

## **An Assessment of the Economic Impact of the Skye Bridge Tolls**

Final Report prepared for Highland Council

Professor Ronald W. McQuaid and Malcolm Greig  
Employment Research Institute and  
Transport Research Institute, Napier University  
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## **Executive Summary**

This report seeks to consider the economic impact of the Skye Bridge tolls upon the local Skye economy. The general conclusion is that, although the Bridge has been of benefit to Skye, the high level of the tolls has considerably reduced its positive impact upon the local economy. The results of this report rely primarily upon previous empirical research studies to provide information on consumer and business travel and expenditure patterns. In addition 19 businesses and 9 policy actors were interviewed by telephone.

The report is broken down into six main sections:

- the introduction;
- previous research on the impact of the Bridge and toll charges;
- interviewees' perspectives of the impact of the tolls;
- current costs of the tolls to the Skye economy;
- economic impacts of removal of the tolls;
- economic impacts of reducing the tolls;
- conclusions.

### **Previous research on the impact of the Bridge and toll charges**

Several previous reports have considered the impacts of the Skye Bridge tolls. They are briefly described and some of their data have been used in compiling this report.

### **Interviewees' perspective of the impact of tolls**

The bridge itself has widely been seen as a benefit for the local economy, for example through reducing waiting and crossing times for traffic. However it was felt by many that the size of the tolls meant that the full potential of the bridge was not being realised. According to the small telephone survey of 19 business people the tolls largely have had a negative effect on visitors numbers. The key points made are:

- Toll charges have considerably affected business for many, with in a number of cases turnover having decreased despite the Bridge;

- Among firms who reported no change in business, many still feel that the tolls are damaging to business;
- Toll charges particularly discourage day-trippers who are important, especially as they may be scouting for a longer break;
- A reduction in coach numbers has affected hotels and restaurants that miss out on the lunch trade.

According to key policy actors and representative groups the tolls have:

- Had negative impacts, but with limited impact on tourist business;
- Had a greater likely affect on short stay and UK visitors;
- An impact on the downturn in tourist coach traffic;
- Significantly increased costs to businesses importing and exporting low-value high-volume goods;
- A deterrent effect only to marginal location and start-up decisions, as availability of workforce, property and the quality of the environment remain major location determinants;
- A limited impact on residents' ability to access jobs and services;
- Led to a significant increase in costs for businesses in the Western Isles, particularly exporters in the Uists;
- Had little impact upon tourism to the Western Isles.

The benefits of removing the tolls were seen to be:

- an increase in visitor numbers, particularly short stay visitors and coach parties, with corresponding increases in tourist-related employment;
- increased competitiveness for manufacturing and export business.

However some negative impacts of removing the tolls were claimed:

- removing tolls may convert longer-stay tourists to day trippers;
- increases in tourist employment in Skye may displace employment from adjacent areas, e.g. Wester Ross;
- businesses dependent on traffic to and from the Glenelg to Kylerhea and Mallaig to Armadale ferries would lose customers;
- traffic stopping at the bridge to pay tolls is used by a local business to distribute tourist information leaflets – this facility would be lost;
- those employed in toll collection (around 6 – 8 people) would lose their jobs;
- crime may increase on Skye if the physical barrier was removed.

However, all the key actors consulted believed that in balance removing the tolls would be beneficial to the local economy.

### **Current costs of the tolls**

The results of the desk-based analysis are:

Due to money not being spent on tolls tourists would save £1,501,294, with an additional income of £90,045 going into the Skye economy, and creation of 7.7 FTE jobs from tourism;

Saved tolls for local residents would be £498,244 which could potentially generate around £597,893 additional income and 12.8 FTE jobs;

Saved tolls for local businesses would be £394,665, which after leakages and multiplier effects would contribute £426,238 to the Skye economy and generate around 9.1 FTE jobs;

Saved tolls for external businesses would be £1,316,373, of which after leakages perhaps £855,642 is passed on to the Skye economy which could potentially generate around £1,026,771 extra income and 22 FTE jobs;

In total the additional income accruing to the local economy from spending by all the groups listed is estimated to be over £2.1m with employment generation of 52 FTE jobs.

**Table E1 (in main text – Table 4.9): Estimated Income and Employment From Diverted Toll Spending**

Source	Estimated tolls paid	Additional Income (including multiplier effects)	Employment (FTE)
Tourist expenditure	£1,501,294	£90,045	7.7
Local resident Expenditure	£498,244	£597,893	12.8
Local business expenditure	£394,665	£426,238	9.1
External business expenditure	£1,316,373	£1,026,771	22.0
Total toll expenditure	£3,710,576	£2,140,947	51.6

### **Additional Economic impacts of removing the tolls**

The anticipated increase in visitor numbers is around 10% if tolls were removed. Expenditure may hence increase by 10% resulting in an additional 42,769 trips and £6,570,000 expenditure. This would result in an additional £2.037m of income and an additional 169 FTE jobs.

Removing of the tolls could result in a number of additional changes in the local economy as a result of more favourable trading conditions:

- new indigenous businesses may be set up;
- there may be an increase in inward investment;
- existing businesses may expand output and employment.

These changes would result in an additional £490,000 of income and an additional 35 FTE jobs. When combined with the tourism growth removing the tolls could lead to an extra £2.5m in income and 204 FTE jobs.

The total effects of removing the tolls would be this increase in income plus the savings to existing users, giving an estimate of a total of £4.67m additional income and 256 additional FTE jobs.

**Table E3 (5.4): Total Additional Income and Expenditure from Toll Removal**

	Income	Employment (FTE)
Diverted existing expenditure	£2,140,947	51.6
Additional Growth	£2,526,700	204
Total	£4,667,647	255.6

## **Economic impacts of reducing the tolls**

### **a) Estimate of the impact of reducing the tolls: Scenario A - £1 Toll each way for car traffic**

The calculations indicate that the income and employment gains of a reduction in toll charges to £1 each way for cars, and reduced charges for other vehicles, are likely to be considerable, although clearly less than for the removal of tolls.

The increase in tourist trips is estimated to be 34,643, resulting in extra tourist spending of £5,321,791, leading to an additional £1,649,755 of local income and 136.8 FTE jobs. In addition, tourists coming to Skye anyway would get a total potential saving of £1,226,097 from paying lower tolls, leading to an extra £245,219 being spent in the local economy, generating £76,018 in additional income and an extra 6.3 FTE jobs.

Local businesses would save a total of £299,139, giving an estimated £323,070 additional income entering the local economy and generating 6.9 FTE jobs. External (non-Skye) businesses would save a total of £1,041,063, giving an estimated £812,029 additional income entering the local economy and generating 17.4 FTE jobs.

Local residents would save a total of £249,276 giving an estimated £301,288 additional income entering the local economy and generating 6.5 FTE jobs.

There would be approximately 3 additional business start-ups, generating around 9 FTE jobs and providing £126,000 additional income. Increased

business efficiency would generate around 18 additional jobs and provide additional income of £252,000 to the local economy.

The estimated total impact of the Scenario A toll reduction is an additional £3.54m income and 201 FTE jobs.

### **b) Estimate of the impact of reducing the tolls: Scenario B – Parity With Forth Road Bridge Tolls**

Our calculations show that the income and employment gains of a reduction in toll charges to match the current Forth Road Bridge tolls (which are even higher than those on the Erskine bridge), are estimated to be greater than in Scenario A.

The increase in tourist trips could be 39,347 resulting in extra tourist spending of £6,044,486, resulting in an additional £1,873,791 of income and 155.4 FTE jobs. In addition, tourists already coming to Skye anyway would get a total potential saving of £1,391,201 in tolls, leading to an extra £278,240 being spent in the local economy, generating £86,254 in additional income and an extra 7.2 FTE jobs.

Local businesses would save a total of £356,454, giving an estimated £384,971 additional income entering the local economy and generating 8.2 FTE jobs. External businesses would save a total of £1,206,249, giving an estimated £855,642 additional income entering the local economy and generating 20.2 FTE jobs.

Local residents would save a total of £398,656 giving an estimated £478,387 additional income entering the local economy and generating 10.3 FTE jobs.

There would be approximately 4 additional business start-ups, generating around 12 FTE jobs and providing £168,000 additional income. Increased business efficiency would generate around 21 additional FTE jobs and provide additional income of £294,000 to the local economy.

The total estimated impact of the Scenario B toll reduction to be an additional £4.14m income and 234 FTE jobs in the local economy.



**Table E3 (6.10): Summary of Estimated Income and Employment Gains from Reduced Toll Charges**

Source	Scenario A		Scenario B	
	Income	Employment	Income	Employment
Tourism (existing and additional)	£1,725,773	143.1	£1,960,045	162.6
Local residents	£301,288	6.5	£478,387	10.3
Local business	£323,070	6.9	£384,971	8.2
External business	£812,029	17.4	£855,642	20.2
Additional business start-ups	£126,000	9.0	£168,000	12.0
Extra business efficiency	£252,000	18.0	£294,000	21.0
<b>Total</b>	<b>£3,540,160</b>	<b>200.9</b>	<b>£4,141,045</b>	<b>234.3</b>

## Conclusions

The general conclusions are:

1. Although the Bridge has been of benefit to Skye, the high levels of the toll have considerably reduced its potential positive impact upon the local economy.
2. There is considerable local resentment to the tolls, with businesses reporting that tourists, particularly short stay visitors and coach parties, have been deterred from crossing the bridge.
3. There would be likely gains from removing or reducing the tolls in terms of diverting existing toll spending, increased tourism, increased business efficiency and more business start-ups.
4. The economic benefits from removing the tolls would be substantial, with around £4.67m of additional income entering the local economy and the creation of perhaps 250 FTE jobs (around 6% of current Skye and Lochalsh Enterprise area employment).
5. There would also be noticeable benefits from reducing the toll charges, with one scenario (based upon a car toll of £1 each way) offering around 76% of the potential income and 78% of the potential employment benefits, and the other scenario (based upon Forth Road Bridge tolls levels) resulting in 89% of the income and 91% of the employment benefits of complete toll removal.

## **1. Introduction**

### ***1.1 Outline of the Report***

This report seeks to consider the economic impact upon the local Skye economy of the tolls on the Skye Bridge. It is primarily desk-based and relies on the results of previous accepted empirical research to provide information on consumer and business travel and expenditure patterns. In addition 19 businesses and 10 policy actors were interviewed by telephone. In line with the brief, the main aims of the study are as follows.

- To estimate the cost of the tolls to the Skye economy.
- To estimate the amount of money that would directly enter the local economy as a result of removing the tolls.
- To quantify the extra economic growth that would be generated from removing the tolls.
- To estimate the economic impact of tax revenues and toll reduction subsidies.
- To assess the effect that the tolls have on inward investment.
- To produce a rough estimate of the economic impact of the tolls on other local economies connected to Skye and Lochalsh, principally the Western Isles.

We have taken these criteria to produce an up-to-date report rooted in analysis that will present economic evidence to inform decision makers. In addition the findings of the study provide an enhanced understanding of the role of bridge tolls on local economic development in general and an up to date census on the economic well-being of the local area and the attitudes and perceptions of local businesses. The report is broken down into six main sections:

- this introduction;
- previous research on the impact of the Bridge and toll charges;
- interviewees' perspectives of the impact of the tolls;
- the costs of the current of tolls;
- the economic impacts of removal of the tolls;
- the economic impacts of reducing the tolls;
- conclusions.

## **1.2 Skye Bridge Traffic**

The baseline figures for these calculations are the Bridge crossings in the latest year available, namely 2001. Scottish Executive figures show that in total, the Skye Bridge had 666,000 vehicle crossings in 2001 (around 1,825 per day), by far the largest component is private cars, with almost 600,000 vehicles (90% of the total) (Table 1.1).

**Table 1.1: Skye Bridge Traffic Figures by Vehicle Type, 2001**

<b>Vehicle</b>	<b>Traffic</b>
Motorcycle	12,684
Cars	598,264
LGV	10,205
HGV 1	15,423
HGV 2	14,551
Service Bus	4,006
Midi Coach	1,721
Coach	4,347
Car & Caravan	4,921
LGV & Trailer	199
Total	666,321

*Source:* Scottish Executive (2002)

The total for 2001 was about 1% less than the 675,000 figure for 2000. Table 1.2 shows that between 1995 when the Bridge opened and 2001:

- the number of vehicles making the crossing rose steadily year on year from 612,000 in 1996 to 675,000 in 2000, before falling back in 2001;
- the number of vehicles in all categories except buses was higher in 2001 than it was in 1996;
- the proportion of cars has remained fairly static at around 92% of total traffic;
- the total annual toll levied rose from 1996 to 1999 and was static at around £3.8m in 2000.

Traffic flows across the Skye Bridge have seen a sustained increase since opening in October 1995 of around 8%. The increase in major traffic flows across Scotland was around 3% over the same period, and there was a *fall* of

9% in the Highland area. This indicates that traffic across the Bridge is growing disproportionately quickly. We can say with confidence that demand increased despite the tolls, however, these figures do not provide us with an estimate of the growth that would have occurred without toll charges.

