

# **HITRANS**

Investment in Lifeline Rural Roads

Individual Scheme Appraisals – Feolin Ferry to  
Ardlussa

September 2004

**Halcrow Group Limited**

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## Investment in Lifeline Rural Roads Individual Scheme Appraisals – Feolin Ferry to Ardlussa

### Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed
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# 1 Introduction (Feolin Ferry to Ardlussa)

## 1.1 *Background*

1.1.1 HITTRANS, the Highlands and Islands Strategic Transport Partnership, commissioned Halcrow Group Ltd to undertake a study to support the campaign for further investment in lifeline rural roads.

1.1.2 The study was split into two stages. Stage One undertook an extensive consultation process to evaluate the issues surrounding lifeline roads including key problems and constraints facing rural communities. The aim of the second stage was to carry out an economic appraisal of nine designated routes in order to bolster the findings of the initial research such as to make an economic case for sustainable increases in investment in lifeline roads.

1.1.3 This report represents part of the second stage of the project. It presents, in full, the economic assessment carried out on the proposed Feolin Ferry to Ardlussa road improvement scheme. It does not seek to encompass all the wider issues involved within the study and does not present the methodology. As such it should be read in conjunction with the main 'Investment in Lifeline Rural Roads: Stage Two Final Report'<sup>1</sup>.

## 1.2 *Report Structure*

1.2.1 **Section 2** presents the contextual background to the scheme. It also assesses the existing road conditions and the proposed scheme enhancements;

1.2.2 **Section 3** presents an assessment of the likely impacts of the scheme;

1.2.3 **Section 4** presents the Transport Economic Efficiently (TEE) analysis;

1.2.4 **Section 5** assess the business survey responses for the Salen to Tobermory route;

1.2.5 **Section 6** presents the Economic Activity Locational Impact (EALI) analysis; and

1.2.6 **Section 7** presents the conclusions.

---

<sup>1</sup> Halcrow (2004)

## 2 Background (Feolin Ferry to Ardlussa)

### 2.1 *Contextual Background*

2.1.1 The A846 forms part of the proposed “overland” route linking Mid Argyll to Islay. It is the only main road route on Jura, providing a link to the island from the ferry port at Feolin Ferry. Access to households located off the A846 is via private paths and tracks. Figure 1 presents a map of the route.

2.1.2 Jura is approximately 30 miles long and 5 miles across. Whilst geographically it is only 190 miles from Glasgow, the combined journey time by car and ferry takes around seven and a half hours. This is a result of the island being two ferry journeys away from the mainland with residents first having to travel to Islay.

2.1.3 Craighouse is the principle centre on the island, but is no more than a village. The remaining households are spread out across the island.

2.1.4 As the only main route on the island the A846 is, by any definition, a lifeline rural road and of significant importance to the local communities. All goods necessary for subsistence must be brought in along this route as well as all exported produce. It is also the only access route for tourists to visit the island.

### 2.2 *Local Economy*

2.2.1 The Scottish Census Results On-Line (SCROL) data (2003) presented in Section 4.4 indicates that Jura has a population of only 90 permanent residents. Furthermore, census data indicates that the population has declined by 5% since 1991 and by over 24% since 1961.

2.2.2 The level of employment is estimated at just over 90; however some of these will be part-time or seasonal jobs. The majority of jobs are within the tertiary sector but again many of these will be part time or seasonal. Therefore, in terms of income generation, the primary and secondary sectors make up a large proportion of employment opportunities.





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Figure 1: A846 FEOLIN FERRY - ARDLUSSA

- 2.2.3 Unemployment is estimated at 6.3%, which is considerably higher than the rate for both Argyll & Bute (4%) and Scotland as a whole (4%). Over a third of the population are economically inactive, with over 15% having a long-term illness.
- 2.2.4 The indices of deprivation presented in Table 4.3 imply that Jura is more affluent than Scotland as a whole. However, it is generally recognised that these data can be distorted by the relatively high levels of car ownership that typify communities within the Highlands and Islands of Scotland. The remote nature of the island communities and low levels of public transport services result in private car ownership becoming a necessity. Critically if the deprivation rating for Jura is compared to the average across the Highlands and Islands then it comes out as being significantly worse.
- 2.2.5 An alternative approach to assess economically and socially disadvantaged parts of the Highlands and Islands is the Fragile Areas definition. A full description of this can be found in Section 4.4.8, but in summary, it uses 12 criteria across three categories: geographic, demographic and economic, to assess whether a region can be considered economically and socially disadvantaged. Jura is classified as a 'Fragile Area' under this assessment process.
- 2.2.6 In addition Jura has also recently been designated by the Scottish Executive as one of the new Initiative at the Edge (IATE)<sup>2</sup> areas. This is a partnership programme which aims to give communities "*the power to identify their needs, required actions and develop projects accordingly*".
- 2.2.7 The island is highly dependant upon the local distillery and the estates. The estates provide a large proportion of employment in sectors such as farming, fish farming and game-keeping. The island's distillery is the single largest employer. This dependence upon a small number of firms adds to Jura's social and economic fragility. There is a strong need to diversify the economic base of the island.
- 2.2.8 All the industries, but tourism in particular, are subject to marked seasonal variations. The low mean income for the island is around £15,000 compared to

---

<sup>2</sup> Ardnamurchan is an existing (pilot) IATE area. Jura and Glenelg will enter IATE on 1<sup>st</sup> April 2004. Areas in the Western Isles will also enter the IATA in 2004/05.

over £20,000 for Argyll & Bute as a whole. This is compounded by a much higher cost of day to day living, although housing costs are lower.

2.2.9 Jura only has one shop and a primary school. Generally the level of social provision is limited with most services only accessible on the neighbouring island of Islay. This creates a greater burden on the provision of transport.

### 2.3 ***Development Plans***

2.3.1 The Jura Island Development Trust was established as a mechanism for actively addressing the obvious economic vulnerability of the island. The decline in population has had a detrimental effect on the sustainability of local services. The trust is now seeking to reverse this decline through a variety of measures including more affordable housing and better transportation links.

### 2.4 ***Existing Road Conditions***

2.4.1 As described above the A846 is the sole main road on Jura and has been classified as part of the proposed 'overland' route linking Mid Argyll to Islay. To make this feasible some major strengthening and alignment improvements would be required to provide a route capable of handling the volume of traffic this would generate. The route is currently all single-track with passing every 300 metres, on average.

