarnan – but no significant plans exist for the A85. There are currently no plans to address road capacity problems on A85 or local road network around Oban.	The current and planned investments are likely to make a contribution to reducing the journey times from Oban to Glasgow, although these time savings are likely to be relatively modest. The congestion/ capacity problems around Oban will not be addressed by these.
Journey times between Oban and Glasgow by rail which are uncompetitive with those by road.	This is evident from the journey time data by road (2h 20m) and by rail (3h 10m). The rail service is regarded weak by consultees in terms of journey times and quality of service.	Some actions are being taken to address this problem with improved trains to be introduced by 2019, offering improved comfort and facilities.	While the improved trains may enable a slight reduction in journey times, there are unlikely to be significant time savings given it is the track which limits speed rather than the stock.

Table 5.1: Summary of problems and extent to which these are/will be addressed			
Poor resilience of journeys between Lochgilphead, Campbeltown and Glasgow by road, due to impacts of landslides and road accident related closures on A83.	There are on-going concerns from consultees regarding potential for disruption due to landslides at R&BT, and more generally impact of closures due to road accidents, impacting on business confidence in use of the route. It is three hours by road from Campbeltown to Glasgow which limits business and tourism (e.g. day trips are not generally possible to Kintyre).	There have been improvements to the road infrastructure, notably some upgrades/investment in the A83. Some further investment is planned, and mitigation measures have been put in place at the R&BT.	The improvements are helping to improve the road journey experience and resilience has improved marginally, although this is still highlighted by consultees as key issue to be addressed.
Disproportionate journey time for the distance from Oban to Lochgilphead, due to sub-standard nature of A816	The journey time is 59 mins for 37 miles, with average speed below 40 mph. The route was identified as a key transport corridor by consultees. It suffers from sub-standard alignment and carriageway width throughout, including a number of difficult bends which can make it a difficult route for HGVs and coaches.	The road was de-trunked and is now the responsibility of Argyll and Bute Council. Improvements have been made within the limitations of local authority resources.	Improvements to date have been insufficient to overcome the issues identified in the analysis and by consultees.
Disproportionate journey times for the distance across Cowal between Dunoon, Bute (via Colintraive) and Kintyre (via Portavadie), where much of the road is single-track	Consultees identified this as an important local corridor for travel between Bute, Cowal and Kintyre. Much of the B836/A8003 route is a single-track road, with average speed close to 30 mph. The nature of the route is probably constraining travel across Cowal, and can present problems for HGVs and coaches.	The B836 has recently been re-surfaced, but little further investment is currently proposed in the corridor.	No proposals currently to address these issues.

Developing Objectives

5.7 The second part of this chapter develops a set of high level objectives designed to address the wider economic problems identified above, as well as the more specific transport problems listed. These objectives should inform consideration of transport investment strategies in Argyll and Bute and would need to be refined in any future transport appraisals, in particular to make them SMART[36] objectives as required for STAG.

5.8 In particular, the objectives are designed to draw on and reflect existing policies/strategies. These include Scotland's Economic Strategy[37] and Argyll and Bute priorities, including those set out in Compelling Argyll and Bute[38]. They also reflect the National Transport Strategy[39]. In all, four high-level objectives have been identified that reflect the wider economic aspirations for Argyll and Bute, address transport constraints, and reflect the desire for a transformational impact on the economy of Argyll and Bute.

Objective 1: Support improved economic performance of Cowal, Bute, Mid Argyll and Kintyre, and the reversal of population decline in these areas - this is a central objective for the review, given the need to address the weaknesses in these parts of the Argyll and Bute economy in particular and to start to reverse what has been long-term population decline.

Objective 2: Support opportunities for economic growth in key sectors and locations throughout Argyll and Bute (especially tourism, food and drink, aquaculture, marine and life sciences, education/research and renewables) – this aligns with the objectives articulated in Compelling Argyll and Bute to rebalance the economy, and also with the Scottish Government and HIE's focus on growth sectors.

Objective 3: Improve journey times, reliability and resilience between Argyll and Bute and Glasgow – this objective is to increase the speed, reliability and resilience of access to the population, key services, markets and onward transport connections at Glasgow, which are important for trade and export opportunities, as well as encouraging inward investment. This also enhances customer and visitor access to the study area.

Objective 4: Improve journey times, reliability and resilience internally between Argyll and Bute settlements - to overcome transport constraints and to improve the functioning of the study area labour market, and to facilitate better business and service-delivery connections between the key towns.

Discussion of Transport Options

5.9 The study has identified a number of potential transport investments which could address the transport problems described in chapter 4, and the economic and transport objectives set out above. The options discussed include discrete options/transport interventions, i.e. specific road upgrades, fixed links or other transport improvements.

5.10 There are clearly different costs associated with each option, which also vary in relation to the extent to which they address one or more of the objectives above. Based on the range of evidence presented throughout the report, the analysis starts to identify transport corridors which may be worthy of further, more detailed consideration.

[36] Specific, Measurable, Achievable, Relevant and Time-bound

[37] http://www.gov.scot/Topics/Economy/EconomicStrategy

[38] https://www.argyll-bute.gov.uk/compelling-argyll-and-bute

[39] http://www.transport.gov.scot/report/national-transport-strategy-nts-8780

Trunk Roads

5.11 Improving the existing road network is, for many current users, the top priority with the slow journey speeds on both the trunk and non-truck road network a considerable concern.

5.12 All three of the trunk roads serving the area (A82, A83 and A85) are of critical importance to the Argyll and Bute economy and to three of the five key towns in particular (Oban, Lochgilphead and Campbeltown). Both the A82 and A83 have been the subject of recent Transport Scotland investment, and further investment is being planned.

A82 Road Upgrade

5.13 The part of the A82 that businesses, organisations and wider stakeholders are most negatively critical of is the section along Loch Lomondside. It continues to be a major travel constraint, especially but not confined to the tourist season. Transport Scotland are developing plans for a major upgrade of the A82 Tarbet – Inverarnan section (at an estimated cost £215-£285m[40]) which is intended to improve journey times and the overall quality of the road for this important route. These improvements should address the main concerns about the A82 raised in consultations.

A83 Road Upgrade: The Rest and Be Thankful

5.14 The concerns of businesses and organisations that depend on access via the R&BT are significant. The intention (and indeed the scope) of this study is not to repeat existing studies, and yet a permanent solution to the R&BT is the transport improvement that is most requested by organisations and the business community. There are differing views as to whether this should be a tunnel, a viaduct, or dualling both sides of the valley, but the key point is that stakeholders indicated that they would strongly prefer a "once and for all" solution. This would signal that Argyll and Bute is "open for business", and perceptions of improved access could encourage future business investment in the A83 corridor.

5.15 The 2013 A83 Route Study[41] considered a range of options, of which the lowest cost 'permanent' solution (i.e. which would completely remove risks posed by landslides at R&BT) was the 'Yellow' option incorporating around 1.2km of viaduct that would allow debris to pass safely under the road. The estimated cost was £83-£95m in 2012 prices. However, the report concluded that the 'Red' option (maintaining the existing alignment of the A83 and adding mitigation measures such as improved hillside drainage and debris flow barriers) offered the best performance against the assessment criteria at a cost of around £9-10 million in 2012 prices.

5.16 These mitigation measures have now largely been implemented although there continue to be landslips and closures (most recently January 2016). Time needs to elapse to be able to take a view on the extent to which the identified problem has been addressed, but there is clearly still a negative view held by those consulted. A permanent solution to the R&BT would have negligible impact on journey time/reliability under normal conditions – it is a resilience measure that would reduce impact of future landslide events at this location, and improve wider perceptions of access to Argyll and Bute. Nevertheless, the issue remains at the front of mind for users and potential users of the R&BT.

[40] Reported in Press & Journal, 6/10/15

[41] http://www.transport.gov.scot/system/files/uploaded_content/documents/projects/A83/a83-rest-and-be-thankful-project-a83-trunk-road-route-study-report-part-a-final.pdf

A83 Road Upgrade (apart from R&BT)

5.17 This was also considered in the 2013 A83 Route Study which followed the STAG process, and various upgrades are currently being planned. These will improve road alignment and width at problematic locations (specifically Strone Point, Erines, Dunderave, and Barmore Road, Tarbert). The A83 study estimated the total cost of these improvements as being in the range of £10-20m. The newly trunked section south of Kennacraig is now subject to a similar process, which may result in additional upgrades being added to those already planned.

5.18 As with the R&BT, time needs to elapse to assess the impact and effectiveness of these planned improvements in addressing the issues identified.

A85 Road Upgrade and Oban road improvements

5.19 Improving the A85 between Oban and Tyndrum was also cited as a priority for many businesses and other stakeholders, given that it is perceived as a relatively slow and often a busy road (noted as the busiest route in the study area in chapter 3). It also leads to one of the busiest ferry terminals in Scotland. Improvement would help to meet the objective of reducing journey times from the study area (particularly Oban and the Lorn Arc) to Glasgow.

5.20 The A85 also forms the only viable route into Oban from the north and east for all traffic, and is noted by consultees as already suffering from congestion with concerns that lack of capacity will constrain future growth of the town. Options to address this have been considered in the past by Argyll and Bute Council, although the proposals were not taken forward. They included a bypass / development road, which would provide for better routing for vehicular traffic, including traffic heading for ferry connections, and upgrading the currently single-track Glencruitten Road to provide an alternative to the A85 between Connel and Oban. As indicated in chapter 4, there is an extremely lengthy diversion (via A816) should the A85 be closed in this section, with the Glencruitten Road currently unsuitable for any significant volume of traffic. The A816 can also be problematic for larger vehicles.

5.21 Transport Scotland policy with regards to the A85 is outlined in the Scottish Transport Projects Review[42]. It does not identify any major interventions but highlights the need to maintain and safely operate the route, including a variety of localised enhancements targeted to improve physical condition and safety standards.

5.22 Oban has been the economic success story for Argyll and Bute in recent years, and as highlighted in Chapter 4 has significant potential for future economic growth based around Tourism, marine sciences, education and research, providing the road network is developed to enable growth of the town. Given the vital role the A85 plays in providing access to the town centre and ferry terminal, and in linking the town centre with planned developments throughout the Lorn Arc, there would be merit in future studies considering transport requirements for economic development in the area.

Non-Trunk Roads

5.23 Businesses and stakeholders indicated that they were also keen to see investment in the road network extended to the non-trunk roads. Options for each of the roads highlighted in the problems/issues section in chapter 4 are considered here. Some of the case study road

[42] http://www.transport.gov.scot/strategic-transport-projects-review

improvements presented in Appendix B provide useful comparators for these routes, including the type and scale of impacts that investment might produce.