**Table 1.2 Skye Bridge Crossings, Thousands, 1996-2001**

	1996	1997	1998	1999	2000	2001
Private Cars and LGVs	563	575	601	613	618	613
HGVs	26	29	33	29	34	30
Buses	12	12	12	11	11	10
Motorcycles	10	11	10	11	12	13
Exempted vehicles	1	-	-	-	-	-
Total traffic	612	627	656	665	675	666
Tolls levied (at 2000 prices) £K	3,544	3,518	3,743	3,775	3,775	n/a

*Source:* Scottish Executive (2002)

The toll revenue figures are useful, as they give a rough indication of the money spent by tourists, local residents and businesses that might otherwise largely be spent in the local economy. Approximately £3.8m of potential spending was paid into toll charges in 2000.

### **1.3 Economic impacts**

The main economic impacts are in terms of the effects of tolls on: spending power and efficiency; the level of suppressed journeys (people choosing not to travel to or from Skye due to the tolls); and inward investment.

The toll figures do not take into account the fact that not all the money spent on tolls would end up in the local economy, and that the money that would be spent locally would be subject to multiplier effects due to indirect and induced spending. Also only a proportion of the money spent by tourists on toll charges would enter the local economy if tolls were abolished – some may be spent in other parts of Scotland and some saved. As the proportion of potential toll money that would be spent in Skye is likely to differ between

tourist, residents or businesses it is therefore necessary to estimate the amount spent on tolls by each group.

Section 2 considers other research and section 3 considers the views of interviewees. The effects of the tolls are considered in section 4. Suppressed journeys and inward investment are considered in section 5. The effects of reducing (rather than removing) the tolls are considered in section 6.

## **2. A Synthesis of Previous Research**

### **2.1 Introduction**

This section gathers together the key findings from research specifically relating to the Skye Bridge, although some other studies will be mentioned where relevant. It considers the general economic impact of the Bridge and the specific impact of tolls.

### **2.2 The Economic Impact of the Skye Bridge**

The bridge has widely been seen as a benefit for the local economy, for example through reducing waiting and crossing times for traffic. However, it was felt by many that the size of the tolls meant that the full economic development potential of the bridge was not being realised.

#### *i) Ex-ante study*

Taking an *ex ante* perspective, the anticipated economic benefits of the Skye Bridge crossing on the local economy were discussed in a study by Piedad (Piedad, 1991). The main points highlighted were:

- an increase in tourist traffic to Skye resulting from reduced congestion;
- greater business efficiency from time savings at the crossing;
- an increase in passing trade business in Kyle from approach road traffic;
- extra development land created by building work adjacent to new the slip roads.

The development of adjacent land has been identified in impact studies of bridges within the UK (e.g. the Humber Bridge) and outside the UK. For example, the decision to complete a second Peace Bridge between Canada and the US triggered a \$20m international trade complex in an adjacent industrial park, although this was linked to improving international trade (American City Business Journals Inc., 1998).

In addition, the study also pointed to possible negative economic effects:

- job losses resulting from the closure of the ferry (although this is a 'one-off' effect);

- greater difficulty for foot passengers commuting between Kyleakin and Kyle;
- a decrease in business from passing trade in Kyleakin, as the approach road bypasses this town.

The baseline study by Transport Research Laboratories and Derek Halden (TRL, 1995) examines the likely socio-economic impact of the bridge from a transport perspective. It concluded that there were likely to be changes to the physical infrastructure of Skye, with resulting impacts on accessibility, and examined the costs and benefits of this, and the distribution of these costs and benefits. The study makes the following conclusions:

- The 30-year net present value benefit from the bridge at 1994 prices is £30.7m;
- The bulk of the benefits from the bridge will come from timesavings.
- The reduced tolls for some vehicles, particularly light vans, also result in some operating cost savings;
- Cars users are the main beneficiaries and pedestrians are the main losers;
- If the ferries operate reliably for about 95% of the time, the effect is a near doubling of the benefits from the bridge;
- Re-routing of traffic will be much more significant for the competing ferry crossings than for the bridge.

#### *ii) Ex-post studies*

The *ex post* follow-up report by DTZ Pineda for the Scottish Executive into the socio-economic impact of the Skye Bridge after completion (Scottish Executive, 1999) found that although the Bridge had led to increased traffic growth, the social and economic impacts were limited – although this varied by sector. The impact on the tourism industry was found to be neutral in terms of occupancy rates and number of overnight stays, and made little difference to visitor attitudes towards the attractiveness of Skye as a place to visit.

However, criticism has been levied by Skye and Kyle Against Tolls (SKAT) at the methodology used, particularly concerning the measurement of suppressed journeys. They argued:

“How can you measure the amount of people who don’t turn up? The tourists that were interviewed were here because the tolls had not affected their

decision. What about those who will not come here because of the extortionate prices?" (SKAT, 2000 web).

Notwithstanding this criticism, it is possible that the extra convenience afforded by the Bridge is offset by the toll charges. A separate study by Independent Northern Consultants (INC, 1996) shortly after the Bridge opened found that visits to tourist information centres had increased in the first year of opening by 27% in Kyle and 52% in Portree, although this was partially explained by an increase in visitors to the Highlands in general in 1996. It was also pointed out that there may have been a novelty attraction of the Bridge in the first year.

The Bridge did not appear to alter business traffic patterns in the area, although 'exporting' businesses (those selling outwith Skye) reported that the Bridge had a negative effect on their transport movements, probably due to the tolls. Some sectors fared better than others, with construction businesses reporting a positive impact, but retail and restaurant businesses reporting a negative impact. However, the overall impact of the Bridge on local businesses was felt to be very slight when compared with wider economic factors.

The effects of the Bridge on population and property prices in Skye were inconclusive – there was an increase in population and prices but this could be due to other factors. The Bridge did have some direct effect, with 6% of local Skye residents indicating that they had moved to Skye from elsewhere because of the Bridge (from opening to July 1998), although corresponding out-migration figures are not available.

The Bridge did appear to result in an increase in traffic growth, with traffic across the Bridge increasing significantly faster than in the rest of Highland Region. Interestingly there has been a fall in the number (and hence a sharper fall in the percentage) of Bridge traffic travelling to the Western Isles. As pointed out by Ross, Skye and Inverness MP Charles Kennedy, increased traffic does not automatically imply increased economic benefits:

"(The Minister's) glib response boils down to equating more journeys with the Bridge being a success. This kind of shallow analysis shows that she has no understanding of the difficulties the tolls are causing on Skye" (SKAT, 2000 web).



There have been two developments on land adjacent to the Bridge, both on the Kyle of Lochalsh side. One is a major extension of a leisure centre and the other is a National Trust for Scotland visitor centre. It was not possible to determine how many potential employees and users living on Skye were deterred due to the tolls.

A follow-up study to TRL (1995) was undertaken by TRL and Derek Halden (TRL, 1996) examined the impacts on the economy in the year following the opening of the bridge. The study undertook a series of travel and traffic surveys and came to the following conclusions:

- Substantial growth on the Kyle of Lochalsh crossing to Skye particularly for longer distance trips had taken place. This was not necessarily due to the bridge, but the traffic growth is beyond what the ferry could have accommodated;
- The bridge had had an effect on travel patterns, with more voluntary trips, such as leisure activities, but less effect on more routine travel requirements such as travel to work;
- The bridge had brought travel time and reliability benefits, however, because of increased usage and dependence, the tolls were a greater burden, although they were priced equally to the ferry;
- Those who viewed the bridge as a positive asset continued to do so, but fewer people now considered that the bridge will have or was having a negative effect on the area;
- There had been a substantial increase in tourist bus and coach travel. The economic impacts of this is dependent on changes in tourist spend, particularly overnight stays, and whether local tourist infrastructure responds to this;
- There were some early indications that an increased proportion of trips appeared to be travelling through Skye to the Western Isles. There were also more circular trips to Skye with a ferry crossing on one leg of the journey.

The authors stated that the last point should be treated with caution as trip patterns could change in the long run.

It seems reasonable to say, therefore, that although there appear to have been positive economic impacts of the Bridge, these may not have been as

great as were originally anticipated in all areas. From the main studies the overall impact on tourism, business and demographics appears to be somewhat limited. This raises the question as to what extent are these limited impacts due to the existence of the relatively high toll charges levied and would a reduction (perhaps to zero) in tolls result in significantly greater economic impacts. The studies below have attempted to address this issue.

### ***2.3 The Impact of Toll Charges***

There have been a number of studies undertaken to isolate the specific effect of toll charges on the Skye Bridge. The INC (INC, 1996) study found that over £850,000 had been paid by Skye residents and businesses towards Bridge tolls in the first year of operation.

- With multiplier effects, tourism spending and increased prices from suppliers paying tolls being taken into account the toll costs (and hence the benefit of removal) this represented over £1.3m pa lost to Skye alone, and almost £1.5m pa in the wider Skye and Lochalsh area. At 1996 local wages this would equate to 99 Full Time Equivalent (FTE) jobs in the local economy.
- The study also estimated that removing tolls would increase tourist visitors to Skye by at least 10%, which would provide 96 FTE jobs worth £992,000 pa including multiplier effects.
- The direct effects on export business competitiveness were estimated to be more modest due to the low number of these businesses on the island. After multiplier effects, increased export efficiency was estimated to generate 12 FTE jobs worth £184,000 pa to the local economy.
- In total, INC (1996) estimated that the total annual income benefit of removing the Bridge tolls would generate over £2.5m, or 208 FTE jobs.

A separate study on the impact of the toll charges on Tourism (System Three, 1996) interviewed a sample of tourists visiting the Highlands and found:

- 15% of tourists who had decided not to go to Skye, or who were considering not going, cited the toll charges being too expensive as the main reason.
- Almost one quarter of all visitors questioned were unaware of the existence of a toll – these were mainly overseas visitors – and almost

half of visitors did not know the cost. Only 9% of continental European visitors knew the toll cost.

- 11% of visitors who had been to Skye stated that they definitely would not have visited Skye had they known the toll charge in advance, and a further 18% stated that they would have thought twice about their visit.
- For respondents intending to visit Skye, the corresponding figures were 6%, who would definitely not visit and 8% who would probably not.
- 23% of visitors who stated that they would definitely not visit Skye said the toll charge was a major influence, and 16% said it was a minor influence.

These figures indicate that toll charges have a relatively small but notable deterrent effect on repeat and potential visits to Skye.

The Scottish Executive (1999) study for the Scottish Executive examined the economic impact of the Bridge itself, and while this study was not intended to quantify the impact of removing tolls, it produced some interesting findings including:

- tourist and other traffic over the Bridge had grown year on year, despite the tolls (although it may have grown faster without them);
- businesses exporting goods from Skye reported that the Bridge had had a negative impact on transport, possibly due to the toll charges.
- there was widespread resentment of the tolls among business in general;
- the revised discount structure introduced in 1998 had led to an increase in use of the Bridge;
- there was no evidence to suggest that traffic to the Western Isles had re-routed across the Bridge (again, possibly because of the tolls).

### **3. Perspectives on the Toll Charges**

#### **3.1 Introduction**

This report is primarily a desk-based study, and as such draws primarily on secondary data collected from a variety of sources. However, findings based on statistical information and previous studies may not reflect the current experience of key actors in the local economy. For this reason the views were sought, through a telephone survey, of a number of local businesses and policy professionals who have an interest in the Skye economy. This section reports the findings from these interviews.

#### **3.2 Local Businesses**

A total of 19 businesses were consulted, covering manufacturing, tourism and agriculture/fishing, regarding a range of issues including:

- the effects of the Bridge tolls on their business;
- the effects of the tolls on visitors and tourist business on Skye in general;
- the effect on visitor expenditure of people who do visit;
- whether tolls increase operating costs – and to what extent;
- the likely impact of removing the tolls.

Table 3.1 below gives a profile of our business sample.

**Table 3.1: Local Business Sample Characteristics**

<b>Characteristic</b>	<b>Number</b>
Sector: Manufacturing	7 (37%)
Agriculture, Fishing	3 (16%)
Other services	9 (47%)
Tourism dependent	15 (79%)
Average number of employees: full time	15
part time	5

## *The Effect of Tolls on Visitors Numbers to Tourist Businesses*

Businesses were asked whether they believed the tolls affected their business. The key points made are given below:

- toll charges have considerably affected business for many, with in some cases turnover having decreased despite the Bridge;
- among business who reported no change in business, many still feel that the tolls are damaging to business;
- toll charges particularly discourage day-trippers who are important to business, especially as they may be scouting for a longer break;
- a reduction in coach numbers has affected hotels and restaurants that miss out on the lunch trade.

Businesses were able to provide substantial evidence for the above points:

- some coach operators have pulled out of touring Skye resulting in a loss of business. One business reported that 53 coaches had already been cancelled in the period January to May 2002, although it is unclear how much of this was due to the tolls;
- Web site feedback indicated that people have cancelled visits because of the tolls;
- discussion with visitors has revealed that people are annoyed with the *level* of toll charges and are reducing the number of trips they make;
- discussions with visitors reveal that it is the perception of bad value relative to the ferry and other bridges that discourages people to come to Skye;
- conversation with visitors reveal that some choose to stay on the mainland instead of making the journey to Skye. However, some of these say they do stay in Kyle.