2.4.2 Whilst the route has no width or weight restriction orders this physical condition of the road limits the vehicles that can pass easily along. The road surface is also reported to be in very poor condition.

2.4.3 The traffic count data provided by Argyll & Bute Council indicated that the average two-way 24-hour traffic flow across the year is 137 vehicles. It is estimated that a relatively high proportion of trips will be in and out of Craighouse or towards Feolin Ferry and this will not encompass all of the route upgrade. As a proxy therefore only 75% of these trips have been estimated to benefit from the full extent of the scheme upgrade. This generates a two-way, 24-hour trips flow for the route of 103 vehicles.

### 2.5 ***Proposed Improvement Scheme***

2.5.1 The proposed scheme is significant in scale given the current provision with an estimated scheme cost in the region of £6.0M across a 36km section of the route. This gives an estimated cost per km of £0.17M.

### 2.5.2

The proposed scheme works include widening, drainage improvements, bridge strengthening and minor realignments. The whole route would also be resurfaced, although it would remain single-track as these traffic flows do not warrant double-tracking. Instead, additional passing places would be introduced to help improve the flow of traffic.

### **3 Assessment of Scheme Impacts (Feolin Ferry to Ardlussa)**

#### *3.1 Impact on Journey Times and Reliability*

*3.1.1* Data provided by Argyll & Bute Council indicates that average speeds across the route from Feolin Ferry to Ardlussa are currently around 36km/hr. This reflects the fact that the whole of the route is single-track and in poor condition.

*3.1.2* The Council believes that the upgrade of the 36km section will allow a much smoother progression of traffic along the route. General widening of the route, resurfacing and additional passing places should help reduce vehicle conflicts. The Council estimate that average journey times between Feolin Ferry and Ardlussa could be reduced by 15 minutes. This would translate to a journey time of 45 minutes against the current 60 minutes. This represents a 25% reduction in the average journey time.

*3.1.3* Given the scale of the investment this level of journey time improvement may be considered marginally optimistic. However, it only translates to an average speed across the route of 55km/hr, which, given the low levels of traffic flow, is not inconceivable.

*3.1.4* Improvements in journey time reliability are also expected as a result of the reduction in traffic conflicts. The stop-start nature of trips along the route would be removed and therefore variations in journey times should be significantly reduced. It is estimated that 'average delay' (as described in Section 3.4.15 of the main report) could fall by as much as 10 minutes per trip.

*3.1.5* Vehicle operating costs are anticipated to fall as a result of higher average speeds along the route and improved road surface conditions. Fuel costs would fall as a result of the shorter journey times with less requirement to accelerate and decelerate along single track sections. Non-fuel costs would fall as a result of less wear and tear on vehicles through improved road surfacing. Overall vehicle operating costs (as described in Section 3.4.7 of the main report) have been estimated to fall by around 19 pence per trip.

3.2

### ***Diversiónary Impacts***

3.2.1

The A846 from Feolin Ferry to Ardlussa is not considered to offer an alternative route to road-based trips between any given origin–destination pairs. As such the proposed upgrades to the route are considered unlikely to have any impact on traffic diverting from other roads to take advantage of the reduced journey times and improved reliability on the A846.

3.3

### ***Generated Traffic***

3.3.1

Section 3.4.18 of the main report provides details of the methodology undertaken to assess the likely levels of generated traffic. To summarise, within the TEE analysis a journey time elasticity of -0.2 has been applied i.e. a 10% reduction in journey time will result in a 2% increase in traffic flows through generated trips. This approach has been taken in order to incorporate a measure of generated traffic within the TEE analysis. A wider assessment of the impact of the schemes on economic activity and subsequent traffic generation is undertaken within the EALI analysis.

3.3.2

Applying a -0.2 elasticity to the forecast journey time saving of over 25% along with a base flow of 103 vehicles, gives a forecast traffic generation of 5 vehicle trips per day.

3.4

### ***Accident Reduction Impacts***

3.4.1

There are no reported accidents along the A846 within the last five years (see Table 4.6 of the main report).

3.4.2

Historical evidence tends to indicate that a large proportion of ‘damage only’ accidents are often not reported. Furthermore, data suggests that ‘damage only’ accidents make up a high proportion of accidents on single-track roads<sup>3</sup>. It is therefore feasible that a number of unreported slight accidents occurred during the period.

3.4.3

The level of accidents, reported and unreported, is however not likely to be significant and hence there is little potential for scheme benefits arising from accident reduction measures.

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<sup>3</sup> J.C. Tomlinson & A.M. Ross, “Accidents on Single Track Roads” 1988

3.4.4

The scheme itself should help to reduce the potential for accidents, in particular serious injury ones between on-coming traffic. Upgrading the narrower sections of the route should reduce the likelihood of vehicle collisions. Generally the improved alignment and re-surfacing should also ensure a much higher quality carriageway providing safety benefits.

**Table 3.1: Summary of Scheme and Estimated Impacts (Feolin Ferry - Ardlussa)**

<i>Description of Scheme Upgrade</i>	Widening, resurfacing and small-scale structural works	
	Estimated scheme costs = £6.0m	
	Scheme cost per km = £0.17M	
<i>Impact on Journey Times</i>	It is estimated that journey times along the route could improve by an average of 15 minutes	
	Estimated existing JT = 60 min	
	Estimated post-scheme JT = 45 min	
<i>Diversiónary Impacts</i>	<b>Competing routes</b>	<b>Estimated diversion</b>
	None	Zero
<i>Generated Traffic</i>	Assumed journey time elasticity of -0.2	
	25% reduction in JT = 5% increase in traffic	
<i>Accident Reduction Impact</i>	No reported accidents within last 5 years	
	Scheme should improve safety levels	

## 4 Transport Economic Efficiency Analysis (Feolin Ferry to Ardlussa)

### 4.1 *TEE Analysis*

4.1.1 As described above, the pre- and post-scheme average journey time data indicates that significant journey time savings may result from this scheme. The estimated 15-minute journey time saving, along with the 10-minute reduction in ‘average delay’, translates to an existing user benefit of just over 19 pence per vehicle trip plus 289 pence per person trip. With a base volume of vehicle trips of 103 and a vehicle occupancy of 1.41, this gives a central forecast for existing user benefits of £160k per annum.

4.1.2 Section 3.2 above describes the assessment of potential ‘diversionary benefits’ deriving from the scheme. It concluded that there was unlikely to be any diversion to the A846 after the scheme upgrade.