A816 Oban to Lochgilphead Road Upgrade

5.24 Upgrading/improving the A816 would address the objective of reducing journey times between two of the study area's key settlements, on what is recognised as a poor quality road, mainly as a result of poor carriageway width and alignment. It may also help to address some of the wider economic growth objectives for the study area, by improving access to Oban for businesses located in the Lochgilphead area and further south in Kintyre, and also by enhancing the accessibility and hence attractiveness of mid-Argyll in itself as a business location. Argyll and Bute Council already considers the A816 a priority route for future investment, and has previously estimated costs in the region of £40m for improving road alignment and width to a modern standard.

Dunoon-Colintraive-Portavadie Road Upgrade (B836/A8003/B8000)

5.25 This predominantly single-track route provides important functions connecting communities across Cowal, Bute and Kintyre with Dunoon, and is a key timber haulage route. Options could include upgrading the whole route to A-road status along with physical upgrades to modern carriageway standards throughout (i.e. a minimum 6m wide carriageway with improved alignment to make it a faster and safer route). No detailed cost estimates exist for this, but single-track road upgrades have recently been completed in the Highland Council area for around £1m per km, suggesting that the cost for upgrading the route is likely to be around £30-40m.

5.26 An upgraded cross-Cowal route such as that discussed above would benefit both service providers (e.g. Argyll College UHI and the NHS) and a considerable number of businesses, including the tourism and forestry sectors. It is potentially a very important east/west route across the study area, connecting Dunoon with the ferry services to Bute and Kintyre that is under-used presently given long journey times and difficult road conditions. The case study evidence presented in Appendix B for the A851 Armadale-Broadford road is very relevant here. This was also a single-track route which connected communities to ferry services at Armadale (for road/rail connections at Mallaig), the upgrade of which enabled an increase in car, van and tourist coach traffic, and helped to support population growth and increased economic activity in the Sleat peninsula on Skye.

Fixed Link Options

5.27 The impact of previous investments in fixed links is reviewed in the case study evidence presented in Appendix B. Some significant positive impacts were identified with respect to traffic volumes, labour market consolidation and commuting, visitor numbers and population trends, particularly where there is a strong tourism offer (as with Skye) and where there is proximity to major centres (as with Sweden). Both these are relevant to the Argyll and Bute study area. On the whole there is a positive relationship between fixed links and population trends (Appendix B para. 1.58).

5.28 On the other hand, some fixed links have led to increased business competition from outside the area, concentration of retail and other services and pressure to concentrate public sector (including health) provision – which can be unpopular. Given the lack of evaluation evidence to draw on, the extent to which they have produced transformational impacts is in most cases unclear, but those which appear to have been most successful have either tapped into existing economic opportunities (e.g. tourism destination, providing a through-route to a

wider geographical area), or allowed a greater benefit to be realised from existing/wider trends. In some cases, small island communities affected by depopulation have seen this continue following opening of a fixed link, albeit at a slower rate.

5.29 The case studies indicate that fixed links should not been seen as a panacea for solving all economic problems in a community. However, in many cases they have proved to be beneficial – in particular where there are existing population and economic growth trends, and current transport infrastructure is struggling to meet demand, or where the fixed link is part of a through-route serving a wider geographical area.

Cowal-Inverclyde

5.30 The current transport provision between Dunoon and Gourock via the two ferry services was generally rated by businesses and stakeholders as good, notwithstanding some concerns about the resilience of the town centre to town centre passenger ferry service, which have been acknowledged by Transport Scotland and should be addressed in the next contract. This was therefore not identified as one of the problem transport corridors in chapter 4.

5.31 That said, a fixed link from the mainland across the Firth of Clyde to Cowal could reduce journey times and costs between the Dunoon area and Glasgow compared to using either of the current ferry services or the 70 mile road trip via the A815 and A83. Some work has already been undertaken (by the Cowal Fixed Link Working Group)[43] looking at different bridge and tunnel options for crossing the Clyde, on various routes. The shortest direct crossing option would be between Dunoon harbour area and the A770 at Cloch, south of Gourock, with a distance of about 2.7km – similar to the length of the new Queensferry Crossing across the Forth Estuary. Given the scale of such a crossing, it would be expected that construction costs would be in terms of hundreds of millions of pounds.

5.32 Such a link would signal major investment in the west of Scotland – and be 'a political statement', which would be viewed by some as helping to rebalance the considerable infrastructure investment in the east of Scotland. However, it is difficult to gauge the potential impact of such an investment. It is evident that there is weak economic performance in east and central/southern parts of the study area, and it is clear from the case study evidence that fixed links can bring a range of benefits, including commuting and labour market consolidation. Businesses and service providers say that they would use the fixed link if it was available, although for existing businesses, it would make marginal differences to their operation. Service providers state more certainly they would use the fixed link, although that does not necessarily mean service improvements (since, as noted with the case studies, it could lead to service rationalisation).

5.33 Assuming, in line with Scottish Government policy, that there would be no tolls on any fixed link, there would undoubtedly be extra trips stimulated as it would be less of a barrier to users than a ferry service. The unknown is how economically significant these additional trips would be. It may well be that a large number of users would be those in Dunoon travelling to do their shopping in Inverclyde or Glasgow, and there would be uplift in the number of commuters to and largely from Dunoon. There may also be local business benefits in terms of making existing trips more efficient/reliable, such as the movement of fish etc. to the customer. There

[43] This is a group established to lobby for a Cowal Fixed link comprising local businesses and other stakeholders

may also be increased usage from business outside Cowal (e.g. Mid Argyll) who may utilise the Cowal to Inverclyde fixed link rather than the A83 via the R&BT.

5.34 There is currently limited evidence of demand for travel to/from the wider study area that would be released by such a major investment, although the Western Ferries vehicle passenger ferry is the most used ferry service in the study area and there can be some peak time capacity constraints for businesses. Where there is feedback that the investment would bring considerable benefits, this is where the crossing is combined with other investment in roads (and other fixed links such as across Loch Fyne) to bring Mid Argyll and Kintyre much closer to the Central Belt in terms of greatly reduced journey times. This is considered in more detail below.

Colintraive-Rhubodach

5.35 A fixed link at the north end of Bute is a far more easily delivered link, given the Kyles of Bute are just 400m across at this point. At the same time, the ferry operates from 5.30am to 9pm each day and runs every 30 minutes or more frequently, and this is not currently viewed as constraining business activity, or identified more generally as a problem. In consultations, concerns were raised that a fixed link would be detrimental to the island of Bute, removing island status with a negative impact on tourism (although case study evidence suggests this fear is not typically realised). There were also concerns that services would be rationalised, for example health services, with reduced need to provide services on the island if there was a fixed link. However, risks of wider business competition are low given any fixed link would not be connecting Bute directly to a major urban area (although benefits may also be less significant). Notwithstanding these concerns, the recent Argyll and Bute Economic Forum Report recommends that a Colintraive-Rhubodach fixed link should be given serious consideration, 'to help Bute and Rothesay flourish again'[44].

Crossing Loch Fyne

5.36 A fixed link across Loch Fyne could produce benefits in terms of reduced journey times for those in Mid Argyll and Kintyre if combined with investment on roads across Cowal towards Dunoon. It may also help by providing an alternative to the A83 (including the R&BT) that introduces more considerable journey time savings, although still requiring a ferry crossing at Dunoon. There is a potential crossing point at Otter Ferry across to the A83 near Lochgilphead that in combination with a new east-west road across Cowal could reduce journey times significantly between Lochgilphead and Dunoon (the distance would be more than halved from 63 miles to around 25 miles), improving connectivity for businesses, commuters and tourists travelling across Cowal to Mid Argyll and Kintyre. A fixed link without associated road investment across Cowal would be largely ineffectual, and would not, for example enable HGV usage and the transport of heavy goods to Glasgow by road. With a minimum crossing distance of around 2km, in addition to investment in link roads, a fixed link across Loch Fyne would also require very substantial capital investment, likely to be in excess of £100m.

Combining fixed links

5.37 In general, for businesses further afield than Cowal, a programme of extensive investment, including crossing the Clyde, Loch Fyne and road upgrades across Cowal, to provide a new east-west route through Argyll, was viewed as offering much greater benefits to

[44] p16 of report.

both the West (Kintyre and Mid Argyll) and East (Dunoon) of the study area. This would help address the needs of businesses in Mid Argyll and Kintyre (although a part of this 'need' is driven by lack of resilience in the R&BT). At the same time, most could not conceive of the level of investment required (possibly in excess of £1bn) to provide fixed link crossings across both Loch Fyne and the Clyde. However, many would also use the route if it was there. For existing businesses, a new east-west route would deliver time-savings and may reduce costs, in turn helping to increase profits. Such major investment could generate new economic activity and business investment, as parts of Argyll become up to an hour closer to the major metropolitan area and 1.75m residents of Glasgow and Clyde Valley. It may also act as a significant stimulus for population growth in Argyll and Bute.

5.38 Extended transport investment from Inverclyde across Cowal to Mid Argyll has the potential to reach more than 21,000 people in Mid Argyll and Kintyre (and almost 1,000 businesses), as well as the 15,000 people and 350 businesses in Cowal. It could provide a fixed link alternative to the much-criticised A83, although at a much higher cost than more simply providing a 'permanent solution' at the R&BT. Further, the majority of tourists coming in to Argyll and Bute may still continue to use the A82, particularly if heading to Oban or Fort William. That said, a faster and more reliable route from Cowal, mid-Argyll and Kintyre into the Central Belt would significantly benefit some key sector businesses, where access to markets is important and time critical, and lead to higher business and visitor traffic volumes.

5.39 Based on the findings of the consultations and case study evidence, each of the fixed link options outlined above would offer a reduction in journey times and costs compared to existing transport options, and this would result in an increase in travel by businesses, residents and tourists. In this respect, the two 'standalone' options (Cowal-Inverclyde and Colintraive-Rhubodach) are likely to offer relatively minor economic benefits in comparison to the benefits offered by the two larger options (Loch Fyne/Cowal crossing and combined Clyde/Cowal/Loch Fyne east-west route), and it is the later of these that would offer the greatest prospect of a transformative economic impact for Argyll and Bute

Ferry services

5.40 There is scope to make greater use of ferry services, and to provide better/more services to unlock further economic potential. As highlighted, the Tarbert-Portavadie ferry example is cited as helpful for a number of businesses and service providers (although use is not as extensive as it would be with better onward Cowal road connections). Similarly, the Campbeltown-Ardrossan ferry has been welcomed and provides an additional way of accessing Kintyre, albeit a large number of users are tourists (the resident/tourist mix is currently being evaluated). The pilot service has now become a permanent ferry crossing.