In addition to the direct effect on tourism businesses, the toll charges had a knock-on impact on other businesses:

- the effect of tolls on non-tourist industries is felt indirectly, as many local businesses are suppliers to the hotel and catering trade;
- removal of tolls would increase visitor numbers resulting in a multiplier effect with increased demand for supplies and building and maintenance work in the hotel sector.

However, not all businesses were critical of the tolls. Points made were that:

- toll charges have to be put in perspective – other problems such as September 11, Foot and Mouth and the high value of Sterling are equally important;
- some businesses on Sleat have seen an increase in business, as the Bridge tolls encourage more visitors to use the Mallaig to Armadale ferry.

Despite this, the majority of business interviewed felt that the tolls reduced visitor numbers and were bad for business. One firm summed up the feeling of many:

*"Tolls affect our business very much. Our visitor numbers have been down over the last 5 years and every customer who comes complains about the cost of the tolls. They come home and tell their friends about that."*

#### *The Effect of Tolls on Visitor Numbers in General*

We also asked businesses whether they thought the toll charges had an effect on visitor numbers to the Skye as a whole. The key points made are given below:

- potential visitors do turn back at the tolls. One business estimated this at between 5 and 10%;
- short-stay tourists are more likely to be deterred;
- tourists are more likely to turn back in poor weather and later in the day;
- fewer visitors arrive 'on-spec' than previously. The trade is becoming reliant on pre-booking;
- many coach tour operators have pulled out. The budget end of the coach market is hit harder, as the tolls are proportionately higher cost for these operators;
- the Portree area appears to have been most affected.

Evidence for effects on other businesses was not hard to come by for most people we interviewed. Skye is a dispersed, but relatively tight-knit community and there is considerable informal networking among local businesses. Methods providing the evidence included:

- conversations with other businesses, especially hotels and B&Bs;
- conversations with tour bus/coach operators who no longer come to the island and report tolls as the main reason;

- conversations with people who have worked on the tolls reveal that cars do turn back;
- personal sightings of cars turning back;
- reports in the local press.

In summary therefore, there is some evidence from local businesses of a widespread decrease in visitor numbers resulting from the toll charges. One quote which summarised the widespread effect:

*"I have seen cars pull up to the toll booth and then turned away from it. When travelling around the country and you mention you're from Skye, people say 'The island with the expensive Bridge?' "*

#### *The Effect of Tolls on Visitor Expenditure*

Businesses were also asked whether, and to what extent, the tolls affected the spending of the tourists who did decide to visit Skye. Evidence on this was mixed, with some businesses reporting more effects than others. The key points arising regarding reduction of spending were:

- there is a bigger effect on visitors taking shorter trips – this may effect spending on the mainland if Skye is part of a larger trip;
- the psychological effect of the tolls – visitors feel 'ripped off' and therefore feel less inclined to spend – one business described this as the 'grump factor';
- visitors on a tight budget, particularly those with families, do reduce their spending;
- first impressions count – the tolls give visitors a bad initial view of Skye which may curtail their spending.

However, counter to the above, several businesses commented that the monetary value of the tolls charges were small compared with an overall holiday budget, therefore the impact of the tolls is small. One also mentioned that some visitors may be more sympathetic to the problems faced by Skye businesses as a result of the poll and will try not to reduce their spending.

### *The Effect of Tolls on Non-Tourist Business Income*

In addition to the above, we interviewed a number of businesses who stated that tourism was not important to them, either directly or indirectly. They were asked about the effect of the tolls on their income. Specific comments included the following.

- the tolls do not have a big impact as most business is done through mail order;
- all business is external to Skye, therefore tolls have no effect on income.

From the above it would appear that the toll charges have limited effect on the income of businesses that are not dependent on tourism. In the case of our sample, this is because the businesses were largely reliant on exporting goods and services. However, the next section shows that this was not the case when operating costs were considered.

### *Operating Costs*

All businesses, whether tourist dependent or not, were asked whether the tolls increased their operating costs. 15 (79%) of businesses replied that the tolls did impact on their operating costs to an extent. There was a variation in the amount by which different businesses felt their operating costs were increased by due to the tolls. Specific comments are given below:

- couriers and suppliers pass on most or all of the toll costs to local businesses – sometimes the surcharge for Skye delivery of supplies can wipe out any profit margin;
- firms exporting and importing heavy and bulky goods were the worst affected;
- business visitors to Skye firms pass their costs on and business visits by Skye personnel to the mainland are also a cost;
- businesses with a mobile sales force travelling outside Skye incur considerable costs;
- local businesses are limited in the amount of costs they can pass on to customers, otherwise they would lose market share;
- the fact that many Skye businesses are very dependent on both suppliers and markets outside Skye intensifies the cost problem.



Of those reporting that the tolls had no impact on their operating costs, the following points were made:

- mail order business by Royal Mail was unaffected;
- some large national (UK) or international suppliers absorb the cost of the Bridge tolls and do not surcharge for Skye delivery;
- courier firms are unaffected;
- even though business costs are not affected, basic consumables such as bread are more expensive which raises costs for all residents and businesses.

It is also worth noting that some businesses had supplies delivered to Kyle and picked them up personally to get round any surcharge imposed by a supplier or courier. This would be particularly worthwhile where the local business had discount tickets, as most do.

### ***3.3 Key Policy Actors***

We interviewed a number of key policy actors to obtain their views on the effects of the toll charges and the potential benefits of removal of these. Specifically, we asked about the effects of the tolls on:

- tourism;
- local and external businesses efficiency;
- inward investment and business start-ups;
- the ability of residents to access employment and other facilities;
- the economy of the Western Isles.

#### *The Effects of the Tolls on Tourism*

Consultees were asked what, if any, effect the toll charges had on visitor numbers and expenditure. The main points are given below:

- It is the level of charge together with tourist perception that road travel should be free that can deter visitors;
- Coach operators are deterred by the tolls – many businesses have seen a downturn of coach party trade;
- Day trippers and speculative visitors are more likely to turn back at the tolls;

- UK day and weekend trippers who do cross are also more likely to spend less once in Skye, as the toll makes up a greater percentage of their total cost;
- Adverse publicity means some potential visitors are under the impression that the tolls are even higher than the current level.

However, some consultees pointed out that the effect of the tolls were limited and may even encourage some visitors:

- The deterrent effect is greater upon UK visitors. Overseas visitors are likely to have already made the decision to come to Skye;
- Overseas visitors are less likely to have encountered negative publicity regarding the tolls;
- Visitors tend to be in a more relaxed frame of mind on holiday and therefore more willing to spend;
- Travel costs in the highlands are high anyway and tourists are accustomed to this;
- The romantic notion of travelling 'over the sea to Skye' usually overcomes any resentment to the toll;
- The toll may increase the perceived exclusivity of Skye as a location;
- The bridge, tolls and associated publicity can be a talking point for visitors!;
- The spending of overseas visitors that do come to Skye is not greatly affected by the tolls, as the tolls are a small proportion of overall expenditure and they are more accustomed to paying tolls;
- There is a spin off benefit to the rest of the Highlands economy, as visitors turning back at the bridge are likely to spend more time on the mainland.

It is fair to say that the majority of actors interviewed held the belief that the tolls had a negative impact on tourist business, although this was often minor, and more likely to affect short stay and UK visitors.

### *The Effects of Tolls on Local Businesses*

While most consultees were of the opinion that the bridge itself had been a benefit to Skye, many had concerns regarding the impact of the tolls on business efficiency and competitiveness. The main points are detailed below:

- Local businesses face high costs of haulage and access to customers;
- Tolls restrict the supply of labour available to businesses on both sides of the bridge;
- Businesses that were involved in haulage of bulky and heavy goods were most affected;
- Haulage and courier businesses based outside Skye tended to over-charge local firms for transport on and off the island;
- The costs of the tolls are eventually passed on to all businesses in the form of increased costs – it is a form of VAT;
- Many Skye exporters are selling low value goods with a tight profit margin. The tolls can wipe out this profit;
- There is a disincentive for firms to use rail freight transport as they must pay the toll to get to the terminal in Kyle.

Again, there were some moderating factors mentioned:

- If the tolls were removed, businesses dependent on Mallaig to Armadale ferry traffic would suffer;
- Distribution costs for businesses in the west highlands are high everywhere because of the distance from the markets. The bridge tolls are only a small component of these costs;
- The forestry industry had overcome the problem by using sea barges to transport timber;
- Exporters selling high value goods such as shellfish are affected less, as the tolls are small compared to the profit margin.

### *The Impact on Inward Investment and Start-ups*

The following concerns were expressed about the effect of tolls on business formation:

- Some potential investors will not consider Skye if they cannot find suitable premises in Lochalsh. The tolls have been mentioned as a factor in this;
- Inward investors dependent on exporting bulk goods can be deterred;
- Tourist-dependent start-ups have fallen in recent years, partly due to toll effects on visitor numbers.

However, most consultees expressed the opinion that the tolls will only make a difference to marginal location and start-up decisions. The availability of workforce and property and the quality of the environment remain the main location determinants for businesses considering Skye. The tolls may even have had a positive effect by encouraging the development of better retail facilities on Skye.

### *Residents' Access to Facilities and Employment*

We asked consultees whether the tolls were a significant barrier to residents accessing employment and other facilities such as shopping, leisure, education and health care. This could be a potential problem for people living in Skye accessing facilities in Kyle, particularly residents in the south of the island for whom Portree is less accessible. It may also be a potential problem for Kyle residents accessing jobs and facilities on Skye. Consultees expressed the following concerns:

- There is a problem for people on Skye accessing higher order services on the mainland, e.g. care services for children with medical conditions. This could lead to a population drain off the island;
- Replacing the discount tickets with a prepaid swipe card would make travel more convenient.

However, in the main, the impact of the tolls on residents accessing services was thought to be minor. The following points were highlighted:

- Discount tickets make regular travel more affordable;
- Residents who only make the trip occasionally are less likely to have discount tickets, but the occasional trip is not a big cost;
- Skye residents are not deterred from visiting the leisure centre in Kyle, similarly there is no sign that Kyle residents are deterred from shopping on Skye.
- Public transport is cheap across the bridge as the operators and Highland Council bear most of the cost;
- There is a shuttle bus operating between Kyle and Kyleakin for which the single adult fare is 15p and free for those holding a Highland Council Travel Card, children under 16 and unemployed people showing a valid UB40 card (and soon to be free for those over 60).

### *The Impact on the Western Isles Economy*

Consultees were asked whether the bridge tolls had a knock-on effect on the economy of the Western Isles. The Uig to Tarbert/Lochmaddy ferry service is a vital link for the islands, particularly North Uist, to the mainland. The following issues were raised:

- Businesses in North and South Uist are most affected as they are dependent on the Uig to Lochmaddy ferry service;
- Almost all commercial traffic to and from Uist goes over the Skye Bridge;
- Tolls are less of a concern to business in Lewis and Harris, most of whom use the Ullapool to Stornoway service;
- Fish and shellfish farming businesses are most affected as they are reliant upon exports and face stiff competition. Tolls could affect the survival of these firms.

Although the effects on exporting businesses were felt to be considerable, the impact on tourism was felt to be weaker. Most consultees felt that the tolls are unlikely to deter tourists from visiting the Western Isles:

- Most tourist bookings on the Uig to Lochmaddy service are made through central reservations. Tourists are probably unaware of the bridge tolls when bookings are made;
- The cost of the tolls and the Uig ferry crossing is not significantly more than other ferry crossings to the Western Isles;
- The growth in traffic on the Uig to Lochmaddy route is in line with that of the Ullapool to Stornoway route.

### *Positive Impacts of Removing the Tolls*

The potential benefits from removing the tolls were felt to be considerable. One consultee summarised the general feeling with the statement:

*"The tolls are a tax on peripherality"*

The main points raised were as follows:

- removing tolls would result in an increase in the number of short stay tourists, and of coach operators running tours to Skye, with

subsequent increases in income and employment in tourist dependent businesses;

- removing tolls would also lead to an increase in business efficiency and employment among manufacturing and exporting businesses;
- it would be good PR for the island and may attract more visitors;
- the increase in visitor numbers would be high initially, then would settle down to a new, relatively higher level;
- an increase in all types of traffic across the bridge would lead to economic growth across all sectors in Skye.

### *Negative Impacts on Removing Tolls*

There were, however, several potential disadvantages associated with removing the tolls. These included:

- the tolls may currently encourage visitors to stay longer on the island – removing tolls may convert longer-stay tourists into day trippers;
- subsequent increases in tourist employment in Skye may displace employment from adjacent areas, e.g. Wester Ross;
- businesses in the south of the island, dependent on traffic to and from the Glenelg to Kylerhea and Mallaig to Armadale ferries, would lose business;
- traffic stopping at the bridge to pay tolls is used by a local business to distribute tourist information leaflets – this facility would be lost;
- those employed in toll collection (around 6 – 8 people) would lose their jobs;
- crime may increase on Skye if the physical barrier was removed.

It is worth noting that the last three problems would be potentially solved if the tolls were reduced to an acceptable level rather than removed altogether. We have investigated the impacts of doing this further in section 6.