4.1.3 Section 3.3 above describes the assessment of potential ‘generated trip’ benefits deriving from the scheme. The central forecast of 5 trips per day translates into a generated user benefit of £4k per annum.

**Table 4.1: TEE Results (Feolin Ferry - Ardlussa)**

Base Trip Matrix (vehicle trips/day)	Average Journey Time Savings	Existing User Benefits (£k/yr)	Diversions Impact (trips/day)	Diversions User Benefits (£k/yr)	Generated Trips (trips/day)	Generated User Benefits (£k/yr)	Total Users Benefits (£k/yr)
103	15	160	0	0	5	4	<b>164</b>

4.1.4 Overall total user benefits are therefore estimated to be in the region of £164k per year.

### 4.2 *TEE Sensitivity Testing*

4.2.1 Sensitivity tests have been carried out on the TEE results in order to illustrate the potential variation in scheme benefits. The central forecasts are based on the data inputs as described above.



4.2.2 The low forecasts assume that only half the estimated journey time-savings are actually achieved by the scheme. So rather than journey times along the A848 falling from 60 to 45 minutes the low forecast assumes a journey time of 53 minutes. In addition the base trip/day are assumed to be 25% lower. This impacts upon ‘existing-user’ benefits, ‘diversionary-user’ benefits and ‘generated-user’ benefits. Furthermore, the journey time elasticity applied to estimate generated traffic is assumed to be only –0.1.

4.2.3 The high forecast assumes an additional 20% reduction in journey times is achievable over-and-above that within the central forecast. As such the journey time along the A848 is assumed to fall to just under 42 minutes. In addition the base trips/day volume is assumed to be 10% higher. Furthermore, the journey time elasticity applied to estimate generated traffic is assumed to be –0.3

**Table 4.2: TEE Benefits (£k/yr) – Central, Low, High Forecasts (Feolin Ferry - Ardlussa)**

Central Forecast	Low Forecast	High Forecast
<b>164</b>	<b>61</b>	<b>222</b>

4.3 ***Present Value of TEE Benefits***

4.3.1 Table 4.3 indicates the present value of the TEE benefits over 30 years for the central, low and high forecasts.

**Table 4.3: Present Value of Benefits (£M) - Central, Low, High Forecasts (Feolin Ferry - Ardlussa)**

Central Forecast	Low Forecast	High Forecast
<b>3.2</b>	<b>1.3</b>	<b>4.6</b>

\* assumes 3.5% discount rate

## 5 Business Survey (Feolin Ferry to Ardlussa)

### 5.1 *Business Survey Data*

5.1.1 Section 5 of the main report describes the objectives and methodology for undertaking the business survey. It discusses the sample obtained and its representation of local industry. In addition, in order to evaluate general trends, it presents the results at an aggregate level, across all schemes.

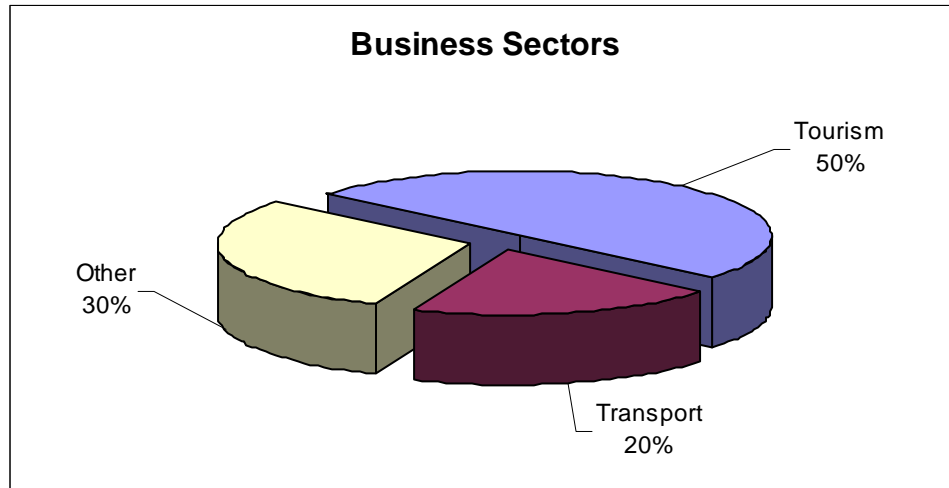
5.1.2 The section below presents the results for businesses that will be directly affected by the proposed Feolin Ferry to Ardlussa scheme. Whilst the overall sample size achieved (10 firms) does not allow for statistically significant analysis to be undertaken, it does provide an insight into how the scheme may affect local firms.

5.1.3 The results have been used to inform the analysis in Section 6 evaluating the economic activity and locational impacts of the scheme.

#### Type of Business (Feolin Ferry - Ardlussa)

5.1.4 The majority of businesses surveyed along the Feolin Ferry to Ardlussa route reported to be 'tourism' related organisations (50%), with a further 30% within 'other' sectors and 20% in the 'transport' sector. None of the respondents were in the 'fishing', 'agriculture' or 'forestry' sectors.

5.1.5 The sample can be considered roughly in line with the actual sectoral breakdown within Jura, with a particularly large representation from the tourism sector. The responses by sector are presented graphically below.



Turnover (Feolin Ferry - Ardlussa)

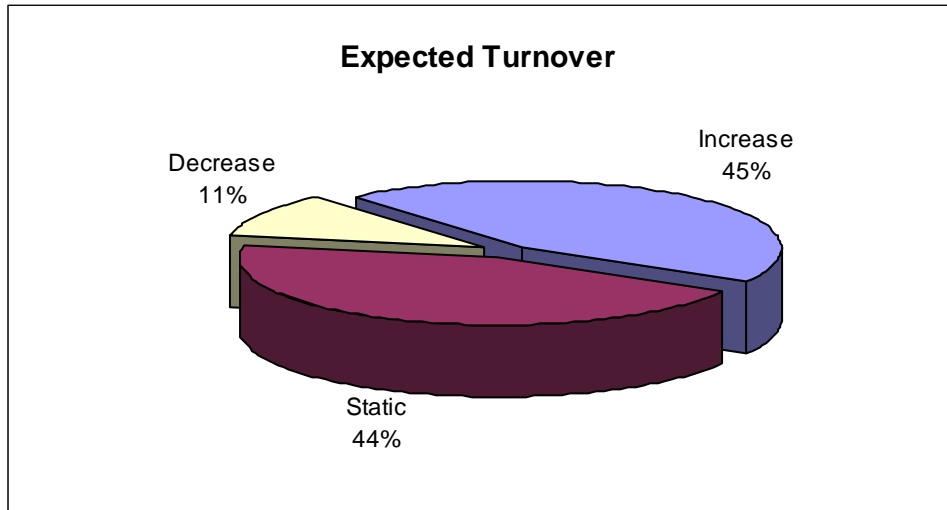
5.1.6

The table below summarises the annual turnover of firms surveyed in each of the business sectors. The majority of respondents quoted a turnover of less than £250k a year. One 'tourism' firm reported an annual turnover of between £250 and £500k, whilst a single firm within the 'other' sector reported a turnover in the range £1m to £5m.