5.41 There are various changes to ferry services proposed in the Scottish Ferries Plan, which are summarised in chapter 3. This study has not identified any additional ferry options for consideration, either in terms of new routes or upgrades to existing routes, beyond those already envisaged in the Scottish Ferries Plan. Rather, it highlights the important economic roles of the current ferry network, and potential to develop these through investment in connecting road infrastructure.

Rail services

5.42 Investment in rail services on the West Highland Line between Oban and Glasgow could address problems identified in relation to poor journey times – these currently being in excess of three hours. This could provide moderate economic benefits for the Oban area by

improving its attractiveness as a business location and encouraging a modal shift of some travellers from road to rail. This in turn might help to reduce road congestion in the Oban-Connel area.

5.43 For the Oban route, current Class 156 trains are due to be replaced with refurbished Class 158s by 2019, offering improved passenger comfort, air-conditioning and on-board wi-fi – and the faster Class 158s may also enable a small journey time reduction. Any physical upgrade of the rail line would need to be considered as part of the rail investment programme for Control Periods 6-7 (2019-2029). Transport Scotland and Network Rail will be consulting on this over the next two years. A more detailed study would be required to identify scope for journey time improvements and the cost of achieving these.

Air services

5.44 There are also potential investments in air services that may help address some business constraints. These principally relate to the potential for an Oban to Glasgow and/or Edinburgh air service that can also link to Barra. Oban and surrounding Lorn area is a growing employment centre, with a population of around 10,000, and there is some evidence that businesses would utilise such a service. With a combined flight and check-in time similar to the Campbeltown-Glasgow service of around 1hr 15 mins, this would however offer journey time savings of less than an hour compared to driving from Oban to Glasgow Airport.

5.45 The Glasgow to Oban air service has been the subject of a recent HITRANS study[45], and Argyll and Bute Council are known to be seeking a potential operator for a commercial service. This study has not identified any additional options for consideration at this time.

Summary

5.46 There are a range of potential investments in the transport infrastructure that may bring economic and social benefits, and help remove transport constraints. These fall across a number of key transport corridors, and cover very major investments in fixed links or other large-scale permanent solutions through to more modest levels of investment such as improving the quality of the road network. Any transport improvements will have significant cost implications if they are to generate desired economic and social outcomes and the benefits will also vary. Few if any of the major investments are likely to generate a positive Benefit to Cost ratio (BCR) based on current methodologies.

5.47 There is more merit in considering fixed link investments that allow greater access to both Cowal and to Mid Argyll and Kintyre than fixed links in isolation. These multiple fixed links would need to be part of major long-term planned investment, and this would need very careful consideration. There are advantages to more modest levels of investment (although more significant than has typically been the case) in the existing infrastructure, especially roads, in addition to planned investment. The benefits will vary between the different investments and there would be a need to fully account for wider economic and social benefits as well as undertake a transport economic efficiency analysis.

[45] http://www.hitrans.org.uk/documents/Regional_Air_Opportunities_Study.pdf

6 Conclusions

6.1 This chapter presents the findings and conclusions of the study.

Economic challenges and transport problems

6.2 The review indicates the long-term challenges facing the Argyll and Bute economy and sustaining population growth, particularly in parts of Bute and Cowal, Mid Argyll and Kintyre. For some of these areas, there is a need to restructure and diversify the economy and move away from a reliance on traditional sectors that no longer sustain sufficient employment opportunities. Oban is further advanced in this process, but the remaining four key towns in the study area need to change their sectoral mix as identified in the recently completed Compelling Argyll and Bute report. The area has experienced population loss in the years to 2011, particularly in Rothesay, rural Cowal and Campbeltown, although there is some evidence that parts of the economy are growing, particularly around Oban and Lorn.

6.3 Potential for future economic growth also appears strongest around Oban and the 'Lorn Arc' which includes key development sites at the European Marine Science Park, Oban Airport and Barcaldine. Other key locations for economic development are Machrihanish / Campbeltown, Portavadie and Sandbank (Dunoon), but the geographical scope for tourism-related development is much more widespread. Improvements in digital connectivity should also encourage population and business growth throughout the region.

6.4 The geography of Argyll and Bute means there will always be some transport challenges due to the distances that need to be travelled and the mix of land masses and sea. Existing road/rail journeys to Glasgow are long from Lochgilphead, Oban and Campbeltown, and these are compounded by the nature of the roads which increase journey times further. Where physical distances to Glasgow are shorter, journey times are still lengthy, due to the sea-crossings involved. Journey times between settlements are also poor, in part due to long distances, but also poor road infrastructure, with average speeds on some routes below 40mph.

6.5 Businesses and stakeholders consulted in the study highlighted concerns associated with seasonal variations in road traffic. Peak volumes can be twice the trough, leading to congestion on the busiest parts of the trunk and non-trunk road network, particularly around Oban but on other routes too, including the A82 at Loch Lomondside. The resilience of the transport network has also been highlighted as a concern, particularly with respect to the A83 at the Rest and be Thankful, but also more generally due to long diversion routes when roads are closed for any reason, and on some ferry routes which are prone to weather-related cancellations.

6.6 The review identifies two key economic problems. Firstly, that the economic performance in parts of Argyll and Bute is weak (particularly Cowal and Bute, Mid-Argyll and Kintyre). Secondly, that there is de-population - and associated issues in terms of service delivery – in parts of Argyll and Bute (again particularly Cowal and Bute, Mid-Argyll and Kintyre).

6.7 There are also five transport problems identified:

- Long journey times between Oban and Glasgow by road for the distance, with reliability issues due to constraints on A82 Tarbet – Inverarnan and relatively slow average speeds on A85 Tyndrum – Oban, as well as congestion and restricted capacity for growth in/around Oban;

- Journey times between Oban and Glasgow by rail which are uncompetitive with those by road;
- Poor resilience of journeys between Lochgilphead, Campbeltown and Glasgow by road, due to impacts of landslides and road accident related closures on the A83;
- Disproportionate journey time for the distance between Oban and Lochgilphead, due to sub-standard nature of A816;
- Disproportionate journey times for the distance across Cowal between Dunoon, Bute (via Colintraive) and Kintyre (via Portavadie), where much of the road is single-track;

Objectives of future investment

6.8 Four high-level objectives are identified which reflect the wider economic aspirations for Argyll and Bute, and address transport problems. These objectives should inform consideration of transport investment strategies in Argyll and Bute and would need to be refined in any future transport appraisals, in particular to make them SMART[46] objectives as required by STAG.

Objective 1: Support improved economic performance of Cowal, Bute, Mid Argyll and Kintyre, and the reversal of population decline in these areas - a central objective for the review, given the need to address the weaknesses in these parts of the Argyll and Bute economy in particular and to start to reverse what has been long-term population decline.

Objective 2: Support opportunities for economic growth in key sectors and locations throughout Argyll and Bute (especially tourism, food and drink, aquaculture, marine and life sciences, education/research and renewables) – aligning with the objectives articulated in Compelling Argyll and Bute to rebalance the economy, and also with the Scottish Government and HIE's focus on growth sectors.

Objective 3: Improve journey times, reliability and resilience between Argyll and Bute and Glasgow – this objective is to increase the speed, reliability and resilience of access to the population, key services, markets and onward transport connections at Glasgow, which are important for trade and export opportunities, as well as encouraging inward investment. This also enhances customer and visitor access to the study area.

Objective 4: Improve journey times, reliability and resilience internally between Argyll and Bute settlements - to overcome transport constraints and to improve the functioning of the study area labour market, and to facilitate better business and service-delivery connections between the key towns

Transport Options

6.9 A number of potential transport investments have been identified which could address the economic and transport objectives.

Trunk Road Investment

6.10 The existing road network is the top priority for many current users. Three of the main trunk roads serving the area (A82, A83 and A85) are of critical importance to the Argyll and Bute economy and to three of the five key towns in particular (Oban, Lochgilphead and Campbeltown).

[46] Specific, Measurable, Achievable, Relevant and Time-bound

6.11 In relation to the **A82**, businesses and stakeholders are most critical of the section along Loch Lomond between Tarbet and Inverarnan. Transport Scotland are planning a major upgrade of this section, intended to improve journey times and the overall quality of the road, which should address the key problems identified with this important route.

6.12 The single most criticised route is the **A83** at the R&BT. This has recently received significant investment in landslide risk mitigation measures, but stakeholders indicate they would still prefer a permanent solution in some form at the R&BT, which would signal that Argyll and Bute is "open for business". Time needs to elapse to be able to take a view on the extent to which the identified problem has been addressed by the mitigation measures, but there is clearly still a negative view held by those consulted.

6.13 Improving the **A85** between Oban and Tyndrum was also requested by many businesses and other stakeholders, given that it is relatively slow and often a busy road, with additional problems relating to congestion and lack of capacity for growth in the Oban area, including the town centre. Improvement would help to meet the objectives of reducing journey times to Glasgow, and supporting population and economic growth throughout the Lorn Arc. Unlike the A83 and A82 this has not been the subject of a detailed Route Study, although Argyll and Bute Council has previously considered options to improve the road network around Oban.

Non-trunk Road Investment

6.14 Businesses and stakeholders indicated that they were also keen to see investment in the road network extended to certain non-trunk roads.

6.15 Upgrading the **A816 Oban-Lochgilphead** road would address the objective of reducing journey times between two of the study area's key settlements, on what is recognised as a poor quality road. It may also help to address some of the wider economic growth objectives for the study area, by improving access to Oban for businesses located in the Lochgilphead area and further south in Kintyre, and also by enhancing the accessibility and hence attractiveness of mid-Argyll in itself as a business location. Argyll and Bute Council already considers the A816 a priority route for future investment, and has previously estimated costs in the region of £40m for improving road alignment and width to a modern standard.

6.16 The **Dunoon-Colintraive-Portavadie route (B836/A8003/B8000)** is a predominantly single-track route connecting communities across Cowal, Bute and Kintyre with Dunoon, and is an important timber haulage route. It is potentially an important east-west route across the study area that is under-used presently given long journey times and difficult road conditions. Upgrading the route would benefit service providers and a considerable number of businesses, including the tourism and forestry sectors. Options could include upgrading the whole route to A-road status along with physical upgrades to modern carriageway standards throughout.