## **4. Current costs of the tolls to the Skye Economy**

### ***4.1 Introduction***

This section details the estimations of the impact of existing toll charges on the local economy. Such a task is not straightforward and relies on a number of assumptions, which are stated in the following sections. However, we believe that the figures present a reliable estimate of the current impact of the tolls. In order to assess this impact, we have looked at the following areas.

- The impact on tourist spending
- The impact on indigenous business costs
- The impact on external business costs (and passed on to local businesses and residents)
- The impact on local residents

### ***4.2 Impact on Tourist Spending***

To estimate the annual spend on tolls by tourists it is first necessary to calculate the number of tourists crossing the Bridge in a given year. The study commissioned by the Scottish Executive (1999) gave some indication of tourist traffic, revealing:

- An estimated 141,492 (65% of cars) crossing the Bridge in July-September 1995 were tourists;
- In the same period in 1998 tourist usage had risen to 168,610 (72% of cars) – an absolute growth of 19%, or relative growth of 7% points over 3 years;
- 38% in summer (April to September) used a discount ticket, compared with 66% of cars in winter 1998 (October 1997 to March 1998). Assuming that discount tickets are used predominantly by non-tourists<sup>1</sup> this implies that around 62% of cars in summer and 33% in winter will include occasional business visitors, local residents using the Bridge

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<sup>1</sup> The System Three tourist survey (System Three, 1996) found that only 2% of visitors used the discount vouchers.

occasionally, as well as tourists (including those visiting friends and families);

- A roadside survey in August 1998 revealed that over 78% of cars crossing the Bridge reported 'holidays' as their main purpose.

To more accurately estimate annual tourist traffic the seasonal figures for Bridge crossings were examined. Table 4.1 below gives the monthly total car and caravan flows for the Skye Bridge (assuming that none or a negligible amount of the Mallaig-Armadale ferry traffic goes to the Uig ferry). There is a proportion of car, coach and motorcycle traffic that will be passing through Skye en route to the Western Isles via the ferry at Uig. Money spent on toll charges by these people would primarily enter the economy of the Western Isles rather than Skye. This is shown in the Table as 'through traffic'. It is assumed that the tolls are tiny compared to the total cost of taking a car to the Western Isles and so overall have limited effects on their choice of routes, and that there is negligible travel to the Western Isles by Skye residents.

**Table 4.1: Monthly Total Car Traffic Flows for Skye Bridge, 2001**

Month	Cars and caravans	Through traffic	Net of through traffic
Jan	27,338	1,341	25,997
Feb	27,029	1,216	25,813
Mar	35,008	1,712	33,296
Apr	47,686	3,005	44,681
May	58,718	3,693	55,025
Jun	62,094	4,587	57,507
Jul	76,302	6,635	69,667
Aug	88,616	6,586	82,030
Sep	62,556	4,127	58,429
Oct	48,966	3,495	45,471
Nov	35,776	1,641	34,135
Dec	33,096	1,808	31,288
<b>Total</b>	<b>603,185</b>	<b>39,846</b>	<b>563,339</b>

*Source:* Scottish Executive (2001)



This table shows:

- the total annual car and caravan flow is 603,185;
- a distinct seasonal variation in such traffic, with a peak traffic flow of 88,616 in August and an annual low of 27,029 in February;
- the difference between the peak (August) and lowest (February) is 61,587;
- the traffic flow, net of through traffic, shows a similar pattern with an August peak of 82,030 and a February low of 25,813 – a difference of 56,217;
- the total through traffic to the Western Isles for 2001 is 39,846 or 7% of the total Bridge crossings, varying from nearly 9% in July to 4% in February. The through traffic also shows a similar seasonal variation to the total traffic, with a peak in July of 6,635 and a low in January of 1,216.

Toll expenditure has been calculated at April 2001 toll charges of £5.70 each way high season (May – September inclusive) and £4.70 low season (October – April). Table 4.2 outlines the charges.

**Table 4.2: Toll Pricing Structure for Local Resident Traffic**

	<b>Cars</b>	<b>M/cycles</b>	<b>Buses</b>	<b>Large coaches</b>	<b>Midi coaches</b>
High season (May-Sept.)	£5.70	£2.90	£16.40	£41.20	£23.70
Low season (Oct.-March)	£4.70	£2.40	£16.40	£27.90	£15.80
Average (used in Tables 4.6-8)	£5.20	£2.65	£16.40	£34.55	£19.75
Discount rate	£1.34	£0.67	£12.26	N/A	N/A

*Source:* Skye Bridge Ltd.

The average toll charges for the year have been taken as £5.20, midway between low and high season, and are used to calculate local resident toll expenditure later (if the average toll is weighted by car use for each month then the average toll would be £5.28). Approximately 1% of the car and caravan traffic above will be cars with caravans, who will be charged double the car rate at £11.40 high season and £9.40 low season. We therefore add an additional 1% to the overall car tolls for tourists to cover this.

To estimate the effect of the tolls on tourists to the Skye economy, the figures net of through traffic have been used. The method of estimating the number of tourist and local traveller cars using the Bridge is shown in appendix 2. It indicates that the majority of the increase in traffic between summer and winter is made up of tourist traffic, as local residents and business traffic will cross the Bridge all year round (with a limited increase in the summer). Table 4.3 provides estimates for the car and caravan tourist traffic and toll expenditure.

**Table 4.3: Estimated Monthly Tourist Car and Caravan Traffic and Toll Outlay, Skye Bridge, 2001**

Season	Cars and caravans*	Number of Tourist Cars	Number of 'local' cars	% Tourist cars	Total Tourist Toll Expenditure
Summer (April-Sept.)	61,223	35,889	25,334	58.6%	£1,058,438
Winter (Oct. – Mar.)	32,666	8,636	24,031	26.4%	£245,970
TOTAL	563,339	267,150	296,190	47.4%	£1,304,408

\*Net of through traffic Numbers are rounded.

This table shows:

- the total estimated tourist traffic crossing the Bridge and staying in Skye for 2001 is around 267,000;
- total tourist traffic varies between around 8,636 in the winter months (March-October) to 35,889 in summer (April-September) – a difference of 27,253;
- tourist cars as a percentage of total cars varies between 26% on average in the winter and 59% in the summer (with much higher figures in July-August);
- the estimated number of tourist cars over the whole of 2001 was 47% of the total annual Bridge car flow;
- the toll expenditure by tourist cars in 2001 was approximately £1.3m.

The figures correspond (are triangulated against) very closely to the Scottish Executive and INC studies and Tourist board figures.

In addition to the car and caravan traffic, there will be tourists crossing the Bridge by coach and motorcycle. Table 4.4 gives the crossings for 2001. No figures are available for motorcycle through traffic, so we have assumed a 5% through rate, as with cars. In any case the number will be small. Coach through traffic is not split into midi and large coach<sup>2</sup>, as we have for the Bridge crossings. We want to preserve this distinction for toll calculations, as the seasonal variations are different for the two coach types. However, we know the total coach through traffic for 2001 was 362 – 6% of the annual coach Bridge traffic – so we have reduced the gross figures by this amount for both coach types. Coach crossings here do not include service or school buses.

**Table 4.4 Motorcycle and Coach Crossings, Net of Through Traffic, Skye Bridge, 2001**

Month	Motorcycle	Large Coach	Midi Coach
January	106	13	87
February	109	33	80
March	205	149	93
April	596	251	150
May	1,888	491	154
June	2,172	666	187
July	3,388	713	186
August	2,053	829	187
September	1,131	558	143
October	318	281	134
November	59	58	111
December	26	43	104
Total	12,050	4,086	1,618

*Source:* Scottish Executive (2002)

Previous studies have combined bus and coach traffic and estimated a split between local and tourist traffic. As we have access to disaggregated figures for coaches, midi coaches and service buses, we have taken all service bus traffic to be local, and the majority of coach traffic to be tourists (see below). The above table shows that midi coach traffic is much less seasonal than

<sup>2</sup> Cal Mac crossing figures by vehicle type are produced differently from Skye Bridge crossing figures.

motorcycle and large coach traffic and is therefore likely to incorporate a higher local content. This is reflected in our calculations below.

Using data from previous studies (see above) we have assumed that 90% of motorcycle crossings year round are made by tourists. For coaches we have taken the winter base in January (13 coaches) for coaches and February (80 midi coaches) as being local/non-tourist. Coach and midi coach usage above these levels each month are assumed to be tourist traffic. While some of the coaches and mini-coaches in January/February were undoubtedly for tourists, this is balanced by probable greater usage by local groups other times of years (although the numbers are still likely to be small). Discount tickets are not available for coaches, so the current toll rates of £41.20 high season/£27.90 low season for full-sized coaches and £23.70/£15.80 for midi-coaches were used. The figures also assume that motorcycle tourists do not use discount tickets, and have used the current rate of £2.90/£2.40. Using these methods, Table 4.5 gives the estimated tourist traffic and toll revenue in each category.

**Table 4.5: Estimated Tourist Motorcycle and Coach Traffic and Toll Revenue, Skye Bridge, 2001**

Month	Motorcycle		Coach		Midi Coach	
	Tourist traffic	£ Toll revenue	Tourist traffic	£ Toll revenue	Tourist traffic	£ Toll revenue
January	95	229	0	0	7	111
February	98	235	20	558	0	0
March	185	443	136	3,794	13	205
April	536	1,287	238	6,640	70	1,106
May	1,699	4,928	478	19,694	74	1,754
June	1,955	5,669	653	26,904	107	2,536
July	3,049	8,843	700	28,840	106	2,512
August	1,848	5,358	816	33,619	107	2,536
September	1,018	2,952	545	22,454	63	1,493
October	286	687	268	7,477	54	853
November	53	127	45	1,256	31	490
December	23	56	30	837	24	379
<b>Total</b>	<b>10,846</b>	<b>£30,815</b>	<b>3,929</b>	<b>152,073</b>	<b>656</b>	<b>13,975</b>

The results show:

- motorcycle tourist traffic reached a peak in July of 3,049, which is over 3,000 more than the December figure;
- total estimated motorcycle tourist toll revenue in 2001 was £30,815;
- large coach tourist traffic reached a peak in August of 816 coaches;
- total estimated large coach tourist toll revenue in 2001 was £152,073;
- midi coach tourist traffic reached a peak in June and August of 107 coaches – the figure from June-August was virtually constant;
- total estimated midi coach tourist toll revenue in 2001 was £13,975.

Although the monthly figures are only approximations, for example in reality there will be some tourist large coach traffic in January, we believe the annual figures give a good estimate of traffic and expenditure.

Taking all vehicle types together it is possible to estimate the total spent on tolls by Skye tourists in 2001. From above there was £1,304,408 paid by tourist cars and caravans, £30,815 by motorcycles, £152,073 by large coaches and £13,975 by midi coaches, giving a total of **£1,501,270**. This is the

amount by which tourists who crossed the bridge in 2001 would have been better off had there been no toll charges.

Previous studies (INC, 1996) estimated that approximately 20% of the money spent on tolls by tourists could be expected to enter the local economy if tolls were abolished. Applying this to the estimated 2001 toll expenditure gives a figure of **£300,254** extra spending entering the local economy. However, not all of this extra expenditure will be converted into income as much of it will 'leak out' of the local economy (e.g. to pay for 'imported' goods). The Scottish Tourism Multiplier Study (STMS, Surrey Research Group, 1993) gives the income multipliers from rural tourist expenditure as: direct, 0.2410; indirect, 0.0297; and induced, 0.0361. This gives a total ratio of income to expenditure of approximately 0.31. Applying this to the potential income from tourism entering the Skye economy if the tolls were removed gives a figure of **£93,079** per annum.

The employment effects of the lost tourist expenditure can also be calculated, using the STMS which estimates that £29,240 (1991 prices) was needed to create 1 FTE job. Scaling this up 33% to current prices based on the Retail Price Index for 1991 and 2002, we estimate that £38,889 is needed to create each FTE job (the STMS employment multiplier (£38,889) used is a Type II, i.e. it includes induced effects.). This is in line with other studies such as RSPB and BASC (1998) and Scottish Executive (1999b), and works out to give an equivalent Scottish Executive employment multiplier effect of around 25, which is less than that for Hotels and Catering, but greater than for Fish Farming and many manufacturing industries. It has therefore been taken as a reasonable approximation of a general employment multiplier for the local economy and has been used throughout this chapter. Using this, therefore, potential extra expenditure of £300,254 from the removal of the tolls would create approximately **7.7** FTE jobs.

### ***4.3 Local Resident Spending***

To estimate the cost of the tolls to local residents (excluding business traffic) we have taken the Bridge traffic from Table 1.1 above and attempted to isolate the local resident component in each case as described below.

- From the assumptions above, we have assumed 43% of car traffic to be local resident (non-business) traffic.
- Local residents have been taken as comprising 10% of motorcycle traffic.
- The local component of coach and midi-coach traffic is the proportion not included as tourist traffic above, i.e. the winter baseline monthly figure multiplied by 12.
- As we did not include bus traffic in the tourist figures, we have included all bus traffic as local resident journeys.
- The Bridge crossing figures are for actual crossing, however, some local residents will have purchased discount tickets which are unused, so the total tolls paid will be somewhat larger than reported below.