Turnover	Sector			
	Fishing	Agriculture	Other	Total
0 - 50k	3	0	1	4
50k - 250k	1	2	0	3
250k - 500k	1	0	0	1
500k - 1m	0	0	0	0
1 - 5m	0	0	1	1
> 5m	0	0	0	0
<b>Total</b>	0	0	1	1

5.1.7

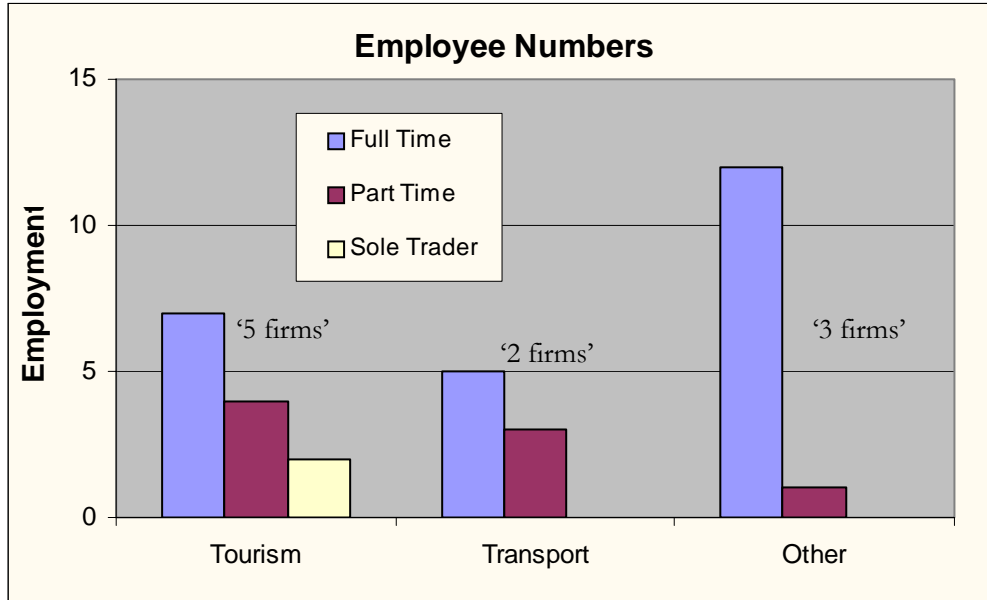
The following diagram indicates expectations amongst firms along the Feolin Ferry to Ardlussa route regarding future turnover. The results demonstrate that just under half the businesses expect to witness an increase in turnover over the next three years, with only a small proportion predicting a decrease.



Employment (Feolin Ferry - Ardlussa)

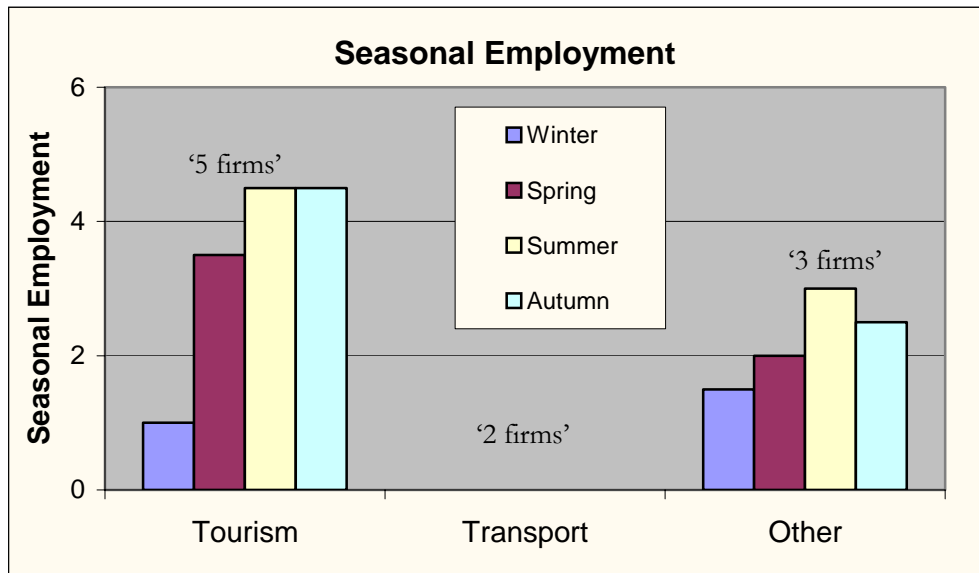
5.1.8 In line with the data on turnover the majority of the businesses who responded employ a relatively small work force. Around 70% of firms employ less than four staff or are run by sole traders and one firm has a total of 11 employees.

5.1.9 In total around 22 full-time and 6 part-time employees are represented. The histogram below presents the employment data by sector including the number of sole traders. The majority of full time employment was within the 'other' sector (12), followed by the 'tourism' sector (7).