Fixed Link Options

6.17 Case study evidence of fixed links in Scotland and Scandinavia indicates that they can have significant positive impacts, including increased traffic volumes, labour market consolidation and commuting, visitor numbers and population trends. At the same time, some fixed links have led to increased business competition from outside the area, concentration of retail and other services and pressure to concentrate public sector (including health) provision. The extent to which fixed links have produced transformational impacts is in most cases unclear, but those which appear to have been most successful have typically taken advantage

of existing economic and geographical opportunities (e.g. popular tourism destination, proximity to a major centre, and providing a through-route to a wider geographical area).

6.18 This review considered four broad fixed link options in the study area. Each would offer a reduction in journey times and costs compared to existing transport options, resulting in an increase in travel by businesses, residents and tourists. Two 'standalone' options (Cowal-Inverclyde and Colintraive-Rhubodach) are likely to offer benefits at a local level, although not on the scale of journey time/cost benefits offered by the two larger options. A **Colintraive-Rhubodach** fixed link would be the lowest cost fixed link option since only 400m of water would need to be crossed, and this would provide some economic benefits to Bute through improved connectivity with the rest of Argyll. As recommended in the recent Argyll and Bute Economic Forum Report, this is probably worth further consideration, although this report notes that improving the connecting road network in Cowal (i.e. B836/A8003) is a more immediate priority of businesses and service providers in the area.

6.19 A **cross-Clyde** fixed link between Cowal and Inverclyde would be a much more significant undertaking, requiring a crossing of around 3km (similar to the length of the new Queensferry Crossing). This would undoubtedly stimulate additional journeys between Cowal and Inverclyde, and provide some benefits to commuters, businesses and service providers, but there could also be negative impacts on the Dunoon area due to competition effects and shift in retail expenditure to Inverclyde. Overall there does not appear to be a strong economic case for such a major fixed link in isolation.

6.20 A **Loch Fyne crossing** (in the vicinity of Lochgilphead and Otter Ferry) and associated road infrastructure across Cowal towards Dunoon would improve connectivity for businesses, commuters and service providers travelling between Kintyre/Mid-Argyll and Cowal, more than halving the distance between Lochgilphead and Dunoon. To some extent it could also provide an alternative to the A83 R&BT when travelling to/from Glasgow, albeit still reliant on a ferry crossing between Dunoon and Gourock. With a water crossing of around 2km plus requirement for new connecting road infrastructure across Cowal, this would also require a major investment similar in magnitude to a cross-Clyde link.

6.21 **Combining a Loch Fyne crossing with a cross-Clyde link** would have a much more significant impact by providing a new east-west route without ferry crossings between Lochgilphead and Glasgow, bringing parts of Argyll up to an hour closer to the Glasgow area. This could provide a significant stimulus for new economic activity and population growth in Argyll and Bute bringing advantages to the west of the region (Kintyre, Mid-Argyll) as well as the east (Dunoon). The wider improvement in east-west connectivity is more likely to produce positive economic outcomes for the Cowal area than a standalone Clyde crossing, and overall this option offers the greatest prospect of a transformational impact in Argyll and Bute making a strong contribution to all four study objectives. However, the scale of such an undertaking should be recognised, with a complete east-west route including two fixed links likely to cost in excess of £1bn.

Rail Services

6.22 Investment in rail services on the West Highland Line between Oban and Glasgow could address problems identified in relation to poor journey times (these currently being mostly in excess of three hours) and support economic growth in the Oban area. The current Class 156 trains are due to be replaced with refurbished Class 158s by 2019, offering improved passenger comfort, air-conditioning and on-board wi-fi – and the faster Class 158s may also enable a small

journey time reduction. Physical upgrades of the rail infrastructure may need to be considered as part of the rail investment programme for Control Periods 6-7 (2019-2029) in order to reduce journey times to below three hours.

Overall Conclusion

6.23 Based on desk based analysis and consultations with businesses and stakeholders, this study has identified a number of transport problems in Argyll and Bute which may be constraining the economy of the area. Transport investment could therefore play a significant role in wider efforts to encourage population and economic growth in Argyll and Bute. It could act as an enabler of economic growth, alongside investment in skills, digital connectivity and key sectors.

6.24 Future transport investment should aim to support improved economic performance and opportunities by improving journey times, reliability and resilience between Argyll and Bute and Glasgow, and internally between key settlements.

6.25 In light of the current and planned investment underway (particularly with respect to the A82 and A83), and based on the evidence presented and the problems identified in the study, the report concludes that the following transport corridors should be given further consideration:

- **A85/Oban access**– with the aim of improving journey times between Oban and Tyndrum, and addressing concerns regarding congestion and lack of capacity for growth in the Oban / Lorn Arc area, including access to Oban town centre and ferry terminal. This would allow physical expansion of the town and support growth opportunities in tourism, marine sciences, education and research.

- **A816**– to remove the constraints caused by poor carriageway width and alignment, and improve journey times between Oban and Lochgilphead (and onward to Kintyre), supporting economic growth along this corridor.

- **Dunoon-Colintraive-Portavadie (B836/A8003/B8000)** – to remove the constraints posed by the single-track sections of this route, which connects Dunoon with the ferry services to Bute and Kintyre, reducing journey times across Cowal throughout the corridor.

- **Glasgow-Oban rail service**, with the aim of reducing journey times, ideally to below three hours. Further investigations would be required to determine the extent of any journey time reductions that the introduction of Class 158 trains will bring, and to identify options for reducing this further.

6.26 In the longer-term, and for truly transformative impacts, an aspirational package of investment to develop a new east-west route (including fixed links across the Clyde and Loch Fyne) that would offer time savings of up to an hour from Mid-Argyll and Kintyre to the Central Belt may also be worthy of further consideration.

Appendix A: Consultee List

Businesses	General Sector
Western Ferries	Transport
West Coast Motors	Transport
McKerrals Transport	Transport
Project Cargo Operations	Haulage
B Mundell Ltd	Haulage
John MacKirdy Ltd	Haulage
AJG Parcels	Haulage
Scottish Sea Farms Ltd	Aquaculture
Loch Fyne Oysters	Food and drink
Forteiths	Food and drink
Argyll Smokery	Food and drink
MacLeod Construction Ltd	Construction
TSL Construction	Construction
Aggregate Industries	Construction
Portavadie Marina	Tourism
Machrie Hotel	Tourism
Machrihanish Dunes	Tourism
Lochs and Glens Holidays	Tourism
Tents and Events	Tourism
Renewable Parts	Energy
Bute Fabrics	Creative Industries
SSE	Utility
BT Openreach	Utility

Organisations/Service Providers
Highlands and Islands Enterprise
Argyll and Bute Council
Community Planning Partnership
Mid Argyll Chamber of Commerce
Cowal Fixed Link Working Group (x2)
Dunoon BID Team
Argyll & the Isles Tourism Co-operative
VisitScotland
UHI Argyll College
Scotland's Rural College
NHS
Scottish Ambulance Service
Scottish Association for Marine Science
Forestry Commission

Appendix B: Transport Investment Case Studies

Introduction

1.1 This chapter provides the "review of other relevant case studies where major investment in transport infrastructure in rural areas has transformed surrounding economies".

1.2 This has been challenging given the general lack of evaluation studies that could usefully address this objective. Therefore, we have reviewed general evidence that has been collected on the impacts of fixed links in particular, as well as roads. This aims to provide an understanding of the factors that are likely to increase the impacts of such major transport investment.

Evidence from Scotland

Skye Bridge

Rationale

1.3 For a period of time, demand for travel to Skye had resulted in long queues in the summer at both ferry terminals despite a high frequency of sailing. At peak times vehicles were having to wait several hours to make the crossing. This reflected high tourism demand for travel to Skye and the growing prosperity of its economy. The Skye Bridge was built to ensure that future growth in travel demand could be accommodated.

Context

1.4 In the years before the Bridge opened a two vessel service had been running to a high frequency on a 24 hour basis. The crossing was very short-around five minutes long.

1.5 The 1991 Census shows a total population of 11,600 in Skye and Lochalsh, most of whom were living on Skye itself. In the ten years to 1991 the island's population had grown significantly, from around 7,300 to 8,800 residents.

Traffic Impacts

1.6 The Skye Bridge opened in October 1995 with tolls in place. The tolls were slightly cheaper than the previous ferry fares, although they were high against fixed link comparators. In 1998 reduced charges were made available for frequent users and tolls were abolished for all users in December 2004.

1.7 Information in a previous Reference study[47] shows that in 1996 volumes on the Bridge were 612,000 vehicles. This was 26% higher than the 484,000 vehicles recorded in 1994. Traffic continued to grow thereafter, reaching 769,000 in 2004 (when tolls were removed completely).

1.8 Volumes increased to 930,000 in the following year and then rose to 1,120,000 in 2006. That represents an increase of 46% compared to the last year in which tolls operated. Many of these new trips were quite short distance ones made by local residents and businesses.

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[47] *The Economic Impacts Of Fixed Links And Enhanced Ferry Services In The Highlands & Islands* (Reference Economic Consultants, 2007)

1.9 Thus, between 1994 and 2006 vehicle numbers had grown by a factor of 2.3, from under 0.5 million to over 1.1 million. That is, even allowing for underlying traffic growth, the amount of traffic generated due to replacing the ferry with the bridge is a significant proportion of the total 2006 volumes.

Economic and Social Impacts

1.10 The DHC report[48] identifies a number of impacts of the Skye Bridge. The main businesses ones were:

- **Labour market catchment areas have increased in South Skye and Lochalsh**. This allowed greater access to labour which had been a significant barrier to some business' growth. It also allowed individuals to access lower paid and/or part-time jobs which may not otherwise have been possible. This was significant given the importance of seasonal and part-time work in the area, reflecting the significance of its tourism sector.

- **Some businesses had increased their local markets**. In particular, retailers on Skye selling to mainland businesses in Lochalsh. It was also noted that companies that were already successful had become more successful. In contrast, those that had been facing decline saw the rate of decline grow as they were exposed to greater competition. This finding did not vary by business sector or location.

- It also appeared that a reasonable proportion of the total impacts had **depended on a few companies or entrepreneurs** who had been able to take advantage of the opportunities presented by the Bridge.

1.11 The toll removal increased business confidence. It was stated that the indirect effects of this could be very significant. If the end of the tolls boosted the confidence to invest, then it could have a major impact on growth.