Table 4.8 outlines our estimation of toll costs paid by local residents. Based upon the DTZ Pineda study (Scottish Executive, 1999) it is suggested that around 89% of frequent user local resident cars and motorcycles trips use discount tickets (see appendix 2). It is assumed that buses always use the discount rate. As local traffic is spread more evenly year round, we have taken an average seasonal price for a full fare crossing and the current price of a discount crossing. The pricing structure used is that outlined earlier.

**Table 4.6: Estimated Annual Toll Charges Paid by Local Residents, 2001**

	<b>Cars</b>	<b>M/cycles</b>	<b>Buses</b>	<b>Large coaches</b>	<b>Midi coaches</b>
Bridge Traffic net of through traffic	575,761	12,050	4,006*	4,130	1,635
Estimated local resident traffic (43%)	247,577	1,205	4,006	156	972
Toll charges paid at full price	£137,270	£351	£0	£5,390	£19,197
Toll charges paid at discount rate	£286,203	£719	£49,114	£0	£0
Total tolls paid by local residents	£423,473	£1,070	£49,114	£5,390	£19,197

\*There are no through bus services to the Western Isles

This table provides an estimate of the toll charges paid by local residents through each vehicle type. This shows that:

- local car drivers paid around £423,000 in toll charges;
- local motorcyclists paid around £1,000;
- service buses paid around £49,000;
- local residents paid around £5,300 through large coaches and around £19,000 through midi coaches.

Summing the totals above, **£498,244** was paid by local residents in non-business toll charges in 2001. Local households (or local businesses where the costs were not passed on) would have been better off by this amount had the tolls not been levied.

Applying the STMS multiplier of 1.2 to this figure gives a potential **£597,893** entering the Skye economy from local residents if the tolls were lifted.

Likewise, estimating employment using the index linked employment multiplier, **£498,244** extra expenditure would create around **12.8 FTE jobs**.



#### ***4.4 Local Businesses Spending***

As with tourist traffic, the first stage in estimating the effect on local businesses is to calculate the spending on tolls by local businesses. For Skye businesses this will fall into three main streams:

- commercial vehicle costs of importing materials and supplies;
- commercial vehicle costs of exporting goods;
- additional costs of business visits, mainly by car, to customers, clients and other events outside Skye.

The INC study (INC, 1996) estimated that around 40% of car traffic was local resident non-business traffic, 50% was tourist traffic and the remainder was split between local business and business visitor traffic. Our estimations above show that around 47% of annual car traffic in 2001 was tourist traffic. In the light of this tourist figure we have estimated for local resident traffic to be 43% of total car traffic and 10% to be local or visiting business traffic. INC (1996) also showed the local business component to be around one third the level of visiting business traffic, in accordance with this we have assumed 3% of car traffic to be local business and 7% visiting business.

In addition, as with coaches, the through traffic ferry figures are not broken down by commercial vehicle type (LGV, HGV1 etc.), therefore we have estimated through traffic for each vehicle type by calculating commercial through traffic as a percentage of total commercial traffic (15%) and applying this reduction to each vehicle class in turn. The INC report (INC, 1996) found local commercial vehicle traffic to be around one quarter the volume of total commercial traffic and we have applied this to the total through traffic figures for all commercial vehicles (CVs).

The DTZ Pinda study (Scottish Executive, 1999) reported the findings of a System Three household survey conducted in 1998, which found that 92% of local business traffic used discount tickets and we have applied the same proportion to all vehicles here. Table 4.6 outlines the estimated tolls paid in each vehicle class by local businesses.

**Table 4.7: Estimated Annual Toll Charges Paid by Local Business Bridge Users, 2001**

	<b>Cars</b>	<b>LGV</b>	<b>HGV1</b>	<b>HGV2</b>
Total traffic	603,185	4,927	130,515	15,514
Bridge Traffic net of through traffic (-15% of total for CVs)	563,339*	4,188	110,938	13,187
Estimated local business traffic (3% of cars, 25% of CVs), excluding through traffic	16,900	1,047	27,735	3,297
Toll charges paid at full price (8% of vehicles)	£7,030	£905	£31,063	£7,358
Toll charges paid at discount rate (92% of vehicles)	£20,834	£7,552	£258,475	£61,449
Total tolls paid by local businesses	£27,864	£8,457	£289,537	£68,807

\*From earlier calculations above

Summing the totals in each vehicle category gives a total of **£394,665** paid by local businesses. This is the amount by which local businesses would have been better off had toll charges not been levied in 2001. Previous studies have estimated that around 10% of this income would be lost to external areas due to the external ownership of businesses based in Skye. Subtracting this from the income saved gives a figure of **£355,199** that would remain in the local economy.

This expenditure would be subject to a multiplier effect, as local businesses and residents spend money on local goods and services which themselves will provide income for the local economy. The size of the multiplier will depend on the size and nature of the area in question – the smaller the area the greater the leakages on imported goods and services. For example the multiplier for the HIE area would be larger than that for Skye. A number of previous studies have used data from the STMS (Surrey Research Group, 1993) to estimate the value of the local multiplier, with values ranging from 1.2 to 1.6. However, the INC (1996) estimated multiplier of 1.2 for Skye resident spending appears to be the most appropriate and is the one used here. Applying this to the above figure gives a total income of **£426,238** that would enter the Skye economy from local businesses if tolls were lifted.

To estimate employment created we have used the index linked STMS employment multiplier of £38,889 per FTE from above. Applying this to the basic expenditure would generate around **9.1 FTE jobs**.

#### ***4.5 External Business Spending***

As mentioned previously, there will be a proportion of cars and commercial vehicles crossing the Bridge that will be business traffic from outside Skye, mainly external suppliers. The toll charges spent by these firms are likely to be passed on in part or in whole to local businesses and consumers. Feedback from businesses that we contacted, including external businesses, indicated that suppliers and couriers can pass on up to 100% of their additional costs to local businesses and residents in terms of increased supply prices and carriage rates. The INC (1996) study estimated that around 50% of these costs would be passed on – we have taken 65% as a reasonable estimate based upon our interviews, although it may be high depending upon the industry and market.

Related to the calculations for local businesses, we have made the following assumptions when calculating current toll expenditure by visiting business:

- 7% of car traffic is visiting business traffic;
- 75% of commercial vehicle traffic is visiting business traffic;
- Our small number of interviews showed some use of discount tickets by external businesses, however the level of use is likely to be less than the 92% of local businesses. We have assumed 65% use.

Based on the above, Table 4.7 shows our estimations for toll spending by external businesses.

**Table 4.8: Estimated Annual Toll Charges Paid by External Business Bridge Users, 2001**

	<b>Cars</b>	<b>LGV</b>	<b>HGV1</b>	<b>HGV2</b>
Total traffic	603,185	4,927	130,515	15,514
Bridge Traffic net of through traffic (15% of total for CVs)	563,339	4,188	110,938	13,187
Estimated external business traffic (7% of cars, 75% of CVs)	39,434	3,141	83,204	9,890
Toll charges paid at full price (35%)	£71,769	£11,873	£407,698	£96,579
Toll charges paid at discount rate (65%)	£34,347	£16,007	£547,854	£130,245
Total tolls paid by external businesses	£106,116	£27,881	£955,552	£226,824

Summing the spending by external businesses through all vehicle types gives a total of **£1,316,373**. This is the amount by which external businesses would be better off if the tolls were lifted. Using the assumption that 65% of this cost is passed onto the Skye economy we can say that the local economy would be better off by **£855,642** if such costs were not passed on.

Applying the STMS multiplier of 1.2 to this figure, we estimate that **£1,026,771** of extra income would enter the local economy from savings made by external businesses if the tolls were removed.

Applying the STMS employment multiplier to the basic expenditure of £855,642, we estimate that approximately **22 FTE jobs** would be created.

#### ***4.6 Total Impact of Current Toll Expenditure***

From the calculations above, we can estimate the total income that would enter the Skye economy from diverted toll spending should the tolls be abolished. Table 4.9 summarises our findings.

**Table 4.9: Estimated Income and Employment From Diverted Toll Spending**

<b>Source</b>	<b>Estimated tolls paid</b>	<b>Additional Income (including multiplier effects)</b>	<b>Employment (FTE)</b>
Tourist expenditure	£1,501,294	£90,045	7.7
Local resident Expenditure	£498,244	£597,893	12.8
Local business expenditure	£394,665	£426,238	9.1
External business expenditure	£1,316,373	£1,026,771	22.0
Total toll expenditure	£3,710,576	£2,140,947	51.6

According to the estimates above for each group (tourists, residents, local businesses, external businesses) the total tolls add up to £3.71m for 2001. The actual tolls in 2000 were £3.78m, but there was a decline of just over 1% in traffic to 2001, so actual tolls are expected to be around £3.73m (note that our estimates are based on actual journeys while the toll figures include discounted tickets purchased but not used). The total additional income accruing to the local economy from spending by all the groups listed would be over £2.1m and the employment generated would be over 51 FTE jobs. This is equivalent to a 1.3% increase in the total employment of the Skye and Lochalsh area.

## **5. Additional Economic Impacts of Removing the Tolls**

### ***5.1 Introduction***

Following a removal or reduction of the toll charges, in addition to the additional income and employment that would be generated in the Skye economy from diverted toll expenditure, there would be further benefits in terms of:

- extra visitor numbers attracted by the lower or free tolls;
- increased business activity and efficiency from lower supply and export costs.

### ***5.2 Increased Visitor Numbers***

To illustrate the dependence of the local economy on tourism based employment, the report by DTZ Pineda (Scottish Executive, 1999) states, with reference to the Skye economy, that 'The other sector [other than Agriculture and Fishing] with substantial over-representation is distribution, hotels and catering, which is effectively the tourism industry'. Our figures, given in the Appendix 1, agree with this – Skye has almost double the national average percentage employment in this group. Figures from the ONS Annual Business Enquiry (2000) show employment in the Skye and Lochalsh Enterprise (SALE) area in distribution, hotels and restaurants to be 1,637: 903 (55%) full-time and 734 (45%) part-time, giving a total of 1,230 FTE jobs. This figure relates to employees only and excludes self-employed, as self-employed figures by sector for the SALE area are suppressed by ONS as statistically unreliable. 1991 Census figures showed that there were 1,246 self-employed in all sectors in the SALE area (HIE, 1999). Although somewhat out of date, this is the only census-type information on self-employment available at local level. Assuming that the proportion of self-employed in distribution, hotels and restaurants reflects that of employees (which is likely to be a conservative estimate), we can assume approximately 40% or 500 people to be self-employed in tourism, and assuming 55% of these to be full-time and 45% part-time, this gives 375 FTE self-employed jobs. The total current number of

FTE employees and self-employed in tourism in the SALE area in is therefore estimated at around 1,605.

To estimate the potential increase in tourist visitors from the abolition of toll charges we have used our own calculations of the price elasticity of demand for Bridge travel by tourists, based largely on results from the System Three tourist survey (System Three, 1996). Price elasticity measures how responsive or sensitive demand for a good or service is to changes in its price. In this case the price is the level of the toll. Details of these calculations are provided in Appendix 3. The provisional figure is a long-run price elasticity of 0.1, in other words if the price of the Bridge was increased by 100%, visitor numbers would drop by 10%, and vice-versa for a decrease in price.

Using the proposed reduced tolls, given in Table 5.1, we have used the 2001 traffic figures to calculate the likely increase in tourist traffic resulting from the abolition of the toll charges. A countervailing issue is that a toll-free Bridge may divert passengers from the Mallaig-Armadale or Glenelg ferries. However, the Bridge could increase the number of tourists doing a semi-circular trip over the Bridge and back by the ferry or vice-versa. In any case, loss of ferry traffic to the bridge is likely to have the effect of redistributing economic activity rather than decreasing it.

**Table 5.1: Projected Tourist Traffic After Toll Abolition**

	<b>Traffic with toll</b>	<b>Increase 10%</b>	<b>Traffic with no toll</b>
Car	350,658	35,066	385,724
Motorcycle	10,846	1,085	11,931
Coach	3,928	393	4,351
Midi Coach	659	66	725
All modes	366,091	36,610	402,701

We had considerable difficulty in obtaining accurate figures for visitor numbers to Skye and/or Skye and Lochalsh. Official figures by Visit Scotland and Highlands of Scotland Tourist Board (HOST) are only broken down as far as HOST level. Figures are available for numbers to Tourist Information Centres (TICs), although not all tourists will visit these facilities (HOST, 2002b). However, figures from the Volume and Value of Tourism Factsheet (HIE, 2000) visitor numbers gives the estimated number of trips in Skye and

Lochalsh in 2000 as 427,686 with a corresponding expenditure of £65.7m. Previous studies (Skye Data Atlas, 1994) have estimated visitor numbers in Skye at around 500,000, so although the HIE estimate also includes Lochalsh, the figure seem reasonable. Taking the 427,686 figure as a base and using the price elasticity of 0.1, abolition of the tolls would lead to an increase in tourist trips and expenditure of 10% resulting in an additional 42,769 trips. At an average visitor spend of £153.62 per trip (HIE, 2000), this would result in an additional £6,570,000 expenditure in the local economy.

As before, assuming an income multiplier of 0.31 this would result in an additional **£2,036,700** of income and applying the employment multiplier, an additional **169** FTE jobs.