5.1.10

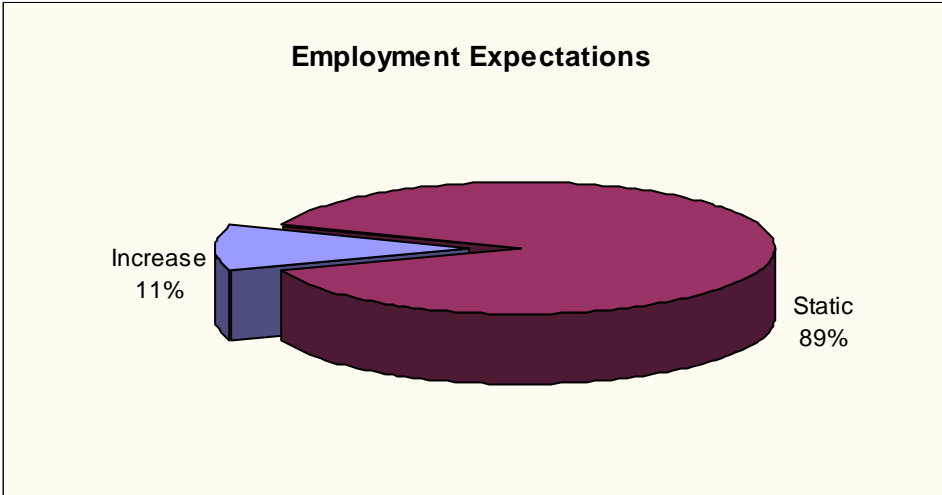
The split of seasonal employment across sectors is shown in the following diagram. The results highlight the seasonal variations inherent within the 'tourism' sector.



5.1.11

The employment expectations of firms over the next three years are highlighted in the diagram below. Most firms (89%) expect employment levels to remain

constant, while 11% expect employment to increase. None of the firms who responded expect employment to decrease.

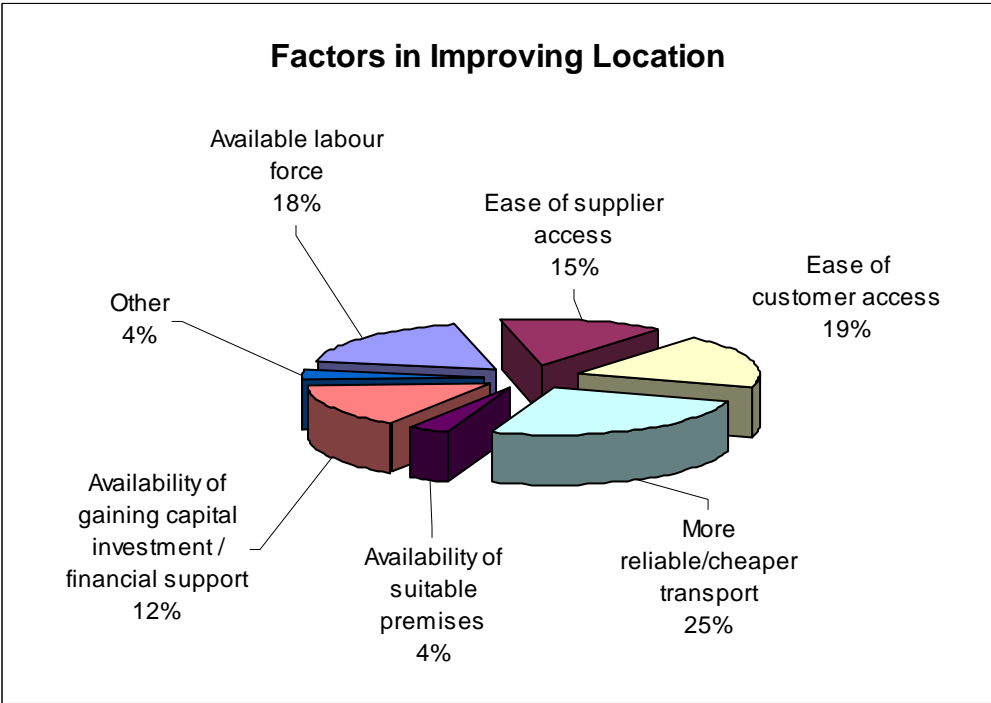


5.1.12 In comparison to expectations for turnover, firms generally predict a lower rate of growth in employment inputs than output. This indicates that firms expect to be able to obtain better utilisation of their current input capital.

Geographical Flexibility (Feolin Ferry - Ardlussa)

5.1.13 Businesses were asked about the feasibility of relocating as a measure of the geographical flexibility of their operation. The overwhelming majority (70%) of companies reported the probability of relocating to be low. This indicates the low proportion of geographically mobile businesses along the Feolin Ferry to Ardlussa route.

5.1.14 The diagram below highlights the relative importance of key factors in improving the location as a place to do business. 'Reliable/cheap transport' was deemed to be of greatest importance, followed by 'ease of customer access' and 'available labour force'.



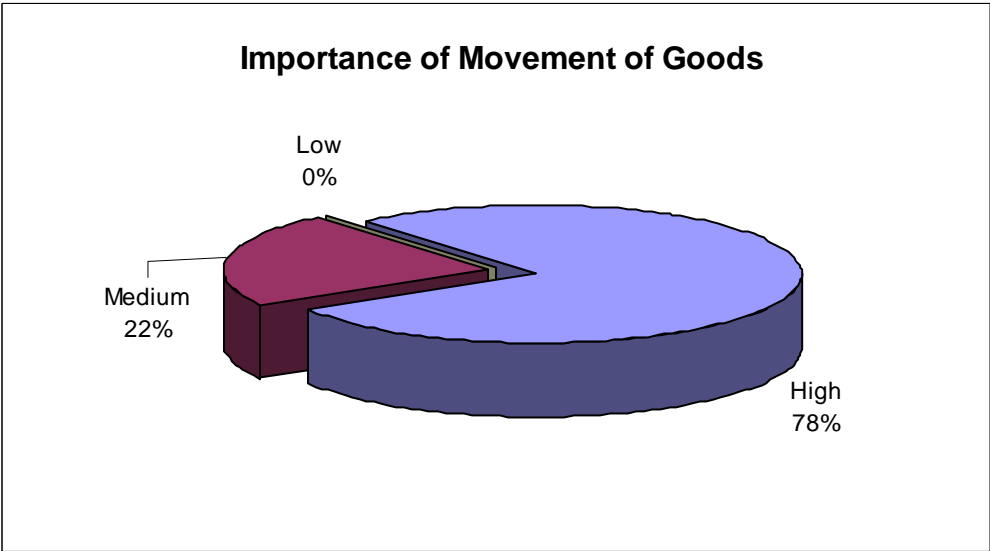
Transport (Feolin Ferry - Ardlussa)

5.1.15

In order to gauge the significance of transportation within a firms operation, respondents were asked to rate the importance of the movement of goods and supplies to their business.