1.12 The DHC research was undertaken relatively soon after the tolls had been removed. Therefore the ultimate scale of the total impacts of the fixed links (e.g. consolidated labour markets) could not yet be gauged.

1.13 The report states that "the impacts of the transport changes on the economy of the area have been significant". However, this appears based on an assessment of user benefits (savings in travel times and financial costs, etc.) rather than business and employment impacts. Nevertheless, the report does states that "the bridge has opened up opportunities and helped to overcome barriers to growth".

1.14 The context in which the fixed link was introduced appears an important determinant of its effects. First, there were wider market changes that would be highly influential on the impacts of the Bridge e.g. wider tourism trends, the rise of lifestyle and remote working. The report states that "the bridge is only one element in the social and economic development of the area". Thus, as a consequence "businesses were generally not able to quantify the changes in turnover or attribute impacts solely to the bridge".

[48] *Evaluation of the Economic and Social Impacts of the Skye Bridge* (DHC, 2007)

1.15 Second, the report states that “The extent to which transport changes support the economic and social strengths of the area is crucial”.

1.16 In particular it appears that improved access assisted what was already a strong tourism product. In fact, it was that strength that led to the congestion on the ferry service which led to the building of the bridge. Further, the consolidation of labour markets facilitated by the bridge helped to address labour issues, which are particularly important to sectors such as tourism in remote areas like Skye. The specific tourism impacts identified for the Bridge were:

- Removal of the tolls attracting visitors most likely to use low cost accommodation.
- Skye being competitive as a day trip destination within what was a growing visitor market.

1.17 In contrast, the nature of the business base in the areas (and the limited number of companies in each sector) meant that agglomeration benefits i.e. those associated with businesses being in close proximity to one another, to employees and to customers, were not significant.

1.18 The DHC work notes that Skye has been successful in attracting population but that the extent to which this can be attributed to the bridge and the removal of the tolls is "not clear". However, the surveys undertaken during the research found that 8% of those reporting an impact of the removal of tolls stated that this had led them to move, or to consider moving, to the island.

1.19 The report also refers to the 1999 Skye Bridge evaluation's finding that 6% of island residents surveyed indicated that they had moved to Skye from elsewhere because of the bridge. The DHC report states that the positive perceptions of the bridge has made the area a better place to live.

1.20 In 1981 the population of Skye was 7,269. By the time of the 2011 Census it had risen to 10,008-an increase of more than 2,700 people (38%). It should, however, be noted that more than half of this increase (1,574 people) occurred between 1981 and 1991 i.e. before the Bridge was built.

Skye-Fort William Transport Corridor

Rationale

1.21 Between 1997 and 2009 significant improvements were made to the roads between Fort William and Mallaig, and between Armadale and Broadford. Single track stretches were replaced, making both roads double track throughout. This was to improve road travel within each of Lochaber and Skye, and between the two areas for traffic using the Mallaig-Armadale ferry service.

A851

Project and Context

1.22 The A851 is a non-trunk road which runs through the Sleat peninsula on Skye. It connects the ferry port of Armadale on the south of the islands with the A87 trunk road at a point close to Broadford. The A851 is the only road between south Skye and the rest of the island. It is around 15 miles long and, according to AA Route Planner, has a 22 minute drive time.

1.23 Between 1997 and 2008 c£16 million was spent on a phased upgrading of the road from single track to a six-metre wide two-lane carriageway. A web-search identified that publicity for the project stated the expected outcomes of:

- Safe and speedier travel for motorists, public transport and service vehicles.
- Improved access for visitor coaches.
- Increased economic activity on the Sleat peninsula as a result of improving its accessibility to tourists and businesses.

1.24 Tourism is a major component of Sleat's economy. Another key employer is Sabhal Mòr Ostaig (SMO), the Gaelic College. It generates over 130 FTE jobs in the Highlands & Islands many of which are in Sleat itself.

Traffic Impacts

1.25 Table B.1 shows that there has been significant growth in A851 traffic since 2000.

Table B.1: A851 Average Daily Traffic Flow

	North Section-Between Isle Ornsay and A87 Junction		South Section-Between Ardvasar and Camuscross	
Year	Number of Vehicles	Growth (Index, 2000 = 100)	Number of Vehicles	Growth (Index, 2000 = 100)
2000	941	100	794	100
2001	956	102	811	102
2002	996	106	844	106
2003	1,040	111	882	111
2004	1,051	112	1,234	155
2005	1,343	143	1,237	156
2006	1,361	145	1,257	158
2007	1,343	143	1,240	156
2008	1,335	142	1,233	155
2009	1,359	144	1,254	158
2010	1,325	141	1,226	154
2011	1,327	141	1,232	155
2012	1,303	138	1,162	146
2013	1,467	156	1,180	149
2014	1,501	160	1,211	153

Source: Department for Transport data

1.26 Traffic has grown strongly across the route. In the north section it grew by 60% between 2000 and 2014 with a similar level of increase (53%) seen in the south section. As noted earlier, the upgrading of the road was phased. This may explain the significant increase in traffic in 2004 (south section) and 2005 (north section).

1.27 Between 2005 and 2012 traffic varied only slightly. In the two remaining years it increased sharply on the north section of the A851 (by 15%) but to a much lesser extent (4%) in the southern part. Overall, there has been no significant change in traffic levels since full completion of the improvements in 2008.

1.28 From 2000 traffic growth on the A851 was significantly above that for all Highland Council roads area. Between 2000 and 2013 vehicle traffic on the area's roads increased by 13% compared to the 46%-56% seen on the A851.

1.29 A851 traffic is dominated by cars, taxis and motorbikes. The splits between different vehicle types are shown at Table B.2.

Table B.2: A851 Vehicle Flows By Vehicle Type-Shares of All Traffic								
	North Section				**South Section**			
	Car/Taxi/ Motorbike	**Bus/ Coach**	**Light Goods Vehicle**	**HGV**	**Car/Taxi/ Motorbike**	**Bus/ Coach**	**Light Goods Vehicle**	**HGV**
2000	86%	1%	9%	5%	84%	1%	14%	1%
2014	83%	2%	13%	2%	79%	2%	18%	2%

Source: Department for Transport data

1.30 In both years cars, taxis and motorbikes accounted for more than 80% of all vehicles. However, the data shows that their share of all traffic fell slightly over the period. This is due to the greater growth rates for LGVs and buses/coaches.

1.31 Table B.3 compares the growth rates by vehicle type between 2000 and 2014.

Table B.3: A851 Vehicle Growth Rates: 2000-2014			
	North Section	**South Section**	**All Highland Roads**
Car/Taxi/ Motorbike	54%	43%	9%
Bus/Coach	213%	175%	42%
Light Goods Vehicle	149%	95%	29%
HGV	-26%	111%	32%

Source: Department for Transport data

1.32 The picture is similar for both sections of the A851. Most traffic types have grown strongly, with buses/coaches seeing the highest rates of increase, and at a far greater rate than elsewhere in the Highlands & Islands. The exception is the decline in HGVs using the north section. They fell by around a quarter between 2000 and 2014.

1.33 Despite the strong growth in buses/coaches they averaged no more than 25 per day in 2014. Nevertheless the average number of buses/coaches will be higher in the summer given

the seasonality of coach tours to Skye. The average daily number of LGVs on the A851 is c200, with HGV numbers below 40.

Economic and Social Impacts

1.34 As far as we are aware, there has been no evaluation of the economic and social impacts of the A851 upgrades.

1.35 Sleat's population grew from 795 to 913 between 2001 and 2011. However, it had grown from 452 in 1971 (source:*sleatlocalhistorysociety.org.uk).* Thus, the growth between 2001 and 2011 was a continuation of a pre-existing trend. The level of absolute growth was, however, above that seen in most other decades.

1.36 Sleat's population growth between 2001 and 2011 was, at 15%, around twice that seen in the rest of Skye. However, Sleat's population grew at a much faster rate than that of the rest of Skye throughout the period between 1971 and 2011.

1.37 The period over which the road was upgraded coincided with further expansion of SMO. This was notably through the creation of the Fas (Growth) Centre that was opened in 2008. This offers business space with the aim of stimulating a critical mass of activities in the Gaelic arts, culture, broadcasting, media and heritage.

1.38 SMO are now undertaking a major phased development of a Community Campus - Kilbeg Village. It is expected to comprise a conference centre, community sports facilities, office space, housing and commercial development sites. In addition, a new distillery is being built at Toravaig on Sleat.

A830 Mallaig to Fort William

Project and Context

1.39 The A830 is a trunk road. It is 40 miles long and, according to AA Route Planner, has a drive time of just under one hour. The roads runs between Mallaig and Fort William, also connecting a number of other, small communities along the route.

1.40 In 2011 Fort William had a population of c10,500 (source: HIE Fort William Settlement Profile). Outside the Fort William area the population is small and sparse. It is concentrated towards the western end of the A830, with the Mallaig, Morar and Arisaig area having around 1,250 residents in total (source: 2011 Census).

1.41 The A830 is the only road link to that area and thus to the ferry services from Mallaig. These sail to Skye, Uist, the Small Isles and Knoydart. Previously the A830 was virtually the only Scottish trunk road with single track sections. These were removed through two major road upgrades. The first was completed in **2003** at a cost around £11 million. This was on a westerly section of the road between **Arisaig and Kinsadel**, with the existing six mile stretch replaced by a new four mile carriageway. As well as upgrading the road from single track, the upgrade reduced the road distance between Mallaig and Fort William by more than two miles.

1.42 Based on a web-search for information on the project the 2003 upgrade aimed to:

- Improve safety for drivers and provide better driving conditions.
- Improve safety for local communities by bypassing some of them.
- Shorten the road distance.

1.43 The second major upgrade commenced in June 2007 and was completed in April **2009**. It was to the east of the earlier one, between **Arisaig and Loch nan Uamh**. At a cost of £23 million, it replaced a 7.4 mile section of road with a double track of c. 5 miles.

1.44 Based on information on Transport Scotland's website the objectives of this second upgrade were to:

- Improve community safety by avoiding emergency services blocking the road when attending an incident.
- Improve road safety.
- Reduce journey times.
- Provide greater journey time reliability.

1.45 It also aimed to relax road-related constraints on economic development, including:

- Positive impacts on inward investment and creation of business opportunities.
- Allowing the area to realise its economic development potential through better serving external markets - particularly tourism, timber and fishing.
- Aiding more efficient delivery of services and improving communications locally.