### ***5.3 Increased Business Activity and Efficiency***

Removal or lowering of the tolls could result in a number of changes in the local economy as a result of more favourable trading conditions:

- new indigenous businesses may be set up;
- there may be an increase in inward investment;
- existing businesses may expand output and employment.

#### *New Indigenous and Inward Investment Start-ups*

Table 5.2 below shows that the SALE area experienced one of the biggest drops (-44.7%) in new business start-ups over the period 1997-2000. This was worse than both the HIE area (-26.5%) and Scotland as a whole (-30.9%). However, over the sub-period 1999-2000 it was the best performing LEC area, showing growth of 19.7%. The accuracy of these figures could perhaps be questioned. Assuming that they accurately reflect economic activity this would indicate at first glance that the tolls may have had a negative then effect initially, but this is becoming less of a problem. The introduction of discount tickets in January 1998 may have helped this, particularly as over 90% of local businesses use these.



**Table 5.2: Number Of Start-ups By LEC Area and Percentage Change On 1997 & 1999**

	<b>Number of New Starts 2000</b>	<b>% Change on 1997</b>	<b>% Change on 1999</b>
SE	85	-35.6	-24.8
WIE	103	-44.9	-22.0
RACE	134	-34.3	-15.7
AIE	291	-32.0	-13.1
LLtd	99	-18.2	-8.3
CASE	120	-48.3	-7.0
INE	367	-19.5	-6.6
MBSE	409	-13.5	-4.7
OE	123	-6.8	-0.8
<b>SALE</b>	<b>73</b>	<b>-44.7</b>	<b>19.7</b>
HIE	1,804	-26.5	-9.0
Rest of Scotland	15,423	-30.9	-10.9
Scotland	17,114	-30.9	-10.2

*Source:* HIE (2001)

Consultation with SALE revealed that the direct effect of the toll charges is felt to be marginal upon the number of start-ups in the local area. Toll charges are a cost to business, but it is likely that other factors such as the effectiveness of business start-up programmes, availability of industrial space and high travel costs in general and outweigh much of the deterrent effect of the tolls. There would be some indirect effect, for example through increased tourism, that would lead to greater consumer and business demand and hence more business opportunity, however this is included in the multiplier effects of the tourism estimates and would be double counting.

In the absence of any estimates or studies on the effect on business start-ups to provide better estimates than above, we have assumed a conservative 5% in the increase in the number of business start-ups resulting from removal of the toll charges. This would have resulted in an extra 4 business start-ups in 2001. The average new start-up in Scotland in 2000 had 5.5 employees (Scottish Executive, 2002b), however, the size on Skye is likely to be smaller. Assuming each new start up created 3 employees, the extra 4 start-up businesses resulting from removal of the tolls would create an extra **12 FTE**

jobs. At the current average annual salary for the SALE area of £14,000 these would generate an additional **£168,000** of income to the local economy.

#### *Existing Business Efficiency*

Previous studies have estimated removal of the tolls would result in a 5% increase in employment through increased efficiency of local businesses. Businesses that would benefit most (other than tourist-dependent businesses, which are covered above) would be those who export and import supplies.

The two principal exporting sectors in Skye as defined by Standard Industrial Classification (SIC 92) are Agriculture, Forestry and Fishing and Manufacturing (Scottish Executive, 1999). ONS Annual Business Inquiry figures show that there are 98 and 33 employers respectively in each sector in the Skye Enterprise (SALE) area, employing 346 and 122 people respectively – a total of 468 employees. This total includes some employment on the mainland (who may also benefit), but excludes employment in group 0010 agriculture, for which no data are available at this level. We have therefore taken this as an approximation for the numbers employed in these two sectors on Skye.

An increase of 5% employment would provide an extra **23** jobs, taking the total employment in export related industries to **491**. Such an increase may also have a multiplier effect on other industries (perhaps of 4-5 jobs). Assuming that these extra jobs are paid at the annual average salary for the SALE area of £14,000 p.a., this will generate an additional **£322,000** of income to the local economy.

#### ***5.4 Total Additional Economic Growth***

Summing the above calculations we can estimate the total income and employment benefits to the local economy resulting from increased tourism, an increase in business start-ups and increased local business efficiency. Table 5.3 summarises this.

**Table 5.3 Estimated Additional Growth Benefits from Toll Removal**

Source	Additional Income (including multipliers)	Employment (FTE)
Increased tourism	£2,036,700	169
Business start-ups	£168,000	12
Business efficiency	£322,000	23
Total	£2,526,700	204

This shows that the total additional economic benefit from removing the tolls would be around £2.5m additional income, and around 200 additional FTE jobs – equivalent to an increase in 5% in current total employment in the SALE area.

### ***5.5 Total Impact of Toll Removal***

Adding the above benefits to those from the diverted existing toll expenditure in Table 4.9 gives the following total potential increase in employment and income resulting from removal of the tolls.

**Table 5.4: Total Additional Income and Expenditure from Toll Removal**

	Income	Employment (FTE)
Diverted existing expenditure	£2,140,947	51.6
Additional Growth	£2,526,700	204
Total	£4,667,647	255.6

The total benefits from removal of the tolls are therefore estimated to be around **£4.67m** additional income to the local economy and a corresponding additional **256 FTE** jobs. This represents a potential 6.3% increase over current employment in the SALE area.

### ***5.6 Buying-out the Bridge***

The Scottish Executive has not estimated a precise cost of buying out the bridge to date. Earlier estimates in a written parliamentary reply in 1997 revealed that it would be likely to cost around £30 million to buy out the tolls,

so it is likely that the cost would now be less after 5 years of toll income. SKAT estimate that the cost of buying out the bridge should now be less than £20m, however they state that this figure is dependent upon whether the Bank of America have been guaranteed a minimum level of profit, which may increase the cost of a buy-out.

Figures from the National Audit Office (based around 2000) are claimed to reveal that the total toll payments to be paid to Skye Bridge Ltd was to be £128m over the lifetime of the concession (approximately 17 years in duration). However, the cost of buy out was not estimated by the NAO as the figure would be dependent upon negotiation between the Scottish Executive and Skye Bridge Ltd. It is likely that it would currently (2002) take at least £23m (to cover debts), plus whatever else extra Skye Bridge Ltd. negotiated, to buy out the bridge. With the lack of transparency concerning this public infrastructure it is not possible to estimate total costs or to consider value for money.

## 6. Economic Impacts of Reduced Toll Charges

### 6.1 Introduction

In addition to estimating the economic impacts of toll removal, we have also estimated the likely impacts of a partial reduction in toll charges. Partial reduction is likely to result in the same types of positive economic benefits to be gained from toll removal, but of a smaller magnitude. Reducing the tolls need not set a precedent for other Public Private Partnership (Private Finance Initiative) schemes, as the tolls have already been effectively reduced with the introduction of the discount tickets. We have developed two scenarios here, both of which offer substantial savings over the current toll charges:

- A) a flat charge of £1 each way for cars, with charges for other vehicles scaled from this figure;
- B) a lower charging structure, taking the higher of the actual charges on the Forth Road Bridge for each vehicle category.

### 6.2 Setting the Charges

Interviews with local businesses and residents revealed that a one-way flat charge of £1 for cars, and this was used as a benchmark for Scenario A. This equates as approximately 2.5 times the return trip level for the Forth Road Bridge, and this figure has been applied to scale up the other charges to give Scenario A (i.e. the current Forth Road Bridge charges for buses etc. have been scaled up by 2.5). Scenario B was taken to be the higher of the current Forth and Erskine Bridge charges in each vehicle category, which in practice turns out to be the Forth Bridge charges in every case. Table 6.1 below shows our hypothetical reduced toll structure, based on a return trip.

**Table 6.1: Round Trip Reduced Toll Charges for the Skye Bridge**

	<b>Cars</b>	<b>M/cycles</b>	<b>Buses and coaches</b>	<b>HGVs</b>
Forth Road Bridge	80p	Free	£1.40	£2.00
Erskine Bridge	60p	Free	60p	60p
Scenario A	£2	Free	£3.50	£5.00
Scenario B	80p	Free	£1.40	£2.00

### 6.3 Tourism

Using the same methodology as for the complete removal of toll charges above, the impact of a reduction in toll charges was calculated.

#### *Scenario A*

Table 6.2 illustrates the savings to be made over the full price tolls by adopting Scenario A.

**Table 6.2: Scenario A Saving Over Existing Tolls by Tourists**

	<b>Cars</b>	<b>Motorcycles</b>	<b>Coaches</b>	<b>Midi Coaches</b>	<b>Total</b>
Full price toll expenditure	£1,304,408	£30,815	£152,073	£13,975	£1,501,271
Scenario A toll expenditure	£267,150	£0	£6,876	£1,148	£275,174
Saving	£1,037,258	£30,815	£145,197	£12,827	£1,226,097

This reduced toll structure gives a potential saving from diverted current expenditure of £1,037,258 for tourists driving cars and cars with caravans, £30,815 for motorcycles, £145,197 for large coaches and £12,827 by midi coaches. This sums to a total potential saving of £1,226,097 and is the amount by which tourists who visited in 2001 would have been better off under Scenario A. Applying the same methodology as for removal of tolls above, an estimated 20%, or £245,219 of this would be spent in the local economy, resulting in **£76,018** additional income and an extra **6.3** FTE jobs.

In addition, as with the total toll removal, it is necessary to estimate the increase in tourist numbers that would result from a reduction in toll charges. A charge of £1 each way represents a saving of £4.20 over the annual average car toll, a reduction of 81%. Assuming that all vehicle types are subject to the same demand responsiveness as cars, applying our price elasticity of demand of 0.1 as before should result in an extra 8.1% tourist trips. Based on 427,686 trips annually to Skye (from section 5.2 above), the total increase in tourist trips would be 34,643. This would result in extra tourist spending of £5,321,791 (£153.62 per trip - HIE, 2000). As before, assuming an income multiplier of 0.31 this would result in an additional

**£1,649,755** of income and applying the employment multiplier, an additional **136.8** FTE jobs.

Summing the total impact of diverted existing toll expenditure and additional tourist visits, we estimate that Scenario A would lead to additional income of **£1,725,773** and **143.1** extra FTE jobs. These figures are not far short (around 80%) of our earlier estimates for the equivalent income and employment benefits from tourism following total removal of the tolls.

*Scenario B*

Table 6.3 illustrates the savings to be made over the full price tolls by adopting Scenario B (tolls equivalent to the Forth Road Bridge).

**Table 6.3: Scenario B Saving Over Existing Tolls by Tourists**

	<b>Cars</b>	<b>Motorcycles</b>	<b>Coaches</b>	<b>Midi Coaches</b>	<b>Total</b>
Full price toll expenditure	£1,304,408	£30,815	£152,073	£13,975	£1,501,271
Scenario B toll expenditure	£106,860	£0	£2,750	£459	£110,069
Saving	£1,197,548	£30,815	£149,322	£13,516	£1,391,202

This reduced structure gives a potential saving from diverted current expenditure of £1,197,548 for tourists driving cars and cars with caravans, £30,815 for motorcycles, £149,322 for large coaches and £13,516 for midi coaches. This sums to a total potential saving of £1,391,202 if the tolls were reduced to these levels. Applying the same methodology as above, an estimated 20%, or £278,240 of this would be spent in the local economy, resulting in **£86,254** additional income and an extra **7.2** FTE jobs. These figures are similar the above estimates for the total removal of the tolls.

The additional tourist numbers from Scenario B can be calculated as before. For cars, the reduction of a one-way equivalent price from a seasonal average of £5.20 to 40p represents a fall of 92%. Assuming again that all vehicle types are subject to the same demand responsiveness as cars, applying our price elasticity of demand of 0.1 as before should result in 9.2% extra tourist trips. Based on 427,686 trips annually to Skye (from section 5.2 above), the total increase in tourist trips would be 39,347. This would result in extra

tourist spending of £6,044,486 (£153.62 per trip - HIE, 2000). As before, assuming an income multiplier of 0.31 this would result in an additional **£1,873,791** of income and applying the employment multiplier, and applying the employment multiplier, an additional **155.4** FTE jobs.

Summing the total impact of diverted existing toll expenditure and additional tourist visits, we estimate that Scenario B would lead to additional income of **£1,960,045** and an extra **162.6** FTE jobs.

### **6.4 Local Residents**

As with the tourism estimates, the same methodology has been used to calculate the private local resident benefits from a reduction in toll charges as was used above for the total removal of charges.

#### *Scenario A*

The reduced charges outlined in Table 6.1 result in the following savings, outlined in Table 6.4 below. We have assumed that, as before, 89% of local resident car and motorcycles use discount tickets.

With lower tolls there would be some increase in the number of trips by local residents (and businesses). We have no evidence on the size of the price elasticity of demand for such trips, although its effects are likely to be insignificant, especially as most residents already use discount tickets, and so it is omitted from the calculations below.