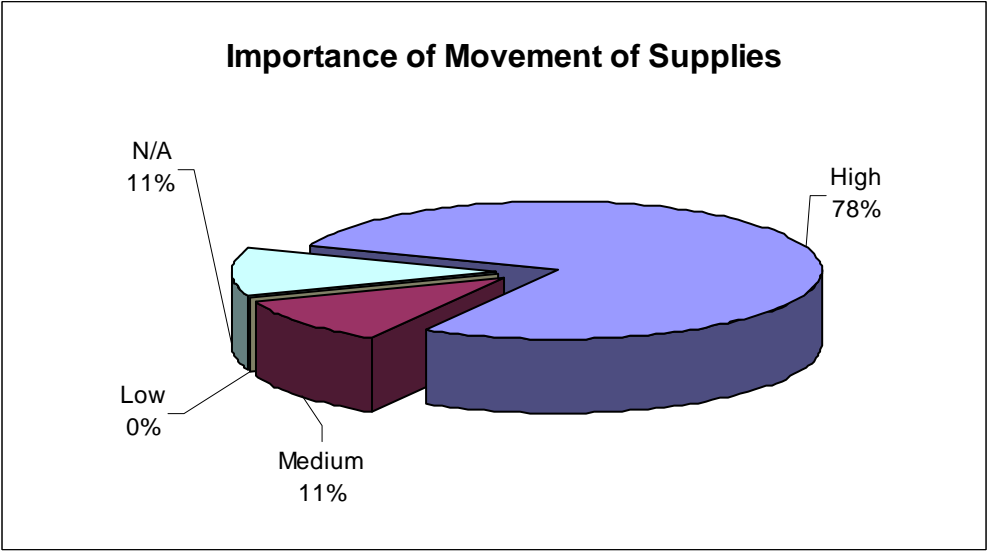
5.1.16

The diagram below indicates the importance of the movement of goods. Some 78% of businesses responded that the movement of goods was of high importance. Furthermore, none of those businesses who transport goods were able to identify an alternative route along which o transport their finished products.



5.1.17

The diagram below indicates the importance of the movement of suppliers. Some 78% of businesses felt that the movement of supplies was of high importance and all responded that there was no alternative route for them to import supplies.



5.1.18

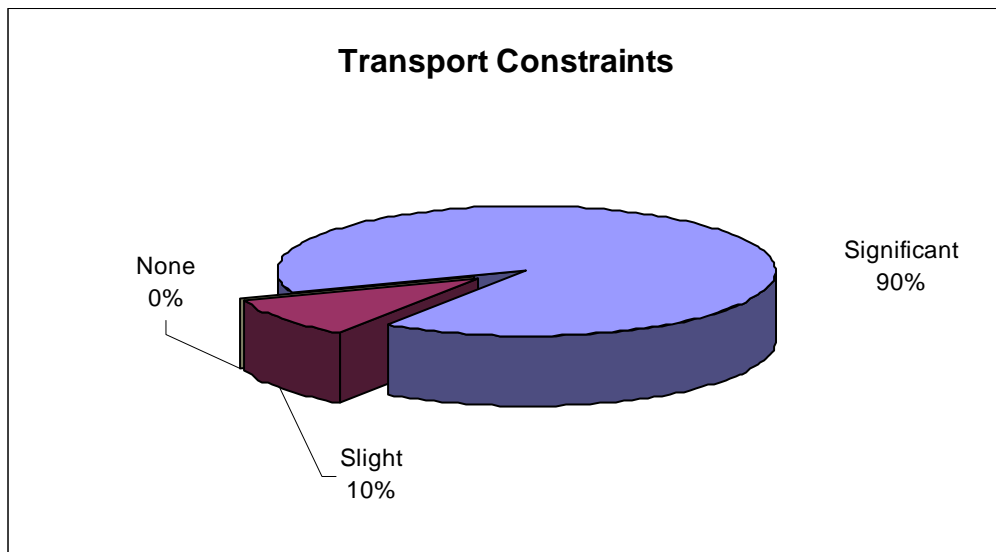
Businesses were asked to estimate the percentage of their total costs that are associated with the transportation of goods and/or supplies. Eight respondents provided this data with three of them indicating transport costs were between 0% and 20% of total costs. Three firms stated it was between 20% and 40% of total



costs, with the two other firms indicating that transport made up between 80% and 100% of their costs.

5.1.19

Respondents were asked whether their business currently faces any transport constraints. All of the respondents stated that this was the case, with 90% considering these constraints to be significant.



*Scheme Impact (Feolin Ferry - Ardlussa)*

5.1.20

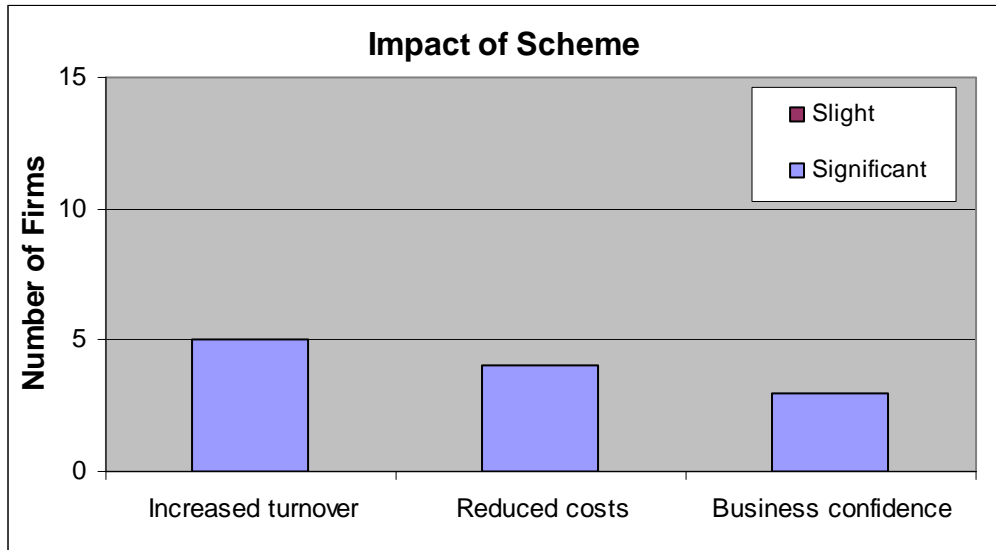
All firms were given a broad description of the type of scheme upgrade proposed along the Feolin Ferry to Ardlussa route. Respondents were then asked to consider the likely impact of a road improvement upgrade upon their business.