1.46 The A830 has subsequently seen some more, minor improvements since the project was completed in 2009.

Traffic Impacts

1.47 Traffic count data are shown at Table B.4.

Table B.4: A830 Average Daily Traffic Flow: Between Arisaig and Lochailort

Year	Number of Vehicles	Growth (Index, 2000 = 100)
2000	1,154	100
2001	1,177	102
2002	1,228	106
2003	992	86
2004	999	87
2005	1,178	102
2006	1,325	115
2007	1,310	114
2008	1,298	112
2009	1,318	114
2010	1,283	111
2011	1,287	112
2012	1,263	109
2013	1,286	111
2014	1,321	114

Source: Department for Transport data

1.48 Traffic fell in 2003-the year of opening of the new Arisaig to Kinsadel section. It then increased in the years to 2006, with volumes in that year some 8% above those in the year before the upgrade was completed (i.e. 2002).

1.49 Vehicle numbers declined in the two years before the opening of the new Loch nan Uamh section in 2009. They continued to decline until 2012, followed by growth in 2013 and 2014. However, 2014 volumes were still slightly below those in 2006-i.e. before the Loch nan Uamh section work was undertaken.

1.50 Between 2000 and 2013 the rate of traffic growth (11%) was slightly below that for the Highland Council area as a whole (13%). Table B.5 describes changes in the composition of vehicle traffic.

Table B.5: A830 Between Arisaig and Lochailort: Vehicle Flows By Vehicle Type-Shares of All Traffic

	Car/Taxi/ Motorbike	Bus/Coach	Light Goods Vehicle	HGV
2000	84%	2%	11%	3%
2014	75%	2%	16%	7%

Source: Department for Transport data

1.51 The shares of different vehicle types have changed over time. Car/Taxi/Motorbike still account for the majority of all vehicles. However, their share has fallen from over 80% in 2000 to 75% in 2014. In contrast, the shares of both types of goods vehicles have increased over this period. Table B.6 compares the growth rates of different vehicle type between 2000 and 2014.

Table B.6: A830 Vehicle Growth Rates: 2000-2014

	A830	All Highland Roads
Car/Taxi/Motorbike	2%	9%
Bus/Coach	23%	42%
Light Goods Vehicle	59%	29%
HGV	179%	32%

Source: Department for Transport data

1.52 Growth in car/taxi/motorbike volumes has been very slight. At 2% it is clearly below that for all Highland Council roads (9%). There is stronger growth in other traffic types-and particularly for goods vehicles. The strong growth rates for most traffic types are in a context of low absolute vehicle numbers. In 2014 the average daily flows on the A830 were:

- Car/Taxi/Motorbike: 991 vehicles.
- Bus/Coach: 27.
- Light Goods Vehicle: 208.
- HGV: 95.

Economic and Social Impacts

1.53 A limited post project evaluation of the **Arisaig-Loch nan Uamh** upgrade was undertaken in 2012. Its findings are published on Transport Scotland's website, with further elaboration provided in a paper that was presented to the 2015 STAR transport conference. The work was very largely a qualitative assessment of impacts, based on anecdotal evidence rather than systematic independent research.

1.54 A local bus operator stated that they were now able to operate a more reliable timetable. This allowed them to provide more accurate departure and arrival times including for connections with other bus services en route. This was in addition to the reduced bus journey times that the project had facilitated. Further, HIE suggested to the evaluators that the upgrade had generated the following benefits:

- Attraction of visitors to the area.
- Perceived improved access for local businesses.
- Improved attractiveness of the area for investment.
- Enhanced economic ties between Mallaig/Arisaig and Fort William, including supply chain linkages.

1.55 It was also suggested that the project had encouraged use of the Mallaig-Armadale ferry service. It was noted that there had been an increase in ferry passengers between 2009 and 2011. However, the evaluators were unable to confirm how far this was due to the road improvements rather than other factors.

1.56 It was further suggested that the salmon harvesting facility at Mallaig was more successful than would have been the case without the road investment. Opened in 2004 this facility receives fish from Marine Harvest sea sites which are then forwarded via the A830 for processing in Fort William.

1.57 Community-related impacts were reported as:

- Children from the Ardnamurchan peninsula making greater use of Mallaig swimming pool.
- Increased sporting links between teams in Ardnamurchan and those in the Mallaig/Morar/Arisaig area.
- Increased number of competitors in the Mallaig half marathon due to a safer route now being provided.

Mallaig Ferry Services

Introduction

1.58 Two CalMac ferry services operated out of Mallaig throughout 2000-2014:

- Mallaig-Armadale operates all year round, albeit with a much reduced sailing frequency in the winter.
- Mallaig-Small Isles is very largely a passenger service with few vehicles carried on it. Its passenger carryings are much lower than those on the Armadale service.

Traffic Trends

1.59 Table B.7 shows carryings on the Armadale and Small Isles services.

Table B.7: CalMac Mallaig Ferry Services Carryings (000): 2002-2014								
Year	Passengers	Growth *	Cars	Growth *	Coaches	Growth *	Commercial Vehicles	Growth *
2002	183	100	38	100	1.2	100	0.1	100
2003	187	102	40	106	1.1	90	0.2	192
2004	208	113	44	116	1.3	112	0.2	163
2005	210	114	44	115	1.3	113	0.3	241
2006	210	115	44	116	1.4	117	0.4	371
2007	214	117	47	123	1.3	110	0.4	365
2008	211	115	47	122	1.2	104	0.7	632
2009	235	128	54	142	1.2	101	0.4	403
2010	239	131	52	136	1.5	127	0.4	389
2011	246	135	52	137	1.6	137	0.3	286
2012	244	133	50	132	1.7	147	0.4	383
2013	263	144	52	137	2.1	178	0.4	411
2014	269	147	53	139	2.1	178	0.4	357

Source: CalMac
Note: * Index (2002 = 100)

1.60 Traffic has grown over the period covered. Passengers and car increases have tended to be concentrated in certain years, with significant uplifts in 2004 and 2009 in particular.

1.61 There has been a significant growth (over 75%) in coaches, albeit absolute numbers are low-exceeding 2,000 vehicles in only the last two years. Commercial vehicles have more than tripled compared to 2002 levels. Again, their absolute numbers are low-around 400 in 2014. However, the movement of goods via the ferry is important to a number of businesses e.g. Mallaig fish merchants, Isle of Skye Brewery's deliveries to Lochaber.

1.62 Timetable changes on the Armadale service will have stimulated demand. The summer timetable saw increased frequency of sailing per day between 2002 and 2005, with only limited changes thereafter.

1.63 More winter sailings were introduced in 2010, with further enhancements in subsequent years. However, winter carryings remain very low. Thus, the timetable changes will have had only a very slight impact on annual carryings.

1.64 Overall, demand is highly seasonal with a spike in July and August. The route is used by local residents and businesses. However, it is very largely dependent on visitors and is seen as a bellwether for the area's tourism performance.

1.65 The timing of ferry traffic growth relative to the road upgrade completions varies by traffic type. Compared to the **A851 upgrades**:

- Ferry passenger numbers grew at similar rate before and after the A851 works were fully completed in 2008.
- Most ferry car traffic growth was in the years before 2008.
- The growth in ferry coach numbers very largely occurred after the A851 works were fully completed.

1.66 **Compared to the A830 upgrades** there was a significant rise in passenger and car ferry carryings in 2004 (the year after the first upgrade was fully complete). However, that year also saw more sailings on the Mallaig-Armadale route which will have stimulated additional demand.

1.67 There was only a slight increase in ferry passengers and cars in 2010-i.e. after the second A830 upgrade was completed. In contrast, completion of the second upgrade in 2009 coincided with a subsequent increase in coach carryings in 2010 and following years.

Wider Ferry Service Comparison

1.68 We have also compared trends on the two Mallaig ferry services to those on other CalMac routes in the area. The latter were taken as the combined carryings on Ullapool-Stornoway, Uig-Tarbert-Lochmaddy, Sconser-Raasay, and the Sound of Barra and Sound of Harris services. Growth trends by traffic type are compared at Table B.8.

Table B.8: Trends on CalMac Mallaig Services Routes and Selected CalMac Routes*

Year	Passengers		Cars		Coaches		Commercial Vehicles	
	Mallaig Services	Other CalMac Routes	Mallaig Services	Other CalMac Routes	Mallaig Services	Other CalMac Routes	Mallaig Services	Other CalMac Routes
2002	100	100	100	100	100	100	100	100
2003	102	108	106	115	90	96	192	102
2004	113	116	116	127	112	120	163	103
2005	114	117	115	130	113	113	241	113
2006	115	113	116	127	117	116	371	106
2007	117	120	123	139	110	108	365	116
2008	115	120	122	142	104	91	632	120
2009	128	137	142	174	101	102	403	122
2010	131	137	136	170	127	122	389	128
2011	135	137	137	169	137	123	286	136
2012	133	135	132	169	147	125	383	117
2013	144	135	137	173	178	97	411	107
2014	147	139	139	179	178	113	357	112

Source: CalMac
Note: * Index (2002 = 100)

1.69 For most traffic types carryings on the Mallaig services have grown faster rate than on the other CalMac routes. This is particularly the case for commercial vehicles, albeit the absolute increase on the Mallaig routes is low.

1.70 It is also the case for coaches. Growth was similar across the two route groups up to 2009. Thereafter the Mallaig routes' coach numbers grew very strongly while those on the other routes stalled from 2010 and then declined in 2013.

1.71 Car growth is much stronger on the other CalMac routes (around 80% since 2002) compared to the Mallaig services (c40%). This will have been strongly influenced by the large increase in the other routes' car numbers in 2009. That followed the introduction of lower (RET) fares on the Ullapool-Stornoway and Uig-Tarbert-Lochmaddy services. However, even before 2009 growth rates on the Mallaig services were below those on the other CalMac routes.

Skye-Fort William Transport Corridor Conclusions

1.72 There have been positive economic and social trends along the A851 and A830 following the major road investments. The difficulty is attributing these trends to the road investments alone. This reflects that no systematic evaluations have been undertaken.

1.73 For the A851 it is, therefore, not clear how far the growth in road traffic is due to increased local trips (e.g. social trips, shopping at the local store) as opposed to longer trips which are more economically significant (e.g. businesses delivering goods over a wider area, Sleat businesses making more trips to Fort William or beyond). As a result, it is also unknown how far the A830 improvements have stimulated additional trips which also involve use of the A851 and vice versa.