**Table 6.4: Local Resident Saving by Adopting Scenario A Reduced Toll charges**

	<b>Cars</b>	<b>M/cycles</b>	<b>Buses</b>	<b>Large coaches</b>	<b>Midi coaches</b>	<b>All</b>
Saving over full price toll	£110,872	£351	£0	£5,117	£17,496	£133,836
Saving over discount toll	£72,619	£719	£42,103	N/A	N/A	£115,440
Total saving	£183,490	£1,070	£42,103	£5,117	£17,496	£249,276



This shows that local residents would save a total of **£249,276** from the introduction of the reduced tolls. The majority (£183,490) of this saving would be made by car drivers, although this is much less than the £423,473 that would be saved by local resident car drivers if the toll was removed, as the £1 saving is not much of a reduction over the discount rate, which most locals pay. Therefore the reduced toll saving under Scenario A by local residents is much smaller than the savings by tourists. In addition there would be an increase in the number of local resident trips over the bridge, and this would lead to a reduced savings. Applying the local spending multiplier of 1.2 to this amount gives an estimated **£301,288** entering the local economy if the tolls were reduced to these levels. Applying the employment multiplier, we estimate that this would also lead to **6.5 FTE** jobs.

#### *Scenario B*

The reduced charges (see Table 6.1) result in the following savings, outlined in Table 6.5 below. We have assumed that:

- as before, 89% of local resident car and motorcycles use discount tickets.

**Table 6.5: Local Resident Saving by Adopting Scenario B Reduced Toll charges**

	<b>Cars</b>	<b>M/cycles</b>	<b>Buses</b>	<b>Large coaches</b>	<b>Midi coaches</b>	<b>All</b>
Saving over full price toll	£126,710	£351	-	£5,281	£18,517	£150,859
Saving over discount toll	£200,769	£719	£46,309	-	-	£247,797
Total saving	£327,479	£1,070	£46,309	£5,281	£18,517	£398,656

This shows that local residents would save a total of **£398,656** from the introduction of the reduced tolls in Scenario B. The majority (£327,479) of this saving would be made by car drivers, this figure is notably higher than the saving by local car drivers under Scenario A. Applying the local spending multiplier of 1.2 to the total amount gives an estimated **£478,387** entering the local economy if the tolls were reduced to these levels. Applying the employment multiplier, we estimate that this would also lead to **10.3 FTE** jobs.

## 6.5 Local Business

Using the same assumptions as in section 4.3 we have estimated the savings that would be made by local businesses by the adoption of reduced toll charges.

### Scenario A

Table 6.6 below gives the estimated savings by local businesses by adopting the reduced charges in Scenario A.

**Table 6.6: Local Business Saving by Adopting Scenario A Reduced Toll charges**

	<b>Cars</b>	<b>LGV</b>	<b>HGV1</b>	<b>HGV2</b>
Total traffic	603,185	4,927	130,515	15,514
Bridge Traffic net of through traffic (-15% of total for CVs)	563,339	4,188	110,938	13,187
Estimated local business traffic (3% of cars, 25% of CVs), excluding through traffic	16,900	1,047	27,734	3,297
Toll charges saved by full price users (8% of vehicles)	£5,678	£821	£25,516	£6,699
Toll charges saved by discount rate users (92% of vehicles)	£5,286	£6,588	£194,685	£53,866
Total saving	£10,965	£7,409	£220,200	£60,565

Summing the totals in each vehicle category gives a total of **£299,139** paid by local businesses. This is the amount by which local businesses would be better off had toll charges been levied at the reduced level in 2001. As with the total removal scenario in section 4.3, we assume that around 10% of this income would be lost to external areas due to the external ownership of businesses based in Skye. Subtracting this from the saved gives a figure of **£269,225** that would remain in the local economy.

Applying appropriate multipliers to the above figure gives an estimated additional **£323,070** of income entering the economy and an estimated additional **6.9 FTE** jobs.

### *Scenario B*

Table 6.7 below gives the estimated savings by local businesses by adopting the reduced charges in Scenario B.

**Table 6.7: Local Business Saving by Adopting Scenario B Reduced Toll charges**

	<b>Cars</b>	<b>LGV</b>	<b>HGV1</b>	<b>HGV2</b>
Total traffic	603,185	4,927	130,515	15,514
Bridge Traffic net of through traffic (-15% of total for CVs)	563,339	4,188	110,938	13,187
Estimated local business traffic (3% of cars, 25% of CVs), excluding through traffic	16,900	1,047	27,734	3,297
Toll charges saved by full price users (8% of vehicles)	£6,490	£871	£28,844	£7,095
Toll charges saved by discount rate users (92% of vehicles)	£14,615	£7,166	£232,958	£58,415
Total saving	£21,105	£8,038	£261,802	£65,510

Summing the totals in each vehicle category gives a total of **£356,454** paid by local businesses. This is the amount by which local businesses would be better off had toll charges been levied at the reduced level in 2001. As with the total removal scenario in section 4.3, we assume that around 10% of this income would be lost to external areas due to the external ownership of businesses based in Skye. Subtracting this from the saved gives a figure of **£320,809** that would remain in the local economy.

Applying appropriate multipliers to the above figure gives an estimated additional **£384,971** of income entering the economy and an estimated additional **8.2 FTE** jobs.

### **6.6 External Businesses**

Based on the same assumptions as made for external businesses as in Section 4.4, i.e.:

- 65% of costs incurred by external businesses are passed on to local businesses and residents;

- 7% of car traffic is visiting business traffic;
- 75% of commercial vehicle traffic is visiting business traffic;
- 65% of external business traffic uses discount tickets;

we have estimated the likely impact of increased external business spending by adopting reduced toll charges.

*Scenario A*

Table 6.8 shows our estimations for toll spending by external businesses under reduction Scenario A.

**Table 6.8: External Business Saving by Adopting Scenario A Reduced Toll charges**

	<b>Cars</b>	<b>LGV</b>	<b>HGV1</b>	<b>HGV2</b>
Total traffic	603,185	4,927	130,515	15,514
Bridge Traffic net of through traffic (15% of total for CVs)	563,339	4,188	110,938	13,187
Estimated external business traffic (7% of cars, 75% of CVs)	39,434	3,141	83,204	9,890
Toll saving over full price toll (35% of vehicles)	£57,968	£10,774	£334,895	£87,925
Toll saving over discount toll (65% of vehicles)	£8,715	£13,965	£412,648	£114,174
Total saving by external businesses	£66,682	£24,739	£747,543	£202,098

Summing the saving by external businesses through all vehicle types gives a total of **£1,041,063**. This is the amount by which external businesses would be better off if the tolls were reduced. Using the assumption that 65% of this cost is passed onto the Skye economy we can say that the local economy would be better off by **£676,691** if such costs were not passed on.

Applying the STMS multiplier of 1.2 to this figure, we estimate that **£812,029** of extra income would enter the local economy from savings made by external businesses if the tolls were reduced. Applying the STMS employment multiplier to the basic expenditure of £676,691, we estimate that approximately **17.4 FTE jobs** would be created under Scenario A.

### *Scenario B*

Table 6.9 shows our estimations for toll spending by external businesses under reduction Scenario B.

**Table 6.9: External Business Saving by Adopting Scenario B Reduced Toll charges**

	<b>Cars</b>	<b>LGV</b>	<b>HGV1</b>	<b>HGV2</b>
Total traffic	603,185	4,927	130,515	15,514
Bridge Traffic net of through traffic (15% of total for CVs)	563,339	4,188	110,938	13,187
Estimated external business traffic (7% of cars, 75% of CVs)	39,434	3,141	83,204	9,890
Toll saving over full price toll (35% of vehicles)	£66,249	£11,434	£378,576	£93,117
Toll saving over discount toll (65% of vehicles)	£24,094	£15,190	£493,772	£123,817
Total saving by external businesses	£90,343	£26,624	£872,348	£216,934

Summing the saving by external businesses through all vehicle types gives a total of **£1,206,249**. This is the amount by which external businesses would be better off if the tolls were reduced. Using the assumption that 65% of this cost is passed onto the Skye economy we can say that the local economy would be better off by **£784,062** if such costs were not passed on.

Applying the STMS multiplier of 1.2 to this figure, we estimate that **£940,874** of extra income would enter the local economy from savings made by external businesses if the tolls were reduced.

Applying the STMS employment multiplier to the basic expenditure of £784,062, we estimate that approximately **20.2 FTE jobs** would be created under Scenario B.

### **6.7 Additional Business Start-ups**

The absence of any estimates or studies on the effect on business start-ups as mentioned in section 5.3 above, means that we have used our earlier assumption of a 5% increase in the number of business start-ups, or 4 extra

businesses resulting from total removal of the toll charges, an extra 12 FTE jobs and an additional £168,000 of income to the local economy.

#### *Scenario A*

The above estimates of the income and employment benefits from Scenario A are approximately 80% that for the complete removal of the tolls. Accordingly we estimate that under Scenario A there would be an increase of around **3** extra businesses, generating **9** FTE jobs and **£126,000** of income to the local economy.

#### *Scenario B*

Likewise, with Scenario B, the impacts above are around 90% that for total removal of the tolls. We would therefore estimate that under Scenario B there would be a similar impact to the toll removal, i.e. **4** extra businesses, an extra **12** FTE jobs and an additional **£168,000** of income to the local economy.

### ***6.8 Increased Business Efficiency***

We assume from section 5.3 that removal of the tolls results in a 5% increase in employment through increased efficiency of local businesses and that this would be manifested mainly in export dependent businesses, providing an extra 23 jobs, and at an average salary of £14,000, generating an additional £322,000 of income to the local economy.

#### *Scenario A*

As with the start-ups Scenario A assumes this will result in approximately 80% of the employment increase of the toll removal. This would result in an additional **18** FTE jobs and an additional **£252,000** income.

#### *Scenario B*

Under the same assumptions, Scenario B would result in 90% of the employment increase generated by toll removal. This would create **21** FTE jobs and **£294,000** income.

## 6.9 Total Impact of Reduced Toll Scenarios

The combined income and employment generated from each scenario is compared in table 6.10 below. This shows that:

- Scenario A generates an additional £3.54m of income and 200 FTE jobs, around 4.8% of current employment in the SALE area;
- Scenario B generates an additional £4.14m income and 235 FTE jobs, around 5.7% of current employment in the SALE area.

**Table 6.10: Summary of Estimated Income and Employment Gains from Reduced Toll Charges**

Source	Scenario A		Scenario B	
	Income	Employment	Income	Employment
Tourism (existing and additional)	£1,725,773	143.1	£1,960,045	162.6
Local residents	£301,288	6.5	£478,387	10.3
Local business	£323,070	6.9	£384,971	8.2
External business	£812,029	17.4	£855,642	20.2
Additional business start-ups	£126,000	9.0	£168,000	12.0
Extra business efficiency	£252,000	18.0	£294,000	21.0
<b>Total</b>	<b>£3,540,160</b>	<b>200.9</b>	<b>£4,141,045</b>	<b>234.3</b>

Scenario B involves the greater toll reduction and is therefore expected to generate more additional income and employment than Scenario A. If we compare the overall income and employment generated with that of removing the tolls from Table 5.4 above, which shows £4.67m additional income and a corresponding additional 256 FTE jobs, we can conclude that Scenario A provides around 76% of the potential income and 78% of the potential employment benefits, and Scenario B provides 89% of the income and 91% of the employment benefits of complete toll removal.

## **7. Conclusions**

We can offer the following conclusions from this study.

1. Although the Bridge has been of benefit to Skye, the high levels of the toll have considerably reduced its potential positive impact upon the local economy.
2. There is considerable local resentment to the tolls, particularly among businesses who report that tourists, particularly short stay visitors and coach parties, have been deterred from crossing the bridge
3. There would be likely gains from removing or reducing the tolls in terms of diverting existing toll spending, increased tourism, increased business efficiency and more business start-ups.
4. The economic benefits from removing the tolls would be substantial, with around £4.67m of additional income entering the local economy and the creation of perhaps 250 FTE jobs (around 6% of current Skye and Lochalsh Enterprise area employment).
5. There would also be noticeable benefits from reducing the toll charges, with one scenario (based upon a car toll of £1 each way) offering around 76% of the potential income and 78% of the potential employment benefits, and the other scenario (based upon Forth Road Bridge tolls levels) resulting in 89% of the income and 91% of the employment benefits of complete toll removal.
6. It is difficult to justify the one year expiry for discount tickets as this inevitably means local residents are paying higher than otherwise tolls as unused tickets become out of date, or it is impossible to buy discounted tickets for only a few journeys.

Finally, it is worth noting that the Standing Advisory Committee on Trunk Road Assessment report (SACTRA, 1999) stated that transport infrastructure could create economic growth, provided the economic conditions were right: that the economy in question had a low level of existing infrastructure; and that supporting economic development policies were in place. Given that from the consultations it would appear that removing or reducing the toll levels would effectively be freeing up the use of a piece of infrastructure, we should perhaps treat such an action as an additional piece of investment. The level of transport infrastructure in Skye is relatively under-developed, therefore with support from accompanying economic development policies it is likely that we would see economic benefits from any increase in bridge traffic.



## Appendix 1: The Skye Economy

### *Overview*

Skye is taken to be the Skye and Lochalsh Local Enterprise Company (SALE) area for the purposes of this report. This is one of ten LECs that fall under the remit of Highlands and Islands Enterprise (HIE). HIE statistics indicate the general characteristics of Skye to be:

- 3.2% of the total HIE population in 1998;
- a slowly rising, but ageing, population;
- falling unemployment rates over the period 1996-1999 (Skye and Ullapool TTWA);
- an economy dominated by small firms;
- a level of business start-ups higher than the HIE or Scottish average.