5.1.21

The figure below presents firms perceptions of the likely impact of a road improvement on business confidence, turnover and costs. A total of four firms (40%) expected road improvements to decrease costs, five firms (50%) expected road improvements to increase turnover and three firms (30%) expected a significant boost in business confidence as a result of road improvements.

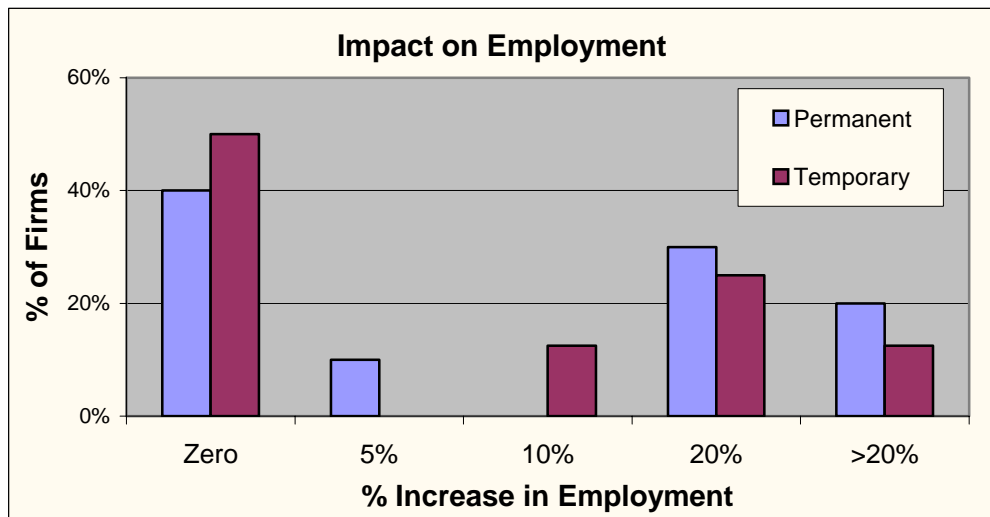
5.1.22

Two companies did not expect any impact to their business as a result of a road improvement scheme.



5.1.23

Firms were further asked to quantify the impacts of a road improvement upon the level of employment. Some 40% of firms considered that an improvement would have little or no impact upon the number of permanent staff that they employed. However, 50% of respondents perceived that a road improvement scheme would increase their permanent employment levels by 20% or more. The following chart summarises the employment effects of the route improvements.



*Additional Comments (Feolin Ferry - Ardlussa)*

5.1.24

The majority of respondents from Jura voiced concern over the detrimental effects poor road conditions were having on the island's tourist trade. Many visitors are too frightened to travel further than Craighouse due to the dangerous state of the road and some visitors are discouraged from coming to Jura at all, preferring to remain on Islay.

5.1.25

The ferry service between Islay and Jura was also described as a major constraint on businesses. Respondents felt that a larger ferry from Islay to Jura in conjunction with improvements to the road would be of major benefit to tourism and business performance in the area. Another issue raised was that of safety along the route, particularly in view of the heavy delivery vehicles travelling to and from the distillery and the danger posed by freely roaming cattle.

## 6 Economic Activity Locational Impact Analysis (Feolin Ferry to Ardlussa)

### 6.1 *EALI Analysis*

6.1.1 The direct benefits to transport users have been estimated as part of the TEE analysis. However, the enhancements to the Feolin Ferry to Ardlussa route may also generate additional benefits in terms of stimulating economic activity at locations served by the route.

6.1.2 The assessment process for determining any potential EALI benefits is not straightforward in the absence of modelling tools. The business survey provides insights into how firms may react to improvements in accessibility. However the relatively small sample sizes make the translation of this data into quantifiable forecasts unreliable. This section therefore seeks to highlight the likely areas where EALI benefits may be derived from the scheme and provide an indication of their magnitude. A detailed description of the EALI methodology is presented in Section 3.6 of the main report.

### 6.1.3 *Importance of Lifeline Roads to Key Sectors*

6.1.3 As part of the Stage One and Workshop phases of this study a key aspect was to identify the main problems, issues and constraints facing firms and organisations within remote communities. More specifically the process involved analysing the importance of 'lifeline' roads to the various industry sectors. One output from this process was the extent to which forestry, fish farming and tourism rely upon the quality of the local and regional road network.

6.1.4 The timber industry is a particular heavy user of lifeline rural roads. The main representative body, the Timber Transport Forum, has an on-going campaign to improve key timber routes. The success of this campaign is reflected in the recent commitment in the Partnerships document (Scottish Executive, 2003) to provide support for roads affected by timber production. The timber industry as a whole in the Highlands and Islands is expected to almost double over the next 10 years, adding considerable pressure to an already unsuitable transport network. Upgrades to lifeline routes serving existing and potential forestry sites are therefore likely to help stimulate economic activity in this sector.

- 6.1.5 The fish farming sector also stressed the importance of lifeline roads, both in bringing raw materials to the fish farms as well as shipping out produce to domestic and international markets. A high proportion of fish farms are located along lifeline routes and thus the condition and upkeep of these routes is essential. Fish farming within the Highlands and Islands is facing considerable competition from abroad, which has driven down prices. As a result, quick and efficient deliveries are becoming increasingly essential in order for these firms to compete.
- 6.1.6 The tourism industry within the Highlands and Islands is a key employer within the region. Whilst tourist boards generally cite major exogenous variables as drivers for tourism performance the level of accessibility to the regions is an important factor. The condition of lifeline routes, in particular in providing access to ferry ports, is essential in encouraging visitors to access remote areas and thus stimulate economic activity.
- 6.1.7 Lifeline roads are therefore clearly an important aspect to the successful operation of these three key sectors within remote areas of the Highlands and Islands. Improved levels of accessibility along routes servicing existing or potential new sites for these industries can therefore be seen as likely to have a positive impact upon economic activity.
- Feolin Ferry to Ardlussa Scheme Impacts*
- 6.1.8 As described above the proposed scheme is anticipated to provide considerable improvements in accessibility on Jura. The reduced journey times and improvements in journey time reliability will encourage economic activity within the island.
- 6.1.9 Islanders rely heavily on imports and hence the quality of transportation leading to the ferry is of considerable importance. Likewise, transportation to the ferry is the sole means of exporting produce to other markets. The level of social service provision on the island is also low, requiring frequent trips to Islay.
- 6.1.10 The long term economic vitality of the island will require a critical mass of population and employment in order that essential services remain in operation i.e. the village shop. Accessibility is a key aspect in promoting the island as a realistic location to live and work.
- 6.1.11 The key industries on the island are tourism, the estates (agriculture/fishing) and the distillery. The former can only be maintained and promoted through improved

accessibility both to the island and then subsequently within it. Firms on the island currently view the poor transport provision as a major constraint on the tourist trade. The primary and secondary industries are heavily reliant upon efficient transportation of goods in order to sustain economic viability. In both respects therefore the proposed scheme enhancements could indirectly provide a much required 'boost' to the local economy.