1.74 The growth in A851 traffic reflects the underlying growth in Sleat's population and economic activity. The much improved road will have helped accommodate this underlying growth by providing a required standard of road for travel by residents and visitors, and deliveries and work-related trips by LGVs. Thus, the investments will have helped to facilitate the significant investments completed or underway.

1.75 In particular, the improved A851 will have helped accommodate peaks in travel demand. Car and coach numbers will have significant seasonal variations which are not captured by annual statistics. Further, use of the A851 by ferry traffic will necessarily be "peaky" as the ferry has fixed times of arrival and departure.

1.76 There has clearly been much lower traffic growth on the A830. Nevertheless, the evaluation evidence suggests that there have been benefits for residents and businesses. As on Skye, the road improvements will have facilitated further growth in ferry traffic. That is by the A830 being more able to cope with increased demand at certain times of day and months of the year. Without the improvements, ferry traffic may have been lower than was the case post 2009, and for coaches in particular.

1.77 The A830 upgrades will also have supported growth in the movements of goods. This is particularly so for HGVs, the numbers of which have grown significantly. That reflects the importance of fisheries activity in the Mallaig area, which distinguishes it from the economy of south Skye.

Outer Hebrides

Rationale

1.78 Between 1997 and 2001 ferry services to each of the islands of Scalpay, Berneray and Eriskay were replaced by fixed links. The rationale for this was to address population loss on each of the islands (notably Eriskay). In the case of Berneray and Eriskay the aim was to improve inter-island connectivity throughout the Western Isles by allowing efficient inter-island ferry services to be introduced along with the causeways. These would allow a surface journey to be possible within a single day between Lewis (the most northerly island of the Outer Hebrides) and Barra (at the south end).

1.79 The previous ferry services had been limited. There were small car ferries to Scalpay and Berneray but these did not have particularly long operating hours. Eriskay was cut off from the neighbouring island of South Uist for a number of hours at a time due to the tidal range which made it impossible to operate the car ferry.

Context

1.80 Each of the individual islands had very small populations (Scalpay had around 300 residents, the other two had fewer than 200).

Traffic Impacts

1.81 In each case there was a very large proportionate increase in traffic after the fixed links were completed. The changes in volumes are shown at Table B.9 below.

Table B.9: Change in Island Traffic Volumes

	Traffic		
Island	**Last Full Year of Ferry Operation***	**2004**	**Factor Increase**
Berneray	10,218	73,794	7
Scalpay	9,764	126,369	13
	1998	**2004**	**Factor Increase**
Eriskay	3,928	102,609	26

*Berneray 1997, Scalpay 1996. Note: Berneray and Scalpay data are for car traffic, Eriskay data are for all vehicles.

1.82 These large proportionate increases reflect the need/desire to access many services and employment outside a small island where only limited opportunities are available. In the case of Eriskay its very limited ferry service had clearly constrained trip-making.

1.83 The Berneray and Eriskay figures include through traffic on the inter-island car ferries which only commenced after the causeways were opened. However, even allowing for that

additional ferry traffic the amount of trips made to/from Berneray and Eriskay themselves had increased by a large factor.

Economic and Social Impacts

1.84 Research undertaken by SQW in 2004[49] compared 1991 and 2001 Census data for Berneray and Scalpay that looked at trends "before" and "after" the fixed links were introduced. The main findings were that:

- The rate of decline in the population and the school roll on Scalpay slowed over this period.
- The number of households on both islands remained broadly constant, compared to a fall across all inhabited Scottish islands.
- The proportion of residents in employment on both islands increased between 1991 and 2001. On Berneray the employment rate for women rose from 50% to 76%.
- Between 2000 and 2001 there was a net in-migration of four people to both islands. This is contrast to net out-migration across inhabited Scottish islands as a whole in the same period.

1.85 Primary research showed that 62% of visitors to Berneray would not have made the trip without the causeway and the ferry service that it enabled. In the case of Scalpay almost half (49%) of the surveyed visitors would not have visited the island if the bridge had not been built.

1.86 In terms of population impacts in 20% of households on Scalpay and 7% on Berneray, the interviewee stated that they or other members of the household would have moved from the island had the fixed links not been built.

1.87 The business survey found increased turnover and employment in a number of existing businesses, plus eight new B&Bs opened across the two islands. A fish processing plant (with 70 direct FTE jobs) was established on Scalpay after the fixed link was built, however, that closed a number of years later.

Dornoch Bridge

Rationale

1.88 The Dornoch Bridge was opened in 1991. It provides a direct route across the Dornoch Firth linking south east Sutherland and Easter Ross. Previously these trips had to be made by travelling inland to cross the firth at Bonar Bridge. Thus, the Dornoch crossing provided a 20 mile reduction in the journey between Golspie and the area immediately south of the Dornoch Firth.

Traffic Impacts

1.89 Data for vehicle traffic crossing Bonar Bridge before the Dornoch Bridge was opened are only available for 1978. They are taken from a report supplied to us by HIE: *Forecasts For Moray Firth Access Transport Dornoch Firth Crossing Road Traffic* (Martin and Voorhees Associates, 1979). Simplifying the results presented in that report, it was estimated that there were around 687,000 vehicles per year travelling between south east Sutherland and the north of Easter Ross. Some of these would have been making a longer distance trip e.g. Thurso to

[49] *Evaluation of the Social & Economic Impacts of Fixed Links to The Islands of Scalpay And Berneray* (SQW, 2004)

Inverness. In addition, there were a further estimated 173,000 vehicles per year travelling between other parts of Sutherland (via Lairg) and the north of Easter Ross - some of which will, again, have been longer distance trips.

1.90 That gives a total of 860,000 vehicle trips between Sutherland and the north of Easter Ross, including longer distance trips. These are for trips with similar origins and destinations to those that would be made over a new Dornoch Firth crossing.

1.91 This compares to a current total of 2,052,000 vehicle movements across the Dornoch Firth (source: Transport Scotland website). That represents an uplift of 1.19 million vehicle movements compared to the 1978 total-an increase by a factor of around 2.4.

1.92 It should be noted that some of the increase will reflect underlying traffic growth since 1978 and 2014 that would have occurred in the absence of the Dornoch Bridge. That will include longer distance trips generated between Caithness & Sutherland and the Inner Moray Firth area by the time savings provided by the opening of the:

- Cromarty Bridge in 1979. That provided a direct crossing of the Cromarty Firth, removing the need to travel inland and
- Kessock Bridge in 1981. This removed the need to either cross to/from Inverness by ferry or make a 14 mile diversion inland via Beauly.

Economic and Social Impacts

1.93 No evaluation evidence is available for the economic and social impacts of the Dornoch Bridge.

Wider Consideration of Traffic Impacts

1.94 The preceding evidence from Scotland shows the variability in the uplift in traffic produced by a fixed link. This is also the case from other research studies in which *Reference* has been involved[50].

1.95 Existing experience suggests that the extent of traffic growth from the introduction of fixed links reflects the:

- Level of any tolls. Norwegian links tend to be tolled at a level above the fares previously charged for the ferry service.
- Quality of the previous ferry service in terms of journey time, frequency and hours of operation. The poorer the quality of the previous ferry service the larger the uplift in demand (e.g. Eriskay).
- Proximity of the crossing to population centres. Crossings that mainly serve short distance trips usually provide a larger percentage increase in traffic.
- Availability of services and employment in the areas that are linked. A lack of services and employment opportunities will increase the propensity to travel after the fixed link is built.

[50] Notably *Shetland Fixed Links Strategy: Socio Economic Study* (Reference Economic Consultants et al,2011)

Evidence from Scandinavia

Norway

1.96 This section reviews evidence for significant transport investments in three remote areas of Norway.[51] These are broadly comparable to the HIE part of Argyll and Bute in terms of population levels and distances between main settlements.

Triangle Link (south Norway)

Description/Context

1.97 The Triangle Link is a tunnel and bridge system connecting the islands of Bømlo and Stord to the mainland and the nearby main settlement of Haugesund (population 37,000). It was opened in 2001.

1.98 The two islands have a combined population of 31,000. The travel time to Haugesund is 50 minutes, and 2½ hours to Bergen/Stavanger.

1.99 The economic base of the islands is mainly industrial plus some service sector activity. Both islands have a significant amount of activity in the oil and gas supply chain and the wider maritime sector. Bømlo has relatively high employment in fishing and aquaculture, whereas Stord has higher employment in the service sector.

Traffic Impacts

1.100 The fixed link provides a 30 minute journey time saving compared to the former ferry service. Traffic levels in the first year of opening were 40% above those on the ferry, with a "strong increase" in volumes in subsequent years.

Economic and Social Impacts

1.101 The main economic and social impacts identified for the Triangle link were:

- Weak population growth overall with some internal centralisation. Population levels have not been influenced by the fixed link.
- More flexible, reliable and cheaper transport of goods from the area, increasing sectoral competitiveness and gaining higher prices for fish products.
- Increased commuting especially towards Haugesund, providing greater flexibility for both employers and households.
- Services consolidated internally on Stord at the expense of Bømlo. However, this was accompanied by reduced leakage to providers based outside the islands as the area can now support shopping centres with chain stores.
- Labour market consolidation.
- Attempts to further relocate/rationalise public services were met with resistance.
- Households have better access to services and Haugesund airport.

[51] This is based on *Wider Economic Benefits of Major Norwegian Road Investments* (Institute of Transport Economics, Oslo 2010)

RV5 road (south Norway)

Description/Context

1.102 The available information notes that road improvements were undertaken incrementally between 1995 and 2005. These were on the RV5 route between Førde and Florø.

1.103 The area covered by the length of the road has a total population of c30,000 residents. Førde and Florø are the main settlements. The travel time from the area to Bergen is 2¾ hours.

1.104 The economic base is a mix of industrial and service sectors. The Førde area is the regional centre with relatively high employment in the public sector and private services. In the Florø area key industries are shipbuilding, supply services for the oil and gas industry sector and aquaculture.

Traffic Impacts

1.105 The improvements reduced the road travel times between the two settlements of Førde and Florø from 80 to 50 minutes. There was an increase in the rate of traffic growth on the route after the improvements were completed in 2005.

Economic and Social Impacts

1.106 The main economic and social impacts identified for the RV5 road improvements were:

- Population levels stable with some internal centralisation, but the trend not influenced by the road investment.
- More reliable transport for those selling goods outside the area, including an increase in some manufacturers sending intermediate goods to be processed elsewhere.
- Increase in commuting, giving greater flexibility to both companies and households.
- Strengthening of Førde as a regional service and retail centre at the expense of Florø.
- Consolidation of labour market-improving ability to recruit more sectoral specialists,
- Resistance to proposed centralisation of health service provision.
- Households have more work opportunities, including when certain sectors (e.g. maritime) have a downturn-and better access to services.