### *Population*

The population figures for the Skye shown a slight growth over the past decade as shown in Table A1 below. The increase in population is greater than that for the HIE area or Scotland as a whole.

**Table A1: Population Levels and Change, 1991-1998**

	<b>1991</b>	<b>1995</b>	<b>1998</b>	<b>2002</b>	<b>% change</b>
Skye & Lochalsh	11,740	11,940	11,980	12,130	+3%
HIE Area	369,320	372,790	370,376	373,000	+1%
Scotland	5,107,000	5,136,600	5,120,000	5,100,000	-0.1%

*Source:* GRO(Scotland), HIE

The population of Skye has seen the fastest growth in the older age groups, indicating that it may be seen as a desirable place to retire. This is not necessarily a negative aspect as many retirees have considerable spending power. Table A2 highlights that the increases in population have been confined to the 45-64 and over 85 age groups.

**Table A2: % Population by Age, Skye, 1991-1998**

Age Band	1991	1998	% change
0-4	6.3	5.8	-8%
5-19	19.9	19.0	-5%
20-44	33.9	30.9	-9%
45-64	22.2	27.0	+22%
65-84	15.6	14.6	-6%
85+	2.1	2.6	+24%

***Employment and Industry***

Table A3 provides an overview of the employment structure of the Skye area. This highlights the high dependence on Distribution, Hotels and Restaurants and Agriculture & Fishing compared with the Scottish average. The figures do not include self-employed, as this data is suppressed by ONS as being statistically unreliable.

**Table A3: Employment by Industry Sector, 2000**

	Skye		Scotland	
	Persons	%	Persons	%
Agriculture & fishing	346	8.5	38,317	1.7
Energy and Water	36	0.9	36,431	1.6
Manufacturing	122	3	302,473	13.6
Construction	127	3.1	132,351	5.9
Distribution, hotels and restaurants	1,637	40.1	506,379	22.7
Transport and communication	313	7.7	117,537	5.3
Banking, finance and insurance	400	9.8	374,870	16.8
Public administration, education and health	974	23.9	599,575	26.9
Other services	126	3.1	121,266	5.4
Total	4,082	100	2,229,199	100

*Source:* ONS Annual Business Enquiry

## ***Unemployment and Social Exclusion***

Table A4 below shows that although unemployment has fallen in Skye, this fall has been less than in Scotland as a whole, possibly indicating that the area has not benefited from the economic upturn to the same extent as other regions.

**Table A4: Average Annual Unemployment Claimant Count, 1995-2001**

	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>% change</b>
Skye & Lochalsh	523	464	432	390	332	342	-35%
Scotland	195,063	159,560	141,489	133,796	119,413	108,025	-45%

In addition, the area appears to suffer from a relatively high level of long-term unemployment. Figures from HIE show that in 1999 47% of unemployed in Skye had been out of work for over 6 months, compared with 38% in the wider HIE area.

As mentioned above, employment in Skye is heavily dependent on tourism and is therefore seasonal in nature. Table A5 illustrates this by highlighting the higher levels of unemployment during winter months: from a low in 242 in September to a high of 465 in February.

**Table A5: Unemployment Claimant Count, SALE Area, 2001**

<b>Month</b>	<b>Persons</b>
January 2001	448
February 2001	465
March 2001	459
April 2001	361
May 2001	308
June 2001	281
July 2001	256
August 2001	254
September 2001	242
October 2001	243
November 2001	347
December 2001	407

### ***Skye Bridge Traffic***

As mentioned in the body of the report there were 666,321 vehicle crossings in 2001. The breakdown by vehicle sector is provided in Table 1.1 and the long term trend in Table 1.2.

## **Appendix 2: Calculation of Visitor Numbers**

1. Applying the Scottish Executive (1999) Skye Bridge Ltd. data for discounted tickets sold April-September estimate of 38% of car traffic using discounts and is 'local' (based on 1998) to 2001 figures gives:  
37,958 tourist cars per month and 23,265 'local' traveller cars per month.

However, two modifications need to be made:

a) The Scottish Executive report (1999, para 8.6) argues that for residents using the Bridge monthly or more often, 76%-84% always pay the reduced charge while 9% usually pay the reduced charge. We assume that: 89% of local resident trips use discount tickets; the lower frequency of discount tickets amongst those who use the Bridge less often is balanced by frequent users who often, but not always, use discount tickets. Also most of the Bridge trips will be made by frequent users.

b) Another (System Three) study suggested 2% of tourist use discount tickets. So these have been added back in and the final 'local' figure calculated from this. This results in the estimates of:  
35,889 tourist cars per month and 25,334 'local' traveller cars per month during the summer (April-September).

2. Applying the Scottish Executive (1999) Skye Bridge Ltd data for discounted tickets sold October-March estimate of 34% of car traffic using discounts and is 'local' (based on 1998) to 2001 figures gives:  
8,636 tourist cars per month and 24,031 'local' traveller cars per month during the winter (October-March).

Together these give an annual tourist figure of: 267,150 tourists 'cars', or 47% (this compares with the INC (1996) figure of 50%).

All of the results depend on the accuracy of the different surveys and the assumptions stated. The number of visitors to Tourist Information Centres (2001/02) suggest 4102 visitors per month to them in winter (October-March) (so 47% of visiting 'cars') and 30,921 per month in summer (including the Kyle of Lochalsh office) (86% of visiting 'cars').

3. Applying the Scottish Executive (1999) August estimate of 78% of car traffic as tourists (based on 1998) to 2001 figures gives:

63983 tourist cars and 18047 'local' travellers.

Applying the Scottish Executive (1999) July-September estimate of 72% of car traffic as tourists (based on 1998) to 2001 figures gives:

50,430 per month tourist cars and 19,612 'local' traveller cars.

According to Tourist Information Centre figures for Portree (open all year) about 55% of all their visitors come in July-September (HOST, 2002b).

Applying this ratio to our total tourist car numbers this would be 48,978 per month (very close to the 50,430 calculated above in the Scottish Executive report). This suggests that the summer visitor figures may be underestimated if the survey above is accurate.

### Appendix 3: Calculation of Price Elasticity of Demand

This appendix sets out the method used to calculate the price elasticity of demand for travel over the Skye Bridge. Price elasticity is a measure of how sensitive the number of vehicles crossing the bridge is to a change in price. For example, a reduction in the toll charge for cars of £1 will result in an increase in bridge traffic – the price elasticity figure is a measure of by how much traffic will change. It is not possible to calibrate a sophisticated model of elasticity given the available data, but a reasonably robust estimate can be made.

1. Price elasticity of demand (PeD) is calculated using the formula:

$$\text{PeD} = \% \text{ change in quantity demanded} / \% \text{ change in price}$$

2. The higher the PeD, the more responsive demand for a product or service (in this case bridge travel) will be to a change in price.

3. We have estimated PeD using the results of the System Three (1996) tourist survey. This surveyed 527 tourists currently on holiday in the Highlands, 280 in Fort William and 247 in Inverness, about their attitudes to visiting Skye and the bridge tolls. From this survey we can draw the following facts.

- Out of a sample of 527, 284 interviewees had considered visiting Skye. The remaining 243 had never considered Skye as an option – we can discount this latter group.
- 65 people considered Skye as a destination but rejected it. Of these 13 or 20% said this was because of the bridge tolls.
- 121 people intended to go to Skye. Of these 31 (26%) knew the cost of the toll. We can assume these people were willing to pay the charges.
- Of the 121, the remaining 90 people were unaware of the cost of the toll. On hearing the cost: 71 (79%) responded on hearing the charges that they would go anyway; however, 19 (21%) replied that now they were aware of the toll they would no longer be visiting Skye.
- 83 people surveyed had already been to Skye on their current holiday. Of these: 28 (34%) were aware of the toll charges before they went to Skye.

- However, 55 (66%) had been unaware of the charge. Of these people 39 (71%) said they would have gone anyway and 16 (29%) said they would not have made the trip to Skye had they known the charges.

4. From the above, we can conclude that out of a potential 284 tourists that had thought about going to Skye:

- 13 considered the idea, but rejected it as the tolls were too expensive;
- 19 put off the idea upon hearing the toll charges;
- 16 went to Skye, but would not have had they been aware of the charge.

5. The 13 who rejected the idea out of hand are simple to classify: these are people for whom the toll charge is unacceptable.

6. The 19 who did not go upon hearing the toll charges via the survey may or may not have found out about the charges elsewhere before they set off for Skye. Assuming that a further 26% of these people would have heard about the charges (based on the proportion of those who already knew, above) we can say that around 5 of the 19 would probably not have made the trip, while 3 of the remainder would turn back at the tolls (see below).

7. The 16 who turned up at the bridge and went to Skye, but said they would not have gone had they known the charges, can be assumed not to go back to Skye. Of course their places will be taken by new tourists, but over time there will be a learning effect as more and more tourists hear about the toll charges, so if a different sample was taken the following year some of these 16 would be aware of the tolls and may not go. Also the number of return trips will be diminished. Assuming that awareness of the toll charges has increased over the period 1996-2002, we could expect, in the long-term, 8 of these 16 not to travel to Skye.

8. The System Three Survey did not survey cars at the bridge and did not probe respondents about whether and why they made U-turns. However, the DTZ Pinda (Scottish Executive, 1999) study did, and found that 9 cars out of 590 on a particular day in August 1998 made a U-turn because of the toll costs. This equates at around 1.5% turning back. Applying this as representative of the System Three sub-sample of 204 (121+83) who either went or intended to go to Skye (i.e. those who would approach the bridge),



we estimate that around 1.5% or 3 people in a sample this size would turn back.

9. Summarising, we can estimate that out of a potential 284 visitors who would consider visiting Skye:

- A total of 26 (13 + 5 + 8) would never have made the trip to Skye because of the tolls;
- A further 3 would turn back at the barrier because of the toll costs
- Therefore 29 out of a potential 284, or 10% of visitors would be deterred by toll charges.

10. From this we can assume that a 100% reduction in tolls, i.e. a fall to zero, will result in a 10% increase in visitor numbers. Using this to calculate elasticity we have:

$$\text{PeD} = 10\% / 100\% = 0.1$$

The estimate for price elasticity of demand is therefore 0.1.

## **Appendix 4: List of Consultees**

We would like to thank all of the following for their contribution to this study.

### ***Policy Actors***

Dave Cotton	Highland Council
Mike Greaves	Highland Council
Ken Kennedy	Comhairle nan Eilean Siar
John MacDonald	Highland Council
Catriona MacLean	Highland Council
Calum MacPherson	Skye and Lochalsh Enterprise
Robert Muir	Skye and Lochalsh Enterprise
David Noble	Highlands of Scotland Tourist Board
Archie Prentice	Highlands and Islands Enterprise
Bill Ross	Highland Council

### ***Information Providers***

Peter Conlong	Scottish Executive
Margaret Crawford	Highlands of Scotland Tourist Board
Alastair Douglas	Scottish Executive
Lynne Duff	Scottish Executive
Derek Halden	Derek Halden Consultants
Stuart Hay	Scottish Executive
Mary MacPherson	Skye and Lochalsh Enterprise
Jennifer MacRae	Highlands of Scotland Tourist Board
Sharon Reid	Visit Scotland
Peter Shannon	The MacAulay Institute
Amelia Simonini	SKAT

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## References

- Highlands and Islands Enterprise (HIE) (1999) Skye Area Economic Update / November 1999
- HIE (2000) Volume and Value of Tourism: Key Statistics Factsheet No. 60 Network Economic Information, April 2000
- HIE (2001) New Business Starts: A Review Of 1997 To 2000, Factsheet No. 64 Strategy Group Economic Information, May 2001
- HOST (2002) Research Report, May, Highlands of Scotland Tourism Board.
- HOST (2002b) Tourist Information Centre figures for Skye and Lochalsh (April 2001 – March 2002), Personal communication
- RSPB and BASC (1998) Geese and Local Economies in Scotland: A Report to the National Goose Forum
- SACTRA (1999) Final Report: Transport and the Economy, DTLR, London.
- Scottish Executive (1999) Skye Bridge: Socio-Economic Impact Evaluation
- Scottish Executive (1999b) Castle Tioram: Economic Impact Assessment
- Scottish Executive (2001), Scottish Transport Statistics - no 20, 2001 edition.
- Scottish Executive (2002) Personal communication of data.
- Scottish Executive (2002b) Scottish Economic Statistics
- Skye Data Atlas (1994) <http://www.bambi.demon.co.uk/skyedata/index.html>
- Surrey Research Group (1993) Scottish Tourism Multiplier Study 1992. Surrey Research Paper No. 31. Scottish Office Industry Department
- System Three (1996) Skye Bridge Tolls Tourism Study
- TRL (1995) Skye Bridge Socio-Economic Impact Study: Extract From Baseline Analysis Report, TRL, Livingston
- TRL (1996) Skye Bridge Socio-Economic Impact Study Phase 2, TRL, Livingston