*6.1.12*

The business survey responses indicated the following key results:

- The majority of firms are geographically immobile and thus are heavily reliant on the local infrastructure and service provision, rather than being in a position to look for alternative locations to undertake their business should constraints arise;
- All firms on Jura are reliant upon the A846 for supplies and delivery of goods and that the current levels of transport provision create very serious constraints to their business operation. Furthermore, that a 'more reliable/cheaper transport network' would be the single most important factor in improving the desirability of the area;
- 40% the respondents consider that a road scheme improvement would significantly reduce their transport costs and allow them to expand turnover. In the majority of cases this would also lead to a requirement for an expansion in the workforce by up to 20%.

*6.1.13*

The responses outlined above provide a strong indication of the dependency that firms have on good accessibility and the ability to efficiently transport goods to the markets. Maintaining and improving the route is therefore a critical issue in sustaining the economic viability of these firms.

*6.1.14*

The scheme improvements should therefore provide stimulus to all firms operating on Jura by helping to release the constraints to travel currently experienced along the A846. This will be encompassed in the form of reduced transportation costs through improved journey times and journey time reliability. This is of particular importance due to the geographical immobility of most of the firms on the island.

*6.1.15*

The improvements in transportation should directly benefit the primary and secondary industries, in particular the estates and the distillery. The business

surveys highlighted the dependency of all firms upon the A846. Road improvements should therefore significantly reduce transport constraints. This should ensure faster and more reliable delivery of goods and supplies to and from the shipping terminal. Such improvements may assist in the expansion of these industries, with the business survey responses suggesting that improvements in accessibility might encourage firms to expand their workforces.

6.1.16 Better accessibility along the A846 will also help to promote tourism on the island. Reduced journey times and better quality roads should encourage more visitors. If coupled with a campaign to promote the “overland route” from Mid Argyll to Islay then this could have a significant impact upon the local economy.

6.1.17 The economic statistics for the island demonstrate its vulnerability with poor deprivation ratings in comparison to the Highland and Islands, high levels of unemployment and its designation as a “Fragile Area”. There is therefore a strong requirement for measures to assist in promoting sustainability if the island is to continue to remain a viable economy. The road scheme upgrade improving accessibility can be viewed in these terms.

## 6.2 ***EALI Conclusions***

6.2.1 The scale of the estimated journey time improvements from the scheme would suggest that there could be significant economic benefits. A proportion of these benefits will be reflected in terms of maintaining the economic viability of businesses within the island. However, the removal of some of the existing transport constraints may allow certain market sectors to expand.

6.2.2 The EALI analysis indicates that the following key benefits could be derived:

- Provide stimulus to all firms operating on Jura by helping to release the constraints to travel currently experienced along the A846;
- Enhance the operating efficiency of the primary and secondary industries through faster and more reliable transportation of goods to the shipping terminals; and
- Promote tourism within the island. Better accessibility along the A846 will encourage more visitors to the island.

- 6.2.3 Limitations within the data set make it is difficult to accurately assess GDP or employment impacts. The business survey responses suggested that just over a third of the firms considered that the improvements would reduce their transport costs. A significant proportion also considered it would lead to an increase in turnover. Just over a quarter of the firms also felt that the improvement would provide a boost to their business confidence.
- 6.2.4 In terms of employment impacts the business survey responses suggest that for a proportion of firms the improvement could significantly enhance their operating efficiency thus allowing them to expand. Just under two thirds of the firms considered that improved accessibility might allow the to expand their workforce.
- 6.2.5 However, other firms indicated that they would absorb any reductions in the cost of transportation as increased profitability. This may be a reflection of the poor rates of return that some of these firms currently make from their operations. In such an instance the scheme enhancements could be considered to be ensuring the long-term security of these firms.
- 6.2.6 It would appear that whilst a major aspect of the benefits deriving from the schemes will be maintaining the existing economic viability of the island a number of firms are optimistic that improvements in accessibility may enable them to expand their businesses. This suggests that they consider the current road provision on the island is significantly restricting the opportunities for growth.
- 6.2.7 The general accessibility to the island will remain a constraining factor to widespread economic growth and therefore the full benefits of a road improvement may only be realised through enhancements to the ferry services.



# 7

## Conclusions (Feolin Ferry to Ardlussa)

### 7.1

#### *Overall Scheme Evaluation Conclusions*

#### 7.1.1

The aim of the Feolin ferry to Ardlussa scheme is to improve the levels of accessibility within Jura. The analysis has demonstrated that the current road provision acts as a constraint to both the primary industries, reliant on the route as a means of transporting goods, as well as the tourism industry, that require good accessibility to encourage visitors.

#### 7.1.2

Direct transport benefits deriving from the journey time savings are not expected to be significant due to the low traffic volumes and are therefore very unlikely to justify the capital costs (£6.0M) by themselves. The present value of benefits over 30 years is estimated to be in the region of £3.2M, with low and high forecasts of £1.3 - £4.6M.

#### 7.1.3

Some indirect impacts upon the local economy within Jura are also anticipated. It is estimated that both primary and secondary industries, in particular agriculture and distilling, will benefit from the reduced transportation costs associated with enhanced road provision. It is likely that much of this cost reduction will sustain the existing operation of firms rather than necessarily lead increased activities within these markets. The economic conditions on Jura are such that maintaining the current viability of the economy is of a primary concern.

#### 7.1.4

The tourism industry may also be able to capitalise upon the improved accessibility within Jura as a promotional tool to encourage greater visitor numbers.

#### 7.1.5

It is likely that the impact upon both the primary and tourism industries could be further enhanced through greater accessibility to the island itself via improved ferry services.

#### 7.1.6

No accidents were reported along the A846 within the last 5 years therefore the level of benefits from accident reduction measures will be minimal.