Fixed link to Nordkapp island (far north of Norway)

Description/Context

1.107 Opened in 1999, this links Nordkapp and mainland Norway. The island has a population of around 3,200 residents. The travel time to the nearest main settlement of Alta (population 14,000) is c3 hours.

Traffic Impacts

1.108 The fixed link provides a travel time saving of between 30 and 60 minutes compared to the ferry. In the first year of the fixed link traffic volumes were 20% above those on the ferry.

Economic and Social Impacts

1.109 The economy is based around fisheries and tourism. The wider North Cape area in which Nordkapp sits attracts 200,000 visitors per year.

1.110 The main economic and social impacts identified for the fixed link to Nordkapp were:

- Population decreasing, not influenced by the road investment.
- No significant change in visitor numbers-the ferry had not been viewed as an obstacle for visitors-rather, a positive experience. However, the fixed link can better accommodate large visitor parties and has increased potential tourism growth.
- Increase in fresh fish exports.
- Commuting unchanged-reflecting the distances between Nordkapp and employment centres.
- Increased leakage of service provision and airport passengers to Alta.

Evidence from Elsewhere

1.111 The following section provides information on examples from three other countries. It is based on a series of case studies of the impacts of fixed links[52].

Ireland

- Ireland's islands have seen major long term population decline. Between 1961 and 2002 alone the islands' total population fell by 37%.
- Individual islands' populations remain small. Only two have more than 1,000 residents, both of which have fixed links.
- Fixed links are viewed as being more successful than ferry services in stemming population decline. However, in some cases where a fixed link was built there was no increase in population. Islands which have seen the most positive population trends have been successful in generating economic activity on the island itself.
- Fixed links' improved access is seen as making the islands more attractive to both in-migrants and tourists.
- Benefits were seen through building on islands' existing assets/strengths-primary industries (including aquaculture), craft making and tourism.
- Distance and travel time to main centres are seen as more influential on impacts than the distance and travel times between the two ends of the fixed link.

Sweden

1.112 Consultation evidence suggests that bridges can probably stop or delay depopulation. For bigger islands fixed links have been good for the economy, development and population growth.

1.113 All of Sweden's five largest islands with fixed links have had very positive population trends. In contrast, only one of the islands without a bridge has seen population growth. However, this could well reflect the largest islands' relative proximity to Sweden's main centres. Those that continue to have a ferry service rather than a fixed link tended to have very low and sparsely distributed populations in the first place.

Canada

1.114 Confederation Bridge, Prince Edward Island (current population 146,000) was built in the 1990s. The rationale was that a bridge would be cheaper in the long run than continuing to operate ferries. Reported impacts were:

[52] *The Bridge Effect* (Godfrey Baldacchino-ed.,2007)

- Visitor numbers increased by over 60%, although the average number of nights spent per visitor fell.
- There was strong growth in imports and exports, continuing a pre-existing trend.
- Displacement of retail activity from island to mainland shops.

General Points on Impacts of Fixed Links

1.115 A review of evidence on the impacts of replacing ferry services[53] with fixed links made the following general points.

- **There is a generally positive relationship between fixed links and population trends**. The links have helped to increase, or in some cases slow the decline in, the number of residents.

- **Fixed links have generally not led to the development of significant amounts of new economic activity on the island/area itself**. The main exception is growth in the visitor/tourism sector.

- In a number of cases the **main economic change has been growth in outward commuting by residents**. In some cases fixed links have contributed to the trend of greater centralisation of employment and services, including retail provision. Fixed links in themselves will not reverse such major economic and social changes.

- Both increased commuting and other economic impacts have been strongest **where the fixed link provides immediate or reasonably close access to main centres**. Where the fixed link provides immediate/close access to an area which lacks economic opportunities the impacts (including those on population) are much weaker.

- In most cases islands/areas with a fixed link **have remained distinctive communities with their own identity**.

Conclusions

1.116 The review of evidence shows-in most cases-the transport investments' positive impacts on one or more of the following:

- Traffic volumes.
- Labour market consolidation/increased commuting.
- Visitor numbers.
- Population trends (although not in the Norwegian examples).

1.117 Some of the less positive/identified impacts have been:

- While some local companies benefit from market expansion, others suffer from greater competition from outside.
- Concentration of retail and other services - either within the area or in locations elsewhere.

[53] *Shetland Fixed Links Strategy: Socio Economic Study* (Reference Economic Consultants et al, 2011)

- Pressure to concentrate public sector provision (including health) which has proved unpopular.

1.118 What represents a transformational impact? One of the cases where this is clearly the case is Eriskay, where population decline has been reversed. However, the *absolute* impacts are clearly very low and flow from what was previously a very poor ferry service. Further, Scalpay has faced further decline since its Bridge was built, showing that significant positive impacts cannot be guaranteed.

1.119 Many of the studies are equivocal or unclear as to whether the impacts have been transformational. In part that could be because this may only be evident over a much longer timeframe than covered by the evaluations.

1.120 Further, attribution of impacts to the transport investment alone can be difficult because of other factors/trends. This reflects the variation in the scope of the evaluation evidence that is available. Perhaps more importantly, it also reflects a wider factor - that the nature and extent of impacts depend on the wider economic context.

1.121 In at least some of the cases covered, the rationale for the transport investment was to tap into opportunities from the existing assets of an area:

- Skye-world renowned tourism destination.
- Berneray and Eriskay - located on a through route for inter-island ferry services that have proved very popular with visitors.
- Norway - existing base of primary production (e.g. fish) and oil and gas supply chain activity.
- Sweden - relative proximity to main centres.

1.122 In other cases the fixed link has allowed a greater benefit to be realised from existing/wider trends-rather than in *itself* transforming an area's prospects. For example:

- Consistent Scottish economic growth-including in visitor markets-in the period covered by the Skye Bridge evaluation (mid 1990s to 2006) and also the first phases of the upgrading of the A851 and A830.
- The growth of Inverness and the energy sector before and after the Dornoch Bridge was opened in 1991.

1.123 In many cases the rationale for the transport investment was to tap into these benefits or address the *problems* of success (e.g. ever increasing traffic on Skye's ferry services, constraints imposed by the A851). Where fixed links have been introduced to tackle decline these appear to have been largely on islands with quite small populations and limited economic bases. Thus, they are not particularly analogous to many of the areas of Argyll and Bute.

1.124 The impacts of the investments reviewed reflect, in each case, their economic and geographical context. This includes the quality of the pre-existing ferry service or road link, and also low and sparsely distributed populations (e.g. Outer Hebrides, along the A830). For example, the length of operating day of ferry services between Cowal and Inverclyde are likely to be superior to many of those that operated in the cases that we have reviewed here.

1.125 Based on the examples of Skye and Norway continued charging is a factor that constrains the impacts of a transport investment. It affects traffic levels in particular, although this may mostly be through limiting the number of short distance household and business trips, rather than longer distance strategic movements. The latter include the movement of finished products out of an area. Fixed links or improved roads can allow such movements to be done on a more reliable basis. Thus, there is a clear benefit to these companies from a fixed link beyond simply the removal of ferry fares.

Appendix C: Additional Ferry Frequency and Crossing Data

Table C1: Ferry Service Frequency and Crossing Times: ISLAND ROUTES							
Route	Number of Return Sailings Per Day						Crossing Time (Hours and Minutes)
	Summer 2015			Winter 2015-16			
	Mon-Fri	Sat	Sun	Mon-Fri	Sat	Sun	
Wemyss Bay-Rothesay	15-17	16	14	Service diverted to Gourock due to pier works in 2015-16			0h 35
Oban-Craignure	6-6½	7	5½	4-6½	5	3½	0h 46
Fionnphort-Iona	Frequent	Frequent	Frequent	9	9	3	0h 10
Colintraive-Rhubodach	36	32	26	32	32	26	0h 5
Kennacraig-Islay	3-5	4	3	4	3	2	1h 55 to 2h 20
Fishnish-Lochaline	14	14	9	11	10	4	0h 18
Islay-Jura (Argyll and Bute Council)	17-18	17	7	15½	15½	6	0h 5
Tayinloan-Gigha	10-11	10	7	9	9	6	0h 20
Oban-Castlebay/Lochboisdale	1 (½Thu)	1½	1	1 (except Tue)	0	1	4h 50 to 7h 05
Oban-Coll-Tiree	1 (except Thu)	1	1	1 (except Wed and Fri)	1	1	2h 40 to 4h 10
Appin-Lismore (Argyll and Bute Council)	13-14	14	10	13-14	14	6	0h 10
Claonaig-Lochranza/Tarbert	9	9	8	1	1	1	0h 30 to 1 h 25
Tobermory-Kilchoan	7	7	5	3-4	3	0	0h 35
Oban-Lismore	4	5	2	4	4	2	0h 55
Cuan-Luing (Argyll and Bute Council)	27½-28	28	12	23½-25½	25½	12	<0h 5
Oban-Colonsay	3	0	1	3	0	0	2h 20 to 2h 40
Seil-Easdale (Argyll and Bute Council)	17-18 scheduled + others on demand	18 scheduled + others on demand	18 scheduled + others on demand	26-27	26	18	0h 5
Oban-Coll/Tiree-Castlebay	1 (Thu only)	0	0	No service			2h 40 to 6h 45
Kennacraig-Islay-Colonsay-Oban	1 (Wed only)	1	0	0	1	0	2h 05 to 7h 05

Table 3.12: Ferry Service Frequency and Crossing Times: MAINLAND ROUTES							
Route	Number of Sailings Per Day						
	Summer 2015			Winter 2015-16			
	Mon-Fri	Sat	Sun	Mon-Fri	Sat	Sun	Crossing Time (Hours and Minutes)
McInroy's Point-Hunter's Quay (Western Ferries)	44-52	47	40	44-52	47	40	0h 20
Gourock-Dunoon (Argyll Ferries)	29-30	30	15	29-30	30	15	0h 25
Tarbert-Portavadie	11	11	10	8	8	7	0h 25
Gourock - Kilcreggan (SPT)	13	12	0	13	12	0	0h 13
Ardrossan-Campbeltown*	1 (Thu) ½ (Fri)	½ (Sat)	1	No service			2h 40 to 3h 40

* May to September

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